2020 SWPPP
CORRESPONDENCE

Steve Goodrich

From: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Sent: Tuesday, November 17, 2020 5:58 AM
To: Thom Fischer
Cc: Corey Kleppe; Steve Goodrich; Marcoe, Sheila (ECY); Serdar, Carol (ECY)
Subject: WAR306648 Electron Hydro LLC Intake - inspection report 27Oct2020
Attachments: WAR306648 inspection rept 27October2020.pdf

Good morning Thom,

The inspection report from our October 27th site visit is attached. Please reach out with any questions/ concerns.

Thank you,

Jess Eakens
WA Dept of Ecology
Construction Stormwater Inspector
(360) 791-5017

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Friday, November 13, 2020 2:55 PM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Corey Kleppe <coreykleppe@electronhydro.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>
Subject: WAR306648 Electron Hydro LLC Intake - inspection report 19Oct2020

Good afternoon Thom,
Please find attached the inspection report from 19October2020. Please respond to this email to demonstrate receipt.

Let me know if you have any questions or need technical assistance. Thank you.
Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

EH-USA000336
ED_005624_00000045-00002

Steve Goodrich

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, November 12, 2020 6:32 PM
To: Steve Goodrich
Cc: Thom Fischer; Chris Spens; Marcoe, Sheila (ECY); Eakens, Jess C. (ECY)
Subject: WAR306648 Electron Hydro LLC Intake - change of ac
Attachments: WAR306648-2020-10-7-ChangeOfDisturbedAcresLtr.pdf

Good evening Steve,
Please find attached, the most up-to-date coverage letter for the site log book.
Let me know if you have any questions.
Thank you,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

11/9/20

Jennifer Alefteras

From: Corey Kleppe
Sent: Monday, November 9, 2020 12:54 PM
To: Jennifer Alefteras
Subject: Re: CSWGP Inspection Report for Electron Hydro- WAR306648

Please print
Get Outlook for iOS

From: Steve Goodrich <sgoodrich@electronhydro.com>
Sent: Thursday, October 15, 2020 6:36:45 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Thom Fischer <thom@Tollhouseenergy.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: RE: CSWGP Inspection Report for Electron Hydro- WAR306648

Thanks for calling me back. I do listen to what you are saying and try to find answers. The sediment laden water in the pond occurred after the water level in the sediment trap went above the lid on the manhole. That is likely the source since the concrete does not appear to be tightly sealed. The road along the bank has a number of issues but large rock I think is not a good solution as it would cause a mess and wear on vehicles causing other possible problems. The intake bridge since it drains away from the river might not a direct connection other waters but the flume. It handles a lot of flow.
I do look forward to having you come out in a rain to see what you can show me. After all these years doing drainage there is still a lot for me to learn.
Have good evening and I will be updating with the SWPPP information Corey was able to walk and collect.
Sincerely,
Steven P Goodrich P.E.

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 15, 2020 5:18 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Thom Fischer <thom@Tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: RE: CSWGP Inspection Report for Electron Hydro- WAR306648

Thank you Corey,
Jess will respond soon. And Steve just touched base with me about a couple of items on the CR from the last compliance inspection.
Sincerely,
Carol

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, October 15, 2020 4:50 PM
To: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Thom Fischer <thom@Tollhouseenergy.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Chris Spens

<cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Re: CSWGP Inspection Report for Electron Hydro- WAR306648

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Good Afternoon Jess,

Apologies for delay, issues with printing, but please see attached photos of BMP for spill response in our SWPPP onsite.

Warm Regards,

Corey

From: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Sent: Wednesday, October 7, 2020 4:42 PM
To: Thom Fischer <thom@Tollhouseenergy.com>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: CSWGP Inspection Report for Electron Hydro- WAR306648

Good afternoon,

On September 30, 2020, Ecology conducted a Construction Stormwater General Permit (CSWGP) compliance inspection at the "Electron Hydro LLC Intake" project. Attached is a copy of the resulting inspection report, and corrections required form. Within the report and corrections required form, you will find information on permit violations and the actions required to achieve permit compliance.

Please respond to confirm receipt, and reach out with any questions regarding this report and/or on-site construction stormwater management.

Thank you,

Jess Eakens
WA Department of Ecology
Construction Stormwater Inspector
(360) 791-5017 | jess.eakens@ecy.wa.gov

11/9/20

Jennifer Alefteras

From: Corey Kleppe
Sent: Monday, November 9, 2020 12:52 PM
To: Jennifer Alefteras
Subject: Re: Electron ERTS #701504

Please print
Get Outlook for iOS

From: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Thursday, November 5, 2020 5:56 AM
To: Corey Kleppe
Subject: RE: Electron ERTS #701504

Great, that is good news. **Ex. 6 Personal Privacy (PP)**

Thank you,

Thom

Thom A. Fischer, PE President, Tollhouse Energy Company, 1800 James Street, Suite 201, Bellingham, WA 98225
Main: 360-738-9999 Direct: 360-746-3414 Cell: 360-739-9999 www.TollhouseEnergy.com

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, November 5, 2020 5:52 AM
To: Thom Fischer <thom@Tollhouseenergy.com>
Subject: Re: Electron ERTS #701504

Hey Thom,

Yes the report for the ERTS was submitted on Friday. It's been taken care of and compiled for both 10/25 and 10/28 turbidity exceedances into one report per the carol serdar email.

Will call tomorrow **Ex. 6 Personal Privacy (PP)**

Thanks,

Corey

Get Outlook for iOS

From: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Monday, November 2, 2020 4:48:14 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Subject: FW: Electron ERTS #701504

Corey, are you doing this report today? Call me.

Thom

Thom A. Fischer, PE President, Tollhouse Energy Company, 1800 James Street, Suite 201, Bellingham, WA 98225

Main: 360-738-9999 Direct: 360-746-3414 Cell: 360-739-9999 www.TollhouseEnergy.com

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 29, 2020 8:45 AM
To: Thom Fischer <thom@Tollhouseenergy.com>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: RE: Electron ERTS #701504
Importance: High

Good morning Thom and Corey,
Based on CSWGP condition S5.F.3. you must submit a written report to Ecology... Thom, I know you said you would provide the photos and someone else would provide the specifics for the Sunday (10/25/2020) ERTS #701504, turbid discharge when river was shifted to the left bank side. I am unsure who will be submitting the report.

Ecology understands the timing of the current activities at your Project, and we are extending the report submission until Monday. Based on the CSWGP you must **provide the report by noon on Monday 11/2/2020**.

Please call if you have any questions about the requirements. Thank you.
Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

From: Serdar, Carol (ECY)
Sent: Monday, October 26, 2020 7:38 PM
To: Thom Fischer <thom@Tollhouseenergy.com>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: Electron ERTS #701504

Good evening,
The ERTS was referred to me...
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

11/9/20

Jennifer Alefteras

From: Corey Kleppe
Sent: Monday, November 9, 2020 12:51 PM
To: Jennifer Alefteras
Subject: Re: ERTS for Oct 28th

Please print
Get Outlook for iOS

From: Corey Kleppe
Sent: Thursday, October 29, 2020 12:04:53 PM
To: Chris Spens <cspens@tollhouseenergy.com>
Cc: Thom Fischer <thom@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: ERTS for Oct 28th

Hey Chris,

Just heads up we had an exceedance with yesterday's final day of work in the river. We were above 5NTU of background 1500' downstream from 8:30am-11:00pm. Background NTU averaged around 5.0-7.0 NTU throughout the day. From 2:30-3:30 was the peak of turbidity reaching a peak of 83.3 NTU which was 77.5 NTU above background at that time. I called in for the ERTS for this per the requirement from our WQMP. Just wanted you to be aware. This was not nearly as much turbid discharge as oct 25th, but was an exceedance none the less.

Let me know if you have any questions,

Thanks,

Corey

10/30

Thom Fischer

From: Dave Risvold <dave.risvold@piercecountywa.gov>
Sent: Friday, October 30, 2020 6:58 PM
To: Thom Fischer; Chris Spens
Subject: RE:

Thanks, guys

From: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Friday, October 30, 2020 6:56 PM
To: Dave Risvold <dave.risvold@piercecountywa.gov>; Chris Spens <cspens@tollhouseenergy.com>
Subject: Re:

Great. Thank you. We will remove ASAP.

Thom

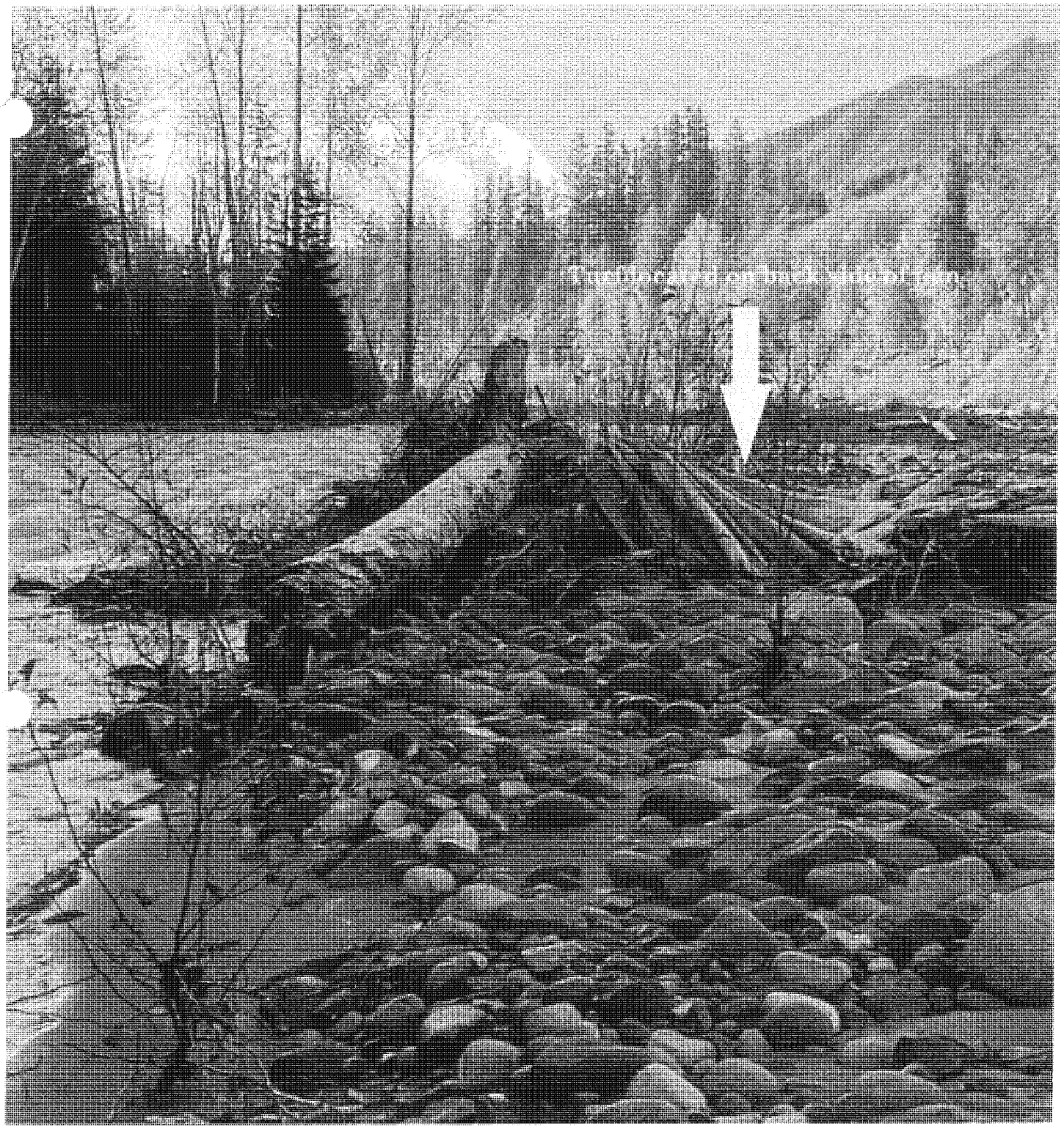
From: Dave Risvold <dave.risvold@piercecountywa.gov>
Sent: Friday, October 30, 2020 6:54:14 PM
To: Thom Fischer <thom@Tollhouseenergy.com>; Chris Spens <cspens@tollhouseenergy.com>
Subject: FW:

ore info on the turf the PTI found

From: Eric Marks <Eric.Marks@PuyallupTribe-nsn.gov>
Sent: Friday, October 30, 2020 9:50 AM
To: Dave Risvold <dave.risvold@piercecountywa.gov>
Cc: Russ Ladley <Russ.Ladley@PuyallupTribe-nsn.gov>; Lisa Anderson <Lisa.Anderson@PuyallupTribe-nsn.gov>
Subject: RE:

Dave,

The turf is partialy burried, so will likely require a small crew and some tools (N46 56.125 W122 03.612)


Turbidoscaled on back side of fan

10/29/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 29, 2020 5:56 PM
To: Corey Kleppe
Cc: Thom Fischer; Steve Goodrich; Eakens, Jess C. (ECY); Marcoe, Sheila (ECY)
Subject: Electron Hydro - ERTS #701575

Importance: High

Good afternoon Corey,
Thank you for reporting the turbid discharge from yesterday.

For ease of reporting two turbid discharges from your activities within the river, please consolidate the report and provide the details for both dates (10/25/2020 and 10/28/2020) – with separate descriptions of events that led up to the turbid discharges with photos. This report is due on Monday (11/2/2020) by noon.

Let me know if you have any questions. Thank you.
Best regards,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

10/20/20

Jennifer Alefteras

From: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Sent: Thursday, October 29, 2020 6:33 AM
To: Corey Kleppe
Cc: Thom Fischer; Serdar, Carol (ECY)
Subject: ERTS Copies for Site Logbook
Attachments: ERTS699710Incident.pdf; ERTS700385Incident.pdf; ERTS700706Incident.pdf; ERTS701504Incident.pdf

Hi Corey,

Attached are copies of the ERTS that we discussed on Tuesday. They should be included in the site logbook, along with any response documents that you may have.
Let me know if you have questions.

Thanks,

Jess Eakens
WA Department of Ecology
Construction Stormwater Inspector
(360) 791-5017 | jess.eakens@ecy.wa.gov

10/29/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 29, 2020 8:45 AM
To: Thom Fischer; Corey Kleppe
Cc: Eakens, Jess C. (ECY); Steve Goodrich
Subject: RE: Electron ERTS #701504

Importance: High

Good morning Thom and Corey,
Based on CSWGP condition S5.F.3. you must submit a written report to Ecology... Thom, I know you said you would provide the photos and someone else would provide the specifics for the Sunday (10/25/2020) ERTS #701504, turbid discharge when river was shifted to the left bank side. I am unsure who will be submitting the report.

Ecology understands the timing of the current activities at your Project, and we are extending the report submission until Monday. Based on the CSWGP you must **provide the report by noon on Monday 11/2/2020**.

Please call if you have any questions about the requirements. Thank you.
Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

From: Serdar, Carol (ECY)
Sent: Monday, October 26, 2020 7:38 PM
To: Thom Fischer <thom@Tollhouseenergy.com>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: Electron ERTS #701504

Good evening,
The ERTS was referred to me...
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

Jennifer Alefteras

From: Corey Kleppe
Sent: Wednesday, October 28, 2020 1:10 PM
To: Serdar, Carol (ECY); Thom Fischer
Cc: Eakens, Jess C. (ECY)
Subject: Re: Electron Hydro WQMP requirement...

Hello Carol,

What is not represented in this photo is that the turbid water visible is in a back eddy pooled up being slowly released downstream. Current NTU downstream is 7 NTU higher than background has been for last hour (1500' downstream), which exceeds the state level, and Thom has been notified to cease work to let the river settle out. We have been monitoring and will continue to do so.

Where did this photo come from may I ask?

Thanks,

Corey Kleppe
19318 Electron Road E, Orting Wa 98360
Main: 360-761-1601 Extension 113 Cell: 808-859-5633 www.ElectronHydro.com

---

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Wednesday, October 28, 2020 12:59 PM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Corey Kleppe <coreykleppe@electronhydro.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: Electron Hydro WQMP requirement...

Good afternoon Thom,
Thank you for taking the time yesterday to look at the Project with Jess and me...

This is one photo that has been shared with me, from today.

Each day, if you have a turbid discharge (>250 NTU), and the in-water activity is different, then you must report another ERTS, and state you are working with me.

Thom your voicemail is full, and I forgot what Corey's number is...
Thank you,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector

Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

10/28/20

Jennifer Alefteras

From: Corey Kleppe
Sent: Wednesday, October 28, 2020 11:09 AM
To: Serdar, Carol (ECY)
Cc: Thom Fischer; Jeff Huber; Marcoe, Sheila (ECY); Eakens, Jess C. (ECY); Chris Spens; Steve Goodrich
Subject: Re: Intake Dailies

Hey Carol,

Please see attached data logs for Oct 22nd-Oct26th.

Thanks you,

Corey

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, October 22, 2020 10:30 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: Re: Intake Dailies

Good Morning Carol,

Please see attached data logs for Oct 19th-21st.

Thank you,

Corey

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Monday, October 19, 2020 11:02 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: Re: Intake Dailies

Good Morning Carol,

Please see attached data logs for Oct 16th-18th.

Warm Regards,

Corey

From: Corey Kleppe
Sent: Friday, October 16, 2020 3:40 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>

Cc: Thom Fischer <thom@tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: RE: Intake Dailies

Good Afternoon Carol,

Please see attached data logs for Oct 15th

10/28/20

RE: Electron Hydro WQMP requirement...

Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Wed 10/28/2020 1:54 PM

To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Thom Fischer <thom@Tollhouseenergy.com>

Thank you Corey,
Yesterday when we were on the right bank, I noticed how the eddy was close to the end of the wooden structure. I would appreciate (if Jerry is still working that side, maybe he could shoot one over to you now?) a photo looking downstream from the upper portion of the structure – so I can see how far downstream the turbidity is... It sounds like you are following the WQMP, I am just reminding you that if you have turbid events every day, keep reporting it if the activity is different. Thank you!

The photo is from the tribal site visit today.

Call if you have any questions. I've got your number now...
Sincerely,
Carol

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Wednesday, October 28, 2020 1:10 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Thom Fischer <thom@Tollhouseenergy.com>
Cc: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: Re: Electron Hydro WQMP requirement...

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Where did this photo come from may I ask?

Thanks,

Corey Kleppe
19318 Electron Road E, Orting Wa 98360
Main: 360-761-1601 Extension 113 Cell: 808-859-5633 www.ElectronHydro.com

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Wednesday, October 28, 2020 12:59 PM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Corey Kleppe <coreykleppe@electronhydro.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: Electron Hydro WQMP requirement...

Good afternoon Thom,
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This is one photo that has been shared with me, from today.

Each day, if you have a turbid discharge (>250 NTU), and the in-water activity is different, then you must report another ERTS, and state you are working with me.

Thom your voicemail is full, and I forgot what Corey's number is...
Thank you,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

Jennifer Alefteras

From: Corey Kleppe
Sent: Monday, October 26, 2020 3:57 PM
To: Serdar, Carol (ECY)
Cc: Thom Fischer; Chris Spens; Steve Goodrich; Jeff Huber
Subject: Call in

Hey Carol,

Thanks again for taking the call with Thom today. Just wanted to let you know we called in the ERTS as well for yesterday.

Best Regards,

Corey

Get Outlook for iOS

10/26/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Monday, October 26, 2020 5:28 PM
To: Corey Kleppe
Subject: RE: Call in

Please remember to send me the dailies...

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Monday, October 26, 2020 3:57 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Call in

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Hey Carol,

Thanks again for taking the call with Thom today. Just wanted to let you know we called in the ERTS as well for yesterday.

Best Regards,

Corey

Get Outlook for iOS

11/20/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Monday, October 26, 2020 7:38 PM
To: Thom Fischer; Corey Kleppe
Cc: Eakens, Jess C. (ECY)
Subject: Electron ERTS #701504

Good evening,
The ERTS was referred to me...
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

10/26/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Monday, October 26, 2020 4:40 PM
To: Corey Kleppe
Subject: RE: Call in

Perfect! Thank you for the email. Will you be writing up the report or will Thom? The summary earlier was pretty succinct, and glad you have the turbidity monitoring data!
Call if you have any questions...
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
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~~360.407.6269 desk~~
360.742.9751 cell

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Monday, October 26, 2020 3:57 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Call in

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link

Hey Carol,

Thanks again for taking the call with Thom today. Just wanted to let you know we called in the ERTS as well for yesterday.

Best Regards,

Corey

Get Outlook for iOS

10/21/20

Jennifer Alefteras

From: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Sent: Wednesday, October 21, 2020 7:11 AM
To: Corey Kleppe
Cc: Marcoe, Sheila (ECY); Chris Spens; Thom Fischer; Steve Goodrich; Jeff Huber; Serdar, Carol (ECY)
Subject: RE: CSWGP Inspection Report for Electron Hydro- WAR306648

Good morning Corey,

I appreciate the follow-up. I requested photos of the spill area on the Corrections Required, but Carol mentioned that you documented the location of these events on the map, which suffices. We will follow-up on the other items from the September 30th report and Corrections Required during our site visit next week.

Thank again,

Jess Eakens
WA Dept of Ecology
Construction Stormwater Inspector
(360) 791-5017

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 15, 2020 5:18 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Thom Fischer <thom@Tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: RE: CSWGP Inspection Report for Electron Hydro- WAR306648

Thank you Corey,
Jess will respond soon. And Steve just touched base with me about a couple of items on the CR from the last compliance inspection.
Sincerely,
Carol

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, October 15, 2020 4:50 PM
To: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Thom Fischer <thom@Tollhouseenergy.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Re: CSWGP Inspection Report for Electron Hydro- WAR306648

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link
Good Afternoon Jess,

Apologies for delay, issues with printing, but please see attached photos of BMP for spill response in our SWPPP onsite.

Warm Regards,

Corey

From: Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Sent: Wednesday, October 7, 2020 4:42 PM
To: Thom Fischer <thom@Tollhouseenergy.com>; Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: CSWGP Inspection Report for Electron Hydro- WAR306648

Good afternoon,

On September 30, 2020, Ecology conducted a Construction Stormwater General Permit (CSWGP) compliance inspection at the "Electron Hydro LLC Intake" project. Attached is a copy of the resulting inspection report, and corrections required form. Within the report and corrections required form, you will find information on permit violations and the actions required to achieve permit compliance.

Please respond to confirm receipt, and reach out with any questions regarding this report and/or on-site construction stormwater management.

Thank you,

Jess Eakens
WA Department of Ecology
Construction Stormwater Inspector
(360) 791-5017 | jess.eakens@ecy.wa.gov

10/21

CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

Section A: General Data

Ecology Inspector(s): Carol Serdar Contaminated CSWGP Inspector Phone: 360.742.9751 Email: carolserdar@ecy.wa.gov	On-Site Representative Name: Thom Fischer Title: Electron Hydro LLC, permittee Additional Participants:	Inspection Date and Entry/Exit Time: 21 Sept 2020, 9:00/14:00 Receiving waters: Puyallup River	Inspection Type: ERTS and CSWGP review Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. Carol Serdar had previously been to the site a few years' prior, during the JARPA review for the then proposed re-construction of the barrier dam and intake structure; and on 11 August 2020 in response to ERTS699710; and 17 August 2020 for a CSWGP compliance inspection.

This inspection incorporates a review of the CSWGP site, discussions and observations related to ERTS700385 (fish kill), and ERTS700706 (wetland filling). These two ERTS are not within or near the CSWGP site and have implications related to hydro operations. The two ERTS are included for ease of reference, and follow-up will occur outside of the CSWGP.

Carol met with Electron Hydro representative Thom Fischer at the hydro office then drove separately to various locations within the Electron Project.

Weather at time of inspection: overcast and 60s

Precipitation in the past 24 hours?

☑ Yes

☐ No

On site observations:

Forebay:

Excavation of sediment from forebay appears to be 15-20 feet thick in some areas of removal; sediment composition is very fine clay. The material is stockpiled in an area adjacent to the maintenance yard at the forebay. Jerry, an Electron employee, met up with Thom and Carol and walked around the stockpile of sediment removed from the forebay. Straw has been applied (some areas need more) to the side slopes of the stockpile; discussed SWMMWW BMP specifics and seeding should be applied now as well as on the top of stockpile. There was no discharge from the area with the stockpile. Area around the stockpile has been clearcut for placement of additional fines. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

ERTS7007006 was explained that the fish were trapped in the ponds as the water receded during dewatering.

Carol thought ERTS700385 related to wetland filling may have been at this portion of the Project. Thom reported there were no wetlands in the area of the stockpile or within the proposed expansion area.

Current work was being performed at the entrance to the forebay; flume connection to the forebay has been widened to direct flow of water toward the fish collection area. Entrance to the penstocks (concrete basin) was being cleaned out. (Unsure where water goes from this cleaning)

Discussed the need for monitoring of turbidity downstream of the powerhouse in the Puyallup River. Monitoring is needed to understand if the dewatering of the forebay and sediment maintenance creates a turbidity exceedance. This may occur when the penstocks fill with water and generation begins. (Unsure of current status of what is in the penstocks now)

Settling Basin:

The Settling Basin was essentially dry, some standing water in bottom from recent rain. When flume is carrying water into the basin, the basin is wider and about 1300 feet long which slows water and settles bedload (cobbles, sand, clay); while water is focused through the settling basin, an excavator removes sediment from the settling basin and piles sediment along the basin, then a bulldozer spreads the material out over the basin yard; sediment composition is sandy to coarse sand, with some fine clay. No excavator present. At the entrance of the settling basin, there was a pile of fist-sized cobbles that had dropped out of the suspended bedload as the velocity slowed. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

Carol asked about ERTS700385 related to wetland filling may have been in this portion of the Project. Based on satellite imagining it appeared that a lot of ground was covered with the sediment excavated out of the settling basin. Thom did not believe there were any wetlands filled in the area of the sediment application.

The area of filling is extensive and the edge has a very large, concave, deep-seated landslide that failed in January - February 2020 storm events. Thom was unsure if this failure discharged into the Puyallup River. Carol expressed that she will need to walk to the river, another day.

CSWGP area:

NPPP map on wall of office at intake structure, it needs to be updated with all additions and removals of BMPs.

Concrete stairs had been poured, and exposed and unworked soil on steep slope is now stabilized.

Haul road has been stabilized with gravel; adjacent slope to the intake structure had been previously exposed and unworked, has been stabilized with jute mat; discussed potential for need of additional BMP if stormwater rills the slope. Survey work of river bed was in progress. Discussed movement of rock and sediment used in construction around the site.

Stormwater pond has been disconnected to the stormwater conveyance system.

Walked along the river's edge for about 100 feet, Carol did not observe any crumb rubber bits or pieces of sports turf. It was not feasible to drive to other side of the river to observe ground around the fish ladder.

Post inspection conversations:
After closer review of ERTS700385 and confirmation from complainant the wetland is found south of the forebay. Thom and Carol reviewed this location over phone while looking at Google maps. Carol will observe the wetland and trench to the south of the forebay on 30 September 2020 compliance inspection and Project site visit.

Section C: Compliance

Note: 21Sept2020 site visit includes small review of CSWGP area; site visit includes area outside CSWGP area this includes ERTS700385 and ERTS700706

Inspection Checklist

This was not a complete CSWGP compliance inspection; observed the SWPPP map (not completely up-to-date), the remaining CSWGP paperwork was not reviewed.

olations and action required to achieve compliance	Complete or submit date	Guidance
No current compliance actions for the CSWGP. This report includes information related to two ERTS that are not within the CSWGP footprint, which will require follow up.		

ADDITIONAL RESOURCES FOR COMPLIANCE:

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 (or 2019) Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Carol Serdar Date: 8 September 2020
Ecology Inspector (print name): Carol Serdar

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
NRO Tel: 360-407-6300

10/15/20

From: Corey Kleppe <coreykleppe@electronhydro.com>
ent: Thursday, October 15, 2020 4:46 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: Re: Intake Dailies

Good Afternoon Carol,

Please see attached data logs for Oct 12 - 14th.

Warm Regards,

Corey

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Monday, October 12, 2020 1:04 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: Re: Intake Dailies

Good Afternoon Carol,

Please see attached data logs for Oct 9th-Oct 10th.

Thanks,

Corey

From: Corey Kleppe
Sent: Friday, October 9, 2020 3:13 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: RE: Intake Dailies

Good Afternoon Carol,

Please see attached data log for Oct 8th.

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, October 8, 2020 10:33 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>; Steve Goodrich <sgoodrich@electronhydro.com>
Subject: Re: Intake Dailies

10/15/20

Washington Department of FISH and WILDLIFE

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: October 15, 2020
Project End Date: September 15, 2021

Permit Number: 2018-6-256+05
FPA/Public Notice Number: N/A
Application ID: 14829

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Electron Hydro, LLC	COMPANY Electron Hydro
ATTENTION: Thom Fischer	ATTENTION: Chris Spens
1800 James St	1800 James St
Bellingham, WA 98225	Bellingham, WA 98225-4631

Project Name: Electron Hydro Diversion Repair, Spillway Replacement and Bank Protection

Project Description: The following work is approved: Construction of the concrete abutment (east) wall intended to secure the left side of the wood diversion structure. Placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that large machinery will need to cross the active channel. Construction of a rock-core diversion and spillway fill within the original diversion footprint which includes placement of 6,000 CY of rock. Placement of a steel sheet at the upstream side and at the crest of the rock. Decommissioning the worksite which includes diverting river flow to the left bank, fish rescue and relocation, removal of the astroturf and crumb rubber from the temporary spillway channel, emptying and removing the cofferdam containers, and restoring river gravel bar surfaces.

These work items are approved in this modification to the HPA and the in-water work window is October 15, 2020 - October 28, 2020.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between October 15, 2020 and October 28, 2020.

2. APPROVED WORK: The following work is approved: Construction of the concrete abutment (east) wall intended to secure the left side of the wood diversion structure. Placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that machinery will need to cross the active channel. Construction of a rock-core diversion and spillway fill within the original diversion footprint which includes placement of 6,000 CY of rock. Placement of a steel sheet at the upstream side and at the crest of the rock. Decommissioning the worksite which includes diverting river flow to the left bank, fish rescue and relocation, removal of the astroturf and crumb rubber from the temporary spillway channel, emptying and removing the cofferdam containers, and restoring river gravel bar surfaces.

3. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled:
- "Electron Close Out Extension request Sep 4 2020", uploaded to APPS on September 15, 2020,
- "Exhibit 4 WQMP Sep 19, 2020 Winter Stabilization (Current).pdf" uploaded to APPS on September 28, 2020,
"Exhibit 1 -V2 ELE_Xtemp-0a-Plan View DIVERSION ROCK SPILLWAY 10-08-2020.pdf", uploaded to APPS on October 8, 2020,
- "Exhibit 1-V2 ELE_Xtemp-0a-Profile-DIVERSION ROCK SPILLWAY.pdf", uploaded to APPS on October 8, 2020,
- "Exhibit 2-V2_ELE_Xtemp-0a-Cross Section DIVERSION ROCK SPILLWAY.pdf", uploaded to APPS on October 8,

2020,
- "Rock Quantity_Specs_Rock Spillway.pdf", uploaded to APPS on October 8, 2020,
- "Exhibit 8a Fish Ladder plan 9-8-2020.pdf", uploaded to APPS on September 28, 2020,
- "Exhibit 9 - Post construction Monitoring and Maintenance.pdf" uploaded to APPS on September 28, 2020,
- the east/right abutment wall must be the only item constructed from the approved plan set "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018, except as modified by this Hydraulic Project Approval.

You must have a copy of these plans available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Follow Level 1 Decontamination protocol for low risk locations. Thoroughly remove visible dirt and organic debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets and undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species. Properly dispose of any water and chemicals used to clean gear and equipment. For contaminated or high risk sites please refer to the Level 2 Decontamination protocol. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online at http://wdfw.wa.gov/publications/search.php?Cat=Aquatic Invasive Species.

NOTIFICATION REQUIREMENTS

5. PRE-, DURING, AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting in-water work, three business days before the fish rescue and relocation begins, and again within seven days after completing the in-water work. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

6. DURING CONSTRUCTION: If there is any potential change to the allowable work that has been approved for the October 15, 2020 to October 28, 2020 in-water work window, the WDFW Area Habitat Biologist and the Assistant Regional Habitat Program Manager must be contacted and those changes must be approved.

7. ADDITIONAL WORK: The applicant must request to do any additional work through the submittal of a major modification to the HPA.

8. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

9. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

10. Use existing roadways or travel paths.

11. Limit the removal of native bankline vegetation to the minimum amount needed to construct the project.

12. Retain all natural habitat features on the bed or banks including large woody material and boulders. You may move these natural habitat features during construction but you must place them near the preproject location before leaving the job site.

13. Confine the use of equipment to the specific access and work corridor shown in the approved plans.

14. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

15. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

16. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

17. Equipment for placing the rock for the fish ladder must cross the Puyallup River in the most direct route and in a manner that does the least damage to the bed, streambank and streambank vegetation.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

18. Work in the dry watercourse (when no natural flow is occurring in the channel, or when flow is diverted around the job site).

19. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

20. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

21. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

22. You must route construction water (wastewater) from the project as shown in the approved construction wastewater plan "WQMP Sep 19 2020" uploaded to APPS on September 22, 2020. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.

23. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

CONSTRUCTION MATERIALS

24. Store all construction and deconstruction material in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

25. Do not stockpile construction material waterward of the ordinary high water line, except for excavated riverbed material.

26. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).

27. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over wet concrete that will come in contact with waters of the state. Forms and impervious materials must remain in place until the concrete is cured.

28. Do not use wood treated with oil-type preservatives (creosote, pentachlorophenol) in any hydraulic project. You may use wood treated with waterborne preservatives (ACZA, ACQ) provided the wood is approved by the Western Wood Preservers Institute for use in the aquatic environment. Any use of treated wood in the aquatic environment must follow guidelines and best management practices available at www.wwpinstitute.org.

EAST ABUTMENT

29. The east abutment must be constructed according to the plans and specifications in the document "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018.

FISH PASSAGE IMPROVEMENT

30. Rocks can be placed at the outlet of the fish ladder to create pools leading up to the first cell, and rock can be

placed at the inlet of the fish ladder to direct flow. This rock must be removed at the end of construction for the diversion unless there are still fish passage concerns at the fish ladder.

31. Place the rock steps so that the drop between pools is a maximum of 12-inches vertical height.

32. Inspect the fish ladder for proper function at least once a day from October 15, 2020 through November 15, 2020. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

33. The fish ladder monitoring must include:
• Fish ladder monitoring must be conducted by a qualified fisheries biologist, hydrologist, or hydraulic engineer that has adequate experience with fish passage projects.
• The fish ladder must be monitored from October 15, 2020 to July 15, 2021. The fish ladder must be monitored daily from October 15, 2020 to November 15, 2020. The fish ladder must be monitored once a week from November 15, 2020 to July 15, 2020. Fish ladder monitoring reports must be submitted weekly to WDFW, emailed to HPAapplications@dfw.wa.gov. Include the APP ID in the email.
• The fish ladder monitoring report must include the following elements:
- Measure velocity (cfs) entering or leaving the fish ladder with a staff gauge or other flow measuring device,
- Measure water surface drops from last cell to tailrace, they must be <12-inches (1 foot) and there must be adequate pools,
- Document any debris at the intake or outlet that could impair flow in the ladder or prevent fish passage,
- Document any attraction flow issues including fish jumping at the barrier/dam instead of the fish ladder
- Document any fish observed using the fish ladder with a photo or video.
• Reporting Fish Passage non-compliance: Report instances where fish passage or the fish ladder require maintenance or repair, such as, but not limited to:
- There are water surface drop at the fish ladder that prevent adult migration,
- Debris issues that impact flow in the ladder or prevent fish from using the ladder,
- There is a fish ladder outage and the ladder must intentionally be closed, if the outage will last longer than 48 hours, there must be a contingency plan for providing fish passage.

If there are issues with fish passage or the fish ladder that require maintenance or repair, WDFW must be notified within 24 hours.

34. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

35. The owner must maintain the fish ladder to ensure it provides continued, unimpeded fish passage for the life of the project.

TEMPORARY ROCK DIVERSION STRUCTURE

36. The rock must be placed according to the approved plans entitled "Exhibit 1 -V2 ELE_Xtemp-0a-Plan View DIVERSION ROCK SPILLWAY 10-08-2020.pdf", uploaded to APPS on October 8, 2020, "Exhibit 1-V2 ELE_Xtemp-0a-Profile-DIVERSION ROCK SPILLWAY.pdf", uploaded to APPS on October 8, 2020, and "Exhibit 2-V2_ELE_Xtemp-0a-Cross Section DIVERSION ROCK SPILLWAY.pdf", uploaded to APPS on October 8, 2020.

37. The rock placement includes: 2,220 CY of rock greater than or equal to 24-inches, 1,050 CY of river rock (bedload), 610 CY of well-graded river rock, 240 CY of membrane support rock, and 900 CY of 4 - 7 man toe anchor rock. The rock must be placed in accordance with the approved plan entitled, "Rock Quantity_Specs_Rock Spillway.pdf", uploaded to APPS on October 8, 2020.

38. Well graded bed load (rounded river rock) must be used to fill voids between the large angular rocks on the downstream side of the dam structure.

39. No voids must be observed on the downstream face of the rock dam to avoid and minimize juvenile fish entrainment.

40. Complete all rock placement prior to releasing flow to the left bank.

41. The temporary rock diversion structure, sheet metal, and all associated materials must be removed during the in-

water work window of July 15, 2021 to September 15, 2021.

IN-WATER WORK AREA ISOLATION USING A COFFERDAM STRUCTURE

42. Use a cofferdam, dike, or similar structure to exclude water from the work area.

43. Maintain water quality when installing and removing the cofferdam, dike or similar structure.

44. Install the cofferdam, dike or similar structure and remove fish prior to the start of other work in the wetted perimeter.

45. Sequence the work to minimize the duration of dewatering.

46. Isolate pump hose intakes with block nets so that fish cannot get near the intake.

47. The pump intake structure must have a fish screen installed, operated, and maintained in accordance with RCW 77.57.010 and 77.57.070. Screen the pump intake with one of the following:
a) Perforated plate: 0.094 inch (maximum opening diameter);
b) Profile bar: 0.069 inch (maximum width opening); or
c) Woven wire: 0.087 inch (maximum opening in the narrow direction).
The minimum open area for all types of fish screens is twenty-seven percent. The screened intake facility must have enough surface area to ensure that the velocity through the screen is less than 0.4 feet per second. Maintain fish screens to prevent injury or entrapment of fish.

48. The fish screen must remain in place whenever water is withdrawn from the stream through the pump intake.

49. Remove fish screens on dewatering pumps in the isolated work area only after all fish are safe and excluded from the work area.

FISH LIFE REMOVAL

50. All persons participating in capture and removal must have training, knowledge, and skills in the safe handling of fish life.

51. If personnel are available, the Washington Department of Fish and Wildlife and affected tribes may help capture and move fish life from the job site.

52. Place block nets upstream and downstream of the in-water work area before capturing and removing fish life.

53. Capture and safely move fish life from the work area to the nearest suitable free-flowing water.

54. All persons removing fish life from a job site must follow the protocol entitled Exhibit 7 Fish Salvage Plan-V2-MV 10 -04-2020 uploaded to APPS on October 6, 2020.

ASTROTURF AND CRUMB RUBBER REMOVAL

55. All astroturf and crumb rubber must be removed from within the temporary spillway using the methods outlined in the plan entitled "Electron Close Out Extension Request Sep 4 2020.pdf" uploaded to APPS on September 15, 2020.

56. All astroturf and crumb rubber removed from the temporary spillway area must be taken to a location above the 100 -year flood elevation of the river to be stored.

DEMOBILIZATION AND CLEANUP

57. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.

58. Return diverted water to the channel immediately downstream of the work area. Dissipate flow energy from the diversion to prevent scour or erosion of the channel and bank.

LOCATION #1:

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: October 15, 2020
Project End Date: September 15, 2021

Permit Number: 2018-6-256+05
FPA/Public Notice Number: N/A
Application ID: 14829

	Site Name: Electron Hydro Diversion 29711 Kapowsin-Electron Reservoir Rd, Orting, WA 98360					
WORK START:	October 15, 2020			WORK END:	September 15, 2021	
WRIA		Waterbody:			Tributary to:	
10 - Puyallup - White		Puyallup River			Puyallup River	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
NW 1/4	03	16 N	06 E	46.90554	-122.03974	Pierce
Location #1 Driving Directions						
Requires company escort due to numerous locked gates and access through other private property.						

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist
Elizabeth Bockstiegel

elizabeth.bockstiegel@dfw.wa.gov
360-480-2908

for Director
WDFW

Hydraulic Project Approval – Fish Ladder Monitoring & Reporting Requirements

HPA Permit Number: 2018-6-256+05 Application ID: 14829

FISH PASSAGE IMPROVEMENT

30. Rocks can be placed at the outlet of the fish ladder to create pools leading up to the first cell, and rock can be placed at the inlet of the fish ladder to direct flow. This rock must be removed at the end of construction for the diversion unless there are still fish passage concerns at the fish ladder.

31. Place the rock steps so that the drop between pools is a maximum of 12-inches vertical height.

32. Inspect the fish ladder for proper function **at least once a day** from October 15, 2020 through November 15, 2020. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

33. The fish ladder monitoring **must** include:

- Fish ladder monitoring must be conducted by a qualified fisheries biologist, hydrologist, or hydraulic engineer that has adequate experience with fish passage projects.
- The fish ladder must be monitored from October 15, 2020 to July 15, 2021.
- The fish ladder must be monitored **daily** from October 15, 2020 to November 15, 2020.
- The fish ladder must be monitored **once a week** from November 15, 2020 to July 15, 2020.

➡ **To Do**: Fish ladder monitoring reports must be **submitted weekly** to WDFW, emailed to HPAapplications@dfw.wa.gov. Include the APP ID in the email.

The fish ladder monitoring report must include the following FIVE (5) elements:

- Measure velocity (cfs) entering or leaving the fish ladder with a staff gauge or other flow measuring device, - Measure water surface drops from last cell to tailrace, they must be <12-inches (1 foot) and there must be adequate pools, - Document any debris at the intake or outlet that could impair flow in the ladder or prevent fish passage, - Document any attraction flow issues including fish jumping at the barrier/dam instead of the fish ladder - Document any fish observed using the fish ladder with a photo or video.

-**Reporting Fish Passage non-compliance**: Report instances where fish passage or the fish ladder require maintenance or repair, such as, but not limited to: - There are water surface drop at the fish ladder that prevent adult migration, - Debris issues that impact flow in the ladder or prevent fish from using the ladder, - There is a fish ladder outage and the ladder must intentionally be closed, if the outage will last longer than 48 hours, there must be a contingency plan for providing fish passage. If there are issues with fish passage or the fish ladder that require maintenance or repair, WDFW must be notified within 24 hours.

34. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

35. The owner must maintain the fish ladder to ensure it provides continued, unimpeded fish passage for the life of the project.

Hydraulic Project Approval – Cofferdam Removal and Fish Removal

HPA Permit #: 2018-6-256+05 Application ID: 14829 Oct. 15, 2020 – Oct. 28th 2020

IN-WATER WORK AREA ISOLATION USING A COFFERDAM STRUCTURE

42. Use a cofferdam, dike, or similar structure to exclude water from the work area.
43. Maintain water quality when installing and removing the cofferdam, dike or similar structure.
44. Install the cofferdam, dike or similar structure and remove fish prior to the start of other work in the wetted perimeter.
45. Sequence the work to minimize the duration of dewatering.

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46. Isolate pump hose intakes with block nets so that fish cannot get near the intake.

47. The pump intake structure must have a fish screen installed, operated, and maintained in accordance with RCW 77.57.010 and 77.57.070. (Cited on page 2.)

Screen the pump intake with one of the following:
a) Perforated plate: 0.094 inch (maximum opening diameter);
b) Profile bar: 0.069 inch (maximum width opening); or
c) Woven wire: 0.087 inch (maximum opening in the narrow direction).
The minimum open area for all types of fish screens is twenty-seven percent. The screened intake facility must have enough surface area to ensure that the velocity through the screen is less than **0.4 feet per second**. Maintain fish screens to prevent injury or entrapment of fish.

48. The fish screen must remain in place whenever water is withdrawn from the stream through the pump intake.
49. Remove fish screens on dewatering pumps in the isolated work area only after all fish are safe and excluded from the work area.

FISH LIFE REMOVAL

50. All persons participating in capture and removal must have training, knowledge, and skills in the safe handling of fish life.

51. If personnel are available, the Washington Department of Fish and Wildlife and affected tribes may help capture and move fish life from the job site.

52. Place block nets upstream and downstream of the in-water work area before capturing and removing fish life.

53. Capture and safely move fish life from the work area to the nearest suitable free-flowing water.

54. All persons removing fish life from a job site must follow the protocol entitled Exhibit 7 Fish Salvage Plan-V2-MV 10 -04-2020 uploaded to APPS on October 6, 2020.

RCW 77.57.010

Fish guards required on diversion devices—Penalties, remedies for failure.

(1) A diversion device [e.g. a trash pump] used for conducting water from a lake, river, or stream for any purpose shall be equipped with a fish guard approved by the director to prevent the passage of fish into the diversion device. The fish guard shall be maintained at all times when water is taken into the diversion device. The fish guards shall be installed at places and times prescribed by the director [WDFW] upon thirty days' notice to the owner of the diversion device.

(2) Each day the diversion device is not equipped with an approved fish guard is a separate offense. If within thirty days after notice to equip a diversion device the owner fails to do so, the director [WDFW] may take possession of the diversion device and close the device until it is properly equipped. Expenses incurred by the department constitute the value of a lien upon the diversion device and upon the real and personal property of the owner. Notice of the lien shall be filed and recorded in the office of the county auditor of the county in which the action is taken.

RCW 77.57.070

Diversion of water—Screen, bypass required.

(1) A person shall not divert water from a lake, river, or stream containing game fish unless the water diversion device [e.g. trash pump] is equipped at or near its intake with a fish guard or screen to prevent the passage of game fish into the device and, if necessary, with a means of returning game fish from immediately in front of the fish guard or screen to the waters of origin. A person who was, on June 11, 1947, otherwise lawfully diverting water from a lake, river, or stream shall not be deemed guilty of a violation of this section.

(2) Plans for the fish guard, screen, and bypass shall be approved by the director prior to construction. The installation shall be approved by the director prior to the diversion of water.

(3) The director or the director's designee may close a water diversion device operated in violation of this section and keep it closed until it is properly equipped with a fish guard, screen, or bypass.

Fish Ladder Monitoring Report Checklist – HPA APP ID # 14829

This checklist must be completed and submitted weekly to WDFW at HPAapplications@dfw.wa.gov

- Fish ladder monitoring must be conducted by a qualified fisheries biologist, hydrologist, or hydraulic engineer that has adequate experience with fish passage projects.
- The fish ladder must be monitored **daily** from October 15, 2020 to November 15, 2020.
- The fish ladder must be monitored **once a week** from November 15, 2020 to July 15, 2021.

Reporting Fish Passage non-compliance: *Report instances where fish passage or the fish ladder require maintenance or repair, such as, but not limited to: A water surface drop at the fish ladder that prevent adult migration; -Debris issues that impact flow in the ladder or prevent fish from using the ladder; -There is a fish ladder outage and the ladder must intentionally be closed. If the outage will last longer than 48 hours, there must be a contingency plan for providing fish passage.*

Monitoring Point	Condition of Monitoring Point & Action Taken
Velocity(cfs) entering/leaving fish ladder	
Height of water surface drop – Last Cell to Tailrace	
Debris at ladder intake: impairing flow or impeding fish passage?	
Debris at ladder outlet (downstream entrance): impairing flow or impeding passage?	
Any attraction flow issues? Fish observed jumping at barrier instead of ladder?	
Were any photos able to be taken of observed fish? How many fish were observed?	
Any additional site data collected? (weather, temperature, debris load, color of river water, etc)	
Do/did any issues of non-compliance require reporting to WDFW?	

Personnel Name & qualification _____

Date _____

Equipment and Personnel Needs for Cofferdam De-watering and Fish Exclusion
Required for compliance with HPA APP ID # 14829

Equipment Required:

-Two, 2" trash pumps
-6 hoses (for trash pumps)
-2 screens for trash pump intakes
2 full gasoline cans
Secondary containment
Spill kit

4 - 18-gallon rubbermaid totes
2 – 32 gallon totes
2 – fish tubes
4 – bucket bubble aerators
5 - white buckets with blue lids
2 - large adult dipnets

2 – 6' handled juvenile dipnets
6 – handheld aquarium nets
1 – 16' seine net
2 block nets (?)
Rebar stakes
Mallet

4 - carabiners/shackles
2 - ropes (for pulling up buckets by hand)
2 - Infinity straps

6 life vests
6 pairs waders, boots, rain jackets

Personnel Requested:

Zac Davis
Phillip (?)
Danny Kelly
Cole Munson
Bill (?)

Alternates:

Chuck (?)
Curtis (?)
Kevin (either one)

Staff will undergo 2 hours of fully-equipped training on best adult and juvenile fish handling practices, proper dipnet and handnet usage, seining techniques, and what to expect under different scenarios. The importance of handling fish as gently and returning them to the river as expediently as possible will be emphasized during this training.
Training will NOT be held the day of de-watering, but well in advance. Training will be scheduled on the day equipment is staged on the ladder side of the river, 2-3 days before de-watering begins. We may be able to utilize the large blue crane to bring materials and supplies to the other side of the river.

This list may be added to as the day of de-watering grows closer.

10/14/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Wednesday, October 14, 2020 6:17 AM
To: Thom Fischer
Cc: Corey Kleppe; Steve Goodrich; Chris Spens; Marcoe, Sheila (ECY); Eakens, Jess C. (ECY); Churchill, Jenae N CIV USARMY CENWS (US); Printz, Jacalen M CIV USARMY CENWS (US); Dave Risvold; Lentes, Gwendolen A (DFW); Bockstiegel, Elizabeth A (DFW)
Subject: Specifics for ELECTRON WQMP Addendum dated Oct??, 2020

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning Thom,
Thank you for the conversation regarding modifications to the Water Quality Monitoring Plan (WQMP). The details that are provided on the daily site logs are detailed and provide a lot of information, thank you. Sample timing has tapered off from the earlier submissions, and this is discussed in the requirements below. Thank you for submitting the daily site logs frequently. The additional sampling point #5 was detailed and managed well on the daily site log that was submitted for 10/9/2020, but this deserves language/text and documented on Figure 1 of the WQMP.

Based on changing site conditions a more comprehensive WQMP is required, this change will include timing for samples, reporting to Ecology, and modifications to the Daily Sampling Activity Site Log sheet.

The following items below must be included in your draft Addendum submitted to Ecology:

1) Cover page of the September 19, 2020 WQMP should reflect new date and Addendum title.
2) Changes to sampling locations must be on a map in the office adjacent to the construction site.
3) Add to the Oil and Grease section that all equipment containing fuel (found within the river's work zone) will be observed during the monitoring time. You may elect to have an additional individual frequently monitor around these pieces of equipment.
4) Monitoring Plan Section, include the following in the appropriate subsection:
    a. Recorded monitoring will occur at beginning of day, midday, and end of day.
    b. Additional documentation will include any unexpected occurrence of highly turbid water, or high pH laden water, or an oil sheen is observed. Provide a column dedicated for the unexpected on the Daily Sampling Activity Site Log sheet.
    c. Additional data will be entered (w/time) and specifics to the occurrence and data from associated sampling will be thoroughly documented on the Daily Sampling Activity Site Log sheet.
    d. Recent reported Sample Point #5 should be added to the map and a description added to the text of the WQMP that provides for this adaptive management. Also, add a description of Sample Point #4 to the Sampling Protocol.
5) Reporting:
    a. Submit Daily Sampling Activity Site Log within 24 hrs of completion.
    b. Continue to assign a consistent person to send daily reports to Ecology.
    c. ERTS must be reported for all exceedances to turbidity and pH; or a sheen in the river or adjacent to generators or fuel-containing equipment and sheen is seen in flowing water or if found on standing water in the construction zone.
    d. All reporting should be as soon as possible, please remove the "within 24 hours."
6) Daily Turbidity Sampling Activity Site Log needs to reflect all sampling, therefore, remove "Turbidity" from the WQMP blank example.
    a. Title on data sheets provided previously must match this title/name.
    b. Location must be reflected on the form you use, and the description of work performed (as it relates to work in the river -below ordinary high water).

c. Description on the log sheet would be appropriate location to document presence of sheen (location may be different than the sample point locations, and you must provide locations).

gain, thank you for the conversation and willingness to continue to provide the agencies specific details needed to understand the work being conducted in the riverbed environment. Please let me know if you have any questions about this email. I look forward to reviewing your modified WQMP.

Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

10/8/20

Adding Steve Goodrich to this email thread.

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Thursday, October 8, 2020 9:34 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>
Subject: Re: Intake Dailies

Good Morning Carol,

Please see attached data log for Oct 7th.

Thanks,

Corey

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Wednesday, October 7, 2020 10:56 AM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Chris Spens <cspens@tollhouseenergy.com>
Subject: Re: Intake Dailies

Carol,

Attached is October 6th data log.

You are requesting that I send you the data logs daily, as you know our Water Quality Monitoring Plan (WQMP) states a weekly submittal frequency, but I am happy to send you daily logs.

You can call the Chalet office number 253-655-3039. My mobile i Ex. 6 Personal Privacy (PP) (I do not have great cell coverage when on site). Usually best time to get ahold of me is around 12:00pm.
Also, during Ecology onsite visits going forward I will be there to participate with compliance inspections.

On Sept, 24,2020 all cover and secondary containment was in place. With activity on the site things change day to day and our philosophy for the crews is to exceed points of compliance, we have a culture of care here and it requires diligent efforts to maintain that. That said, we are working to cultivate all crews and newer employees to the Electron Hydro standard.

Also, for activity on Oct 6th, Thom spoke with you about moving a pump closer to the coffer dam where water seepage is occurring, this new pump location will improve overall dewatering for the site. Yesterday we moved a pump to the new location marked on the attached image. The water will be tested to ensure that water meets compliance prior to pumping back into river.

I am adding Chris Spens to this email thread.

Best Regards,

Corey

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Tuesday, October 6, 2020 5:11 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: RE: Intake Dailies

Good afternoon Corey,
Thank you for the reports (28Sept – 5Oct2020). I appreciate your assistance.

Would you please send these to me (daily) so the county will not need to be the shuffler of these reports. I need to ensure compliance with the Water Quality Monitoring Plan (WQMP) and water quality compliance. If I am unable to read something on the data log sheets, what is the best time to reach you by phone? And please provide the number. Thank you.

Additionally, the next time Ecology is onsite, you as the CESCL and the one who does the weekly site inspection reports will need to participate with the compliance inspection. Although we were assigned a guide through the Project, as I mentioned when we met, your job is the most important one to keep the site in compliance. For instance, I hope you are pointing out the secondary containment issues when you see them; your inspection report signed and dated 9/24/2020 states there was cover and secondary containment; both were not observed on 9/30/2020.

Call if you have questions or need technical assistance related to the Construction Stormwater General Permit or the WQMP.

Best regards,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Tuesday, October 6, 2020 4:50 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Intake Dailies

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link
Carol,

Please see attached for dailies from Sept 28 to Oct 5th.

Thanks,

Corey Kleppe

10/7/20

Hello Chris,

Upon initial review of the modification request documents for APP ID 14829 provided on 9/28/2020, it has been identified that additional information is required to process this application. A few comments to the provided materials have also been stated below. WDFW needs additional information regarding a few of the documents:

1. Provide the quantity of rock that will be placed in the river for the rock diversion structure in exhibit 1.
2. Provide the size and/or specs of the rock that will be placed.
3. WDFW has concerns over the use of large angular rock with clay backfill, as this may cause interstitial spacing that could injure out-migrating juvenile fish. Can well-graded streambed sediment be layered into the large angular rock as it is placed to try to seal some of the larger voids? This can be a discussion.
4. We need additional information and have the following comments about Exhibit 7, the fish salvage plan including:
    a. An HPA provision will require the fish rescue and relocation crew to have the training, knowledge, and skills in the safe handling of fish life. To ensure that this provision is followed adequately, prior to fish handling and/or transport, provide the list of fish handling crew qualifications and/or training.
    b. 5-gallon buckets are too small for adult salmon. Fish bags or tubes are recommended. Please provide an alternative transport method/tool and include sizing information about the proposed fish transport method/tool and provide a photo. The use of the fish transport method/tool requires WDFW approval.
    c. Adult fish must be released upstream of the diversion.
    d. People may not be able to hold the net in place if the flow is strong. Recommend having rebar stakes on hand as a contingency or use rebar stakes to hold the net in place.
    e. Please include details on how Electron will ensure that fish that are being transported maintain adequate water quality (examples include oxygen, temperature, pH) levels necessary for their survival during a relocation effort.
    f. An HPA provision will require that WDFW must be notified 3 days before the fish transport work is to be begin, so that WDFW has an opportunity to be out on site during the fish transport work.
5. Fish ladder monitoring
    a. WDFW is assessing requirements for this monitoring and information on this subject is forthcoming.

Date: **October 7, 2020**
To: **Electron Hydro**
From: **Shane Cherry**
Re: **Electron Hydro Diversion Repair and Spillway Replacement Project Recommendations to Minimize Potential Effects of the Temporary Spillway on Juvenile Fish**

I am writing to offer my perspective and suggestions on the construction of a temporary spillway at the Electron Hydro water intake diversion. I understand that Electron Hydro plans to construct a temporary spillway using large rock and aggregate material placed in the left side of the channel between a concrete center wall and the intake wall on the left bank. The temporary spillway will have approximate dimensions of 50 ft width and 2 ft depth, and it will be constructed using approximately 6,670 CY of rock with 40 percent of the material larger than 24" diameter. Regulatory agencies have expressed concern about the potential for out-migrating juvenile salmonids to become trapped in the crevices among the large rocks on the downstream side of the spillway structure. My recommendations below are intended to reduce the potential for impacts to out-migrating juvenile salmonids.

Flow velocities and shear forces on the riverbed at the temporary spillway would be extremely high (e.g. 15 – 20 feet/sec) during winter high flow events because of the localized channel constriction and steep local gradient over the spillway. Large rock material is necessary to minimize the potential for such high flows to damage or wash out the temporary spillway.

The network of deep cracks and crevices among the large rocks poses the greatest risk for trapping small fish on the downstream side of the temporary spillway. That risk may be greatly reduced (but not eliminated) by filling the cracks and crevices with smaller material during installation. Sand and gravel material placed during installation to fill the voids among the large rocks would eliminate most of the void space. The potential for trapping small fish would be reduced because any remaining crevices at the surface of the spillway would be shallow. Bedload transport of sand and gravel occurs frequently throughout the winter season given the availability of such material in the riverbed combined with the steep channel gradient and elevated flows. Some of the sand and gravel will be winnowed from the cracks among the large rocks over time. The depth of the surface voids will be variable over time in response to changing hydraulic conditions driving that winnowing process, and it will be variable depending on the orientation of each crevice with respect to flow direction. The constant supply of bedload will ensure that material removed by winnowing will be replaced by similar bedload material over time. While the potential effects on juvenile fish cannot be completely avoided, these measures will help to minimize the potential effects. Please contact me if you have questions or want to discuss anything written here.

SHANE CHERRY
Principal Scientist
239.313.7495 (desk)
425.218.9748 (mobile)
shaneconsulting@comcast.net

State of Washington
1180
Licensed Geologist
DAVID SHANE CHERRY

Electron Diversion Rock Materials Schedule 10/08/2020

1. Quantity of rock is estimated at 6,000 cubic yards broken down by components below.

Large Rock 24" and larger	2,220 cubic yards
River Rock (bedload)	1,050 cubic yards
Well Graded River Rock	610 cubic yards
Membrane Support Rock	240 cubic yards
Large Rock (toe anchor)	900 cubic yards
Steel Sheet Membrane	330 square yards

2. Description of materials and placement.
   - Large 2 to 4-man rock to be placed on the downstream side of the spillway. The top 24" can have 4"to 8" stream bed cobbles dumped and spread to fill voids and sand is allowed. Rock is to be placed in 36" lifts. Dumping may not to be used for placement of large rock, it must be fitted to interlock. Riverbed cobbles should meet WSDOT Standard Specifications 9-03.11(2).
   - Toe-key rock must be 4 to 7-man rock, or 48" to 72" rock, placed as rip rap individually is necessary to provide interlocking. Voids may be filled by dumping and spreading 4" to 8" river cobbles with bedload. Riverbed cobbles should meet WSDOT Standard Specifications 9-03.11(2).
   - Smaller rock from river bedload is to be placed upstream of the dam. Place in 24" to 36" lifts and compact with vibrating wheeled rollers. River bedload should be similar to sediment found in section 9-03.11(1).
   - Smaller rock well graded for placement under the steel sheets should be similar to "Streambed Sediment" with no material over 2.5"

Sieve Size	Percent Passing
2.5"	99-100
2"	65-95
1'	50-85
No. 4	26-44
No. 40	16 max
No. 200	5.0-9.0

   - Steel sheets are 0.375" thick ASTM A572 Grade 60 with not treatment for corrosion resistance.
3. Well graded bed load should be used to fill voids between the large angular rocks once they are placed. Bed load is expected to flow over the dam since it is a spillway.

This should provide some detail on the rock fill construction. Impermeable membranes used on the upstream face of spillway is a standard solution for rock filled temporary containment systems. Use of a steel sheet liner is preferred.

Prepared by: Steven P. Goodrich P.E.

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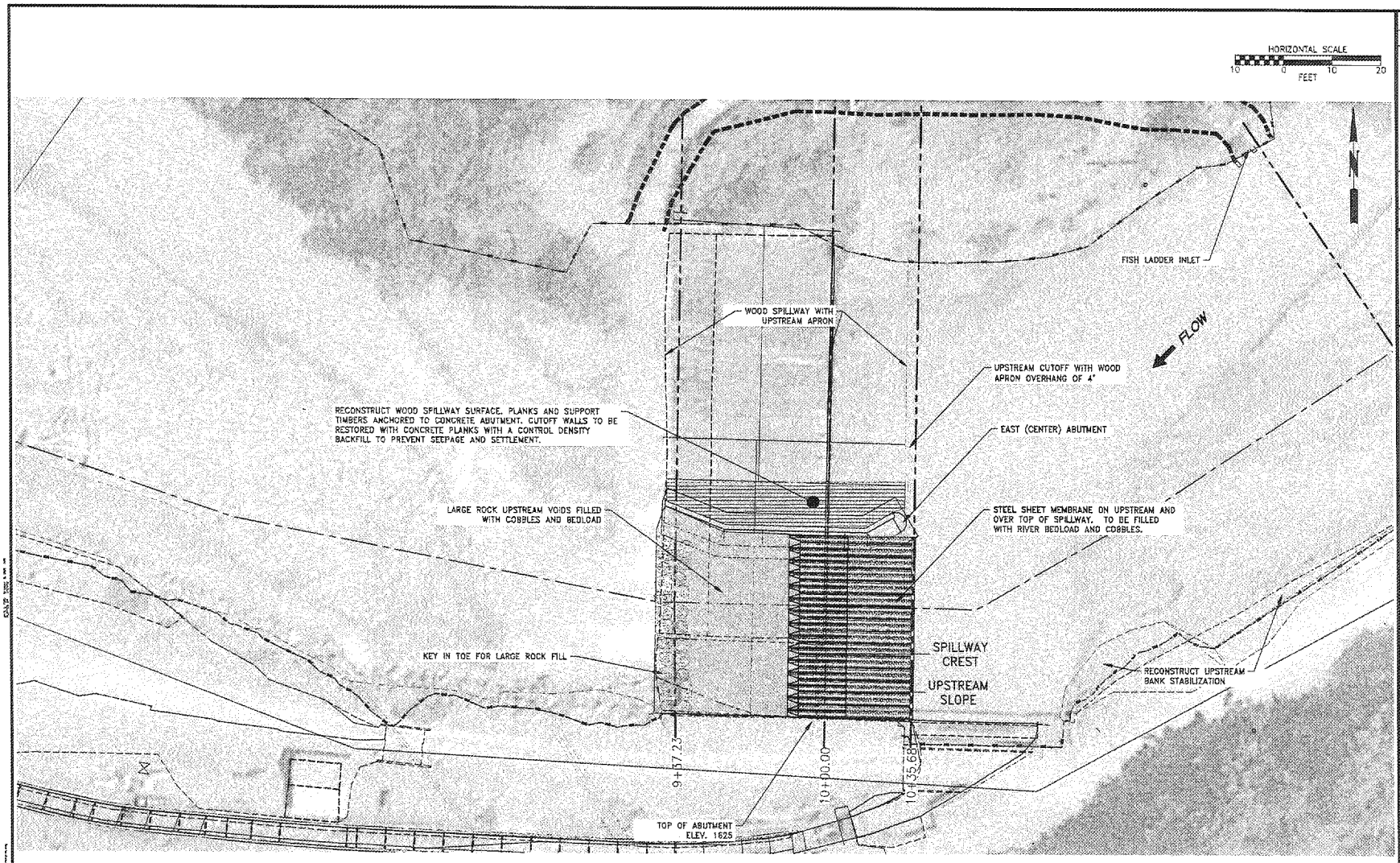


1/1 **PLANVIEW SPILLWAY AND ABUTMENT**
PLANVIEW 1"=40'

NOTE:
ENGINEER SMALL INSPECT LAYOUT, APPROVE MATERAILS AND CONSTRUCTION.

NO.	DATE	REVISION	BY	CK
1	10/8/20	STEEL SHEET PILE MEMBRANE	STC	
2				
3				
4				
5				
6				
7				
8				
9				

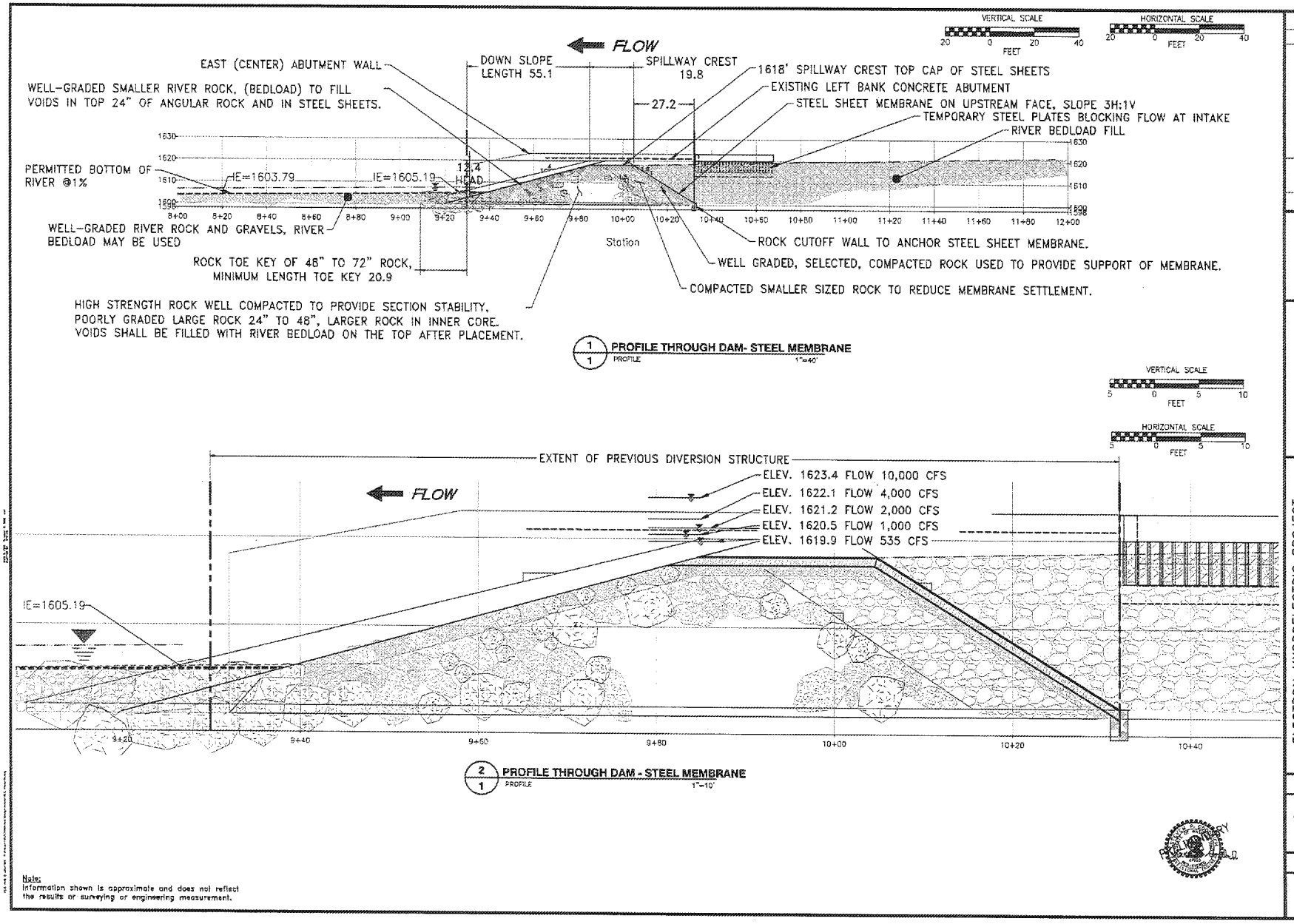
Electron HYDRO

ELECTRON HYDROELECTRIC PROJECT
DIVERSION ROCK SPILLWAY
PIERCE COUNTY WASHINGTON

SCALE: 1" = 40'
DESIGN:
DRAWN:
CHECKED:
DATE: 10/08/2020
JOB#: 11011900
SHEET 1 OF 3
DRAWING 1

EH-USA000384

ED_005624_00000045-00051

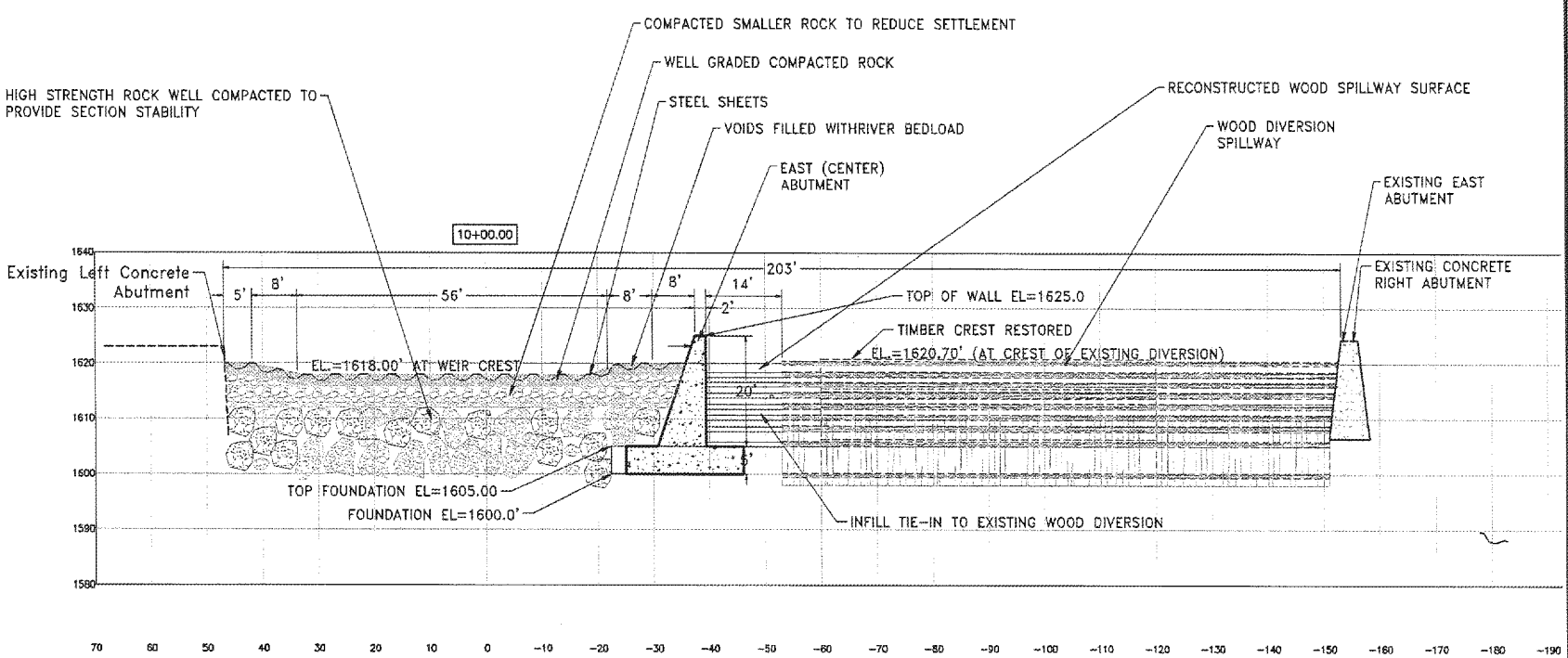


EH-USA000385

EH-USA000386

SECTION LOOKING UPSTREAM

HORIZONTAL SCALE
10 0 10 20
FEET



1/3 RIVER SECTION 12+66.43- CENTER OF ROCK SPILLWAY
SECTION 1"= 20'

Note:
Information shown is approximate and does not reflect the results or surveying or engineering measurement.

NO.	DATE	REVISION	BY	CK
9				
8				
7				
6				
5				
4				
3				
2	10/8/20	STEEL SHEET MEMBRANE SPILLWAY	SG	

Electron HYDRO

ELECTRON HYDROELECTRIC PROJECT
DIVERSION ROCK SPILLWAY
PIERCE COUNTY WASHINGTON

SCALE: 1" = 20'
DESIGN: SPC
DRAWN: SG
CHECKED: TAF
DATE: 9/23/2020
JOB#: 0/08/2020
SHEET 3 OF 3
DRAWING 3

ED_005624_00000045-00052

05/04/20

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Tuesday, October 6, 2020 5:11 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>
Subject: RE: Intake Dailies

Good afternoon Corey,
Thank you for the reports (28Sept – 5Oct2020). I appreciate your assistance.

Would you please send these to me (daily) so the county will not need to be the shuffler of these reports. I need to ensure compliance with the Water Quality Monitoring Plan (WQMP) and water quality compliance. If I am unable to read something on the data log sheets, what is the best time to reach you by phone? And please provide the number. Thank you.

Additionally, the next time Ecology is onsite, you as the CESCL and the one who does the weekly site inspection reports will need to participate with the compliance inspection. Although we were assigned a guide through the Project, as I mentioned when we met, your job is the most important one to keep the site in compliance. For instance, I hope you are pointing out the secondary containment issues when you see them; your inspection report signed and dated 9/24/2020 states there was cover and secondary containment; both were not observed on 9/30/2020.

Call if you have questions or need technical assistance related to the Construction Stormwater General Permit or the WQMP.

Best regards,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Tuesday, October 6, 2020 4:50 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>
Subject: Intake Dailies

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link
Carol,

Please see attached for dailies from Sept 28 to Oct 5th.

Thanks,

Corey Kleppe

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Monday, October 5, 2020 3:03 PM
To: Corey Kleppe
Cc: Thom Fischer; Jeff Huber; Eakens, Jess C. (ECY); Marcoe, Sheila (ECY); Dave Risvold
Subject: RE: Turbidity & PH Test 9/29/2020 1315

Importance: High

Good afternoon Corey,
Thank you for the email below, explaining the wild fluctuations in turbidity reflected in your data regarding sampling along the Puyallup River.

I request that you complete the documents completely. Your daily site data log sheets do not contain the row "Description of work performed" this should be filled in accordingly. An example to include would be when the large rock fell onto the concrete form on 30Sept2020. Any work within the Puyallup River bed, this includes the construction zone.

I have received these data sheets through 27Sept2020. I have not received 28Sept2020 through present. I am not sure if you will be sending these to Dave Risvold, I too will need to have the data log sheets closer to the days completed and signed.

Please call if you have any questions. Thank you.
Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

From: Corey Kleppe <coreykleppe@electronhydro.com>
Sent: Tuesday, September 29, 2020 1:21 PM
To: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>
Subject: Fw: Turbidity & PH Test 9/29/2020 1315

THIS EMAIL ORIGINATED FROM OUTSIDE THE WASHINGTON STATE EMAIL SYSTEM - Take caution not to open attachments or links unless you know the sender AND were expecting the attachment or the link
Hey Carol,

Thom informed me that you were wondering about our turbidity logs and the variation in NTUs. I am confident in how we are sampling for turbidity and pH, but for a third party reference I asked the independent environmental consultant Jeff Huber (Encore Environmental) who has been working on our

A note about how the river conditions over the last week:
The river has fluctuated over the past week, with a peak flow of 1,700 cfs from Sept 23rd to Sept 24th and today Sept 29th the most recent cfs reading was 326. During the period of peak flow Turbidity results for the river were over 1,000 NTU. Since then the cfs has dropped significantly, and as one would expect the river became significantly less turbid. In addition, our turbidity meter is calibrated weekly, last calibration was 9/25/2020.

Forwarded with this email is Jeff Huber's email with the results from his sampling for pH and Turbidity.

Do let me know if you have any further questions, and I would be happy to help.

Best Regards,

Corey Kleppe
19318 Electron Road E, Orting Wa 98360
Main: 360-761-1601 Extension 113 Cell: 808-859-5633 www.ElectronHydro.com

---

From: Jeff Huber <jeff@encoreenvironmental.com>
Sent: Tuesday, September 29, 2020 12:49 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Chris Spens <cspens@tollhouseenergy.com>; Dave Risvold <dave.risvold@piercecountywa.gov>
Subject: Turbidity & PH Test 9/29/2020 1315

Corey, per our conversation I went to the upstream sampling point and took a couple of PH & Turbidity tests.

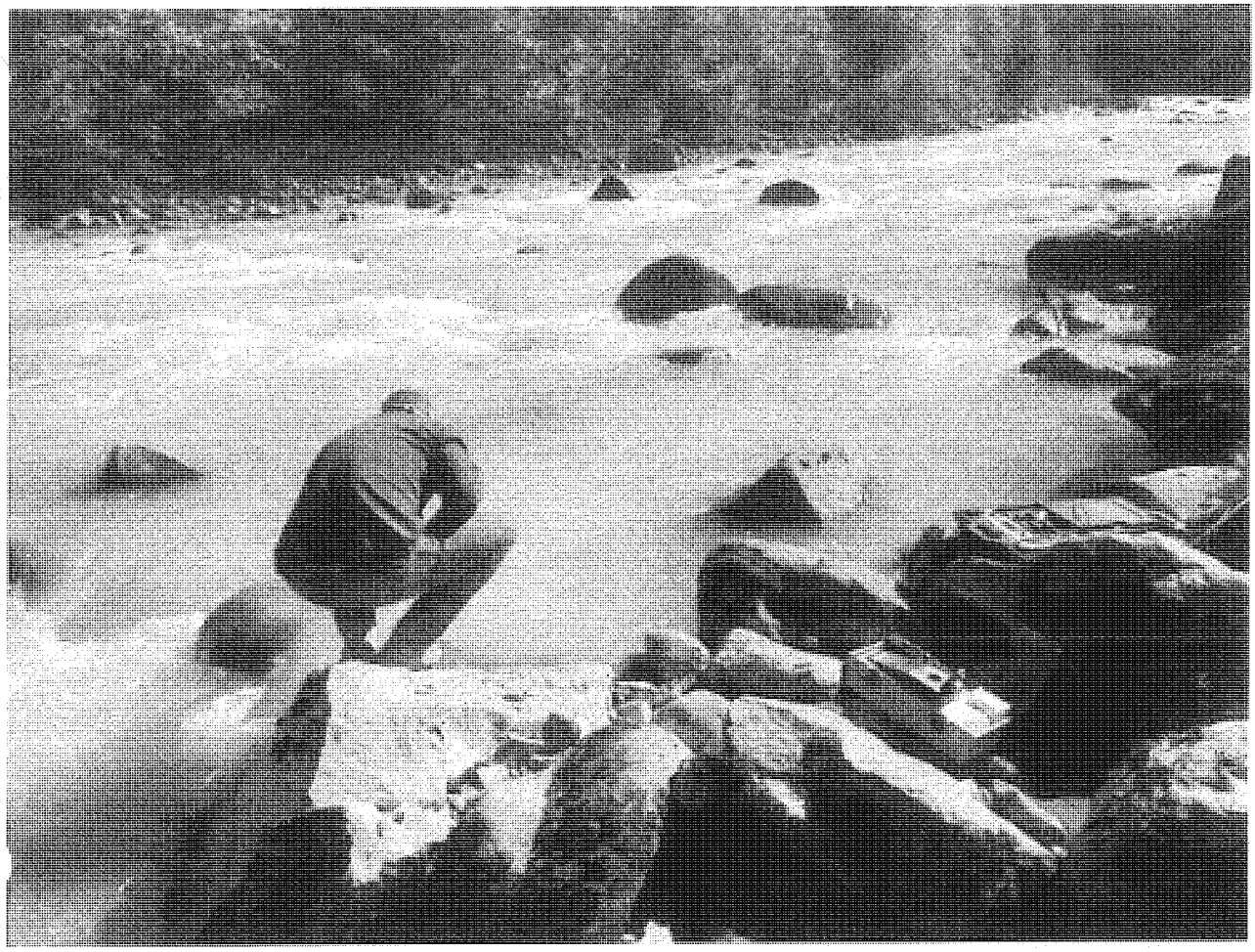
My results were as follows -

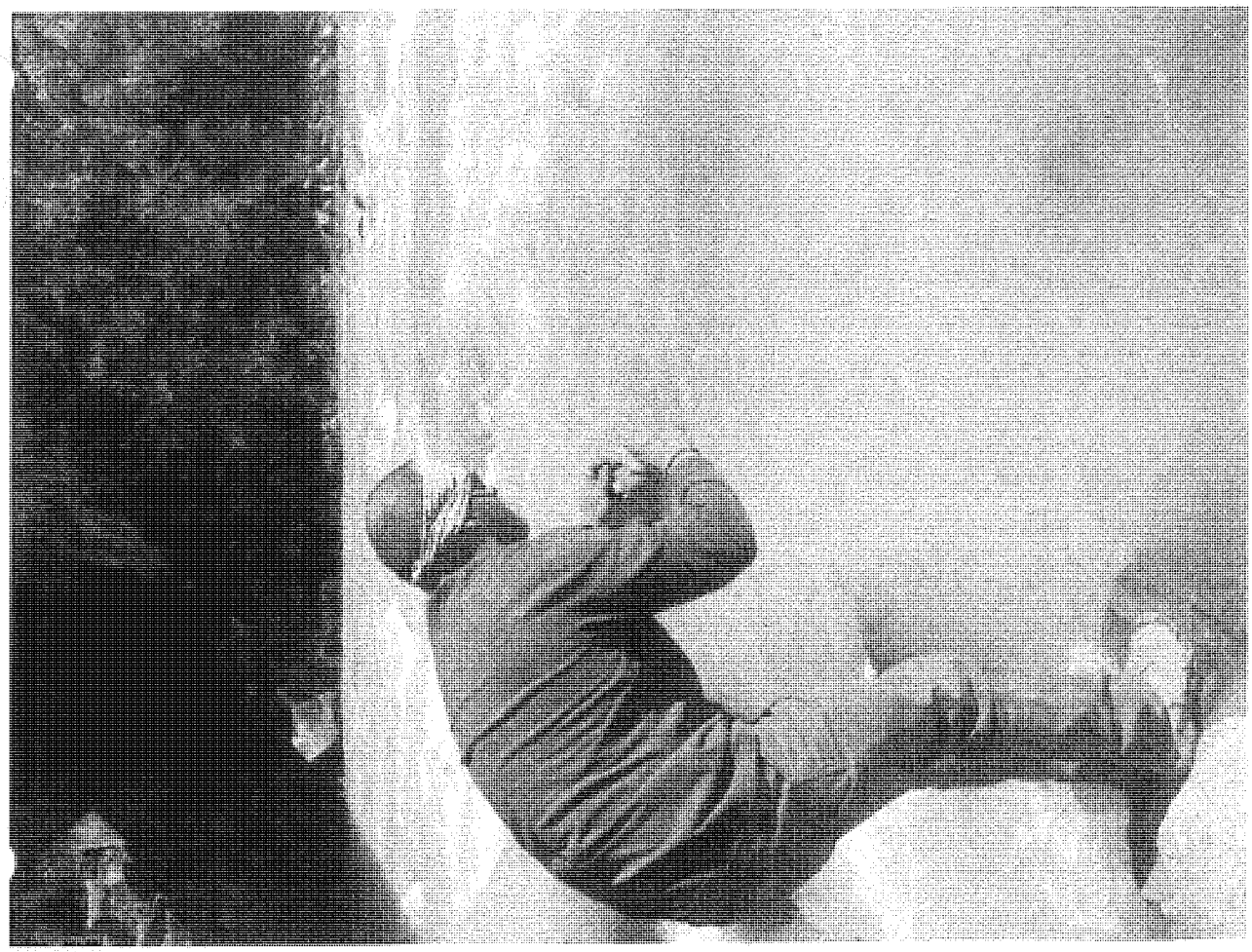
42.4 & 45.6 NTU's

PH 7.72

Weather at time of testing was 60 degrees and clear sky's.

Encore Environmental PH & Turbidity machines are calibrated weekly. The last calibration was done on 9/27 to both machines.





J. Jeffrey Huber
(360)-915-3414
Encore Environmental LLC
WBE /DBE Certified
www.encoreenvironmental.com

10/1/20

Jennifer Alefteras

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Thursday, October 1, 2020 9:41 AM
To: Corey Kleppe
Cc: Thom Fischer; Jeff Huber; Eakens, Jess C. (ECY); Marcoe, Sheila (ECY); Dave Risvold
Subject: RE: Turbidity & PH Test 9/29/2020 1315

Importance: High

Including Dave on this...

From: Serdar, Carol (ECY)
Sent: Thursday, October 1, 2020 9:40 AM
To: 'Corey Kleppe' <coreykleppe@electronhydro.com>
Cc: Thom Fischer <thom@Tollhouseenergy.com>; Jeff Huber <jeff@encoreenvironmental.com>; Eakens, Jess C. (ECY) <JEAK461@ECY.WA.GOV>; Marcoe, Sheila (ECY) <smar461@ECY.WA.GOV>
Subject: RE: Turbidity & PH Test 9/29/2020 1315
Importance: High

Corey,
When you are completing the data sheets with turbidity, ensure you have provided the details of the work being performed during that time. I should be able to see when the rocks below the fish ladder were installed, and that information was missing from the data sheets... Please completely fill in the data sheets.

Call if you have questions. Thank you.
Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

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Hey Carol,

Thom informed me that you were wondering about our turbidity logs and the variation in NTUs. I am

independent environmental consultant Jeff Huber (Encore Environmental) who has been working on our site, who is experienced in water quality, to test and sample the river.

A note about how the river conditions over the last week:
The river has fluctuated over the past week, with a peak flow of 1,700 cfs from Sept 23rd to Sept 24th and today Sept 29th the most recent cfs reading was 326. During the period of peak flow Turbidity results for the river were over 1,000 NTU. Since then the cfs has dropped significantly, and as one would expect the river became significantly less turbid. In addition, our turbidity meter is calibrated weekly, last calibration was 9/25/2020.

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Main: 360-761-1601 Extension 113 Cell: 808-859-5633 www.ElectronHydro.com

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Sent: Tuesday, September 29, 2020 12:49 PM
To: Corey Kleppe <coreykleppe@electronhydro.com>
Cc: Chris Spens <cspens@tollhouseenergy.com>; Dave Risvold <dave.risvold@piercecountywa.gov>
Subject: Turbidity & PH Test 9/29/2020 1315

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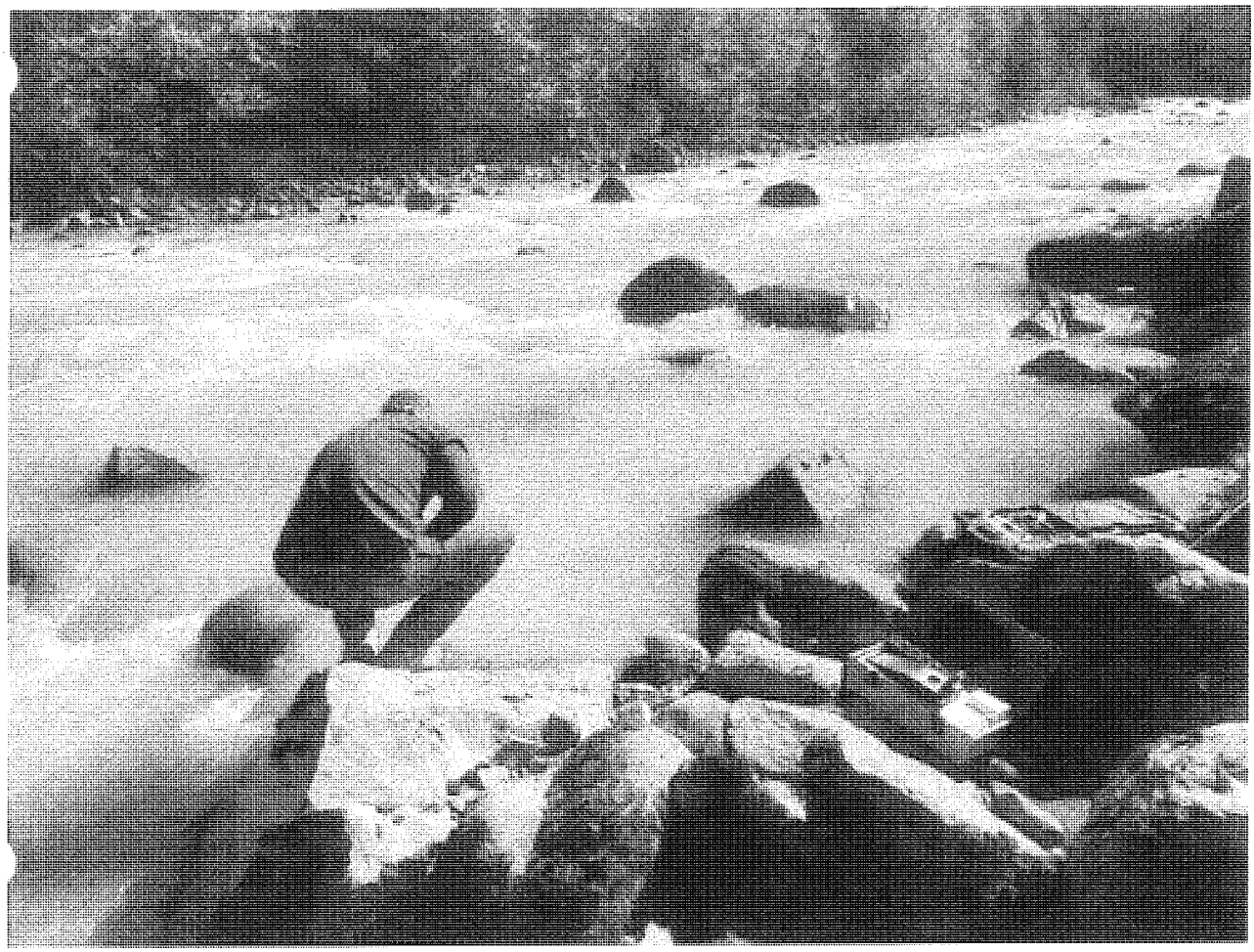

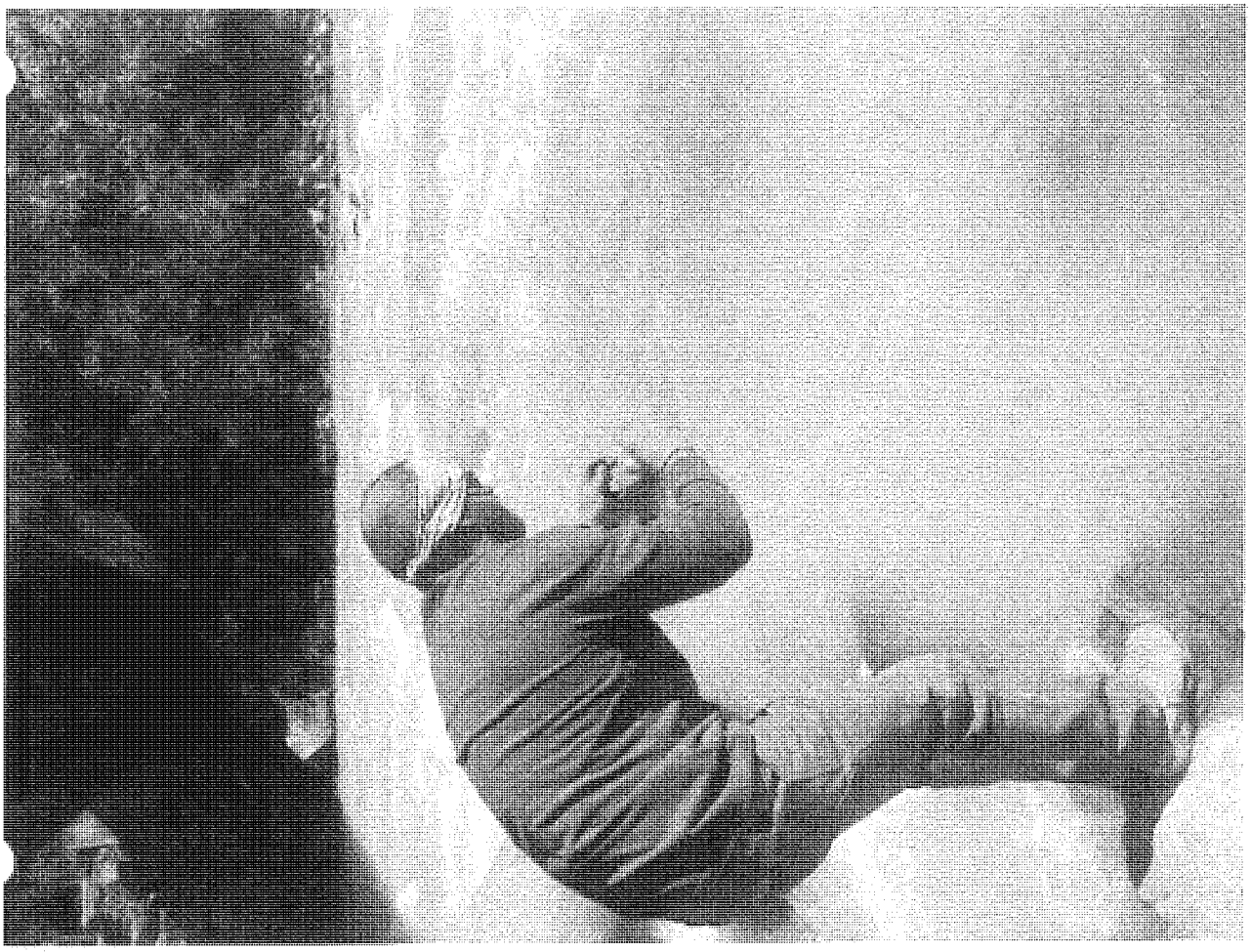

J. Jeffrey Huber
(360)-915-3414
Encore Environmental LLC
WBE /DBE Certified
www.encoreenvironmental.com

9/30

CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

Section A: General Data

Ecology Inspector(s): Carol Serdar, Jess Eakens	On-Site Representative Name: Chris Spens-Tollhouse Energy Company Title: Director, Regulatory & Environmental Affairs Phone: 360-746-3435 Email: cspens@tollhouseenergy.com	Inspection Date and Entry/Exit Time: Sep 30, 2020, 09:45/14:30	Inspection Type: Announced
		Receiving waters: Puyallup River	Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. The purpose of this inspection is to conduct a compliance inspection and to provide technical assistance as appropriate. Ecology had previously been to the site a few years' prior, during the JARPA review for the then proposed re-construction of the barrier dam and intake structure; and on 11 August 2020 in response to ERTS699710; and 17 August 2020 for a CSWGP compliance inspection; and 21 September 2020 partial CSWGP compliance inspection and response to ERTS 700385 and 700706.

This inspection incorporates a review of the CSWGP site, discussions and observations related to ERTS700385 (fish kill), and ERTS700706 (wetland filling). These two ERTS are not within or near the CSWGP site and have implications related to hydro operations. The two ERTS are included for ease of reference, and follow-up is occurring outside of the CSWGP. This report will incorporate the areas under CSWGP coverage only.

Carol Serdar and Jess Eakens met with Electron Hydro representatives Chris Spens, Steve Goodrich, and Thom Fischer at the hydro office where the paperwork review began, and then drove separately to various locations within the Electron Project.

Weather at time of inspection: Overcast and 70s
Precipitation in the past 24 hours? No

On-site Observations

SWPPP, SWPPP map, and Site Log Book all need to be updated. See violation messages below and Corrections Required Form.
Concrete stairs had been poured, and exposed and unworked soil on steep slope is stabilized. Water at base of staircase was sampled with a 6.5 pH (Ecology sampled) result.
Haul road gravel needs maintenance for stabilization; adjacent slope to the intake structure is stabilized with jute mat.
Work consisted of intake structure dewatering, with mitigation efforts to prevent water from travelling underneath hillside and entering the work area. Monitoring was being conducted 300ft downstream of construction activity.
Stormwater from the stormwater conveyance system is being dispersed into the "forested uplands" area. PH analysis was also conducted at this point, with a result of 6.5 (Ecology sampled).
Electron representatives confirmed that turbidity sampling will take place should full infiltration not be achieved.
There appeared to be a trickle of water entering the stormwater pond, but not discharging due to capacity. Ecology noted the need to fully plug the outlet pipe within the sediment trap.
Ecology did not observe any crumb rubber bits or pieces of sports turf.

Section C: Compliance
Note: See Corrections Required Form

Inspection Checklist

Is the Permit Coverage Letter on-site? ☑ Yes ☐ No	Is a copy of the CSWGP on-site? ☑ Yes ☐ No	Is the Site Log Book Current? ☐ Yes ☑ No	Is the Site Log Book Adequate? ☐ Yes ☑ No
Are Site Inspections Recorded? ☑ Yes ☐ No	Are Site Inspections Adequate? ☑ Yes ☐ No	Permittee has Prepared and Implemented a SWPPP? ☑ Yes ☐ No	Is the SWPPP Adequate? ☐ Yes ☑ No

Violations and action required to achieve compliance	Complete or submit date	Guidance
S4.A Site Log Book **Site Log Book should include WQMP and daily data sheets.** Failure to meet S4.A: The site maintenance log books are not adequate. Retain Plans and Records on site, or within reasonable access to the site for use by the operator or for on-site review by Ecology or the local jurisdiction.	**7 days** from the date of this inspection.	
S9.B SWPPP General Requirements **SWPPP must include accurate disturbed acreage (10 acres), correct Ecology contact info (Carol Serdar with SWRO), and all ERTS and responses.** Failure to meet S5.C. The Permittee must retain records of all monitoring information (site log book, sampling results, inspection reports/checklists, etc.), Stormwater Pollution Prevention Plan, copy of the permit coverage letter (including Transfer of Coverage documentation), and any other documentation of compliance with permit requirements for the entire life of the construction project and for a minimum of three years following the termination of permit coverage. **SWPPP must reflect all on-site BMPs, including infiltration BMPs, and BMP changes made to address the hydraulic fluid spills that occurred September 25th and 29th.** Failure to meet S9.B.1. Missing or incomplete 13 elements of S9.D.1-13, including BMPs used to address each element. Missing or incomplete construction phasing/sequence and general BMP implementation schedule. The SWPPP is not adequate. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of this inspection, per S9.B.2.a. **SWPPP map must reflect current BMPs, including the infiltration area, and BMPs used for hydraulic fluid spills that occurred on September 25th and 29th.** S9.E SWPPP – Map Contents and Requirements Failure to meet S9.E: SWPPP Map Contents and Requirements. S9.E.5: The SWPPP does not include locations of structural and nonstructural controls (BMPs) identified in the SWPPP. Review the SWPPP for compliance with Special Condition S9 and make appropriate revisions within 7 days of this inspection, per S9.B.2.a. The SWPPP map contents and requirements must be corrected to address these issue(s), per S9.E.	**7 days** from the date of this inspection.	Ecology's Stormwater Pollution Prevention Plan (SWPPP) template and SWMMWW Vol. II-3.2 SWPPP guidance.

check tanks

S9.D.9 Control Pollutants **Fuel tanks observed without proper/ effective secondary containment.** Failure to meet S9.D.9.b: Provide cover, containment, and protection from vandalism for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks must include secondary containment. Secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure. Doublewalled tanks do not require additional secondary containment. Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants, as set forth in permit conditions S1.D.1, S9.D.9.	Immediately begin. Address the problems **no later than 10 days** from the date of this inspection.	C151, C152, C153, C154, C250, C251, C252, C253
S9.D.11 Maintain BMPs **Unmaintained haul road stabilization, unmaintained secondary containment observed beneath fuel tanks, and unmaintained ditch check BMPs in "conveyance ditch."** Failure to meet S9.D.11.a: Permittee must maintain and repair all temporary and permanent erosion and sediment control BMPs as needed to assure continued performance of their intended function in accordance with BMP specifications. Maintain and repair all temporary and permanent BMPs, as set forth in permit condition S9.D.11.a.	Immediately begin. Address the problems **no later than 10 days** from the date of this inspection.	SWMMWW, Chapter II-4 Best Management Practices Standards and Specifications, C150, C160 C162

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Jess Eakens Date: October 7, 2020
Ecology Inspector (print name): Jess Eakens

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
SWRO Tel: 360-407-6300

Sediment depth 1/2 Depth sump

Haul road used constantly

All photos taken by Jess Eakens

Photo 1

Photo Description: SWPPP map located within staging area office- needs to be updated with all on-site BMPs

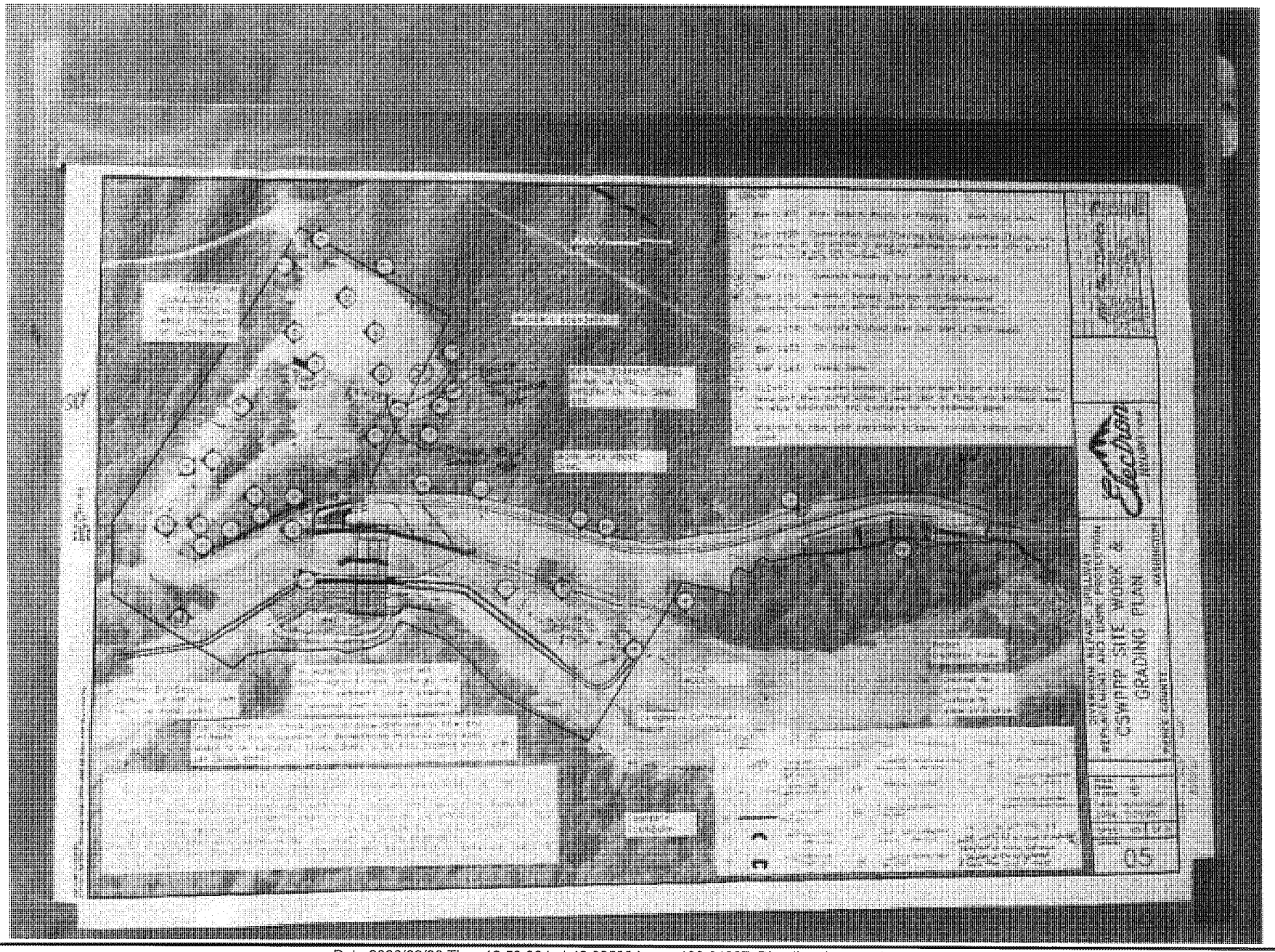

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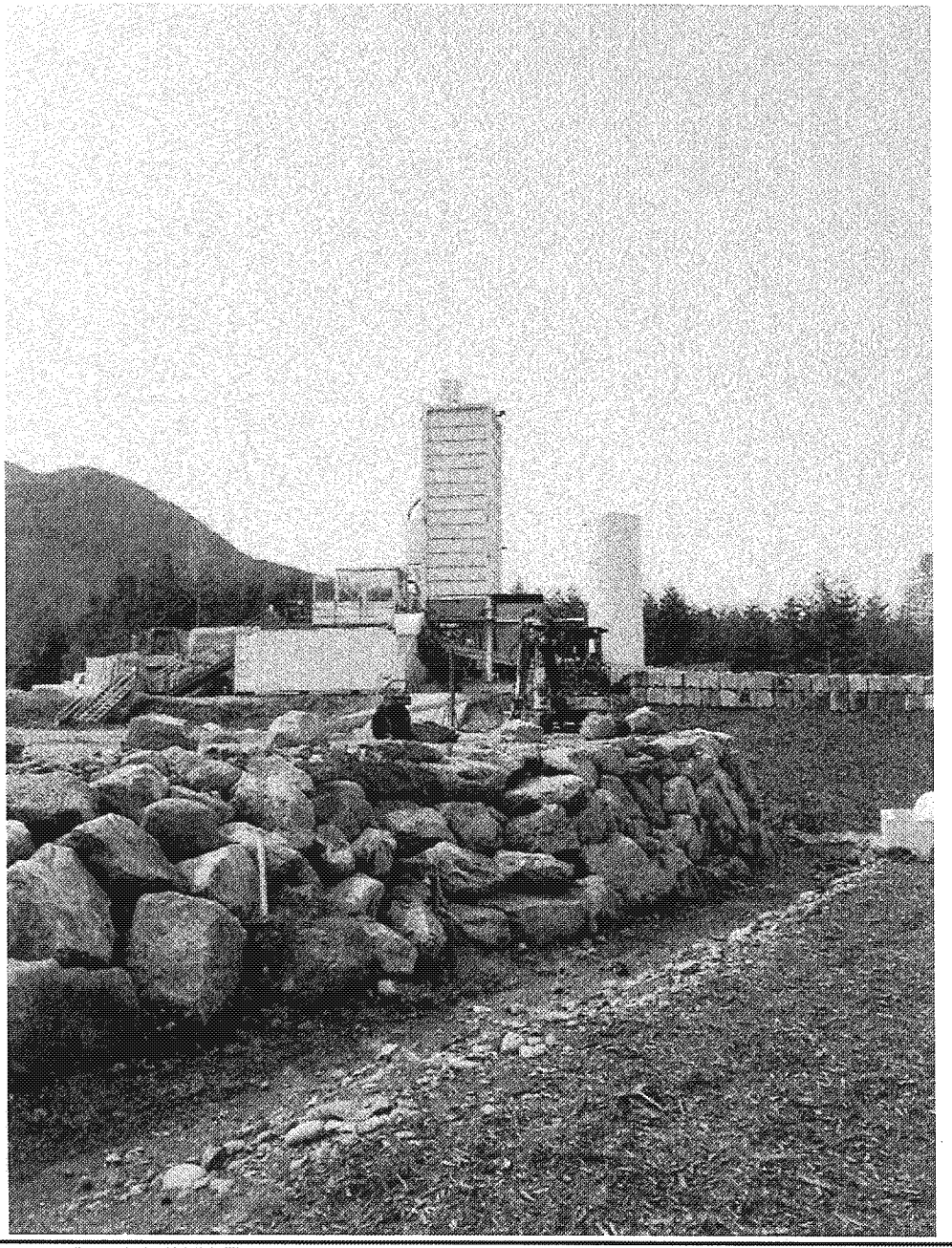
Photo 2

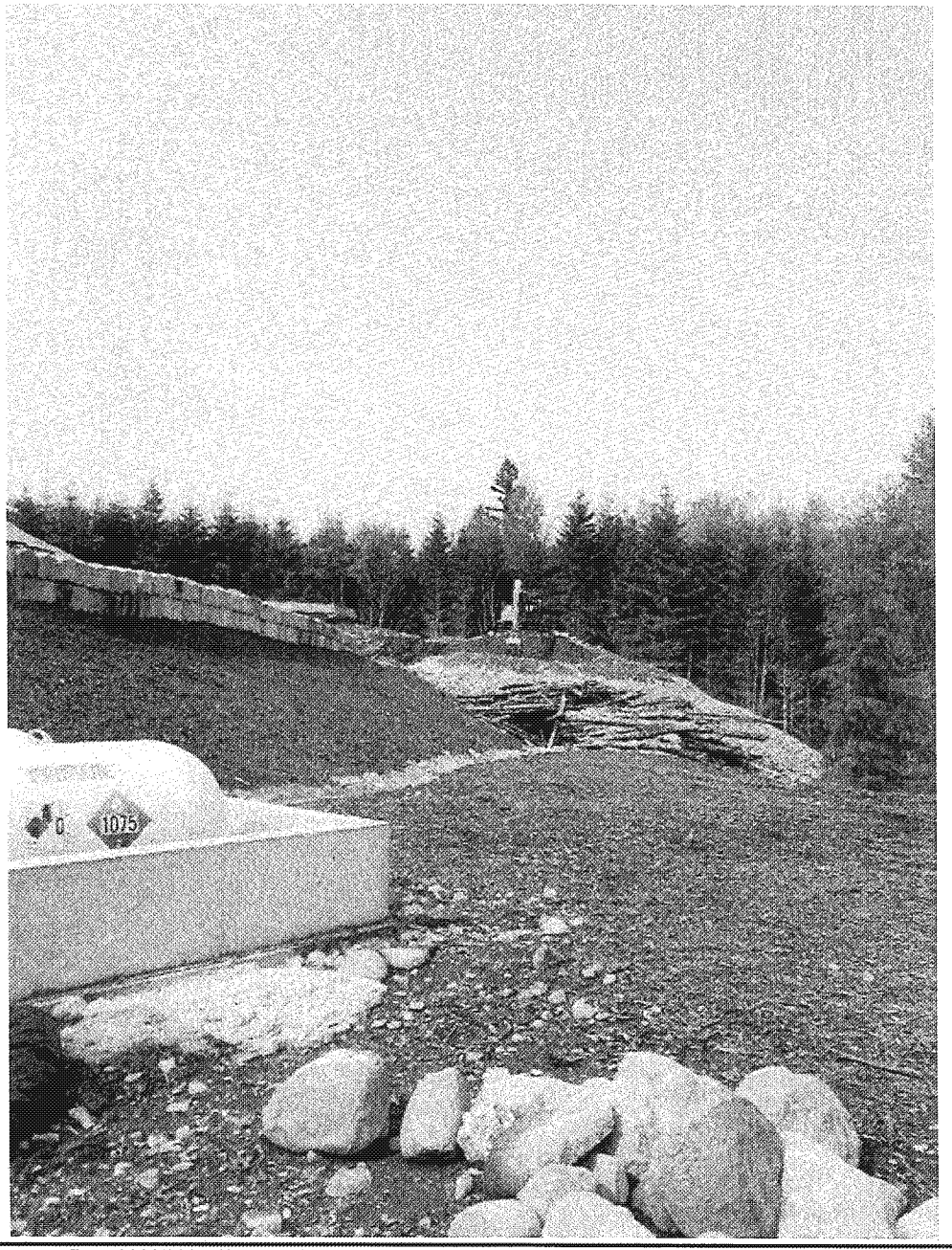
Photo Description: General upland staging area view



Date:2020/09/30 Time:12:51:19 Lat:46.9053 Long:-122.04042 Direction degrees:270.77008

Photo 3

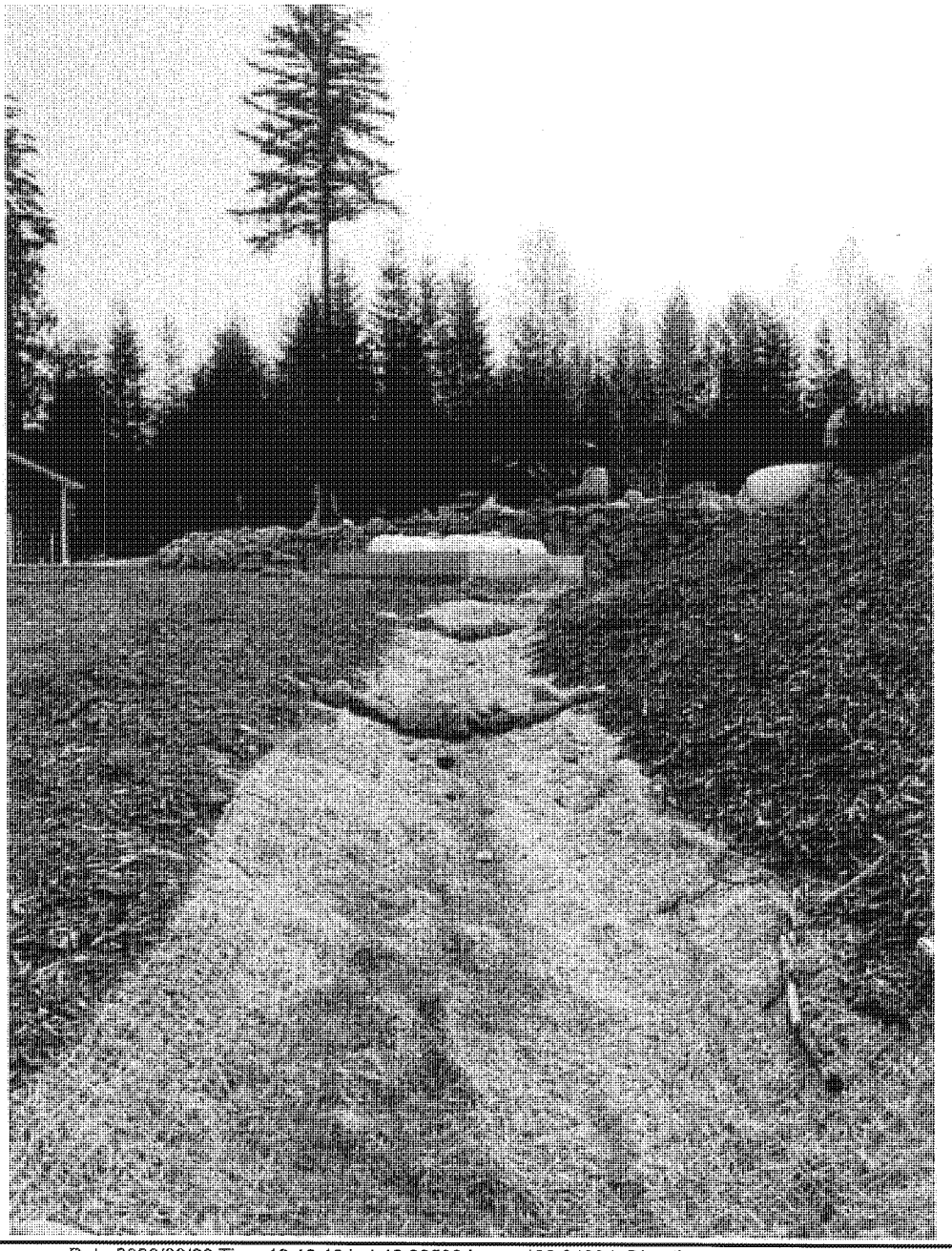
Photo Description: General upland staging area view



Date:2020/09/30 Time:13:10:58 Lat:46.90533 Long:-122.04053 Direction degrees:323.83197

Photo 4

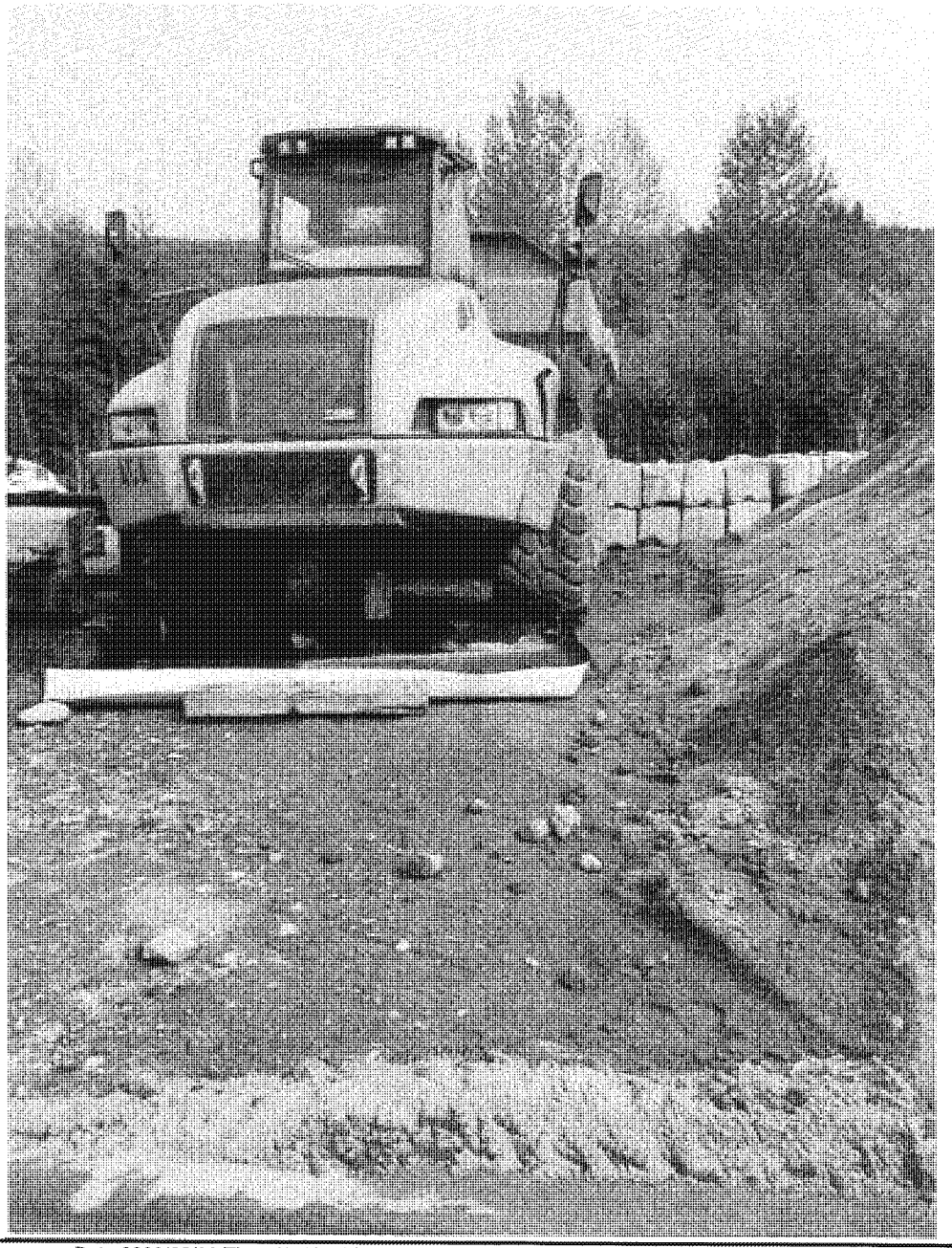
Photo Description: Plastic mesh should be removed prior to heavy rains. Potential conveyance channel for treated pH water.



Date:2020/09/30 Time:13:13:18 Lat:46.90563 Long:-122.04094 Direction degrees:153.40218

Photo 5

Photo Description: Unmaintained secondary containment



Date:2020/09/30 Time:13:16:41 Lat:46.90572 Long:-122.04127 Direction degrees:57.29525

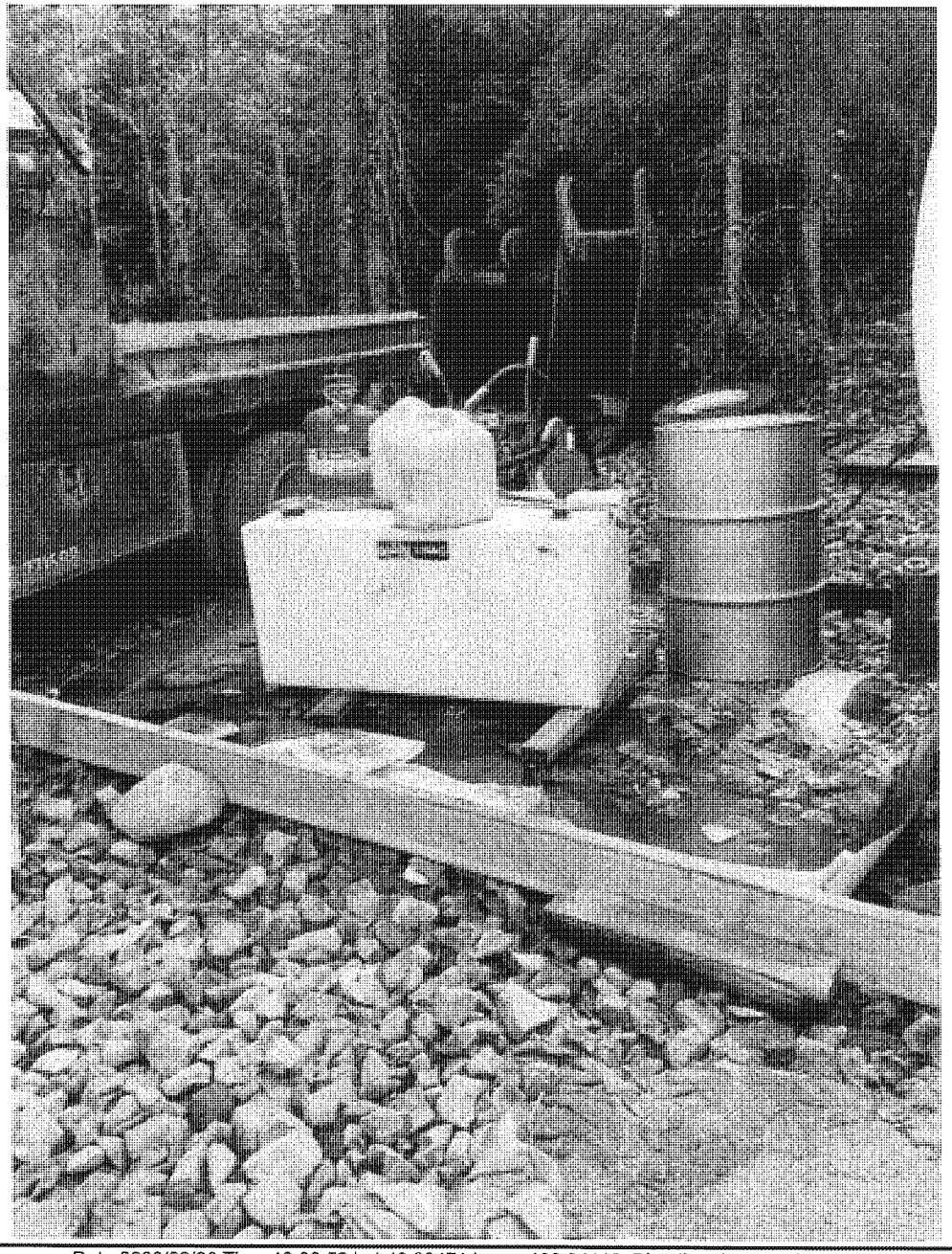
Photo 6

Photo Description: Active work area, fuel tanks without proper secondary containment in riverbed

Date:2020/09/30 Time:13:38:11

Photo 7

Photo Description: Secondary containment without 110% capacity and side walls need to be maintained.



Date:2020/09/30 Time:13:22:52 Lat:46.90471 Long:-122.04118 Direction degrees:146.33566

Photo 8

Photo Description: Concrete waste water treatment system- Thom Fischer demonstrated how CO2 sparging treatment system operates.

Date:2020/09/30 Time:13:24:37 Lat:46.90523 Long:-122.04077 Direction degrees:185.93329

Photo 9

Photo Description: pH sampling result at base of recently poured concrete staircase

Date:2020/09/30 Time:13:35:35 Lat:46.90563 Long:-122.03978 Direction degrees:266.55841

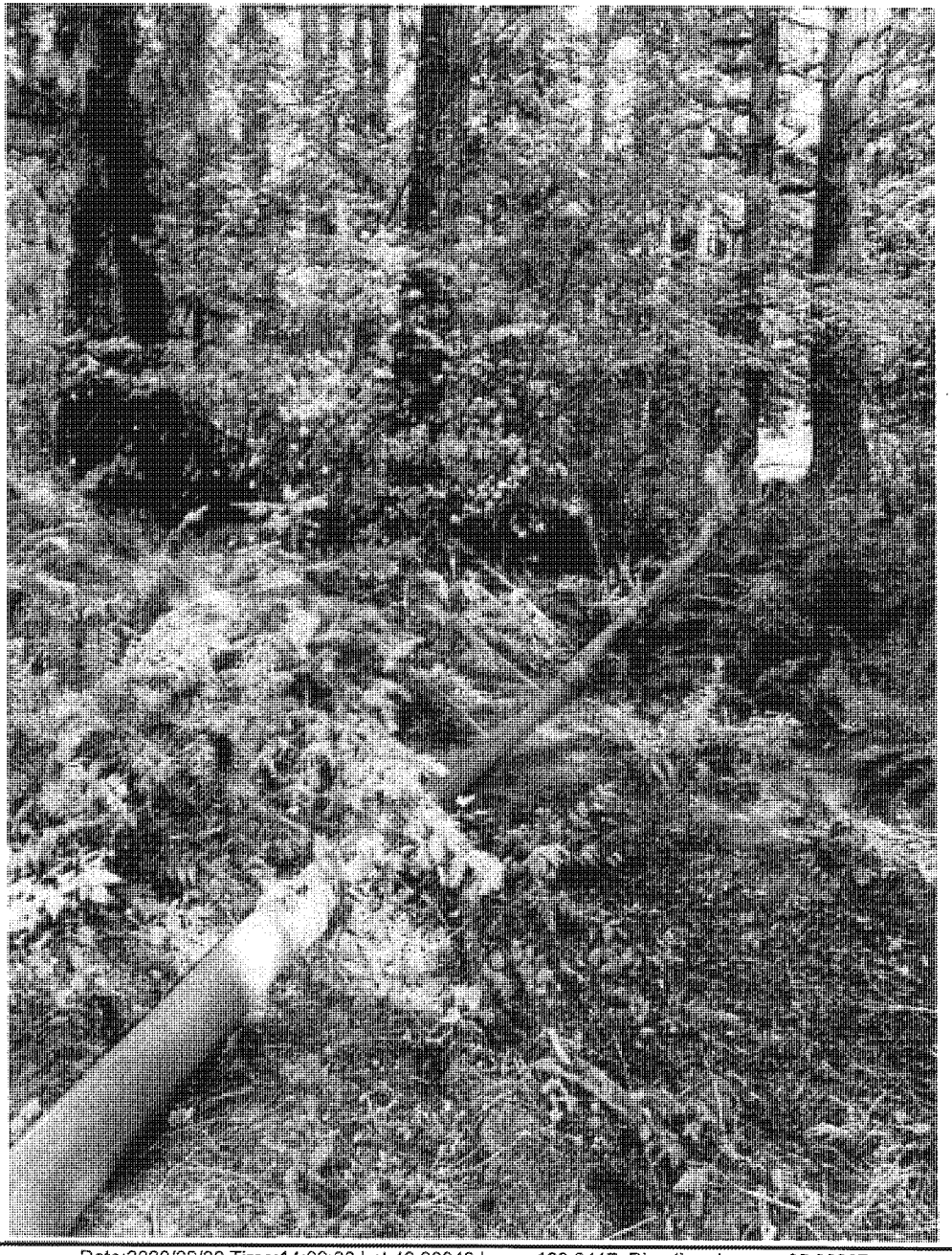
Photo 10

Photo Description: Stabilized slope, unmaintained haul road stabilization

Date:2020/09/30 Time:13:37:05 Lat:46.90566 Long:-122.03961 Direction degrees:114.00119

Photo 11

Photo Description: Forested uplands area where stormwater is infiltrated



Date:2020/09/30 Time:14:09:08 Lat:46.90848 Long:-122.0417 Direction degrees:65.96987

Photo 12

Photo Description: pH sampling result at forested uplands area

Date:2020/09/30 Time:14:10:56 Lat:46.90846 Long:-122.04152 Direction degrees:4.17676

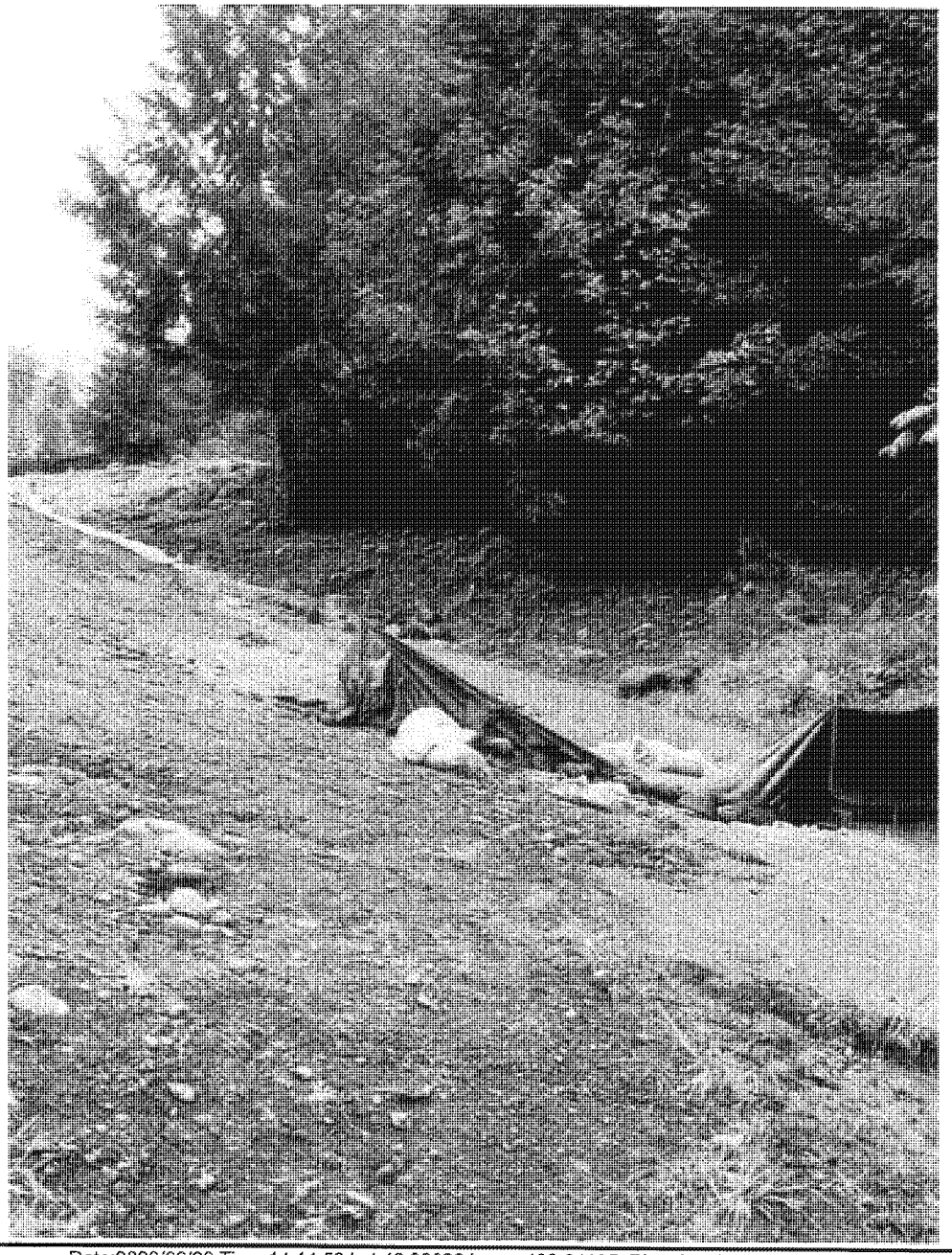
Photo 13

Photo Description: Sediment pond, no longer being utilized for stormwater management

Date:2020/09/30 Time:14:11:53 Lat:46.90847 Long:-122.04156 Direction degrees:310.86194

Photo 14

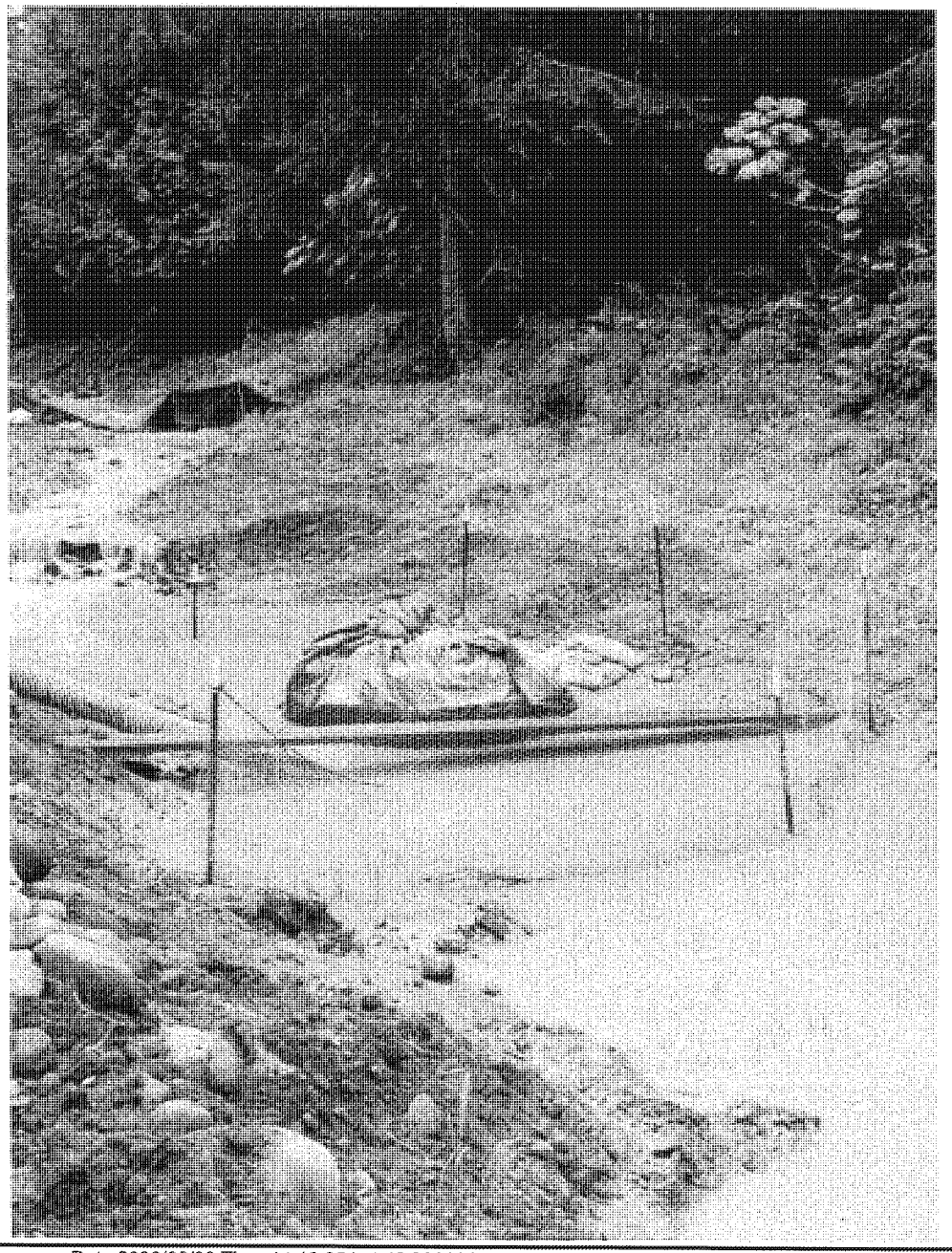
Photo Description: Unmaintained ditch checks in conveyance ditch leading to sediment trap



Date:2020/09/30 Time:14:14:59 Lat:46.90826 Long:-122.04195 Direction degrees:151.54778

Photo 15

Photo Description: Outlet pipe in sediment trap- covered, but plug needs to be checked and maintained



Date:2020/09/30 Time:14:16:25 Lat:46.90839 Long:-122.04202 Direction degrees:151.16135

9/30/20

DEPARTMENT OF ECOLOGY State of Washington

Water Quality Program
Corrections Required

Construction Stormwater General Permit (CSGP) ☒	Industrial Stormwater General Permit (ISGP) ☐	Sand and Gravel General Permit (S&G) ☐

Site name and location	Mailing address –
Electron Hydro LLC Intake, Orting WA	1800 James St. Suite 201 Bellingham WA 98225-4631 Phone: 360-738-9999
Site contact: Steven Goodrich	Permit #: WAR306648
Ecology inspector(s): Carol Serdar, Jess Eakens	Inspection date: 9/30/2020
Inspector phone: 360-742-9751; 360-791-5017 / FAX: 509-329-3570	E-mail: cser461@ecy.wa.gov
Notice of Penalty issued ☐ Yes ☒ No / Field Citation # N/A	Latitude and longitude *46.9052, -122.0408*

The Department of Ecology (Ecology) is responsible for overseeing environmental laws that protect human health and the environment in Washington. Ecology observed violations of Chapter 90.48 of the Revised Code of Washington (RCW), Chapter 173-226 of the Washington Administrative Code (WAC), Waste Discharge General Permit Program during this site visit. Violations observed are checked below.

Violation No.	Violation	Reason	Permit Condition
☐ 1	RCW 90.48.160	Operating or discharging without a permit (all)	Does not apply.
☐ 2	RCW 90.48.080	Polluting waters of the state (all)	
☐ 3	RCW 90.48.080	Polluting impaired waters, discharge exceeds 303(d) limit (CSGP and ISGP)	
☐ 4	WAC 173-201A or WAC 173-200	Violating Water Quality Standards *(List specific standard violated.)* (all)	
☐ 5	RCW 90.48.090	Denial or withdrawal of access (all)	
☐ 6	RCW 90.48.080, WAC 173-226-070	Process water discharge without treatment in lined impoundment (S&G)	
☐ 7	RCW 90.48.080, WAC 173-226-070	Failure to clean up oil spills or repair leaking equipment	
☐ 8	RCW 90.48.080, WAC 173-226-070	Cover or containment not provided for chemical or petroleum products (all)	
☐ 9	RCW 90.48.080, WAC 173-226-070	Corrective Action not taken (ISGP)	
☐ 10	RCW 90.48.080, WAC 173-226-070	No Stormwater Pollution Prevention Plan (SWPPP) (all)	
☒ 11	RCW 90.48.080, WAC 173-226-070	SWPPP does not meet permit requirements (all)	**S9.B.2**
☒ 12	RCW 90.48.080, WAC 173-226-070	☒ Not maintaining best management practices (BMPs) (all) ☒ Not implementing BMPs (all) ☒ Failure to modify SWPPP per permit or Dept. of Ecology Notice (all)	**S9.B.2, S9.D.9**
☐ 13	RCW 90.48.080, WAC 173-226-070	☐ BMPs not maintained per permit or Dept. of Ecology Notice (all) ☐ BMPs not implemented per permit or Dept. of Ecology Notice (all)	
☐ 14	RCW 90.48.080, WAC 173-226-070	☐ Inspections not completed as required by permit (CSGP and ISGP) ☐ Inspections do not comply with permit requirements (CSGP and ISGP)	
☐ 15	RCW 90.48.080, WAC 173-226-090	☐ Monitoring not conducted as required by permit (all) ☐ Sampling does not comply with permit requirements (all)	
☐ 16	RCW 90.48.080, WAC 173-226-070	☐ Not keeping site log book (CSGP and ISGP) ☐ Not keeping inspection reports or checklists (CSGP)	
☐ 17	RCW 90.48.080, WAC 173-226-090	☐ Did not telephone report turbidity greater than 250 NTU (CSGP), or threshold exceeded (ISGP) ☐ No Discharge Monitoring Reports available (all) ☐ Failure to notify Dept. of Ecology of noncompliance with permit requirement (all)	
☐ 18			

Violation No.	Observation(s) and action(s) required to achieve compliance. (see permit conditions)	Complete or Submit Date
11	SWPPP does not reflect current disturbed acreage, SWRO Ecology contact information, and does not include ERTS and responses, or WQMP and daily data sheets. (not previously documented)	
	TO DO: update SWPPP to 10 disturbed acres Ecology Contact should be SWRO- Carol Serdar at carol.serdar@ecy.wa.gov, or 360-742-9751 Ensure ERTS and responses are included in site log book Ensure WQMP and daily data sheets are included in site log book	10/14/2020
12	SWPPP and SWPPP map not being updated to reflect on-site conditions. (previously documented items)	
	TO DO: update SWPPP and SWPPP map to reflect all on-site BMPs including the infiltration area, and BMPs utilized for hydraulic fluid spill along haul road Send photos of "Control Pollutants" section of SWPPP once updated with hydraulic fluid spill BMPs.	10/14/2020
12	Fueling tanks without proper or effective secondary containment observed throughout site.	
	TO DO: Ensure that all fuel tanks have secondary containment with 110% of the volume of the largest tank within the containment structure. Maintain secondary containment as needed to ensure proper functionality. Send photos of CSWGP area where spills occurred on both 9/25/20 and 9/29/20.	10/16/2020

Instructions:

- These corrective action requirements are not an enforcement order and are **not appealable.**
- If a penalty accompanies these corrective action requirements, **the penalty is appealable.**
- **Appeal directions are on the back of the penalty.**
- Failure to comply with these corrective action requirements may result in enforcement action.

1. To comply with the water quality regulations, complete the actions identified in the table above.
2. If you have questions, contact Jess Eakens, Ecology inspector, at 360-791-5017.
3. To request an extension, **send a written request** to the Ecology inspector by 10/12/2020.

   Ecology will notify you if an extension is granted. Please include all of the following:
   - Reason extension is needed.
   - Steps already taken.
   - Description of work that remains to be completed.
   - Anticipated completion date.

Send required document(s) to the appropriate Ecology office:

Bellingham Field Office
1440 10th St Ste 102
Bellingham WA 98225
360-715-5200

Vancouver Field Office
2108 Grand Blvd
Vancouver WA 98661
360-690-7171

Central Regional Office
15 W Yakima Ave Ste 200
Yakima WA 98902
509-575-2490

Northwest Regional Office
3190 160th Ave SE
Bellevue WA 98008-5452
425-649-7000

Southwest Regional Office
PO Box 47775
Olympia WA 98504-7775
360-407-6300

Eastern Regional Office
4601 N Monroe
Spokane WA 99205-1295
509-329-3400

Ecology Inspector (signature): Jess Eakens Date: 10/7/2020

If you need this publication in an alternate format, call the Water Quality Program at 360-407-6722. Persons with hearing loss call 711 for the Washington Relay Service. Persons with a speech disability call 877-833-6341

Pierce County
Planning & Public Works

2401 South 35th Street, Room 2
Tacoma, Washington 98409-7460
piercecountywa.gov/ppw

Dennis Hanberg—Director
dennis.hanberg@piercecountywa.gov

September 28, 2020

Thom Fischer Electron Hydro LLC
1800 James Street Suite 201
Bellingham, WA 98225
thom@Tollhouseenergy.com

Subject: **Amendment to Stop Work Order**
Electron Hydro Facility Compliance, Shoreline Substantial Development
Permit Application 858766 and 858765

Mr. Fischer,

After consideration of your concerns and comments, the County regrettably concludes there is no reasonable alternative but to allow the temporary bed channel armoring presented in your September 4th plan. This armoring is needed to minimize headcutting and significant scour of the channel, loss of infrastructure along the left bank, and effective operation of the fish ladder.

As such, your proposal to temporarily place large rock in a portion of the western (left-looking downstream) roughly 300 feet in length (approximately 150 feet up and downstream from the centerline of the diversion structure footprint) is approved.

This temporary bed armoring is being allowed pursuant to PCC 18S.60.020 (4): "Emergency Construction necessary to protect property from damage". Such construction: "…. *does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the County to be an appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed, or any permit which would have been required absent an emergency, shall be obtained* (18S.60.020 (4) b- emphasis added).

Your September 4th Plan concludes this material will be needed through July of 2021, after which it is to be removed.

The County has previously provided permission to construct the abutment wall against the free floating end of the diversion crib. This wall was permitted as part of Substantial Development permit 858766.

Permission was also given to place heavy stone to create a step pool configuration that restores passage through the fish ladder (Item 4 of the County's September 11 letter). It is acknowledged that this will necessitate machinery in the wet channel. Please ensure water quality related concerns are addressed in your Water Quality Management Plan (WQMP).

The remaining items from our September 11 letter remain in effect, or have been revised as follows:

Item 2: Remove partially buried concrete culverts placed vertically and filled with rubble located in bladder dam foundation area.

Item 5-9: These five items pertain to the need to dewater the current active channel to allow for the removal of remaining astro-turf. These items remain requirements however, their sequence may be modified as you propose in your September 12 e-mail.

- You are not required to truck offsite the material in the Conex boxes. This is river bed material and it may remain onsite. The placement of this considerable volume of material within the channel or on the bank is a considerable source of concern in regards to water quality, Please ensure your WQMP addresses this and have your water quality monitor assess sediment plumes that result, both in proximity to the material and within a 300 foot distance downstream.
- It is acknowledged that machinery may have to be in-water in order to remove the turf and liner. Please refer to the preceding bullet point for WQMP and monitoring requirements.
- Turf and rubber crumb is to be removed and located to a secure site for future analysis. Your River Cleanup memo indicates a storage container has been established for this.
- Super sacks remain the preferred cofferdam mechanism. If you prefer to use existing bed material, as you currently do upstream of the Conex boxes, you may but, this will necessitate additional review by the Department of Fish and Wildlife and the Corps which will delay things.

Item 10: To further ensure protection of fish stocks, Electron Hydro shall block off (weld or bolt shut) the entrance to prevent any water from entering the flume until such time as measures approved by agencies with authority are in effect to prevent accidental entrapment of fish.

Item 11: Materials should be inventoried to ensure their complete removal from the river.

Item 12: Once the site is clean, crane sling out any super-sacks that are present.

Item 13: Encore Environmental is currently serving as an independent site monitor to oversee work. Encore staff are to be onsite whenever river channel related activities are underway. Specific monitoring tasks have been defined in the County's letter of September 23rd.

No one specific person from Encore is responsible for serving as the monitor. It is expected that a number of different persons will serve this purpose. Encore may engage the services of other qualified firms to assist with monitoring should they feel that to be necessary.

Item 14: Electron Hydro shall provide access to the Puyallup Tribe for monitoring at the Tribe's discretion and at any time.

The information provided in your September 4th letter, is sufficiently detailed for purposes of County approval of these emergency actions. They are not adequate for any future permitting.

Be advised, Electron Hydro remains obligated to obtain all applicable permits and approvals from other agencies, prior to commencing work.

Other agencies may require more detailed plans/description of the emergency work to occur and Electron Hydro is wholly responsible for coordination to that end. Electron Hydro is also solely responsible for Endangered Species Act coverage consultation and compliance with all environmental laws and regulations.

Please continue to communicate your next steps as we move forward in the process. If you have any questions, contact Dave Risvold at dave.risvold@piercecountywa.gov, 253-798-7036 (desk) or Ex. 6 Personal Privacy (PP) (cell).

Be advised that compliance with the mitigation requirements outlined above will not absolve Electron Hydro or any individuals or entities acting on its behalf from civil or criminal liability arising out of the environmental damage that has been caused by their actions.

Sincerely,

Melanie D. Halsan
Assistant Director, Planning and Public Works

EC: Bill Sterud, Chair, Puyallup Tribe
Doug Richardson, Chair, Pierce County Council
Don Anderson, Pierce County Executive's Office
Jacalen Printz, US Army Corps of Engineers
Carol Serdar, WA Department of Ecology
Chris Cziesla, Principal Marine/Fisheries Biologist, Confluence EC
Gwen Lentes, Program Manager Region 6, WA Department of Fish and Wildlife
Jeff Huber, Encore Environmental, LLC
Dennis Hanberg, Director, Pierce County Planning and Public Works
Todd Campbell, Prosecuting Attorney's Office
Chris Spens, cspens@tollhouseenergy.com

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: September 23, 2020
Project End Date: October 16, 2020

Permit Number: 2018-6-256+04
FPA/Public Notice Number: N/A
Application ID: 14829

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Electron Hydro, LLC	COMPANY Electron Hydro
ATTENTION: Thom Fischer	ATTENTION: Chris Spens
1800 James St	1800 James St
Bellingham, WA 98225	Bellingham, WA 98225-4631

Project Name: Electron Hydro Diversion Repair, Spillway Replacement and Bank Protection

Project Description: This major modification is approved for work items #1 and #2, as described in Pierce County's letter to Electron Hydro dated September 18, 2020. Work item #1 is the construction of the concrete abutment (east) wall only. This is intended to secure the left side of the wood diversion structure. Work item #2 is the placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that a piece of large machinery will need to cross the active channel.

These two work items are approved in this modification to the HPA and the in-water work window is September 23, 2020 - October 16, 2020.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between September 23, 2020 and October 16, 2020.

2. APPROVED WORK: The following work is approved: Construction of the concrete abutment (east) wall intended to secure the left side of the wood diversion structure. Placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that a piece of large machinery will need to cross the active channel.

3. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled "Electron Close Out Extension request Sep 4 2020", uploaded to APPS on September 15, 2020, "Fish Ladder Operation and Maintenance Plan", uploaded to APPS on August 27, 2020, "WQMP Sep 19, 2020" uploaded to APPS on September 22, 2020, the east/right abutment wall must be the only item constructed from the approved plan set "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018, except as modified by this Hydraulic Project Approval.

You must have a copy of these plans available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Follow Level 1 Decontamination protocol for low risk locations. Thoroughly remove visible dirt and organic debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets nd undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species. Properly dispose of any water and chemicals used to clean gear and equipment. For contaminated or high risk sites please refer to the Level 2 Decontamination protocol. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online at http://wdfw.wa.gov/publications/search.php?Cat=Aquatic Invasive Species.

NOTIFICATION REQUIREMENTS

5. PRE- AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting in-water work, and again within seven days after completing the in-water work each year of construction. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

6. DURING CONSTRUCTION: If there is any potential change to the allowable work that has been approved for the September 23, 2020 to October 16, 2020 in-water work window, the WDFW Area Habitat Biologist and the Assistant Regional Habitat Program Manager must be contacted and those changes must be approved.

7. ADDITIONAL WORK: The applicant must request to do any additional work through the submittal of a major modification to the HPA.

8. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

9. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

10. Use existing roadways or travel paths.

11. Limit the removal of native bankline vegetation to the minimum amount needed to construct the project.

12. Retain all natural habitat features on the bed or banks including large woody material and boulders. You may move these natural habitat features during construction but you must place them near the preproject location before leaving the job site.

13. Confine the use of equipment to the specific access and work corridor shown in the approved plans.

14. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

15. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

16. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

17. Equipment for placing the rock for the fish ladder must cross the Puyallup River in the most direct route and in a manner that does the least damage to the bed, streambank and streambank vegetation.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

18. Work in the dry watercourse (when no natural flow is occurring in the channel, or when flow is diverted around the job site).

19. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

20. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

21. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

22. You must route construction water (wastewater) from the project as shown in the approved construction wastewater plan "WQMP Sep 19 2020" uploaded to APPS on September 22, 2020. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.

23. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

CONSTRUCTION MATERIALS

24. Store all construction and deconstruction material in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

25. Do not stockpile construction material waterward of the ordinary high water line, except for excavated riverbed material.

26. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over wet concrete that ill come in contact with waters of the state. Forms and impervious materials must remain in place until the concrete is cured.

27. Do not use wood treated with oil-type preservatives (creosote, pentachlorophenol) in any hydraulic project. You may use wood treated with waterborne preservatives (ACZA, ACQ) provided the wood is approved by the Western Wood Preservers Institute for use in the aquatic environment. Any use of treated wood in the aquatic environment must follow guidelines and best management practices available at www.wwpinstitute.org.

EAST ABUTMENT

28. Only the installation the east abutment is approved as part of this HPA. No other elements of the dam structure are approved to be installed in this HPA. The east abutment must be constructed according to the plans and specifications in the document "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018.

FISH PASSAGE IMPROVEMENT

29. Rocks can be placed at the outlet of the fish ladder to create pools leading up to the first cell, and rock can be placed at the inlet of the fish ladder to direct flow. This rock must be removed at the end of construction for the diversion unless there are still fish passage concerns at the fish ladder.

30. Place the rock steps so that the drop between pools is a maximum of 12-inches vertical height.

31. Inspect the fish ladder for proper function at least once a day through the salmon and steelhead migration season. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

32. The owner must maintain the fish ladder to ensure it provides continued, unimpeded fish passage for the life of the project.

DEMOBILIZATION AND CLEANUP

33. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.

LOCATION #1: Site Name: Electron Hydro Diversion
, , WA

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: September 23, 2020
Project End Date: October 16, 2020

Permit Number: 2018-6-256+04
FPA/Public Notice Number: N/A
Application ID: 14829

WORK START:	September 23, 2020			WORK END:	October 16, 2020	
WRIA		Waterbody:			Tributary to:	
10 - Puyallup - White		Puyallup River			Puyallup River	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
NW 1/4	03	16 N	06 E	46.90554	-122.03974	Pierce
Location #1 Driving Directions						
Requires company escort due to numerous locked gates and access through other private property.						

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by ma to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	elizabeth.bockstiegel@dfw.wa.gov	El Bockstiegel	for Director
Elizabeth Bockstiegel	360-480-2908		WDFW

9/21

CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

Section A: General Data

Ecology Inspector(s): Carol Serdar Contaminated CSWGP Inspector Phone: 360.742.9751 Email: carolserdar@ecy.wa.gov	On-Site Representative Name: Thom Fischer Title: Electron Hydro LLC, permittee Additional Participants:	Inspection Date and Entry/Exit Time: 21 Sept 2020, 9:00/14:00 Receiving waters: Puyallup River	Inspection Type: ERTS and CSWGP review Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. Carol Serdar had previously been to the site a few years' prior, during the JARPA review for the then proposed re-construction of the barrier dam and intake structure; and on 11 August 2020 in response to ERTS699710; and 17 August 2020 for a CSWGP compliance inspection.

This inspection incorporates a review of the CSWGP site, discussions and observations related to ERTS700385 (fish kill), and ERTS700706 (wetland filling). These two ERTS are not within or near the CSWGP site and have implications related to hydro operations. The two ERTS are included for ease of reference, and follow-up will occur outside of the CSWGP.

Carol met with Electron Hydro representative Thom Fischer at the hydro office then drove separately to various locations within the Electron Project.

Weather at time of inspection: overcast and 60s

Precipitation in the past 24 hours?

☑ Yes

☐ No

On site observations:

Forebay:

Excavation of sediment from forebay appears to be 15-20 feet thick in some areas of removal; sediment composition is very fine clay. The material is stockpiled in an area adjacent to the maintenance yard at the forebay. Jerry, an Electron employee, met up with Thom and Carol and walked around the stockpile of sediment removed from the forebay. Straw has been applied (some areas need more) to the side slopes of the stockpile; discussed SWMMWW BMP specifics and seeding should be applied now as well as on the top of stockpile. There was no discharge from the area with the stockpile. Area around the stockpile has been clearcut for placement of additional fines. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

ERTS7007006 was explained that the fish were trapped in the ponds as the water receded during dewatering.

Carol thought ERTS700385 related to wetland filling may have been at this portion of the Project. Thom reported there were no wetlands in the area of the stockpile or within the proposed expansion area.

Current work was being performed at the entrance to the forebay; flume connection to the forebay has been widened to direct flow of water toward the fish collection area. Entrance to the penstocks (concrete basin) was being cleaned out. (Unsure where water goes from this cleaning)

Discussed the need for monitoring of turbidity downstream of the powerhouse in the Puyallup River. Monitoring is needed to understand if the dewatering of the forebay and sediment maintenance creates a turbidity exceedance. This may occur when the penstocks fill with water and generation begins. (Unsure of current status of what is in the penstocks now)

Settling Basin:

The Settling Basin was essentially dry, some standing water in bottom from recent rain. When flume is carrying water into the basin, the basin is wider and about 1300 feet long which slows water and settles bedload (cobbles, sand, clay); while water is focused through the settling basin, an excavator removes sediment from the settling basin and piles sediment along the basin, then a bulldozer spreads the material out over the basin yard; sediment composition is sandy to coarse sand, with some fine clay. No excavator present. At the entrance of the settling basin, there was a pile of fist-sized cobbles that had dropped out of the suspended bedload as the velocity slowed. Thom explained this is the same practice PSE was using when he purchased the Project in November 2014.

Carol asked about ERTS700385 related to wetland filling may have been in this portion of the Project. Based on satellite imagining it appeared that a lot of ground was covered with the sediment excavated out of the settling basin. Thom did not believe there were any wetlands filled in the area of the sediment application.

The area of filling is extensive and the edge has a very large, concave, deep-seated landslide that failed in January - February 2020 storm events. Thom was unsure if this failure discharged into the Puyallup River. Carol expressed that she will need to walk to the river, another day.

CSWGP area:

SWPPP map on wall of office at intake structure, it needs to be updated with all additions and removals of BMPs.

Concrete stairs had been poured, and exposed and unworked soil on steep slope is now stabilized.

Haul road has been stabilized with gravel; adjacent slope to the intake structure had been previously exposed and unworked, has been stabilized with jute mat; discussed potential for need of additional BMP if stormwater rills the slope. Survey work of river bed was in progress. Discussed movement of rock and sediment used in construction around the site.

Stormwater pond has been disconnected to the stormwater conveyance system.

Walked along the river's edge for about 100 feet, Carol did not observe any crumb rubber bits or pieces of sports turf. It was not feasible to drive to other side of the river to observe ground around the fish ladder.

Post inspection conversations:
After closer review of ERTS700385 and confirmation from complainant the wetland is found south of the forebay. Thom and Carol reviewed this location over phone while looking at Google maps. Carol will observe the wetland and trench to the south of the forebay on 30 September 2020 compliance inspection and Project site visit.

Section C: Compliance

Note: 21Sept2020 site visit includes small review of CSWGP area; site visit includes area outside CSWGP area this includes ERTS700385 and ERTS700706

Inspection Checklist

This was not a complete CSWGP compliance inspection; observed the SWPPP map (not completely up-to-date), the remaining CSWGP paperwork was not reviewed.

Violations and action required to achieve compliance	Complete or submit date	Guidance
No current compliance actions for the CSWGP. This report includes information related to two ERTS that are not within the CSWGP footprint, which will require follow up.		

ADDITIONAL RESOURCES FOR COMPLIANCE:

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 (or 2019) Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Carol Serdar Date: 8 September 2020
Ecology Inspector (print name): Carol Serdar

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
SWRO Tel: 360-407-6300

All photos taken by Carol Serdar

Photo 1

Photo Description: Forebay area – flume enters forebay at the right, behind large rocks.

Date:2020/09/21

Photo 2

Photo Description: Forebay area – forebay, recent rain added more fines.

Date:2020/09/21

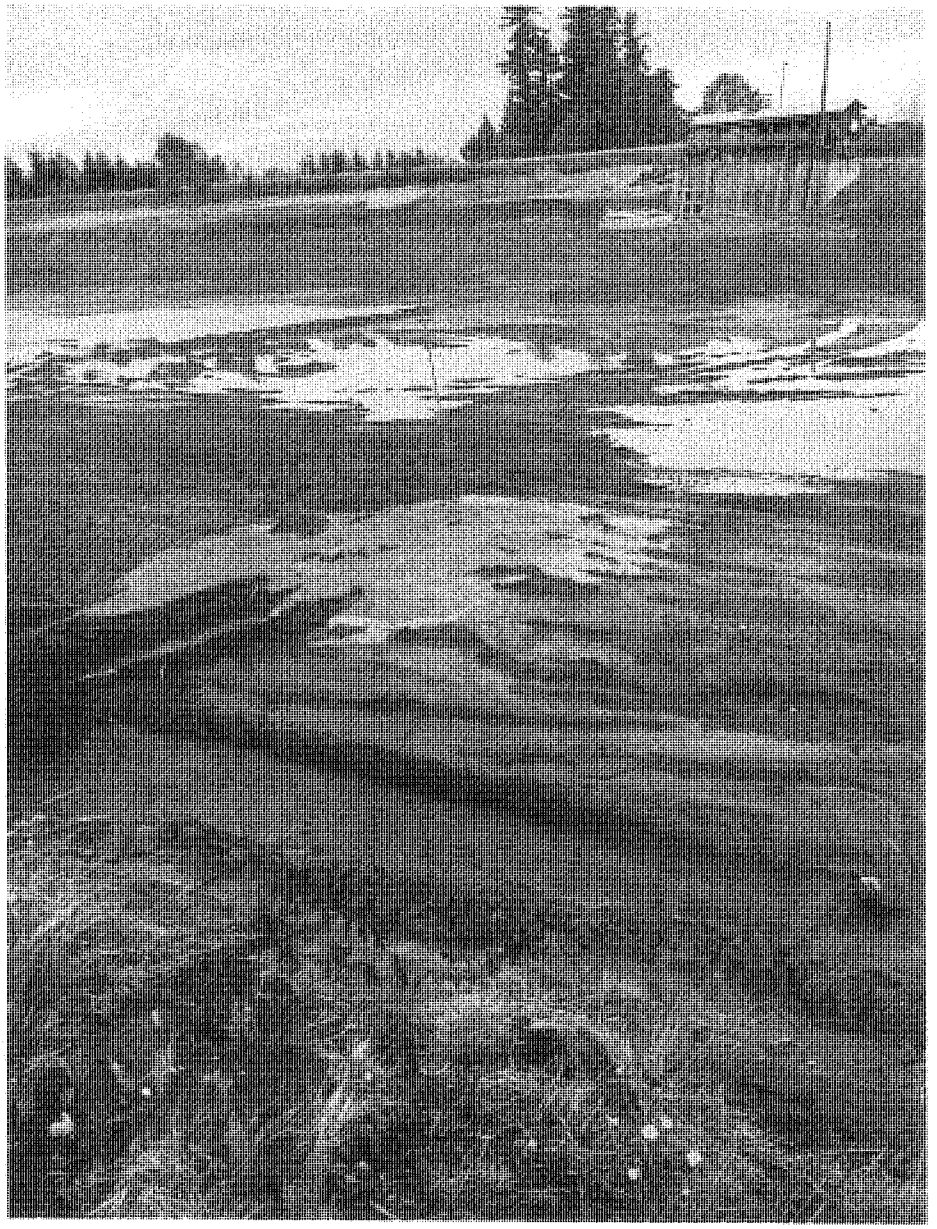
Photo 3

Photo Description: Forebay area – forebay, recent rain added more fines; fish collection facility on left of photo.

Date:2020/09/21

Photo 4

Photo Description: Forebay area – forebay, recent rain added more fines.



Date:2020/09/21

Photo 5

Photo Description: Forebay area – fine sediment excavated from the dewatered forebay and stockpiled near the forebay.

Date:2020/09/21

Photo 6

Photo Description: Forebay area – fine sediment stockpiled, forebay located in front of the satellite tower in mid-photo.

Date:2020/09/21

Photo 7

Photo Description: Forebay area – fine sediment stockpiled and straw had been applied; some areas need additional straw.

Date:2020/09/21

Photo 8

Photo Description: Forebay area – fine sediment stockpiled; no discharge from stockpile area was observed.

Date:2020/09/21

Photo 9

Photo Description: Forebay area – construction of flume entrance into forebay behind large rocks.

Date:2020/09/21

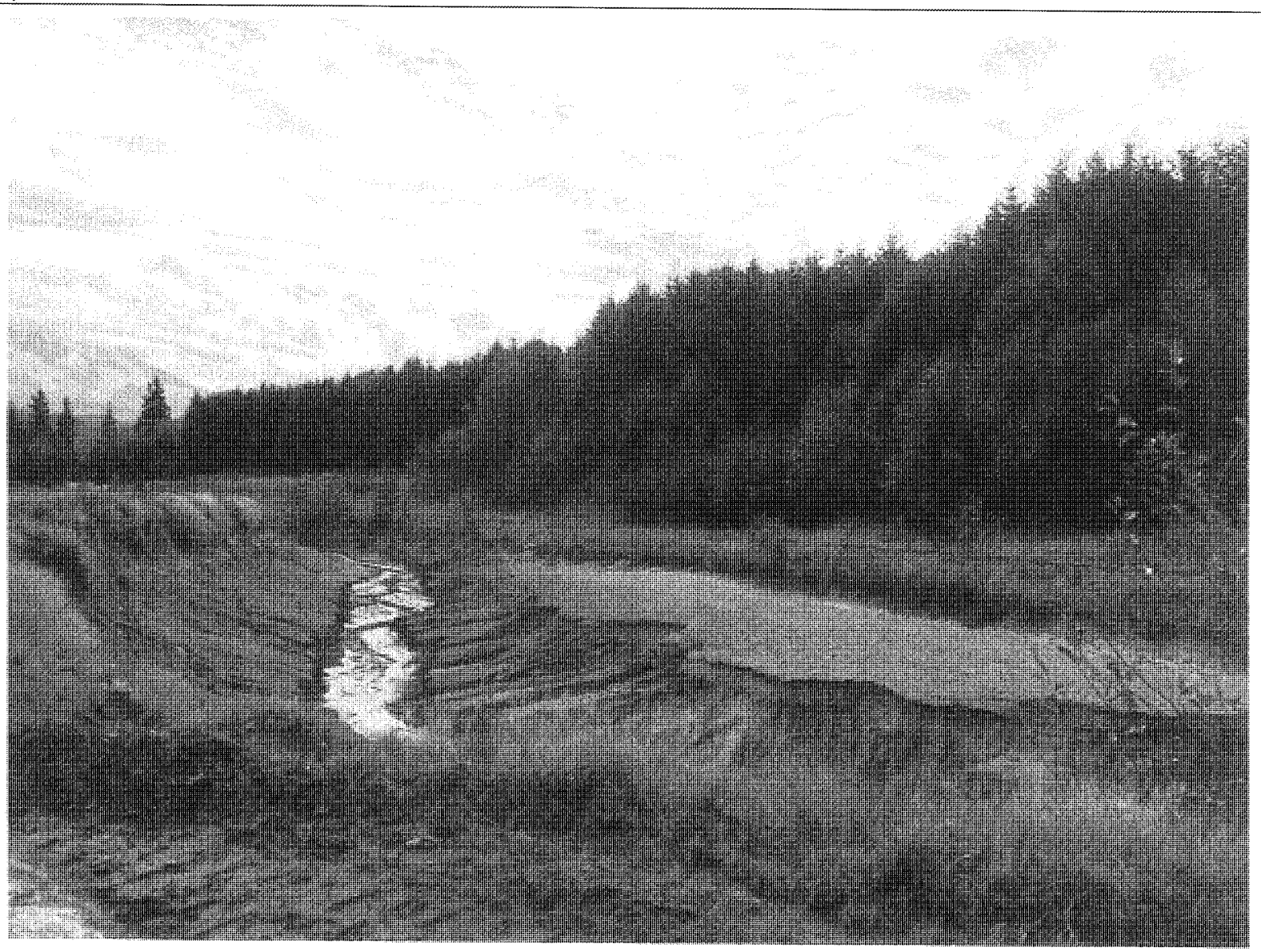
Photo 10

Photo Description: Forebay area – flume under construction, widening to change flow into forebay. A portion of the fish collection facility is on left side of photo.

Date:2020/09/21

Photo 11

Photo Description: Settling Basin area – settling basin has accumulated sediment on left bank (water would be flowing toward bottom of photo, right bank had been excavated and filled adjacent to basin.



Date:2020/09/21

Photo 12

Photo Description: Settling Basin area – small amount of water in the basin from recent rain in bottom of channel, there may be some side slope drainage into basin. Filling area with sediment occurs to left of basin in this photo and beyond.

Date:2020/09/21

Photo 13

Photo Description: Settling Basin area – sandy to coarse sand sediment is fill adjacent to the settling basin. Photo was taken with back to settling basin.

Date:2020/09/21

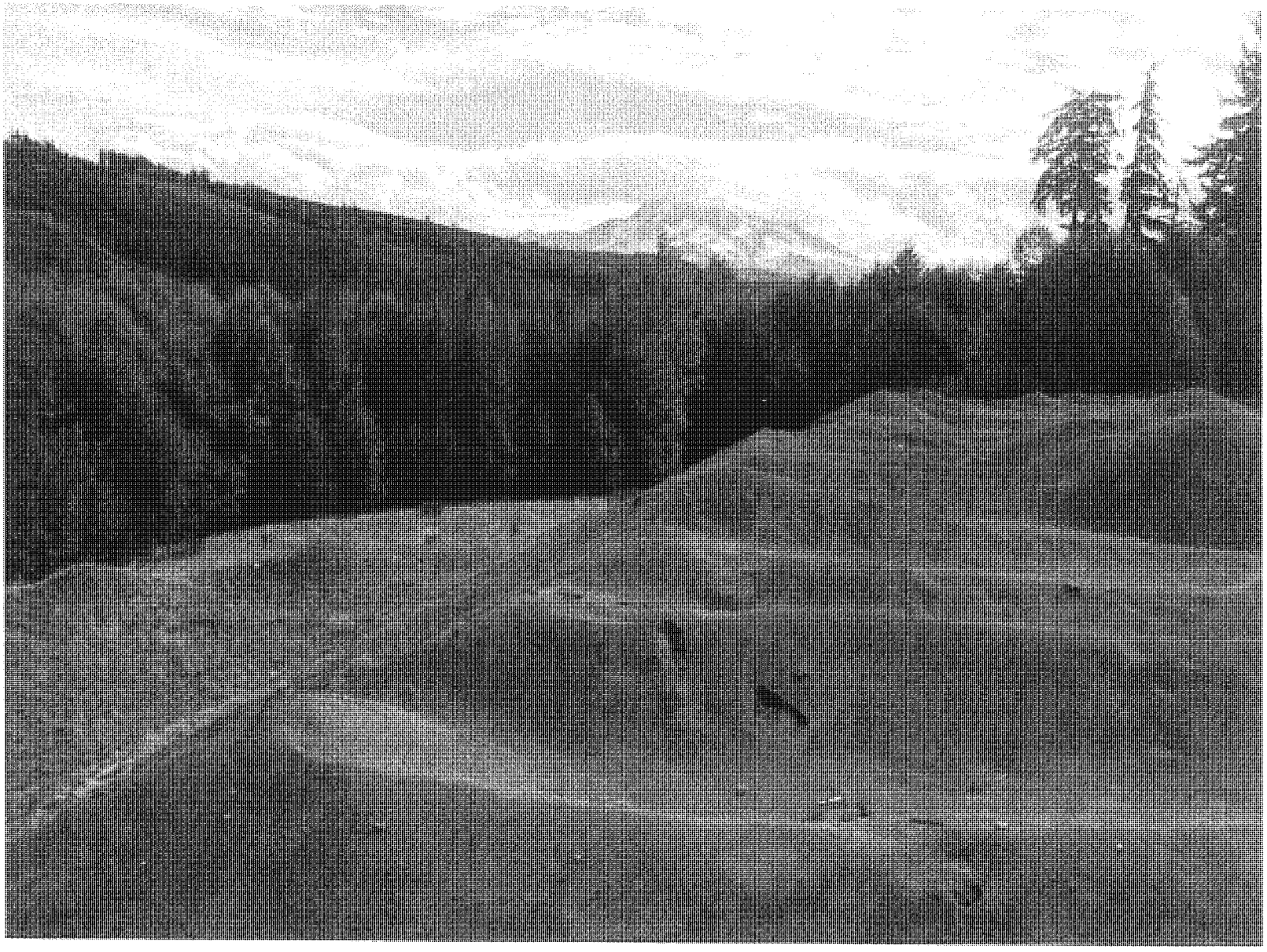
Photo 14

Photo Description: Settling Basin area – cobbles had dropped out of suspension; side wall needs repair, note the slumping of top of sidewall.

Date:2020/09/21

Photo 15

Photo Description: Settling Basin area – sandy to coarse sand sediment is filled adjacent to the settling basin.



Date:2020/09/21

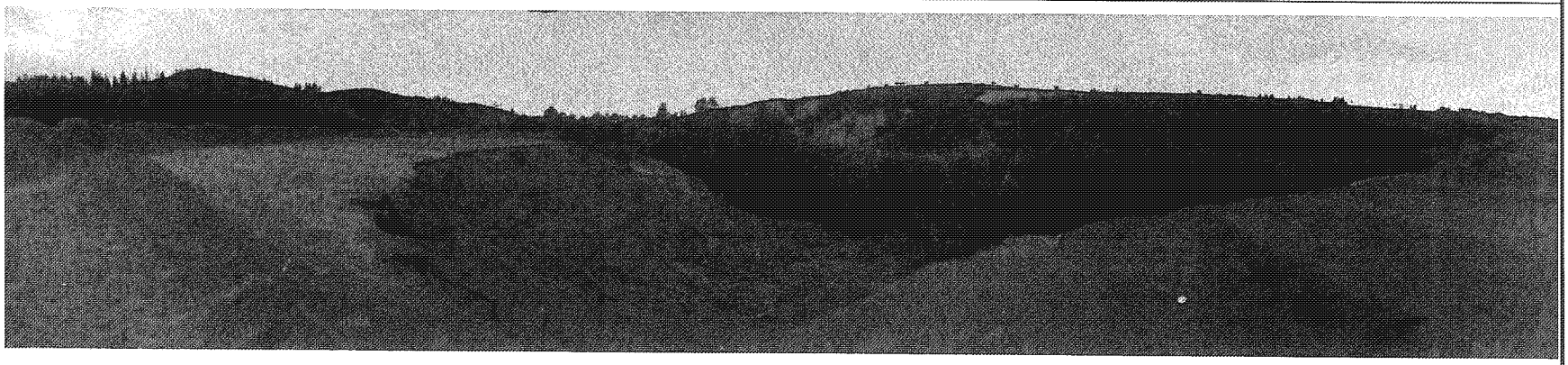
Photo 16

Photo Description: Settling Basin area – sandy to coarse sand sediment is filled adjacent to the settling basin. Puyallup River is in valley bottom.

Date:2020/09/21

Photo 17

Photo Description: Settling Basin area – large deep-seated landslide, sandy to coarse sand sediment is filled adjacent to the settling basin. Panorama view.



Date:2020/09/21

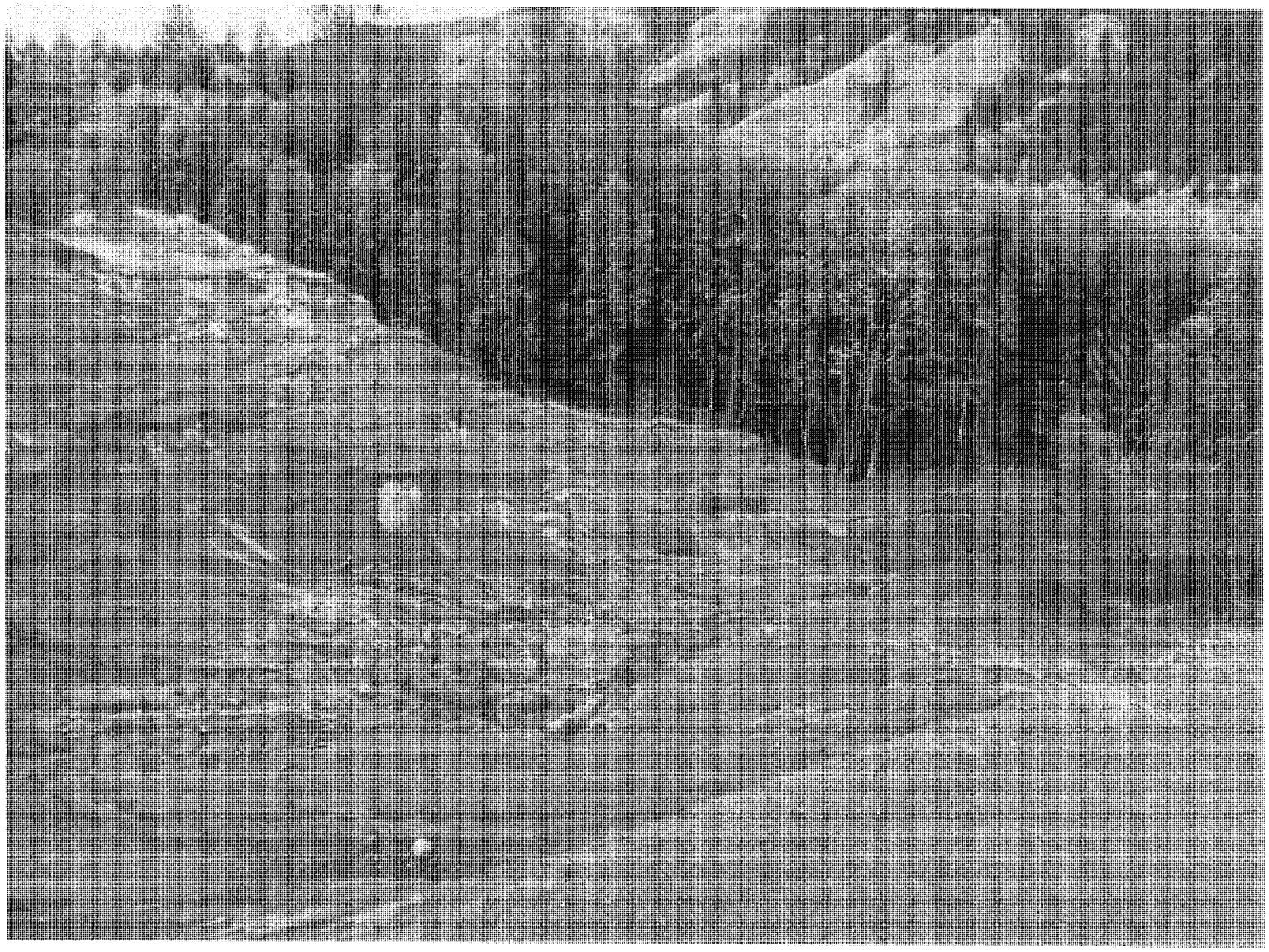
Photo 18

Photo Description: Settling Basin area – Sandy to coarse sand sediment is filled adjacent to the settling basin. Large deep-seated landslide, occurred during storms of Jan-Feb 2020; unsure if landslide delivered sediment to the Puyallup River. Carol will return to walk landslide deposit runout.

Date:2020/09/21

Photo 19

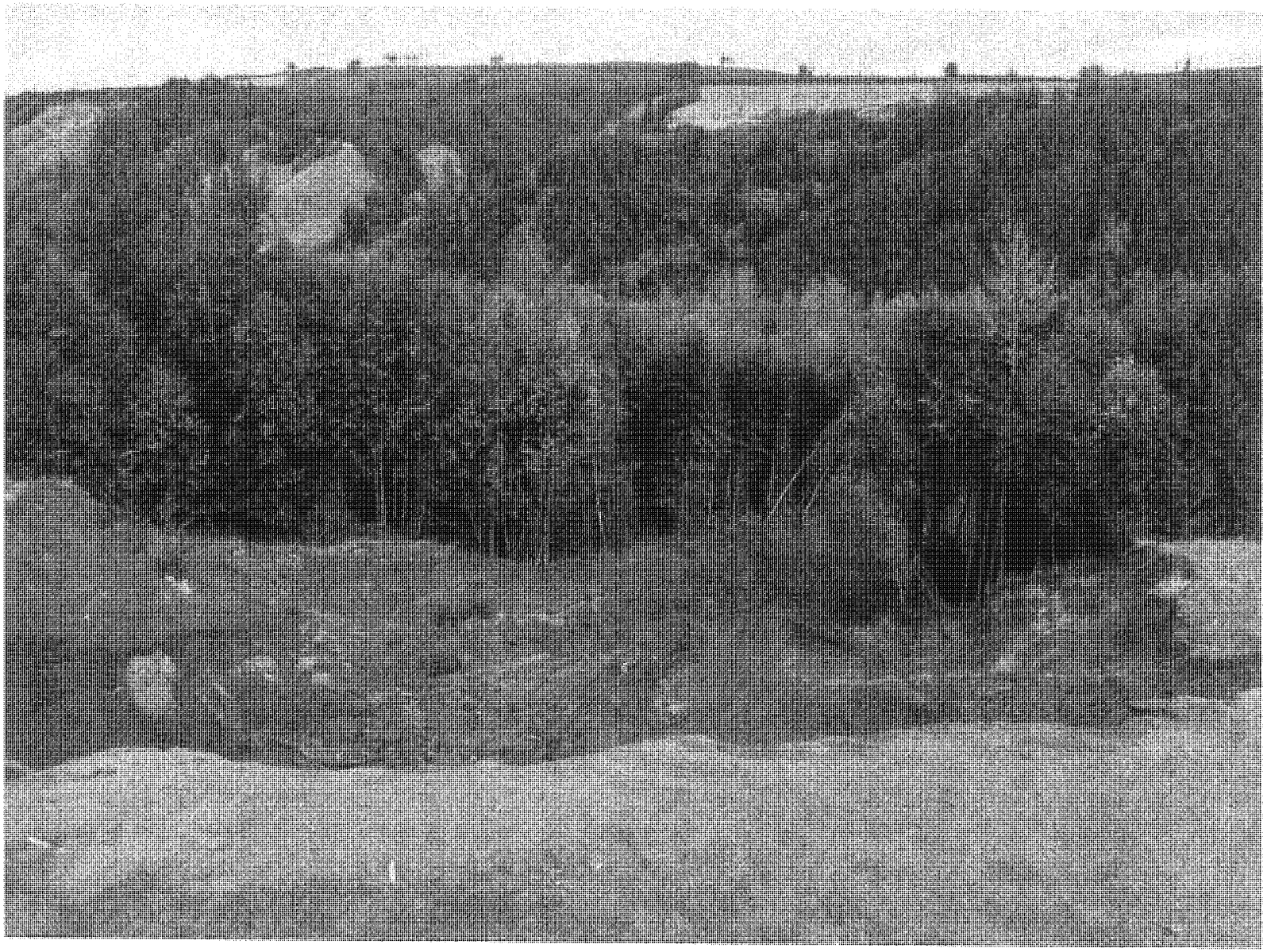
Photo Description: Settling Basin area – toe of large deep-seated landslide evacuated into forestland below, delivery to Puyallup River is unknown.



Date:2020/09/21

Photo 20

Photo Description: Settling Basin area – large deep-seated landslide, delivery to Puyallup River is unknown. Puyallup River is at bottom of valley.



Date:2020/09/21

Photo 21

Photo Description: Intake Structure Construction area – looking downstream through construction area; river in by-pass channel in black liner, upstream end of fish ladder was seen right side of black liner.

Date:2020/09/21

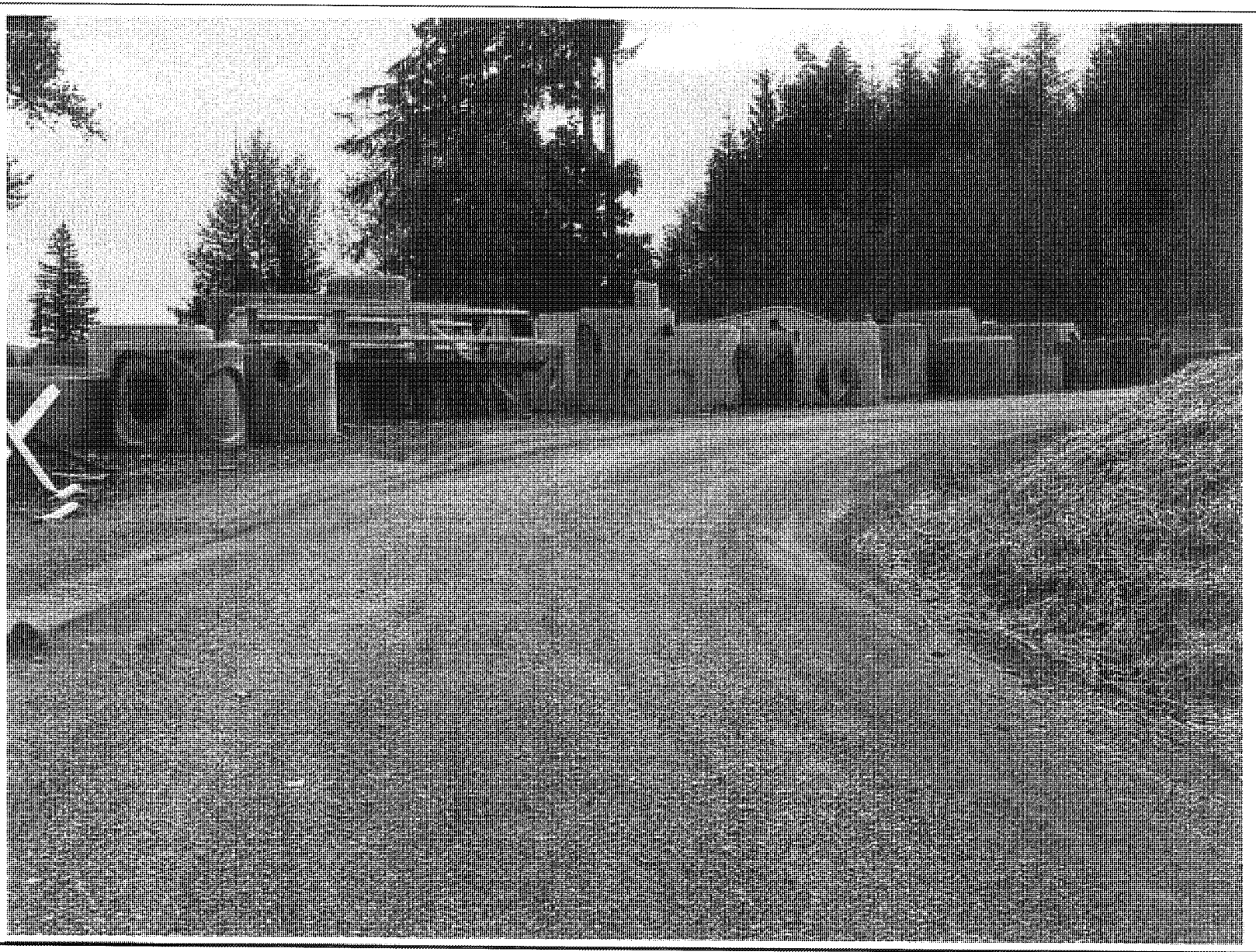
Photo 22

Photo Description: Intake Structure Construction area – looking downstream through construction area; river in by-pass channel in black liner.

Date:2020/09/21

Photo 23

Photo Description: Intake Structure Construction area – gravel had been placed on the haul road; previously exposed and unworked side slope has been temporarily stabilized.



Date:2020/09/21

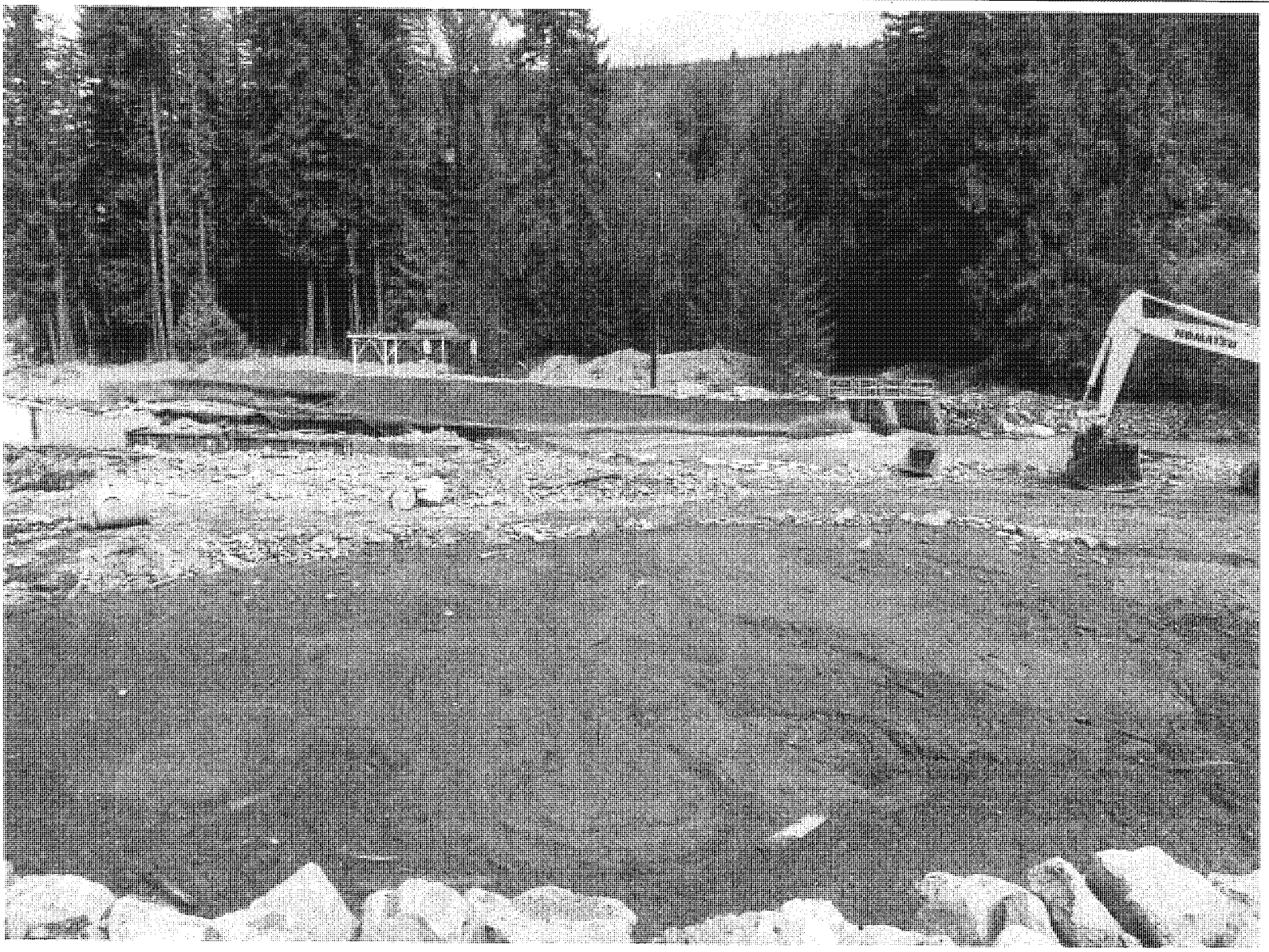
Photo 24

Photo Description: Intake Structure Construction area – upstream portion of construction area.

Date:2020/09/21

Photo 25

Photo Description: Intake Structure Construction area – upstream portion of construction area; fish ladder entrance and by-pass channel in black liner (turf below black liner).



Date:2020/09/21

Photo 26

Photo Description: Intake Structure Construction area – looking downstream, intake structure on left and river is within black liner on right.

Photo 27

Photo Description: Intake Structure Construction area – jute matting on previously exposed and unworked soil; discussed there may be a need for additional BMPs.

Date:2020/09/21

Photo 28

Photo Description: Intake Structure Construction area – upstream construction area; survey of streambed.

Photo 29

Photo Description: Intake Structure Construction area – concrete stairs had been poured, slope now stabilized.

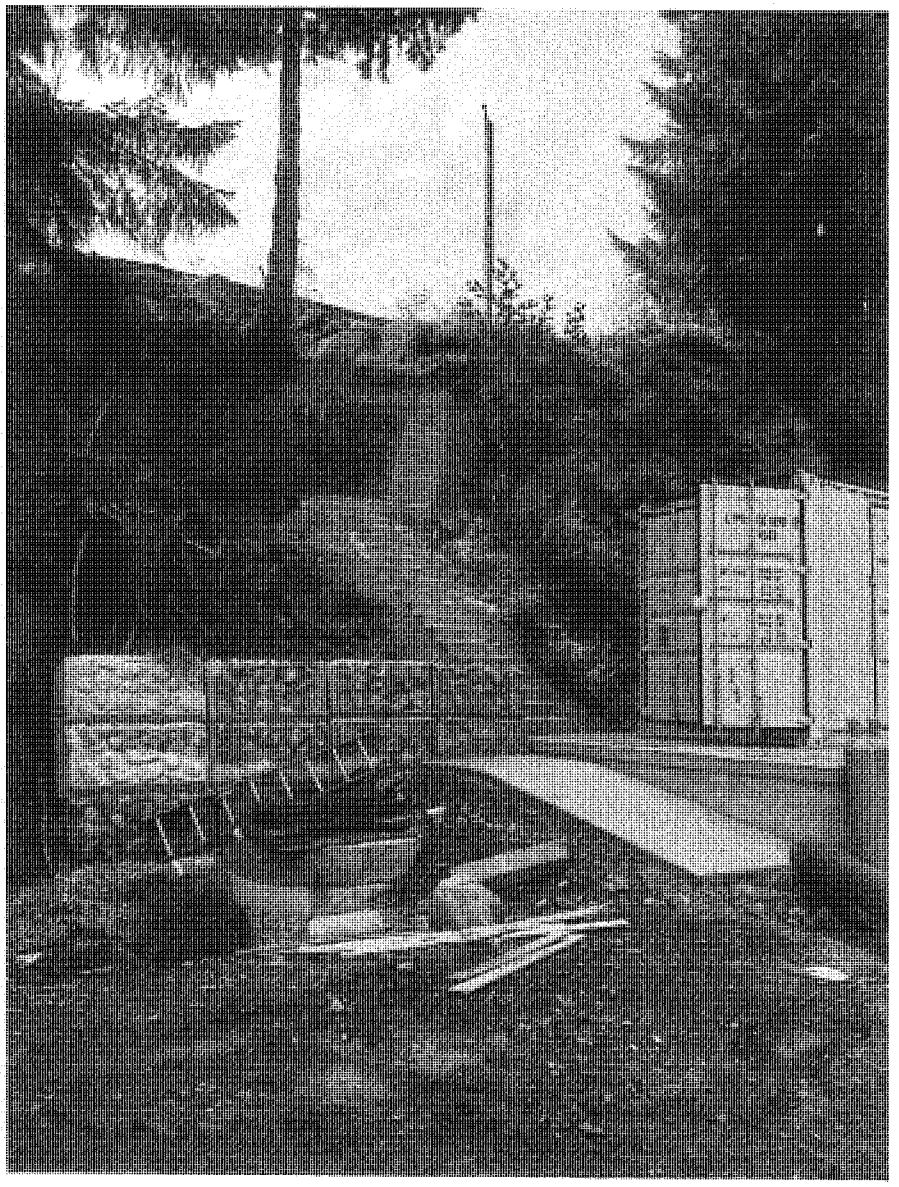


Photo 30

Photo Description: Intake Structure Construction area – downstream of construction near stormwater pond, no crumb rubber bits or sports turf found.

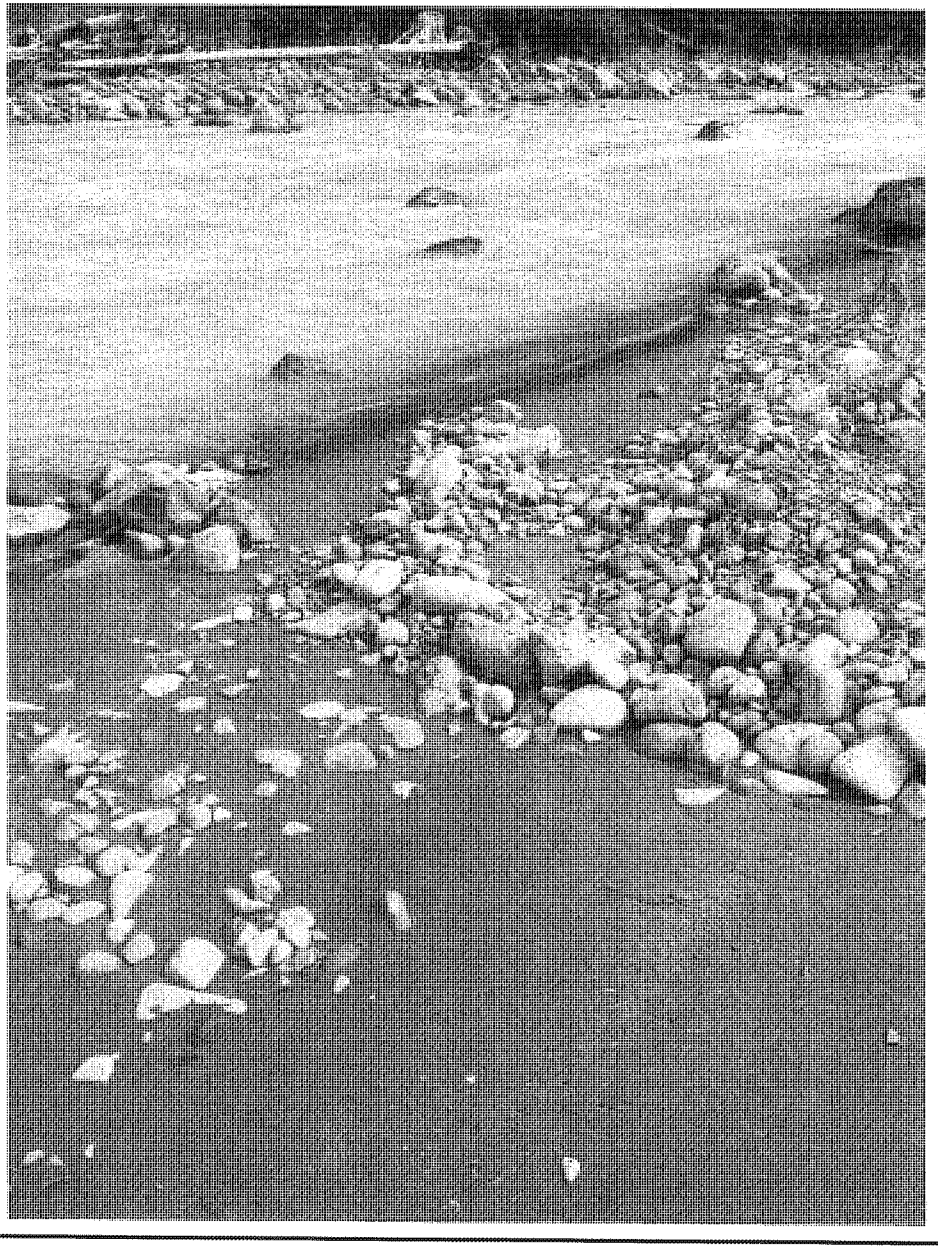
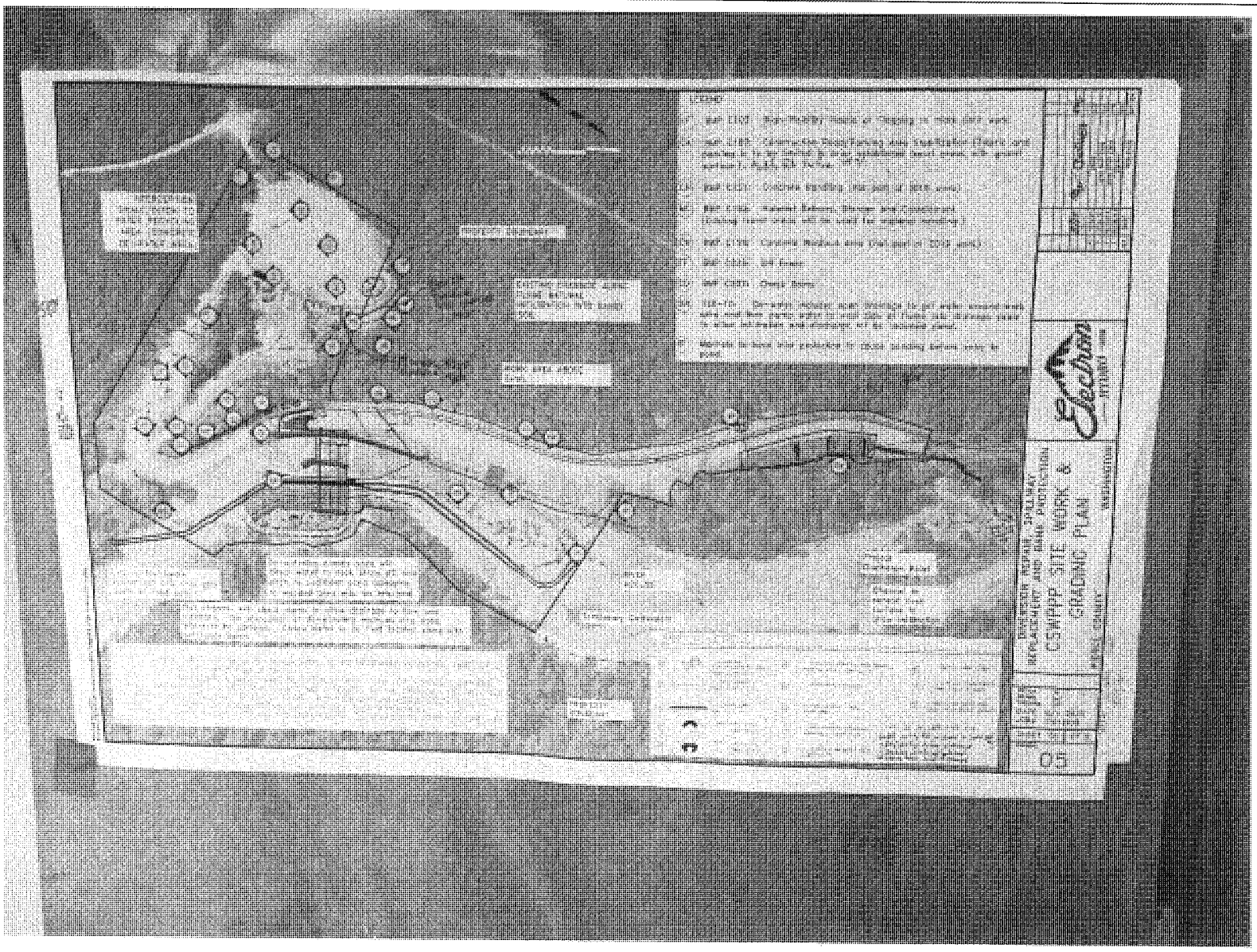


Photo 31

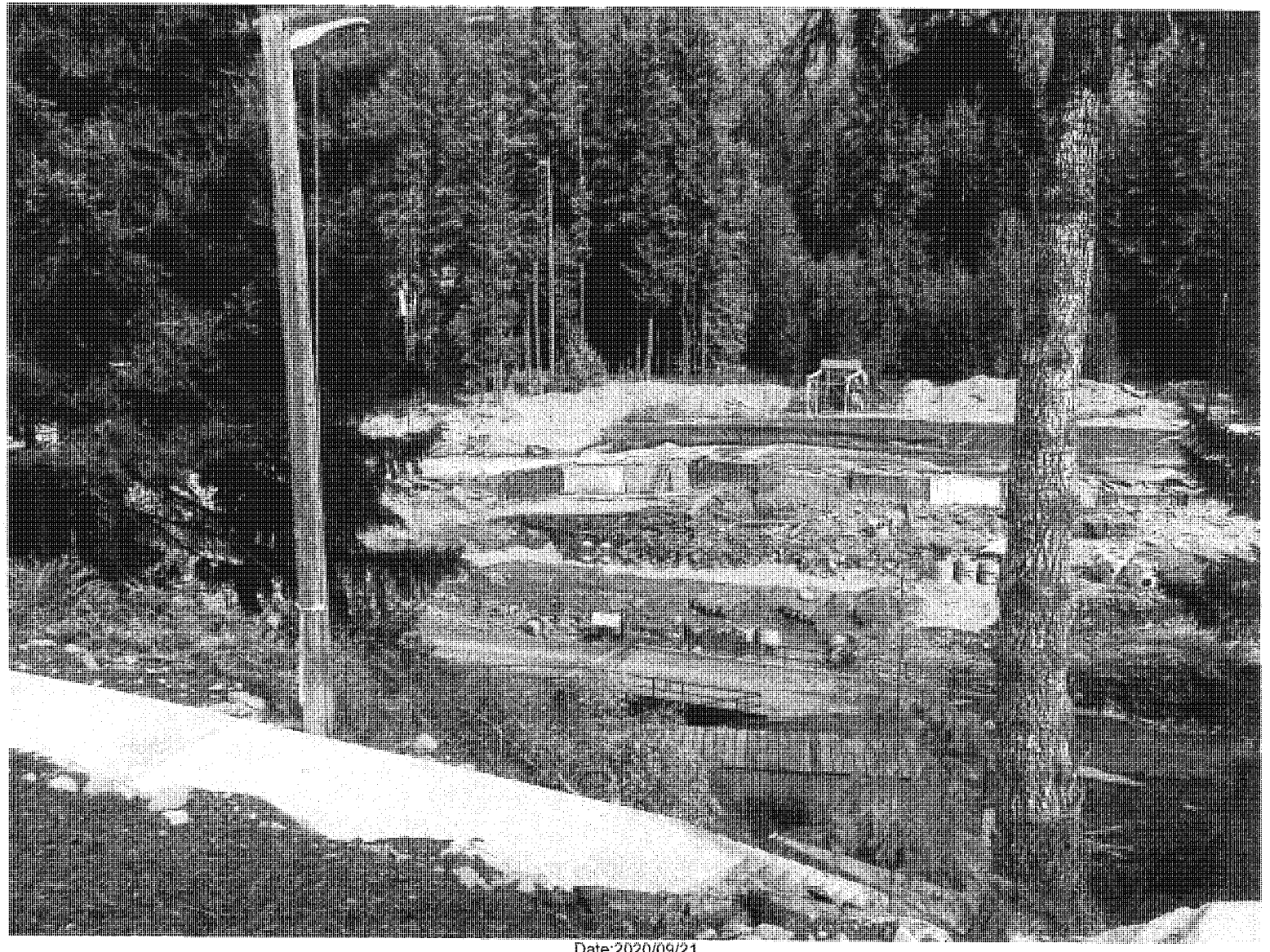
Photo Description: Intake Structure Construction area – SWPPP map with updates to installation and removal of BMPs.



Date:2020/09/21

Photo 32

Photo Description: Intake Structure Construction area – concrete stairs have been poured and area stabilized; note by-pass channel in black liner, some slumping of soil below the black liner may be occurring along the right bank, downstream of fish ladder entrance.



Date:2020/09/21

Photo 33

Photo Description: Intake Structure Construction area – concrete wash area, no discharge from area.

Date:2020/09/21

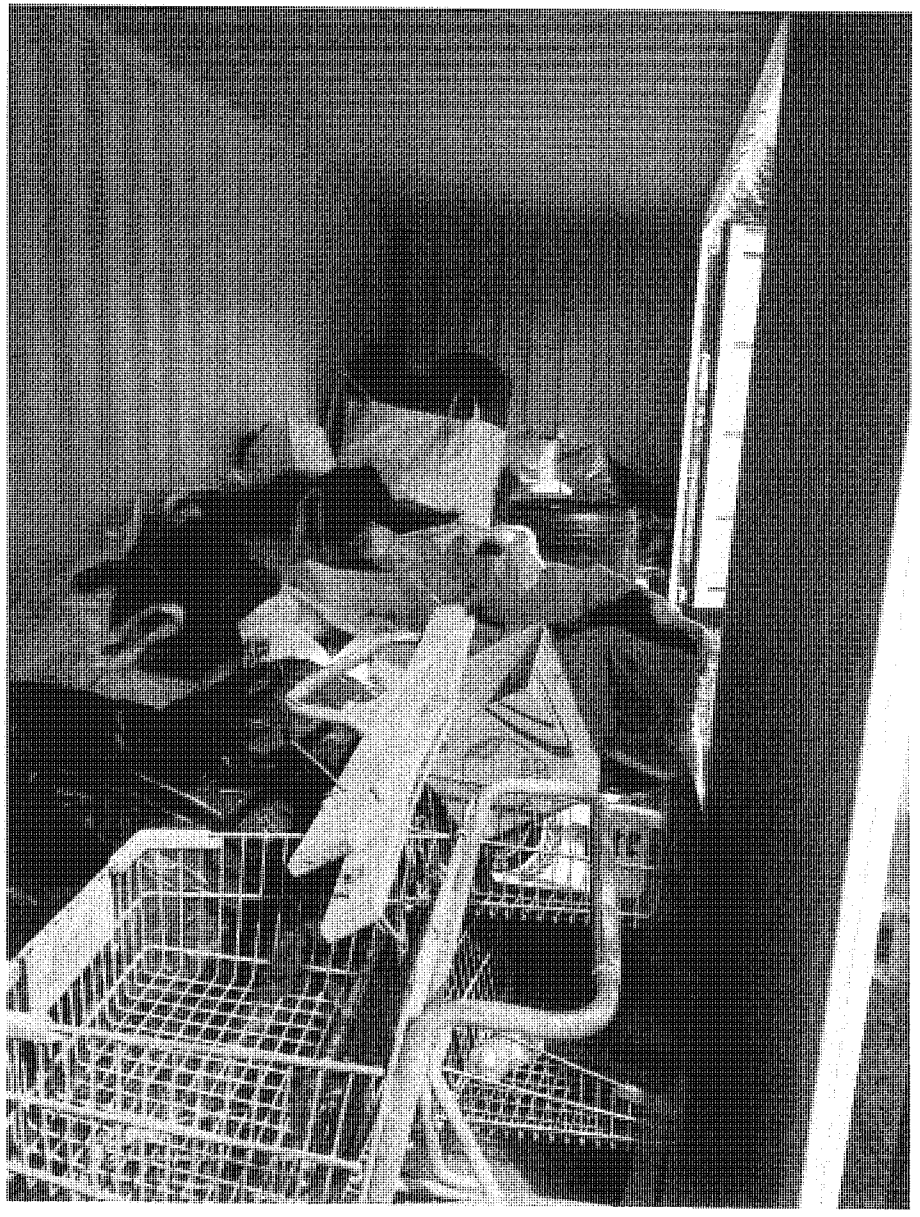
Photo 34

Photo Description: Intake Structure Construction area – secondary containment.

Date:2020/09/21

Photo 35

Photo Description: Electron Hydro Office parking lot area – conex box with debris removed from the river (more than sports turf).



Date:2020/09/21

Photo 36

Photo Description: Electron Hydro Office parking lot area – conex box with debris removed from the river, sports turf in super sacks and plastic bags.

Date:2020/09/21

9/22

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

Regulatory Branch

September 22, 2020

Mr. Thom Fischer
Electron Hydro, LLC
1800 James Street, Suite 201
Bellingham, Washington 98225

Reference: NWS-2016-350
Electron Hydro, LLC
(Diversion Repair and
Spillway Replacement)

Dear Mr. Fischer:

We have reviewed the information you provided in the Water Quality Monitoring Plan (WQMP) dated September 19, 2020, related to the work performed on your property located in the Puyallup River near Electron, Pierce County, Washington. As previously mentioned in our letter dated August 7, 2020, you are in violation of your permit.

We appreciate your coordination to develop a site stabilization plan and we approve of the immediate implementation of the WQMP dated September 19, 2020. At this time the U.S. Army Corps of Engineers (Corps) does not release the Stop Work Order for any work not described in the September 11, 2020, and September 18, 2020, letters from Pierce County. Any reports or updates submitted to Pierce County should also be copied to the Corps during the allowed construction. While we understand you continue to coordinate with Washington State Department of Fish and Wildlife for an updated Hydraulic Project Approval, we strongly emphasize the need to begin the turf removal phase of the work previously approved in the letters described above before heavy rain/flow occurs.

As mentioned in our September 17, 2020, letter, your work-window extension ends on October 2, 2020, and a request formal work window extension request if needed should be submitted to the Corps no later than September 28, 2020. We strongly encourage you to do everything you can to complete the allowed work, including all turf removal at the site, by October 2, 2020.

Please be reminded that you continue to be out of compliance with Special Conditions "a" and "b" of your Corps permit pertaining to your Endangered Species Act (ESA) Section 7 consultation Biological Opinions with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service.

9/22

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

Regulatory Branch September 22, 2020

Mr. Thom Fischer
Electron Hydro, LLC
1800 James Street, Suite 201
Bellingham, Washington 98225

Reference: NWS-2016-350
Electron Hydro, LLC
(Diversion Repair and
Spillway Replacement)

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Pierce County
Planning & Public Works

2401 South 35th Street, Room 2
Tacoma, Washington 98409-7460
piercecountywa.gov/ppw

Dennis Hanberg—Director
dennis.hanberg@piercecountywa.gov

September 18, 2020

Thom Fischer Electron Hydro LLC
1800 James Street Suite 201
Bellingham, WA 98225
thom@Tollhouseenergy.com

Subject: Electron Hydro Facility Compliance, Shoreline Substantial Development Permit Application 858766 and 858765

Mr. Fischer,

This letter serves as notice that the County's Stop Work of August 4th is amended in a limited manner to allow the following three specific items:

1. Construction of the abutment wall intended to secure the left side of the wood diversion structure. We understand this work is expected to take approximately 21 days (14 days to form, pour, cure, and strip the "center" abutment, and 7 days to tie-in the existing wood diversion to the abutment). This work is to be done in a manner that ensures full containment of concrete leachate.

2. Placement of heavy stone (which may be rounded or angular) at the outlet of Fish Ladder to create a step pool configuration that restores fish passage through the ladder. It is acknowledged that this will necessitate machinery in the wet channel. Stone shall not be placed elsewhere in the River.

   Water quality related concerns related to these two items must be addressed in a Water Quality Management Plan that is to include water quality monitoring both at the immediate work site and for a distance of 300 feet downstream. Please coordinate with the Department of Ecology on this matter.

3. Isolation of the diversion intake structure. The opening to this structure is to be welded or bolted shut to prevent water from entering.

This letter also acknowledges our support for the work window time extension through October 2, as provided for in the Corps letter of September 18, 2020.

Please coordinate with the County and your 3rd party monitor regarding your proposed schedule of work.

Please continue to communicate your next steps as we move forward in the process. If you have any questions, contact Dave Risvold at dave.risvold@piercecountywa.gov or 253-798-7036.

You are responsible for coordinating with, and receiving approval from, other agencies with review authority.

Be advised that allowance for these actions will not absolve Electron Hydro or any individuals or entities acting on its behalf from civil or criminal liability arising out of the environmental damage that has been caused by their actions.

Sincerely,

Melanie D. Halsan
Assistant Director, Planning and Public Works

Cc: Bill Sterud, Chair, Puyallup Tribe
Doug Richardson, Chair, Pierce County Council
Jacalen Printz, US Army Corps of Engineers
Carol Serdar, WA Department of Ecology
Chris Cziesla, Principal Marine/Fisheries Biologist, Confluence EC
Gwen Lentes, Program Manager Region 6, WA Department of Fish and Wildlife
Dennis Hanberg, Director, Pierce County Planning and Public Works
Todd Campbell, Prosecuting Attorney's Office
Chris Spens, cspens@tollhouseenergy.com

9/23/20

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: September 23, 2020
Project End Date: October 16, 2020

Permit Number: 2018-6-256+04
FPA/Public Notice Number: N/A
Application ID: 14829

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Electron Hydro, LLC	COMPANY Electron Hydro
ATTENTION: Thom Fischer	ATTENTION: Chris Spens
1800 James St	1800 James St
Bellingham, WA 98225	Bellingham, WA 98225-4631

Project Name: Electron Hydro Diversion Repair, Spillway Replacement and Bank Protection

Project Description: This major modification is approved for work items #1 and #2, as described in Pierce County's letter to Electron Hydro dated September 18, 2020. Work item #1 is the construction of the concrete abutment (east) wall only. This is intended to secure the left side of the wood diversion structure. Work item #2 is the placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that a piece of large machinery will need to cross the active channel.

These two work items are approved in this modification to the HPA and the in-water work window is September 23, 2020 - October 16, 2020.

PROVISIONS

TIMING - PLANS - INVASIVE SPECIES CONTROL

1. TIMING LIMITATION: Work below the ordinary high water line must only occur between September 23, 2020 and October 16, 2020.

2. APPROVED WORK: The following work is approved: Construction of the concrete abutment (east) wall intended to secure the left side of the wood diversion structure. Placement of heavy stone which may be rounded or angular at the outlet of the fish ladder to create a step pool configuration that restores fish passage through the ladder. This necessitates that a piece of large machinery will need to cross the active channel.

3. APPROVED PLANS: You must accomplish the work per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled "Electron Close Out Extension request Sep 4 2020", uploaded to APPS on September 15, 2020, "Fish Ladder Operation and Maintenance Plan", uploaded to APPS on August 27, 2020, "WQMP Sep 19, 2020" uploaded to APPS on September 22, 2020, the east/right abutment wall must be the only item constructed from the approved plan set "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018, except as modified by this Hydraulic Project Approval.

You must have a copy of these plans available on site during all phases of the project construction.

4. INVASIVE SPECIES CONTROL: Follow Level 1 Decontamination protocol for low risk locations. Thoroughly remove visible dirt and organic debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets and undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species. Properly dispose of any water and chemicals used to clean gear and equipment. For contaminated or high risk sites please refer to the Level 2 Decontamination protocol. You can find this and additional information in the Washington Department of Fish and Wildlife's "Invasive Species Management Protocols", available online at http://wdfw.wa.gov/publications/search.php?Cat=Aquatic Invasive Species.

NOTIFICATION REQUIREMENTS

5. PRE- AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting in-water work, and again within seven days after completing the in-water work each year of construction. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

6. DURING CONSTRUCTION: If there is any potential change to the allowable work that has been approved for the September 23, 2020 to October 16, 2020 in-water work window, the WDFW Area Habitat Biologist and the Assistant Regional Habitat Program Manager must be contacted and those changes must be approved.

7. ADDITIONAL WORK: The applicant must request to do any additional work through the submittal of a major modification to the HPA.

8. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS, AND EQUIPMENT

9. Establish staging areas (used for equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

10. Use existing roadways or travel paths.

11. Limit the removal of native bankline vegetation to the minimum amount needed to construct the project.

12. Retain all natural habitat features on the bed or banks including large woody material and boulders. You may move these natural habitat features during construction but you must place them near the preproject location before leaving the job site.

13. Confine the use of equipment to the specific access and work corridor shown in the approved plans.

14. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

15. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

16. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

17. Equipment for placing the rock for the fish ladder must cross the Puyallup River in the most direct route and in a manner that does the least damage to the bed, streambank and streambank vegetation.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

18. Work in the dry watercourse (when no natural flow is occurring in the channel, or when flow is diverted around the job site).

19. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

20. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

21. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

22. You must route construction water (wastewater) from the project as shown in the approved construction wastewater plan "WQMP Sep 19 2020" uploaded to APPS on September 22, 2020. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.

23. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

CONSTRUCTION MATERIALS

24. Store all construction and deconstruction material in a location and manner that will prevent contaminants such as petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

25. Do not stockpile construction material waterward of the ordinary high water line, except for excavated riverbed material.

26. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over wet concrete that will come in contact with waters of the state. Forms and impervious materials must remain in place until the concrete is cured.

27. Do not use wood treated with oil-type preservatives (creosote, pentachlorophenol) in any hydraulic project. You may use wood treated with waterborne preservatives (ACZA, ACQ) provided the wood is approved by the Western Wood Preservers Institute for use in the aquatic environment. Any use of treated wood in the aquatic environment must follow guidelines and best management practices available at www.wwpinstitute.org.

EAST ABUTMENT

28. Only the installation the east abutment is approved as part of this HPA. No other elements of the dam structure are approved to be installed in this HPA. The east abutment must be constructed according to the plans and specifications in the document "1-Electron Hydro JARPA_Sup_28Mar2017 Plans Reduced PDF", dated May 14, 2018.

FISH PASSAGE IMPROVEMENT

29. Rocks can be placed at the outlet of the fish ladder to create pools leading up to the first cell, and rock can be placed at the inlet of the fish ladder to direct flow. This rock must be removed at the end of construction for the diversion unless there are still fish passage concerns at the fish ladder.

30. Place the rock steps so that the drop between pools is a maximum of 12-inches vertical height.

31. Inspect the fish ladder for proper function at least once a day through the salmon and steelhead migration season. If passage problems develop, contact the WDFW Area Habitat Biologist to discuss modifications.

32. The owner must maintain the fish ladder to ensure it provides continued, unimpeded fish passage for the life of the project.

DEMOBILIZATION AND CLEANUP

33. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.

LOCATION #1: Site Name: Electron Hydro Diversion
, , WA

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

HYDRAULIC PROJECT APPROVAL

Issued Date: September 23, 2020
Project End Date: October 16, 2020

Permit Number: 2018-6-256+04
FPA/Public Notice Number: N/A
Application ID: 14829

WORK START: September 23, 2020 WORK END: October 16, 2020

WRIA	Waterbody:	Tributary to:
10 - Puyallup - White	Puyallup River	Puyallup River

1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
NW 1/4	03	16 N	06 E	46.90554	-122.03974	Pierce

Location #1 Driving Directions

Requires company escort due to numerous locked gates and access through other private property.

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

Washington Department of
Fish & Wildlife
PO Box 43234
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MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

HYDRAULIC PROJECT APPROVAL

Issued Date: September 23, 2020
Project End Date: October 16, 2020

Permit Number: 2018-6-256+04
FPA/Public Notice Number: N/A
Application ID: 14829

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	elizabeth.bockstiegel@dfw.wa.gov		for Director
Elizabeth Bockstiegel	360-480-2908		WDFW

Electron Hydro Diversion Repair and Spillway Replacement Project
Water Quality Monitoring Plan
Winter Stabilization Version

Prepared by:

19318 Electron Rd. E.
Orting, Washington 98360

September 19, 2020

Rev.	Date	
1	8/26/20	Added questions and answers on Pages 9 and 10 for clarity.
2	8/26/20	Figure 1, Page 11 shows new #4 Outfall Sample Point location.
3	8/27/20	Figure 2, Page 12 shows check dams at the Outfall Channel.
4	8/28/20	Text to eliminate Sediment Pond, and treat water by Forested Uplands discharge and infiltration, and Revised Figures 1 and 2.
5	8/30/20	Clarify text and Revised Figure 1 with new note.
5WSV	9/19/20	Added items for Winter Stabilization work (in blue).

Electron Hydro Diversion Repair and Spillway Replacement Project
Water Quality Monitoring Plan
Winter Stabilization Version

INTRODUCTION AND BACKGROUND

Electron Hydro is currently performing the Electron Hydro Diversion Repair and Spillway Replacement Project. The project is located on the Puyallup River approximately 18 miles upstream of Orting, Washington. The headworks at the construction project location includes a flow diversion structure, spillway, and diversion channel with flow controls leading to a 10-mile long wooden box flume that conveys diverted water to the powerhouse for electricity generation. In its pre-project condition, the diversion entrains fish along with diverted flows, and those fish travel 10-miles down the flume to a forebay pond where they are trapped and hauled and released back to the Puyallup River. The diversion repair and spillway replacement project is an essential step to allow installation and operation of a modern fish screening system at the intake to exclude fish from being entrained. The project will greatly reduce the impacts to fish resulting from entrainment into water intake, transport down the fume, and fish handling during the current trap and haul operation. In-water construction activities started in 2019 with bank stabilization upstream and downstream of the diversion. The bulk of in-water work to repair the diversion and replace the spillway is ongoing from July through September 2020. Fish exclusion work is scheduled to be completed in 2021. This water quality monitoring plan (WQMP) guides compliance monitoring for stormwater and dewatering water generated during the in-water construction activities. *This Winter Stabilization Version adds a few temporary items to stabilize the worksite during the winter of 2020 (see Figure 3 plan attached). The time period for this version is between today and the first two weeks of November, weather dependent, and as agencies approve.*

PURPOSE

The purpose of the WQMP is to provide specifics on water quality sampling for turbidity and pH, as well as track the performance of Best Management Practices (BMPs) used during in-water work, as described in this document. This WQMP identifies the appropriate parameters to be monitored, includes a monitoring schedule, monitoring locations, monitoring and sampling procedures, and contingency sampling procedures.

OBJECTIVES

- Provide specific locations and methods for sampling water quality for turbidity and pH.
- Document the performance of BMPs used within waters that the proposed work will occur in by monitoring water quality.
- Determine if State water quality standards are being met at two points-of-compliance: at Sample Point #2 and Sample Point #3 (see **Figure 1**).

There will be additional sampling at Pump #3 inlet.

Any changes in the proposed monitoring will be submitted to Ecology and the Corps of Engineers for approval prior to making the changes. Any revisions to the WQMP will be subject to review and approval by Ecology under the Construction Stormwater General Permit (CSWGP) and the Corps of Engineers under the Section 404 Nationwide Permits #3 and #13 for work within Waters of the U.S.

DESCRIPTION OF IN-WATER/OVER-WATER CONSTRUCTION ACTIVITIES

The Electron Hydro Diversion Repair and Spillway Replacement Project includes the removal of the damaged wooden diversion structure, installation of a concrete foundation and inflatable bladder spillway and supporting infrastructure, reconfiguration of the water intake channel, and targeted stabilization of the riverbed and riverbanks. This phase of construction lays the groundwork for the next phase in which fish screens will be installed to prevent the entrainment of fish into the water intake. Work within the OHWM includes:

- Bank stabilization upstream and downstream of the diversion (completed in 2018 and 2019)
- Installation of a temporary cofferdam to isolate the in-river work area from river flows
- Construction of a temporary bypass channel to route river water downstream of the in-river work area
- Excavation within the isolated work area to a target elevation below the riverbed (depth varies)
- Temporary dewatering of the excavation
- Concrete construction of the replacement spillway and supporting infrastructure
- Installation of an inflatable rubber bladder as a flow control structure in the spillway
- Stabilization of the riverbed
- Removal of the temporary bypass channel and temporary cofferdam
- Restoration of river flow through the new spillway structure
- Work activity items for Winter Stabilization are shown on the attached **Figure 3**, items not crossed out, and as allowed by the agencies.

Work in the upland includes:

- Construction staging area (equipment, fuel, stockpiles)
- Temporary concrete batch plant and concrete washout area (contained)
- Operation and maintenance of the on-site water quality treatment system

The construction work includes activities that will generate turbid water and may affect the pH of the water within the isolated work area. Concrete stairs will be poured (and no pH laden water will reach waters of the state) from the road along the river to the staging area. Stormwater and dewatering water pumped out of the excavation will be routed through the on-site water treatment system.

WATER QUALITY STANDARDS FOR SURFACE WATERS

The project is located in WRIA (Water Resources Inventory Area) 10 (Puyallup/White), in the Puyallup River. The Puyallup River is designated as Core Salmonid Summer Habitat use in the vicinity of the construction site, which requires monitoring the following parameters.

- **Turbidity:** Shall not exceed 5 NTU over background when the background is 50 NTU or less; or 10 percent increase in turbidity when the background turbidity is more than 50 NTU: as outlined in Washington Administrative Code (WAC) 173-201A-200(1)(e) for Core Salmonid Summer Habitat.
- **pH:** pH shall be within the range of 6.5 to 8.5. pH will be monitored using a pH meter. If any water enters the containment area behind the cofferdam when cementitious work is occurring, pH will be monitored using a pH meter. All pH data will be recorded on the field monitoring forms. Best Management Practices will be employed to ensure all water leaving the containment area meets State water quality requirements prior to discharge.
- **Oil and Grease**: No visible sheen. Inspect vehicles and equipment daily, and prior to entering the area below ordinary high water.

The Nationwide Permit Authorization issued by the Corps of Engineers included an Endangered Species Act (ESA) Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The consultation yielded Biological Opinions (BO) issued by each agency in July 2018. Turbidity will be monitored in accordance with the Terms and Conditions set in the USFWS BO. Electron Hydro will also fully comply with implementing all reasonable and prudent measures outlined in the National Marine Fisheries Service (NMFS) BO. These criteria set in the BOs also satisfy the criteria set by the CSWGP, permitted by the Washington Department of Ecology (Ecology) in July 2018. The results of monitoring efforts will be transmitted weekly to the US Army Corps of Engineers and Ecology.

MONITORING PLAN

Monitoring Contacts

Electron Hydro staff Chris Spens and Corey Kleppe will be responsible for providing Ecology with the necessary notifications and results of the water quality monitoring per the frequency specified in the CSWGP and the Section 401 WQC. The monitoring team will include Electron Hydro staff led by Chris Spens. Contact information is provided below:

Chris Spens:	(360) 746-3435
Corey Kleppe	253-655-3039
Mallory Voyk:	(425) 923-5021
Corey Alefteras	360-688-0080

Monitoring Schedule

Turbidity monitoring will be conducted daily (visual monitoring will occur downstream at Pump #3 inlet while active excavation is occurring) and reported weekly. Visual monitoring will occur

along the riverside edge of the Forested Uplands infiltration area when water is being pumped to that area for infiltration. The visual monitoring will focus on confirming that no water is flowing overland from that area into the river. More frequent contingency monitoring related to specific events (e.g. start of sediment-generating activities, exceedance events, etc.) is described below under Sampling Procedures. Monitoring of pH will be conducted daily and reported weekly while construction activities using cement are ongoing. All concrete related work below OHWM will be performed within the in-river work area that is isolated from river flows by a temporary coffer dam. No pH sample points are located within the river. Instead, water in contact with concrete work will be sampled within the excavation at pump locations and tested for pH to determine if water treatment is required. If the water requires treatment to adjust pH within the acceptable range, it will be treated by injecting CO_2 into the pump discharge line so it will be vigorously mixed with the water as it flows through the line. Water exiting the discharge line will be tested to determine whether it is in compliance with the pH standard. The injection rate will be adjusted until the water is in compliance. Treated water will be pumped to the Conveyance Ditch, Sediment Trap, then pumped into a Forested Uplands area (shown on **Figure 2**) where it will be discharged through a manifold to distribute the water for infiltration. As a backup option, a temporary water treatment tank will be maintained on site for isolated treatment using either CO_2 sparging or dry ice. Water within the tank will be tested for pH and will be sampled prior to discharge. Treated water will be pumped to the Conveyance Ditch, Sediment Trap, then pumped into the Forested Uplands area for infiltration. Water that does not require treatment and meets requirements for turbidity will be discharged into the Conveyance Channel. Monitoring and testing results will be documented in the weekly reports and provided to the Corps and Ecology.

Monitoring Duration

Water samples will be collected, and visual observations will be recorded for as long as work activities below the OHWM continue. Visual monitoring for turbidity and sheen will be conducted continuously for those times when construction activities could potentially impact water quality. The on-site monitor will generally be stationed downstream of active excavation on the left bank of the river. This location will allow the monitor to observe both the river flow conditions and monitor the riverside edge of the Forested Uplands area where treated water is infiltrated (**Figure 2**). For Winter Stabilization work, all excavations in live water (all water that reaches waters of the state, including water currently in the excavation area) require visual monitoring 300 feet downstream of any activity (monitoring personnel must be stationed 300 feet downstream during all in-water work). If multiple activities are occurring, the monitoring will occur at 300 feet downstream of the most downstream activity. This includes placement of large rock in the live water. Monitoring will occur continuously every day, while in-water work is being conducted. If an exceedance of 10% of background occurs at the 300' point of compliance, the monitoring personnel will report the exceedance to Ecology (see below specifics). If exceedances persist, in-water activities may need to be adaptively modified with BMPs to minimize water quality impacts.

Monitoring of pH will occur when construction activities that involve cement/concrete are occurring at the in-water construction site. Concrete construction activities will be conducted within a dewatered work area isolated from Puyallup River flows by a temporary cofferdam and temporary bypass channel. Treated water from the excavation dewatering operation will be tested for pH prior to release into the Conveyance Ditch.

Non-Compliance

If either visual or physical monitoring indicates that water quality standards (turbidity and pH) have been exceeded, the required reporting will be initiated.

SAMPLING PROTOCOL

Sampling Locations

Monitoring locations are identified on **Figure 1** for construction activities within OHWM. There are three monitoring locations (in addition to the monitoring for pH in the excavation zone) identified as follows:

Sample Point #1: Upstream Sample Point – the upstream sample point is located approximately 1,500 ft upstream of the limits of excavation within OHWM. The upstream sample point provides the background sample.

Sample Point #2: Downstream Sample Point – The stream gage (rock gage) sample point is the point of water quality compliance identified in the Corps Section 404 permit. Per the Corps permit requirements, it is located approximately 1,500 ft downstream of the limits of excavation within OHWM.

Sample Point #3: Channel Sample Point – The Channel Sample Point is a sample location at the end of the Conveyance Channel just prior to water entering the river (additional sampling will occur in the construction area).

Sampling Procedures

Turbidity Monitoring

An appropriately trained and knowledgeable Electron Hydro staff member will be available during every day of in-water construction activity to take and report turbidity measurements, who will work under the direction of a CESCL. The turbidity assessment protocol is as follows:

1. Sample 2 locations (Sample Points #1 and #2, **Figure 1**) daily, at the intervals specified by Corps permit, which incorporates NMFS and USFWS Biological Opinions. The NMFS and USFWS BOs stipulate that work will cease and sediment control procedures will be re-evaluated if:
    - background turbidity is exceeded by 56 NTU at any time,
    - background turbidity is exceeded by 37 NTU for more than a cumulative hour during a 10-hour workday,

- background turbidity is exceeded by 13 NTU for more than a cumulative 3 hours in a 10-hour workday,
- background NTU levels are exceeded by 8 NTU for more than 7 hours over a 10-hour workday.

These compliance criteria are different compared to the State compliance criteria for turbidity, which stipulate turbidity limits of 5 NTU above background when background is less than 50 NTU and 10 percent or less above background when background turbidity is greater than 50 NTU.

2. One additional location (Sample Point #3) will be monitored when water accumulates at the end of the Conveyance Channel.

3. Monitor to establish background turbidity levels upstream of construction, and away from the influence of sediment-generating activities (Sample Point #1). Background turbidity will be monitored at least twice daily (early morning and early afternoon) during sediment-generating activities. For Winter Stabilization work, additional sampling may take place if the background turbidity changes during the construction day.

4. To monitor for construction-influenced changes in turbidity, turbidity monitoring will be conducted 1,500 feet downstream of in-water construction activities (Sampling Point #2) as stipulated in the Section 404 permit issued by the Corps of Engineers.

5. Determine the turbidity of each sample by testing with an EPA-approved NTU meter; turbidity meter will be calibrated correctly and documented on a spreadsheet prior to each sample period.

6. Compare the results for Sample Point #1 (background) to Sample Point #2 (in-water work compliance point) and Sample Point #3 to determine whether there is an exceedance.

7. Turbidity at Sample Points 2 and 3 will not exceed 10% above background NTU levels, in accordance with Washington Water Quality Standards. If turbidity levels approach 10% above background, activities causing the exceedance will cease and sediment control measures will be inspected and adjusted. The on-site Environmental Monitor will inspect the riverside edge of the Forested Uplands area for infiltrating treated water to determine if surface flow is draining from that area directly into the river. If that is the case, the discharge manifold will be adjusted, relocated within the area, or stopped to allow excess surface water to infiltrate.

8. Ecology requirements specified in the CSWGP allow for modifications to the SWPPP, based on adaptive management.

9. Initiate response and reporting protocols if there is an exceedance.

In addition to the regular ongoing sampling and monitoring activities, there are specific protocols for the start of sediment-generating activities. Those protocols are outlined below:

Monitoring Protocols for Start of Sediment-Generating Activities

1. For the first 3 hours from the start of sediment-generating activities, monitoring will be conducted at 30-minute intervals. A person will generally be stationed 300 feet below sediment-generating activities along the left bank of the river. For Winter Stabilization work, when the river is re-diverted to the left bank, 300 feet downstream of the end of the in-river Conveyance Channel. Monitoring personnel will be safely stationed along the left bank 300' downstream of #3 Conveyance Channel Sample Point when the river re-enters the left side of the river channel. Additional monitoring will be 300 feet downstream of any work that has potential to create a turbid discharge.

2. If turbidity does not exceed the below-listed levels during the first hour of work, then monitoring will be reduced to once per hour.

3. If turbidity does not exceed the below-listed levels during the first 3 hours of work, then monitoring will be reduced to twice per day, until there is a change in excavation (depth or location within the excavation zone), then monitoring will begin again.

4. Per the conditions stipulated by the USFWS and NMFS BOs, work will cease and sediment control procedures will be re-evaluated if turbidity monitoring results exceed the compliance thresholds defined above based on State water quality standards or the turbidity standards stipulated by the USFWS and NMFS BOs.

<u>pH Monitoring</u>

Concrete pouring activities are planned to begin approximately August 26, 2020. During all concrete pouring activities, any water that comes into contact with concrete will be tested for pH. Should the water be outside the approved limits of 6.5 and 8.5 pH, it will be collected and pumped from the work area below OHWM. High pH water will be treated by injecting CO_2 into the pump discharge line allowing the CO_2 and water to mix vigorously within the discharge line downstream of the pump. Water exiting the discharge line will be tested to determine whether it is in compliance with the pH standard. The injection rate will be adjusted until the water is in compliance. Treated water will be discharged to the Conveyance Ditch where it will flow to the Sediment Trap on the uphill side of the flume. Water will be pumped from the Sediment Trap to the Forested Uplands area (shown on **Figure 2**) where it will be discharged through a manifold to distribute the water for infiltration. As a backup option, a temporary water storage tank (see **Figure 2** for location) will be maintained on site where water may be retained until its pH can be normalized by treatment using CO_2 sparging or dry ice. An adequate supply of these materials for pH treatment will be maintained on site during concrete construction activities below OHWM. Monitoring for pH and any pH adjustments will occur daily, in accordance with the CSWGP, to comply with 40 CFR § 450.21, "Prohibited discharges". Monitoring will be conducted with a digital pH meter and will be recorded in the monitoring logbook and included

in the weekly reports. The normalized water will be discharged to the Forested Uplands area for infiltration when pH is within approved pH limits. For Winter Stabilization work any activities that create pH laden water will be captured, sampled, and possibly treated according to treatment methods described in above detailed Monitoring Schedule section.

Monitoring of Intercepted Seepage Water

Water from the river flow seeps through the riverbed upstream of the excavation and flows into the excavation at multiple points on the upstream wall. That water is relatively clear compared to the typical natural background turbidity of the river because of natural filtration as it flows through sandy riverbed sediments. The dewatering plan includes a collection trench and a pump to collect that water before it contacts the active work areas within the excavation. This component of the dewatering plan prevents relatively clean water from mixing with highly turbid water in the bottom of the excavation. Visual observation of this seepage water indicates that it is much less turbid than adjacent river water. These observations will be verified by visual monitoring for turbidity. Provided the water complies with state water quality standards for turbidity it will be pumped back into the river through the Conveyance Channel shown on **Figure 2**.

CONTINGENCY PLAN FOR HIGHLY TURBID WATER:

Monitoring personnel will observe the riverside edge of the Forested Uplands infiltration area (see **Figure 2** for location) to ensure that infiltration occurs and ensure the water does not flow overland into the river. In the event that the Forested Uplands area becomes oversaturated and overwhelmed, treated water will be discharged to a secondary backup Forested Uplands area located adjacent to and downstream of the primary Forested Uplands area for infiltration. Turbid water will be infiltrated within the Forested Uplands area by discharging the water through a manifold that spreads out the water and dissipates flow energy and prevents soil erosion. Additional Backup Forested Wetlands is shown on **Figure 2**.

Additional contingencies include sampling for turbidity at unexpected locations as per CSWGP.

REPORTING

Exceedances of turbidity standards (sample results above 10% of background) will be called in as an Environmental Report Tracking System (ERTS) notification within 24-hours of acknowledgement at 360-407-6300 and the area inspector will also be notified.

The CSWGP requires monthly reporting of the highest values of water quality monitoring data (turbidity and pH), exceedances, and corrective measures as specified by the SWPPP and this WQMP. In addition to monthly reporting, Electron Hydro will prepare weekly reports describing construction activities and duration, confirmation of effective isolation of the in-river work area, dewatering system operation, turbidity monitoring activities and results, Field Turf containment and disposal, conservation measures implemented, and incidental takes associated with project activities. This is in accordance with implementing Reasonable and Prudent Measure 2 in the USFWS BO. Weekly reports will be submitted to the Corps of Engineers and Ecology.

In addition to regular weekly and monthly reporting, the following additional notifications are required by Ecology in response to exceedance events and changed conditions:

- High turbidity phone notification – within 24 hours.
- Non-compliance notification by phone – within 24 hours
- Non-compliance reports provide written notification – within 5 days of non-compliance (CSWGP condition S5F).

Additionally, phone and written notifications to Ecology will also be directed to:

Carol Serdar, Hydropower WQ Compliance Manager
(360) 742-9751
Cser461@ecy.wa.gov

For Winter Stabilization work, Ecology requests a daily site log for observations, including date, name of observer (printed and signature), statement certifying that the report is accurate and is true as witnessed by the monitoring personnel, and description of the activities performed over the day. The additional daily spreadsheet of turbidity observations (date, time, location along the river bank, and activity) that created turbid event at 300' monitoring location, and comments (color of turbid event, etc.), is included in this WQMP (see Figure 4).

Reporting process must include an Environmental Report Tracking System (ERTS) filing if turbidity or pH values exceed the WA Water Quality Standards as found in 173-201A WAC; reporting includes Ecology SWRO 360-407-6300 and email to carol.serder@ecy.wa.gov.

Responses to Corps Questions Re: Plan Submitted August 18, 2020

The Corps raised three specific questions about the plan prepared by Electron Hydro and submitted for Corps review on August 18, 2020. Responses are provided below.

"1. What happens when a storm or high flow event increases flow in the conveyance channel (page 7 of 20) to a rate that exceeds the pumping capacity of Pump 4? What happens when pump 4 fails? This occurrence is inevitable-what are the backups in place?"

Response: The new WQMP moves the Pump 4 location from the Conveyance Channel to the Sediment Trap. There will be a backup pump for Pump 4. Pump 4 will not be overwhelmed by high flows because it only manages water that was pumped into the Conveyance Ditch.

Only water that meets water quality standards of 110% NTU of background and pH between 6.5 and 8.5 can flow into the Conveyance Channel. Should the Conveyance Channel overtop, that is acceptable as it is essentially the river returning to the river. Water that could flow into the Conveyance Channel would be pumped by three other pumps (Pumps #1, #2, #3). Further backup pumps described below.

The new WQMP shows that there are three 6" pumps and one 3" pump. Electron Hydro will maintain a minimum of seven pumps (four 6" pumps and three 3" pumps) on-site to either

replace capacity for a failed pump or increase the available pump capacity for high flow conditions. The 6" pumps have a capacity of 2000 gpm. There currently is approximately 100 gpm running through the work area, and an additional 400 gpm below the work area.

The temporary bypass channel was designed to safely convey river flows up to 2000 cfs. That design flow was selected to exceed maximum anticipated river flows for July through September and prevent surface water in the river from spilling into the isolated in-river work area. Storms or high flow events would likely increase the rate of water flowing into the excavation either as stormwater runoff or shallow subsurface water flowing into the sides of the excavation. During higher flow conditions, the rate of water entering the excavation would be limited by the capacity of the subsurface flow paths and the surface area that drains to the excavation. The four pumps identified in the dewatering plan work together to remove water from the same excavation. Previous operation of one pump prior to the stop work order has demonstrated that it provided sufficient capacity to keep up with the rate of water flowing into the excavation.

"2. A trench near the position of well point 1 and perpendicular to the flow would provide greater lateral pickup and more effectively control groundwater into the site. What is the backup for pump 1 failure?"

Response: Pump 1 picks up water that enters the dried-up riverbed on the left bank. We agree that a trench near the position of the Pump 1 inlet and perpendicular to the river flow direction would provide greater lateral pickup. It would be at the risk of increasing the overall infiltration as the trench gets close to the flowing river. We will widen the intake area, moving toward the river to intercept any water traveling downslope toward the work area. The backup plan for Pump 1 failure is that we will maintain an additional backup pump for Pump #1 at the jobsite.

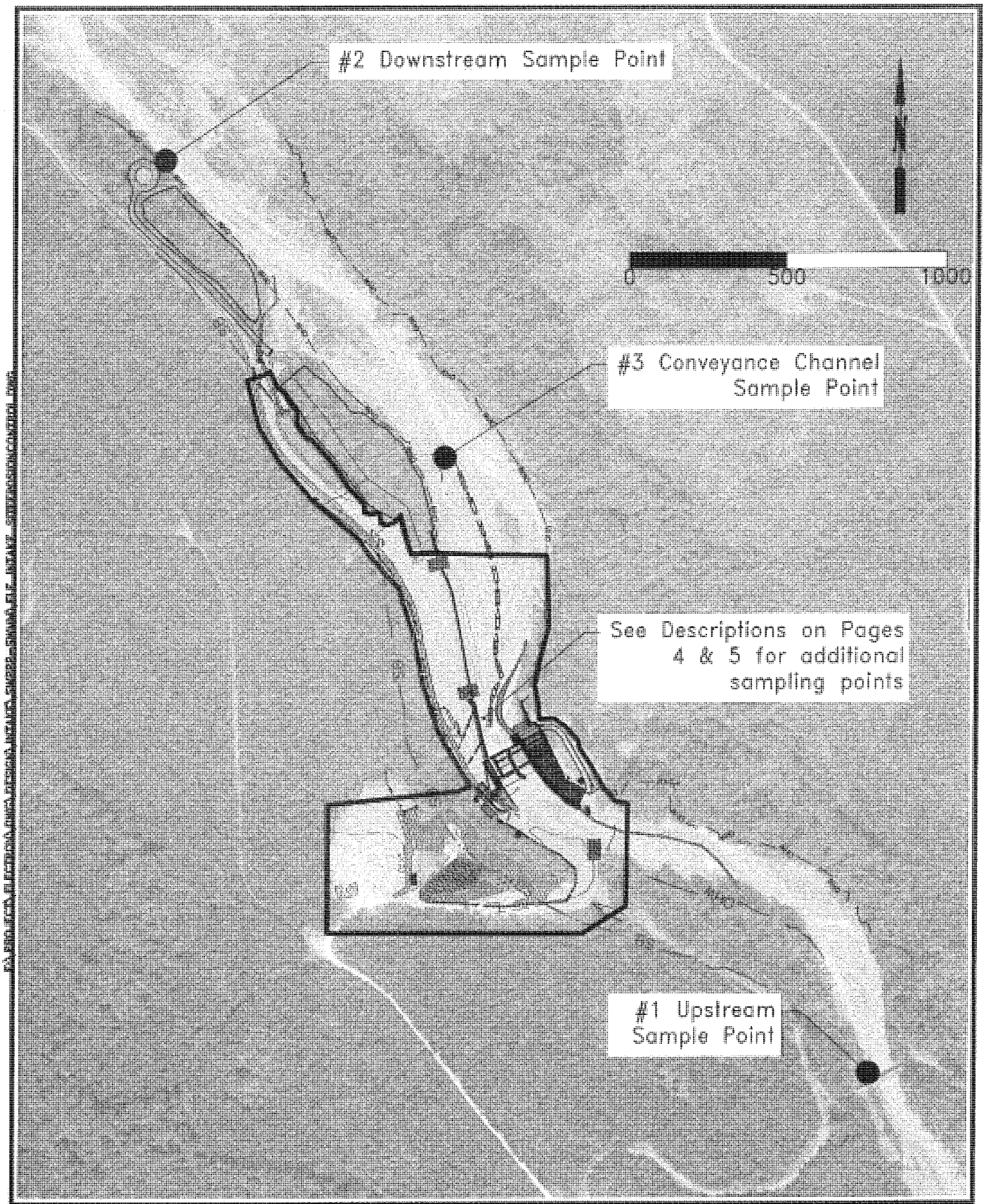
"3. The existence and operation of the Conveyance Channel depends entirely on river flows staying quite low-presumable under 1000-cfs. What is the plan should the channel be overtopped?"

Response:

It would take substantial flows in the bypass channel to overtop the lower cofferdam (downstream of the diversion) next to the Conveyance Channel. The bypass channel is designed for 2000 cfs. Sediment deposition resulting from the 10,000 cfs flood last February naturally raised the riverbed elevation of the dry cobble bar downstream of the diversion. As a result, the lower cofferdam is at a higher elevation than originally planned. However, should the river overtop the lower cofferdam and flow into the Conveyance Channel, there would be no environmental harm. This is due to our use of the Conveyance Channel as essentially just another branch of the river, and only water that meets water quality standards can flow into the Conveyance Channel.

The Conveyance Channel is intended to only pass water that meets water quality standards as it leaves the work area. It also is to facilitate infiltration of water that leaves the in-river excavation area by passive flow. This is expected to be at times when no concrete work is being performed, no excavation work, or no work such as at night. The Conveyance Channel dries up when

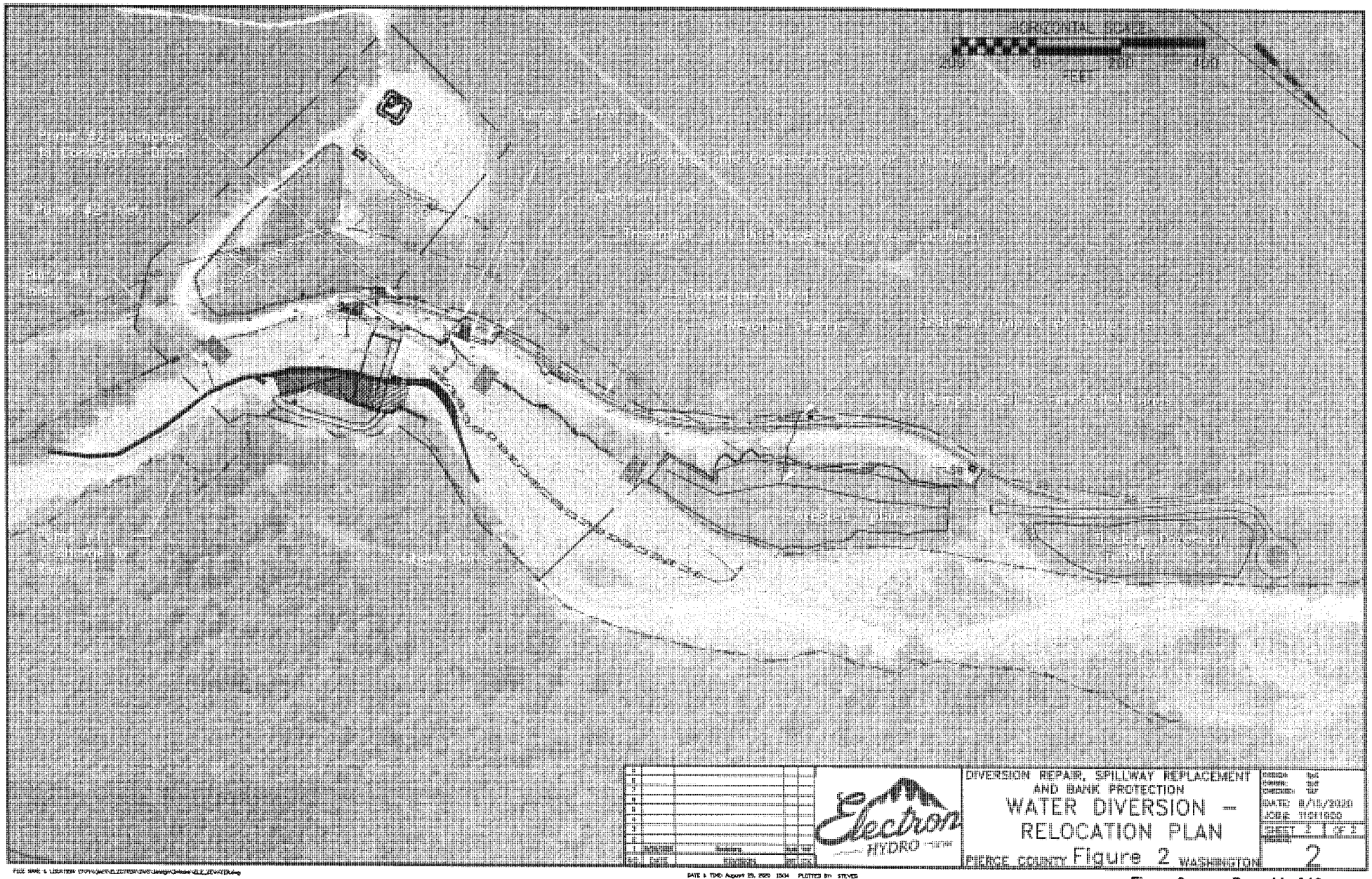
Pumps 2 and 3 are in operation. The Conveyance Channel will only be used if the water exiting the work area near Pump 3 is within 10% of background and within the required pH levels. Otherwise the water will be pumped into the treatment tanks or Conveyance Ditch. Water entering the Conveyance Channel will infiltrate at the north end or overtop and flow into the river. Overtopping would be acceptable since the water would meet water quality standards.



DRAWN: SPG CHECKED: TAF DATE: 08/10/2020	DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION SWPPP SITE PLAN Sample Sites					
		1	8/31/20	Label update	SpG	
EXHIBIT 1 OF 2	PIERCE COUNTY Figure 1 WASHINGTON	NO.	DATE	REVISION	BY	CK

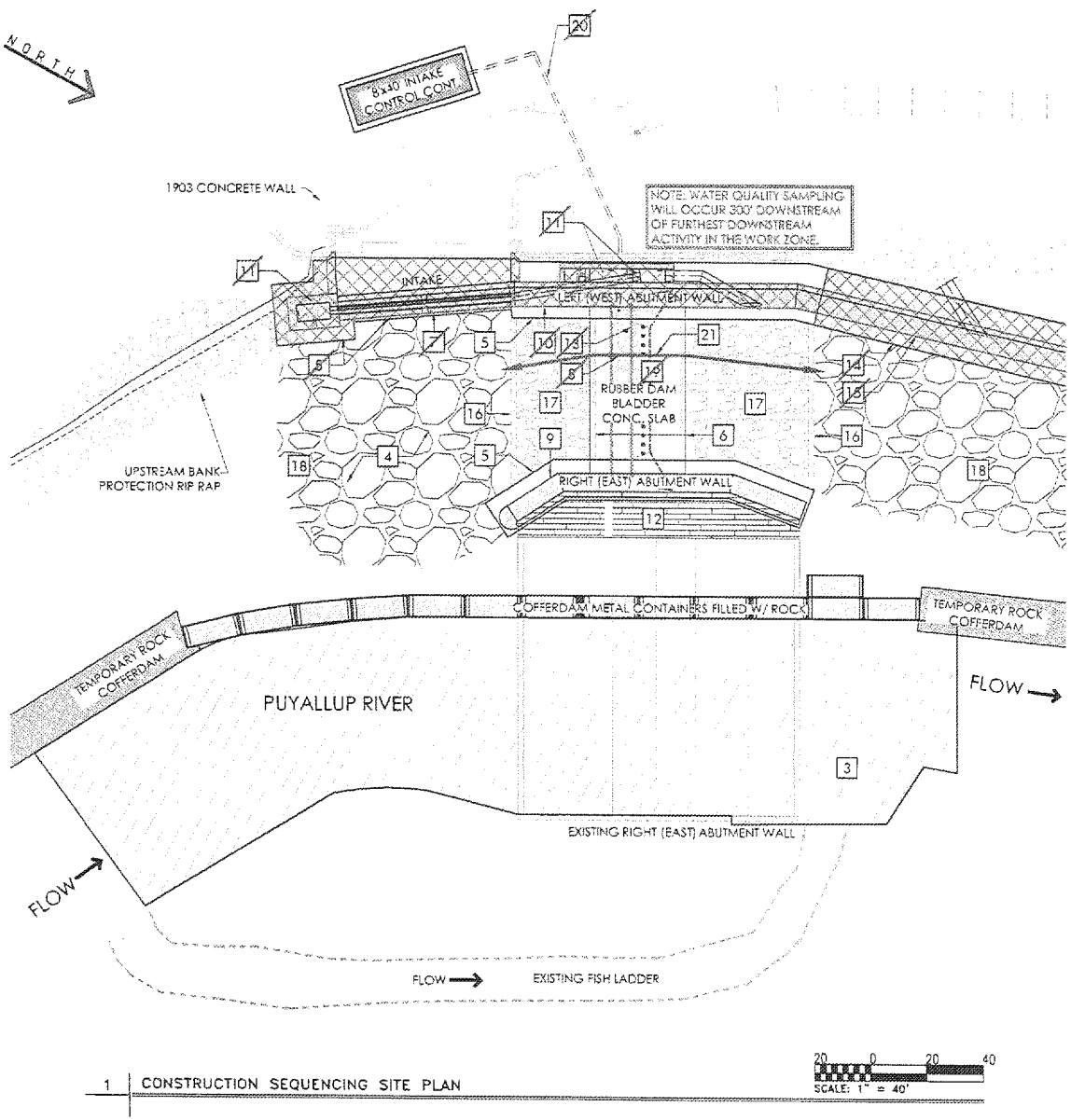
Figure 1

ED_005624_00000045-00159



EH-USA000493

ED_005624_00000045-00160



1 CONSTRUCTION SEQUENCING SITE PLAN

CONSTRUCTION SEQUENCING KEYNOTES

KEYNOTES ARE LISTED IN CONSTRUCTION SEQUENCING ORDER FROM NOTE 3

3 IMPROVING THE FISH LADDER PER THE FISH LADDER OPERATION AND MAINTENANCE PLAN

4 COMPLETE EXCAVATION AND DEWATERING EFFORTS PER THE MODIFIED WATER DIVERSION/RELOCATION PLAN

5 FORM AND POUR FOUNDATIONS FOR THE EAST ABUTMENT WALL THEN ~~INTAKE AND~~ WEST ABUTMENT WALL

6 FORM AND POUR THE TWO CENTER CUTOFF WALLS

~~7 FORM INTAKE WALL, PLACE AND ALIGN THE SLUICE PIPE~~

~~8 SET THE EMBED PIPES FOR THE BLADDER~~

9 FORM UP, PLACE EMBEDS, AND POUR THE EAST WALL

~~10 FORM UP, PLACE EMBEDS, AND POUR THE WEST WALL~~

~~11 FORM AND POUR THE TWO SLUICE PIPE VAULTS, AND THE MECHANICAL DRAIN EQUIPMENT VAULT~~

12 ONCE THE EAST ABUTMENT WALL IS POURED, CONNECT THE REMAINING EXISTING WOOD DIVERSION TO THE EAST ABUTMENT WALL

13 CONCURRENT TO THIS, FORM, ~~PLACE EMBEDS~~, AND POUR REINFORCED SLAB BETWEEN THE TWO ABUTMENT WALLS

~~14 FORM AND POUR DOWNSTREAM ABUTMENT FOUNDATION~~

~~15 FORM AND POUR DOWNSTREAM ABUTMENT WALL SECTION~~

~~16 FORM AND POUR UPSTREAM AND DOWNSTREAM CUTOFF WALLS~~

~~17 POUR AND PLACE BOULDER ARMORING BETWEEN THESE TWO CUTOFF WALLS AND THE CENTER SLAB~~

18 PLACE LARGE RIP RAP DOWNSTREAM OF THE DOWNSTREAM OF THE LOWER CUTOFF WALL, AND UPSTREAM OF THE UPSTREAM CUTOFF WALL

~~19 CONCURRENT TO BUILDING CUTOFF WALLS AND BOULDER ARMORING, POSITION AND BOLT DOWN THE BLADDER ON THE CENTER SLAB~~

~~20 ONCE THE BLADDER IS IN PLACE, CONNECT THE AIR PIPING, DRAIN PIPING, AND BLOWERS BEFORE TESTING THE BLADDER OPERATIONS, TEST BLADDER OPERATIONS~~

21 PLACE LARGE ROCK IN LOCATION OF REMOVED WOOD DIVERSION TO ELEVATION 1620.00'

NO.	DATE	REVISION	BY	CK

Electron HYDRO

PHASE 1 CONSTRUCTION SEQUENCING SITE PLAN

SCALE PER VIEW

DESIGN: RDM
DRAWN: ESK
CHECKED: TAF
DATE: 09-04-20
JOB #:

SHEET 1 OF 20

DRAWING S0.1

Figure 3

EH-USA000494

DAILY TURBIDITY SAMPLING ACTIVITY SITE LOG

Electron Hydro Intake Project				Date:		
Weather:						
Location on River Bank:						
Work Activity Observed:						
Time:						
Upstream Sample Point #1:						
Downstream Sample Point #2:						
Exceedance (Y / N)						
Time:						
Sample Point #3:						
Exceedance (Y / N)						
Description of Turbity Event:						
Sample 300' Downstream						
Location	**Time**	**Turb. Color**	**NTU**	**Description of Work Performed**		
Observed by: (print)			(Signature)			
by my signature I certify that this report is accurate and true as witnessed.						

9/18/20

Pierce County
Planning & Public Works

Dennis Hanberg—Director
dennis.hanberg@piercecountywa.gov

2401 South 35th Street, Room 2
Tacoma, Washington 98409-7460
piercecountywa.gov/ppw

September 18, 2020

Thom Fischer Electron Hydro LLC
1800 James Street Suite 201
Bellingham, WA 98225
thom@Tollhouseenergy.com

Subject: Electron Hydro Facility Compliance, Shoreline Substantial Development Permit Application 858766 and 858765

Mr. Fischer,

This letter serves as notice that the County's Stop Work of August 4th is amended in a limited manner to allow the following three specific items:

1. Construction of the abutment wall intended to secure the left side of the wood diversion structure. We understand this work is expected to take approximately 21 days (14 days to form, pour, cure, and strip the "center" abutment, and 7 days to tie-in the existing wood diversion to the abutment). This work is to be done in a manner that ensures full containment of concrete leachate.

2. Placement of heavy stone (which may be rounded or angular) at the outlet of Fish Ladder to create a step pool configuration that restores fish passage through the ladder. It is acknowledged that this will necessitate machinery in the wet channel. Stone shall not be placed elsewhere in the River.

   Water quality related concerns related to these two items must be addressed in a Water Quality Management Plan that is to include water quality monitoring both at the immediate work site and for a distance of 300 feet downstream. Please coordinate with the Department of Ecology on this matter.

3. Isolation of the diversion intake structure. The opening to this structure is to be welded or bolted shut to prevent water from entering.

This letter also acknowledges our support for the work window time extension through October 2, as provided for in the Corps letter of September 18, 2020.

Please coordinate with the County and your 3rd party monitor regarding your proposed schedule of work.

Please continue to communicate your next steps as we move forward in the process. If you have any questions, contact Dave Risvold at dave.risvold@piercecountywa.gov or 253-798-7036.

You are responsible for coordinating with, and receiving approval from, other agencies with review authority.

Be advised that allowance for these actions will not absolve Electron Hydro or any individuals or entities acting on its behalf from civil or criminal liability arising out of the environmental damage that has been caused by their actions.

Sincerely,

Melanie D. Halsan
Assistant Director, Planning and Public Works

Cc: Bill Sterud, Chair, Puyallup Tribe
Doug Richardson, Chair, Pierce County Council
Jacalen Printz, US Army Corps of Engineers
Carol Serdar, WA Department of Ecology
Chris Cziesla, Principal Marine/Fisheries Biologist, Confluence EC
Gwen Lentes, Program Manager Region 6, WA Department of Fish and Wildlife
Dennis Hanberg, Director, Pierce County Planning and Public Works
Todd Campbell, Prosecuting Attorney's Office
Chris Spens, cspens@tollhouseenergy.com

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

Regulatory Branch

September 22, 2020

Mr. Thom Fischer
Electron Hydro, LLC
1800 James Street, Suite 201
Bellingham, Washington 98225

Reference: NWS-2016-350
Electron Hydro, LLC
(Diversion Repair and
Spillway Replacement)

Dear Mr. Fischer:

We have reviewed the information you provided in the Water Quality Monitoring Plan (WQMP) dated September 19, 2020, related to the work performed on your property located in the Puyallup River near Electron, Pierce County, Washington. As previously mentioned in our letter dated August 7, 2020, you are in violation of your permit.

We appreciate your coordination to develop a site stabilization plan and we approve of the immediate implementation of the WQMP dated September 19, 2020. At this time the U.S. Army Corps of Engineers (Corps) does not release the Stop Work Order for any work not described in the September 11, 2020, and September 18, 2020, letters from Pierce County. Any reports or updates submitted to Pierce County should also be copied to the Corps during the allowed construction. While we understand you continue to coordinate with Washington State Department of Fish and Wildlife for an updated Hydraulic Project Approval, we strongly emphasize the need to begin the turf removal phase of the work previously approved in the letters described above before heavy rain/flow occurs.

As mentioned in our September 17, 2020, letter, your work-window extension ends on October 2, 2020, and a request formal work window extension request if needed should be submitted to the Corps no later than September 28, 2020. We strongly encourage you to do everything you can to complete the allowed work, including all turf removal at the site, by October 2, 2020.

Please be reminded that you continue to be out of compliance with Special Conditions "a" and "b" of your Corps permit pertaining to your Endangered Species Act (ESA) Section 7 consultation Biological Opinions with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service.

Please be reminded this letter is not a permit. We anticipate future ongoing conversations to resume shortly after the work described above is complete regarding continued turf monitoring and removal, restoration and mitigation for impacts that have occurred, and your long term plan at the site and paths for lifting the remaining Stop Work order with a revised permit assessment, including continuing the ESA Section 7 consultation. Failure to cooperate in this matter could also result in the assessment of administrative civil penalties under 33 CFR Part 326 and/or a directive to remove any fill placed under this permit. Please read the enclosure *Clean Water Act Class I Administrative Penalties* for more information. If you have any questions concerning this letter, please contact Ms. Jenae Churchill at jenae.churchill@usace.army.mil or at (206) 764-5527.

Sincerely,

Kristine G. Tong

for Alexander L. Bullock
Colonel, Corps of Engineers
District Engineer

Enclosure

9/18/20

Steve Goodrich

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Friday, September 18, 2020 11:49 AM
To: Thom Fischer
Cc: Chris Spens; Steve Goodrich; Corey Kleppe; Marcoe, Sheila (ECY); Eakens, Jess C. (ECY)
Subject: specifics for Electron Addendum to the WQMP (dated 30Aug2020)

Importance: High

Good morning Thom,
Based on this morning's email with attached letters from the USACE and Pierce County, the winterizing stabilization activities will require an Addendum to the Water Quality Monitoring Plan (WQMP) dated 30 August 2020. Call if you have a need for clarification.

The Puyallup River has naturally elevated and variable turbidity (and exceeds 50 NTU). Based on the description of the construction activities within the riverbed you will need to continue to monitor water quality. Based on Washington Water Quality Standards 173-201A-200(1)(e) Aquatic life turbidity criteria, your maximum "turbidity shall not exceed a 10 percent increase in turbidity when the background turbidity is more than 50 NTU."

The following items below must be included in your draft Addendum submitted to Ecology:

1) Cover page of the 30August2020 WQMP should reflect new date and Addendum title; and

2) Narrative that describes the winterizing stabilization activities and and time period this Addendum will cover. Narrative should include text related to textboxes on the figure described below; and

3) A figure showing an area that will include all ground disturbing activities (list within specifications provided by USACE and Pierce County) within the riverbed and an additional 1000 feet downstream (two pages may be necessary); and

4) Text boxes on figure describing distinct activities (USACE and County specific activities) and information provided in the narrative:
    a. All excavations in live water (all water that reaches waters of the state, including water currently in the excavation area) require visual monitoring 300 feet downstream of any activity (monitoring personnel must be stationed 300 feet downstream during all in-water work). If multiple activities are occurring, the monitoring will occur at 300 feet downstream of the most downstream activity; and
    b. Some activities include:
        i. Emptying conex boxes; and
        ii. Placement of large rock in live water; and
        iii. Include all directed activities (USACE and Pierce County); and
    c. Statement of background sampling location (performed daily); and

5) Additional narrative related to monitoring specifics for when the Puyallup River re-enters the current exclusion area of the construction/wooden dam structure. Monitoring will be 300 feet downstream of any work that has the potential to create a turbid discharge; and

6) Daily site log for observations, including date, name of observer (printed and signature), statement certifying that the report is accurate and true as witnessed by the monitoring personnel, description of the activities performed over the day; and

7) Daily spreadsheet of turbidity observations (date, time, activity that created turbid event at 300′ monitoring location, and comments (color of turbid event, etc); and

8) Additional narrative stating, any activities that create pH laden water will be captured, sampled, and possibly treated. The treatment will remain as stated in the main portion of this new dated WQMP; and

9) Additional narrative stating, reporting process which must include an Environmental Report Tracking System (ERTS) filing (Ecology SWRO – 360.407.6300) and email to carol.serdar@ecy.wa.gov.

Once you have written the specifics, send to me for my review and comments.

Sincerely,
Carol

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

EH-USA000501

ED_005624_00000045-00167

Thom Fischer

om:	Thom Fischer
sent:	Saturday, September 12, 2020 5:26 PM
To:	Alice McDaniel
Cc:	Doug Richardson; Dennis Hanberg; Bill.Sterud@PuyallupTribe-nsn.gov; Bruce Dammeier; Dave Risvold; Churchill, Jenae N CIV USARMY CENWS (US); Printz, Jacalen M CIV USARMY CENWS (US); Walker, Michelle CIV USARMY CENWS (US)
Subject:	RE: Electron Hydro Facility Compliance

Bruce Dammeier,

Thank you for your letter. I just received a conditional release of the Corps stop work order for items listed in your letter dated yesterday on September 11, 2020. We could start once we have approval from the County for the independent site monitor, and we have a meeting with your personnel to discuss the details of what we will be doing. It is important that these issues are discussed so that we do not experience any further environmental problems this coming winter when high flows again return.

I understand Dave Risvold will be available Monday September 14, 2020. It would be helpful to also have County engineering at the meeting to expedite decisions. Issues we would like to discuss are as follows:

***Item 3**. Temporarily secure the existing 116-year-old wooden diversion structure for the wet season s to prevent it from collapse and causing damage downstream.*

A solid abutment is needed to stabilize the existing structure to withstand flood events, as called for by your letter. We will bring a proposed design for approval on Monday.

***Item 4**. Place heavy rounded riprap at outlet of Fish Ladder to create a step pool configuration that restores fish passage through the ladder. Your August 16 plan will suffice.*

This works as long as there is an understanding that implementation of the August 16 plan, approved by your letter, requires an excavator operating in the river.

***Item 5**. Empty the Connex boxes currently being used to isolate the work area from the active channel and remove all fill from within. Fill material must be trucked out or crane slung out of channel.*

Fill in the containers came from the river. What is the reason the gravel would be removed?

***Item 6**. Remove Connex boxes entirely from the channel working in an upstream direction so as to preserve a dry exit path before river assumes new course.*

We cannot remove containers before we dry the channel out and remove the HDPE and turf. The HDPE is attached to the containers. Performing work in this order would wash turf and liner downriver.

***Item 7**. Once the active channel is dewatered, remove all artificial turf and HDPE liner present using an excavator positioned on the east shore and manpower as necessary. Place all liner and turf material in an empty Conex box located on the east shore. Once filled, the Conex box will be crane slung across channel and removed from site and disposed of properly.*

There needs to be machinery and equipment in the now dry bypass area to remove the liner and turf and place into containers. This will not work with an excavator on one bank or another as it is 80 ft across.

em 8. Super-sacks should be positioned at top of channel to direct flow to the west to ensure all flow is off the liner and either directed into the fish ladder or eastward toward bladder dam construction site. Place super-sacks as needed.

The cofferdam will have to be adjusted per the approved plan to move the water back to the west bank of the river. We can use supersacks if needed as further assistance.

Item 10. *To further ensure protection of fish stocks, Electron Hydro shall block off the entrance to the flume to whatever extent necessary so that the river cannot enter at any time.*

We take exception to this, but it should be dealt with at a later date, and not during this emergency closure. We can go over how to accomplish this.

Item 13. *Commission an independent site monitor to oversee work and observe fish ladder inlet and outlet for proper operating conditions. This person must be approved by Pierce County and must be onsite whenever river channel related activities are underway.*

Is Confluence Environmental accepted?

Once we have a scope and approved start (approved monitor) then we could estimate how much time it will take to accomplish these items and request a time extension.

Thank you,

Thom

Thom A. Fischer, PE President, Tollhouse Energy Company, 1800 James Street, Suite 201, Bellingham, WA 98225
Main: 360-738-9999 Direct: 360-746-3414 Cell: 360-739-9999 www.TollhouseEnergy.com

From: Alice McDaniel <alice.mcdaniel@piercecountywa.gov>
Sent: Friday, September 11, 2020 5:11 PM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Doug Richardson <doug.richardson@piercecountywa.gov>; Dennis Hanberg <dennis.hanberg@piercecountywa.gov>; Bill.Sterud@PuyallupTribe-nsn.gov; Bruce Dammeier <bruce.dammeier@piercecountywa.gov>
Subject: Electron Hydro Facility Compliance
Importance: High

Mr. Fischer,

Please find the attached correspondence from Pierce County.

Sincerely,

Alice McDaniel
Executive Assistant to Bruce Dammeier

.erce County Executive's Office
930 Tacoma Ave S, Rm 737
253.798.6602 | alice.mcdaniel@piercecountywa.gov

Pierce County

Office of the County Executive

930 Tacoma Avenue South, Room 737
Tacoma, Washington 98402-2100

(253) 798-7477 • FAX (253) 798-6628
www.PierceCountyWA.gov

BRUCE F. DAMMEIER
Executive
(253) 798-7477
Bruce.Dammeier@PierceCountyWA.gov

September 11, 2020

Thom Fischer
Electron Hydro LLC
1800 James Street Suite 201
Bellingham, WA 98225

Subject: Electron Hydro Facility Compliance, Shoreline Substantial Development Permit Application 858766 and 858765

Mr. Fischer,

After evaluation of events and consideration of the documents submitted in response to the County's Stop Work order, it is the County's determination that the Stop Work Order will remain in effect. Pierce County will require Electron Hydro take advantage of summer low flow conditions and perform the following steps immediately:

1. Any stabilization required at the site must be within the original footprint in the original permit.
2. Remove partially buried concrete culverts placed vertically and filled with rubble located in bladder dam foundation area and presently being used as a coffer structure.
3. Temporarily secure the existing 116-year-old wooden diversion structure for the wet season as to prevent it from collapse and causing damage downstream.
4. Place heavy rounded rip-rap at outlet of Fish Ladder to create a step pool configuration that restores fish passage through the ladder. Your August 16 plan will suffice.
5. Empty the Conex boxes currently being used to isolate the work area from the active channel and remove all fill from within. Fill material must be trucked out or crane slung out of channel.
6. Remove Conex boxes entirely from channel working in an upstream direction so as to preserve a dry exit path before river assumes new course.
7. Once the active channel is dewatered, remove all artificial turf and HDPE liner present using an excavator positioned on the east shore and manpower as necessary. Place all liner and turf material in an empty Conex box located on the east shore. Once filled, the Conex box will be crane slung across channel and removed from site and disposed of properly.
8. Super-sacks should be positioned at top of channel to direct flow to the west to ensure all flow is off the liner and either directed into the fish ladder or eastward toward bladder dam construction site. Place super-sacks as needed.

9. Remove all Conex boxes and concrete culverts from the active river channel as well as any other remaining debris and construction related materials.
10. To further ensure protection of fish stocks, Electron Hydro shall block off the entrance to the flume to whatever extent necessary so that the river **cannot** enter at any time.
11. Any materials placed in this temporary fix should be inventoried and removed. Removal should be monitored to make sure ALL materials are in fact removed from the river.
12. Once site is clean, crane sling out any super-sacks that remain.
13. Commission an independent site monitor to oversee work and observe fish ladder inlet and outlet for proper operating conditions. **This person must be approved by Pierce County and must be onsite whenever river channel related activities are underway.**
14. Electron Hydro shall provide access to the Puyallup Tribe for monitoring at the Tribe's discretion and at any time.

Electron Hydro will be required to prepare a new plan for permits that outlines a responsible construction sequence and meets approval of all agencies. After approval, Electron Hydro will be required to follow the plan and notify the permitting agencies of any and all departures. The plans shall be submitted to the county along with new permit applications. Electron Hydro must initiate consultation for Endangered Species Act coverage and comply with all environmental laws and regulations.

The deposit of FieldTurf and its crumb rubber component in the Puyallup River for this project is tragic and demonstrated inexcusable decision making. Pierce County will require that Electron Hydro, LLC. take all necessary steps to clean up the environmental damage caused by its actions and prepare the project for the upcoming winter. Please continue to communicate your next steps as we move forward in the process. If you have any questions, contact Dave Risvold at dave.risvold@piercecountywa.gov or 253-798-7036.

Be advised that compliance with the mitigation requirements outlined above will not absolve Electron Hydro or any individuals or entities acting on its behalf from civil or criminal liability arising out of the environmental damage that has been caused by their actions.

Sincerely,

Bruce F. Dammeier
Pierce County Executive

Cc:
Bill Sterud, Chair, Puyallup Tribe
Doug Richardson, Chair, Pierce County Council
Jacalen Printz, US Army Corps of Engineers
Carol Serdar, WA Department of Ecology
Chris Cziesla, Principal Marine/Fisheries Biologist, Confluence EC
Gwen Lentes, Program Manager Region 6, WA Department of Fish and Wildlife
Dennis Hanberg, Director, Pierce County Planning and Public Works

Steve Goodrich

From: Serdar, Carol (ECY) <cser461@ECY.WA.GOV>
Sent: Tuesday, September 8, 2020 2:35 PM
To: Steve Goodrich
Subject: 306648 modification form
Attachments: NOI Copy of Record DepartmentofEcology Friday June 1 2018.pdf

Carol F. Serdar, LG
Hydropower WQ Compliance Manager and
Contaminated Construction Stormwater Inspector
WA Department of Ecology - SWRO
Water Quality Program - Watershed Resources Unit
PO Box 47775
Olympia, WA 98504-7775

~~360.407.6269 desk~~
360.742.9751 cell

ATTENTION: This form is for Permit Modification and Updates Only. A new Notice of Intent (NOI) must be submitted electronically unless granted a waiver.
www.ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance

DEPARTMENT OF ECOLOGY
State of Washington

MODIFICATION/UPDATE
(Reporting Planned Changes)

Construction Stormwater General Permit

Check if applicable:
- [x] **Update Permit Information**
- [x] **Modification of Permit Coverage**

Permit #WAR _____

Please print or type all sections of this application. All fields are required unless otherwise marked. (use [F11] to navigate fields)

I. Site Information

Site or Project Name Electron Hydro LLC Intake

Street Address or Location Description (*If the site lacks a street address, list its specific location. For example, Intersection of Highway 61 and 34.*)

38400 Moose Junction Road East, 28400 Grid of S3, T16N, R6E, Parcel 0616032001

City (or nearest city): Orting

County: Pierce

Zip Code: 98360

Parcel ID#: 0616032001 (*Optional*)

Type of Construction Activity (*check all that apply*):
- [ ] Residential
- [ ] Commercial
- [ ] Industrial
- [ ] Highway or Road (city ,county, state)
- [x] Utilities
- [ ] Other (specify): _____.

Site Acreage
Total size of your site/project, including support activities such as off-site equipment staging yards, material storage areas, borrow areas, etc. (that ***you*** own/control): 30 acres.

Total area of soil disturbance for ***your*** site/project over the life of the project: 10 acres. Include grading, equipment staging, excavation, borrow pit, material storage areas, dump areas, haul roads, side-cast areas, off-site construction support areas, and all other soil disturbance acreage associated with the project. *(Note: 1 acre = 43,560 sq.ft.)*

Concrete/Engineered Soils
Will 1,000 cubic yards or more of poured concrete or recycled concrete be used over the life of the project?
- [x] Yes
- [ ] No

Estimated project start-up date (mm/dd/yy): 7/15/2018

Estimated project completion date (mm/dd/yy):

Record the latitude and longitude of the *main entrance* to the site or the approximate center of site

Latitude: 46.90591 °N

Longitude: -122.039807 °W

II. Operator/Permittee

(Party with operational control over plans and specifications or day-to-day operational control of activities that ensure compliance with Stormwater Pollution Prevention Plan (SWPPP) and permit conditions. Ecology will send correspondence and permit fee invoices to the permittee on record.)

Name: Mr. Thom Fischer

Company: Electron Hydro, LLC

E-mail: thom@electronhydro.com

Business Phone: 360-738-9999

Ext.

Cell Phone (Optional): 360-739-9999

Fax (Optional): 360-733-3056

Unified Business Identifier (UBI):
(UBI is a nine-digit number used to identify a business entity. Write "none" if you do not have a UBI number.)

City: Orting

State: WA

Zip + 4: 98225-4631

III. Property Owner (The party listed on the County Assessor's records as owner and taxpayer of the parcel[s] for which permit coverage is requested. Ecology will *not* send correspondence and permit fee invoices to the Property Owner unless he/she is also the permittee. The Property Owner information will be used for emergency contact purposes.)

Name: Mr. Thom Fischer		Company (if applicable): Electron Hydro, LLC	
Business Phone: 360-738-9999	Ext.	Unified Business Identifier (UBI): *(UBI is a nine-digit number used to identify a business entity. Write "none" if you do not have a UBI number.)*	
Cell Phone (Optional): 360-739-9999	Fax (Optional): 360-733-3056		
E-mail: thom@electronhydro.com			
Mailing Address: 1800 James Street St., Suite 201		City: Bellingham	State: Wa	Zip + 4:

IV. On-site Contact Person (Typically the Certified Erosion & Sediment Control Lead or Operator/Permittee)

Name: Mr. Thom Fischer		Company: Electron Hydro, LLC		
Business Phone: 360-738-9999	Ext.	Mailing Address: 1800 James St.,Suite 201		
Cell Phone (Optional) 360-739-9999	Fax (Optional):	City: Bellingham	State: WA	Zip + 4: 98225-4631
E-mail: Thom@electronhydro.com				

V. WQWebDMR (Electronic Discharge Monitoring Reporting)

You must submit monthly discharge monitoring reports using Ecology's WQWebDMR system. To sign up for WQWebDMR, or to register a new site, go to www.ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance. If you are unable to submit your DMRs electronically, you may contact Ecology to request a waiver. Ecology will generally only grant waiver requests to those permittees without Internet access. Only a permittee or representative, designated in writing, may request access to or a waiver from WQWebDMR. To have the ability to use the system immediately, **you must submit the Electronic Signature Agreement with your application**. If you have questions on this process, contact Ecology's WQWebDMR staff at WQWebPortal@ecy.wa.gov or 800-633-6193 or 360-407-7097 (local). **Note: DMRs are optional for permitted sites under 1 acre that do not discharge to impaired waterbodies.**

VI. Existing Site Conditions

1. Are you aware of contaminated soils present on the site? ☐ Yes ☒ No
2. Are you aware of groundwater contamination located within the site boundary? ☐ Yes ☒ No
3. If you answered yes to questions 1 or 2, will any contaminated soils be disturbed or will any contaminated groundwater be discharged due to the proposed construction activity? ☐ Yes ☐ No

["Contaminated" and "contamination" here mean containing any hazardous substance (as defined in WAC 173-340-200) that does not occur naturally or occurs at greater than natural background levels.]

If you answered yes to Question 3, *please provide* detailed information with the NOI (as known and readily available) on the nature and extent of the contamination (concentrations, locations, and depth), as well as pollution prevention and/or treatment Best Management Practices (BMPs) proposed to control the discharge of soil and/or groundwater contaminants in stormwater. This should include information that would be included in related portions of the Stormwater Pollution Prevention Plan (SWPPP) that describe how contaminated and potentially contaminated construction stormwater and dewatering water will be managed.

VII. Stormwater Pollution Prevention Plan (SWPPP)

You must develop a SWPPP prior to starting construction. Do ***not*** submit your SWPPP with your application. The exception is that Ecology may request a copy of all or part of the SWPPP if you answered yes to the questions in Part VI.

VIII. Best Management Practices (BMPs)

You must use the BMPs listed in the Stormwater Management Manual for Western Washington or the Stormwater Management Manual for Eastern Washington or other manuals approved by Ecology. Alternatively, you may use demonstrably equivalent BMPs on the basis of permit condition S9.C.4. If you intend to use a BMP at your site that is not included in these manuals, but that you believe meets the definition of a *demonstrably equivalent* BMP, you must notify the appropriate regional office. https://ecology.wa.gov/About-us/Get-to-know-us/Contact-us/Regional-contacts
(See Definitions in the Construction Stormwater General Permit).*

**Note that if you receive permit coverage without indicating the preference for a demonstrably equivalent BMP and later decide to use one, you must provide Ecology with notice of the selection of an equivalent BMP no less than 60 days before the intended use of the equivalent BMP.*

IX. Discharge/Receiving Water Information

Indicate whether your site's stormwater and/or dewatering water could enter surface waters, **directly** and/or **indirectly**:

☒ Water will discharge directly or indirectly (through a storm drain system or roadside ditch) into one or more surface waterbodies (wetlands, creeks, lakes, and all other surface waters and water courses).

If your discharge is to a storm sewer system, provide the name of the operator of the storm sewer system:
(e.g., City of Tacoma): _____

☐ Water will discharge to ground with 100% infiltration, with no potential to reach surface waters under any conditions.

If your project includes dewatering, you **must** include dewatering plans and discharge locations in your site Stormwater Pollution Prevention Plan.

Location of Outfall into Surface Waterbody

Enter the outfall identifier code, waterbody name, and latitude/longitude of the point(s) where the site has the potential to discharge into a waterbody (the outfall). Enter all locations. See illustration of Surface Waterbody Outfall locations at the end of this form.

- Include the names and locations of both direct and indirect discharges to surface waterbodies, even if the risk of discharge is low or limited to periods of extreme weather. **Attach a separate list if necessary.**
- Give each point a unique 1-4 digit alpha numeric code. This code will be used for identifying these points in WQWebDMR.
- Some large construction projects (for example, subdivisions, roads, or pipelines) may discharge into several waterbodies.
- If the creek or tributary is unnamed, use a format such as "unnamed tributary to Deschutes River."
- If the site discharges to a stormwater conveyance system that in turn flows to a surface waterbody, include the surface waterbody name and location.

Outfall Identifier Code. These cannot be symbols. (Maximum of four characters).				Surface Waterbody Name at the Outfall	Latitude Decimal Degrees	Longitude Decimal Degrees
Example: 001A				**Example:** Puget Sound	47.5289047° N	-122.3123550° W
1				Puyallup River	46.90591 ° N	-122.039807 ° W
					° N	° W
					° N	° W

If your site discharges to a waterbody that is on the impaired waterbodies list (e.g., 303(d) list) for turbidity, fine sediment, high pH, or phosphorus, Ecology will require additional documentation before issuing permit coverage and these sites will be subject to additional sampling and numeric effluent limits (per Permit Condition S8). Ecology will notify you if any additional sampling requirements apply. Information on impaired waterbodies is available online at https://www.ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d.

X. State Environmental Policy Act (SEPA)

This Notice of Intent (NOI) is incomplete and cannot be approved until the applicable SEPA requirements under Chapter 197-11 WAC are met.

Who is the SEPA lead agency on your site? Pierce County.

Has the SEPA lead agency issued a final decision on your checklist? (if there is a comment period, the SEPA decision is final at the close of the comment period) ☐ No ☒ Yes ☐ Exempt* (*attach written documentation if Exempt).

If No: The NOI is incomplete. Ecology will hold the application until a final SEPA decision is made or the Construction Stormwater NOI public comment period ends, whichever is later. ***You must notify Ecology once the SEPA lead agency has issued a final decision following any comment period.***

If Yes: Type of SEPA threshold determination issued: ☒ Determination of Non-Significance (DNS) ☐ Mitigated DNS (MDNS) ☐ Determination of Significance (DS) ☐ Final Environmental Impact Statement (EIS) ☐ Other: _____

- Date when SEPA comment period ended or will end: _____.

Notify Ecology if the SEPA determination is appealed. *More SEPA information is available at* www.ecology.wa.gov/regulations-permits/SEPA-environmental-review.

XI. Public Notice

You must publish a public notice at least once a week for two consecutive weeks with at least seven days between publications, in a newspaper of general circulation in the county in which the construction is to take place. Ecology cannot grant permit coverage sooner than the end of the 30-day public comment period, which begins on the date of the second public notice.

Mail or fax (360-407-6426) the NOI to Ecology on or before the first public notice date. If you fax the public notice to Ecology, you must also mail a hard copy. Failure to do so may delay the issuance of your permit.

Provide the exact dates (mm/dd/yy) that the first and second public notices will appear in the newspaper(s):

Name of the newspaper publishing the notices: _____

First notice: _____/_____/_____

Second notice: _____/_____/_____ (Begins 30-day public comment period.)

For example: First notice: Friday 01/01/16 Second notice: Friday 01/08/16

PUBLIC NOTICE TEMPLATE

Complete this template using project-specific information and submit to a local newspaper with general circulation within the county where the project is located. The language in **bold** is required by WAC 173-226-130 and must be included in its entirety. (Either use the fill-in template below or **attach on a separate sheet of paper, if necessary.**)

(Name of operator/permittee)_____, (address of operator/permittee)_____, **is seeking coverage under the Washington State Department of Ecology's (Ecology's) Construction Stormwater NPDES and State Waste Discharge General Permit.**

The proposed project, (project name)_____, **is located at** (street address, intersection, crossroads, or other descriptive site location)_____ in (name of nearest city)_____, in (County)_____.

This project involves _____ acres of soil disturbance for _____ construction activities.

(List all construction activities; for example, residential, commercial, industrial, highway, utility).

The receiving water(s) is/are _____

(List all named and un-named surface waterbodies, or ground water if applicable, waters identified in section IX).

Any persons desiring to present their views to the Washington State Department of Ecology regarding this application, or interested in Ecology's action on this application, may notify Ecology in writing no later than 30 days of the last date of publication of this notice. Ecology reviews public comments and considers whether discharges from this project would cause a measurable change in receiving water quality, and, if so, whether the project is necessary and in the overriding public interest according to Tier II antidegradation requirements under WAC 173-201A-320.

Comments can be submitted to:
Department of Ecology
Attn: Water Quality Program, Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

EH-USA000511

ED_005624_00000045-00177

XII. Certification of Permittees

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ / _____	_____
Printed Name / Company	Title
_____	_____
Signature of Operator/Permittee	Date

*** Signature of Operator/Permittee requirements:**

A. For a corporation: By a responsible corporate officer.
B. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively.
C. For a municipality, state, federal, or other public facility: By either a principal executive officer or ranking elected official.

Please sign and return this **ORIGINAL** document to the following address:

Department of Ecology
Attn: Water Quality Program, Construction Stormwater
PO Box 47696
Olympia, WA 98504-7696

Please indicate which section(s) you modified/updated:

- ☐ **Section I. Site Information**
- ☐ **Section II. Operator/Permittee**
- ☐ **Section III. Property Owner**
- ☐ **Section IV. On-Site Contact Person**
- ☐ **Section V. WQWebDMR**
- ☐ **Section VI. Existing Site Conditions**
- ☐ **Section VII. SWPPP**
- ☐ **Section VIII. Best Management Practices**
- ☐ **Section IX. Discharge/Receiving Water**
- ☐ **Section X. SEPA**
- ☐ **Section XI. Public Notice**

To request ADA accommodation including materials in a format for the visually impaired, call the Water Quality Program at 360-407-6600 or visit https://ecology.wa.gov/accessibility. People with impaired hearing may call Washington Relay Service at 711. People with speech disability may call TYY at 877-833-6341.

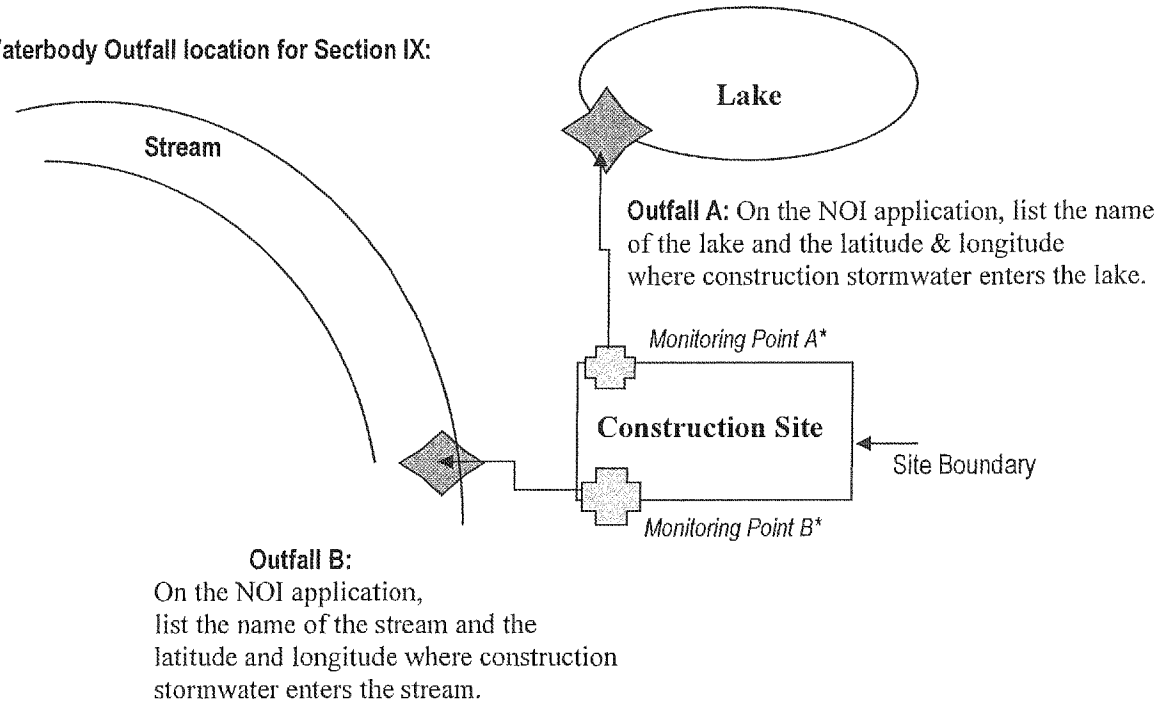
EH-USA000512

ED_005624_00000045-00178

(Do Not Submit this Page)

If you have questions about this form, contact the following Ecology staff:			
Location	**Contact Name**	**Phone**	**E-mail**
City of Seattle, and Kitsap, Pierce, and Thurston counties	Josh Klimek	360-407-7451	josh.klimek@ecy.wa.gov
Island, King, and San Juan counties	RaChelle Stane	360-407-6556	rachelle.stane@ecy.wa.gov
Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Skagit, Snohomish, Spokane, Stevens, Walla, Whatcom, and Whitman counties.	Shawn Hopkins	360-407-6442	shawn.hopkins@ecy.wa.gov
Benton, Chelan, Clallam, Clark, Cowlitz, Douglas, Grays Harbor, Jefferson, Kittitas, Klickitat, Lewis, Mason, Okanogan, Pacific, Skamania, Wahkiakum, and Yakima counties.	Joyce Smith	360-407-6858	joyce.smith@ecy.wa.gov
If you have questions about WQWebDMR, contact the following Ecology staff:			
Visit https://www.ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance/WQWebPortal-guidance or contact Ecology's WQWebDMR staff at WQWebPortal@ecy.wa.gov or 800-633-6193/Option 3 or 360-407-7097 (local).			

Example Surface Waterbody Outfall location for Section IX:



*Note: The monitoring points are for illustration only and are not required on this Notice of Intent application form. Monitoring point information will be entered on the monthly discharge monitoring report as required for active permits.

Electron Hydro Diversion Repair and Spillway Replacement Project
Water Quality Monitoring Plan

Prepared by:

19318 Electron Rd. E.
Orting, Washington 98360

August 20, 2020

ED_005624_00000045-00180

Electron Hydro Diversion Repair and Spillway Replacement Project
Water Quality Monitoring Plan

INTRODUCTION AND BACKGROUND

Electron Hydro is currently performing the Electron Hydro Diversion Repair and Spillway Replacement Project. The project is located on the Puyallup River approximately 18 miles upstream of Orting, Washington. The headworks at the construction project location includes a flow diversion structure, spillway, and diversion channel with flow controls leading to a 10-mile long wooden box flume that conveys diverted water to the powerhouse for electricity generation. In its pre-project condition, the diversion entrains fish along with diverted flows, and those fish travel 10-miles down the flume to a forebay pond where they are trapped and hauled and released back to the Puyallup River. The diversion repair and spillway replacement project is an essential step to allow installation and operation of a modern fish screening system at the intake to exclude fish from being entrained. The project will greatly reduce the impacts to fish resulting from entrainment into water intake, transport down the fume, and fish handling during the current trap and haul operation. In-water construction activities started in 2019 with bank stabilization upstream and downstream of the diversion. The bulk of in-water work to repair the diversion and replace the spillway is ongoing from July through September 2020. Fish exclusion work is scheduled to be completed in 2021. This water quality monitoring plan (WQMP) guides compliance monitoring for stormwater and dewatering water generated during the in-water construction activities.

PURPOSE

The purpose of the WQMP is to provide specifics on water quality sampling for turbidity and pH, as well as track the performance of Best Management Practices (BMPs) used during in-water work, as described in this document. This WQMP identifies the appropriate parameters to be monitored, includes a monitoring schedule, monitoring locations, monitoring and sampling procedures, and contingency sampling procedures.

OBJECTIVES

- Provide specific locations and methods for sampling water quality for turbidity and pH.
- Document the performance of BMPs used within waters that the proposed work will occur in by monitoring water quality.
- Determine if State water quality standards are being met at two points-of-compliance (i.e. at Pump#3 inlet, and the discharge from the last sedimentation pond just before it enters the river).

Any changes in the proposed monitoring will be submitted to Ecology and the Corps of Engineers for approval prior to making the changes. Any revisions to the WQMP will be

subject to review and approval by Ecology under the Construction Stormwater General Permit (CSWGP) and the Corps of Engineers under the Section 404 Nationwide Permits #3 and #13 for work within Waters of the U.S.

DESCRIPTION OF IN-WATER/OVER-WATER CONSTRUCTION ACTIVITIES

The Electron Hydro Diversion Repair and Spillway Replacement Project includes the removal of the damaged wooden diversion structure, installation of a concrete foundation and inflatable bladder spillway and supporting infrastructure, reconfiguration of the water intake channel, and targeted stabilization of the riverbed and riverbanks. This phase of construction lays the groundwork for the next phase in which fish screens will be installed to prevent the entrainment of fish into the water intake. Work within the OHWM includes:

- Bank stabilization upstream and downstream of the diversion (completed in 2018 and 2019)
- Installation of a temporary cofferdam to isolate the in-river work area from river flows
- Construction of a temporary bypass channel to route river water downstream of the in-river work area
- Excavation within the isolated work area to a target elevation below the riverbed (depth varies)
- Temporary dewatering of the excavation
- Concrete construction of the replacement spillway and supporting infrastructure
- Installation of an inflatable rubber bladder as a flow control structure in the spillway
- Stabilization of the riverbed
- Removal of the temporary bypass channel and temporary cofferdam
- Restoration of river flow through the new spillway structure

Work in the upland includes:

- Construction staging area (equipment, fuel, stockpiles)
- Temporary concrete batch plant and concrete washout area (contained)
- Operation and maintenance of the on-site water quality treatment system

The construction work includes activities that will generate turbid water and may affect the pH of the water within the isolated work area. Concrete stairs will be poured (and no pH laden water will reach waters of the state) from the road along the river to the staging area. Stormwater and dewatering water pumped out of the excavation will be routed through the on-site water treatment system.

WATER QUALITY STANDARDS FOR SURFACE WATERS

The project is located in WRIA (Water Resources Inventory Area) 10 (Puyallup/White), in the Puyallup River. The Puyallup River is designated as Core Salmonid Summer Habitat use in the vicinity of the construction site, which requires monitoring the following parameters.

- **Turbidity:** Shall not exceed 5 NTU over background when the background is 50 NTU or less; or 10 percent increase in turbidity when the background turbidity is more than 50 NTU: as outlined in Washington Administrative Code (WAC) 173-201A-200(1)(e) for Core Salmonid Summer Habitat.
- **pH:** pH shall be within the range of 6.5 to 8.5. pH will be monitored using a pH meter. If any water enters the containment area behind the cofferdam when cementitious work is occurring, pH will be monitored using a pH meter. All pH data will be recorded on the field monitoring forms. Best Management Practices will be employed to ensure all water leaving the containment area meets State water quality requirements prior to discharge.
- **Oil and Grease**: No visible sheen. Inspect vehicles and equipment daily, and prior to entering the area below ordinary high water.

The Nationwide Permit Authorization issued by the Corps of Engineers included an Endangered Species Act (ESA) Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). The consultation yielded Biological Opinions (BO) issued by each agency in July 2018. Turbidity will be monitored in accordance with the Terms and Conditions set in the USFWS BO. Electron Hydro will also fully comply with implementing all reasonable and prudent measures outlined in the National Marine Fisheries Service (NMFS) BO. These criteria set in the BOs also satisfy the criteria set by the CSWGP, permitted by the Washington Department of Ecology (Ecology) in July 2018. The results of monitoring efforts will be transmitted weekly to the US Army Corps of Engineers and Ecology.

MONITORING PLAN

Monitoring Contacts

Electron Hydro staff Chris Spens and Corey Kleppe will be responsible for providing Ecology with the necessary notifications and results of the water quality monitoring per the frequency specified in the CSWGP and the Section 401 WQC. The monitoring team will include Electron Hydro staff led by Chris Spens. Contact information is provided below:

Chris Spens:	(360) 746-3435
Corey Kleppe	253-655-3039
Mallory Voyk:	(425) 923-5021
Corey Alefteras	360-688-0080

Monitoring Schedule

Turbidity monitoring will be conducted daily (visual monitoring will occur downstream at Pump #3 inlet while active excavation is occurring) and reported weekly. More frequent contingency monitoring related to specific events (e.g. start of sediment-generating activities, exceedance events, etc.) is described below under Sampling Procedures. Monitoring of pH will be conducted daily and reported weekly while construction activities using cement are ongoing. All concrete related work below OHWM will be performed within the in-river work area that is isolated from river flows by a temporary coffer dam. No pH sample points are located within the

river. Instead, water in contact with concrete work will be sampled within the excavation at pump locations and tested for pH to determine if water treatment is required. If the water requires treatment to adjust pH within the acceptable range, it will be pumped to two temporary water treatment tanks for isolated treatment using either CO_2 sparging or dry ice. Water within the tanks will be tested for pH and will be sampled prior to discharges to the sediment trap and sediment pond. Water that does not require treatment and meets requirements for turbidity will be discharged into the conveyance channel. Monitoring and testing results will be documented in the weekly reports and provided to the Corps and Ecology.

Monitoring Duration

Water samples will be collected, and visual observations will be recorded for as long as work activities below the OHWM continue. Visual monitoring for turbidity and sheen will be conducted continuously for those times when construction activities could potentially impact water quality. The on-site monitor will generally be stationed downstream of active excavation on the left bank of the river. This location will allow the monitor to observe both the river flow conditions and the discharge from the sediment pond (**Figure 1**, Sample Points #3 and #4)

Monitoring of pH will occur when construction activities that involve cement/concrete are occurring at the in-water construction site. Concrete construction activities will be conducted within a dewatered work area isolated from Puyallup River flows by a temporary cofferdam and temporary bypass channel. Treated water from the excavation dewatering operation will be tested for pH prior to release into the conveyance channel.

Non-Compliance

If either visual or physical monitoring indicates that water quality standards (turbidity and pH) have been exceeded, the required reporting will be initiated.

SAMPLING PROTOCOL

Sampling Locations

Monitoring locations are identified on **Figure 1** for construction activities within OHWM. There are four monitoring locations (in addition to the monitoring for pH in the excavation zone) identified as follows:

Sample Point #1: Upstream Sample Point – the upstream sample point is located approximately 1,500 ft upstream of the limits of excavation within OHWM. The upstream sample point provides the background sample.

Sample Point #2: Downstream Sample Point – The stream gage (rock gage) sample point is the point of water quality compliance identified in the Corps Section 404 permit. Per the Corps permit requirements, it is located approximately 1,500 ft downstream of the limits of excavation within OHWM, and it is approximately 600 ft downstream of Sample Point #4 where the on-site water treatment system discharges to the river.

Sample Point #3: Channel Sample Point – The channel sample point is a contingency sample location that is only sampled in the event that the conveyance channel used to infiltrate water passively drained from the in-river excavation spills into the river.

Sample Point #4: Outfall Sample Point – The outfall sample point is used to characterize the quality of water discharged from the on-site treatment system at the point of discharge to the river. Samples at this location will be taken from the discharge stream from the sediment pond just before it enters the river.

Sampling Procedures

Turbidity Monitoring

An appropriately trained and knowledgeable Electron Hydro staff member will be available during every day of in-water construction activity to take and report turbidity measurements, who will work under the direction of a CESCL. The turbidity assessment protocol is as follows:

1. Sample 2 locations (Sample Points #1 and #2, **Figure 1**) daily, at the intervals specified by Corps permit, which incorporates NMFS and USFWS Biological Opinions. The NMFS and USFWS BOs stipulate that work will cease and sediment control procedures will be re-evaluated if:
    - background turbidity is exceeded by 56 NTU at any time,
    - background turbidity is exceeded by 37 NTU for more than a cumulative hour during a 10-hour workday,
    - background turbidity is exceeded by 13 NTU for more than a cumulative 3 hours in a 10-hour workday,
    - background NTU levels are exceeded by 8 NTU for more than 7 hours over a 10-hour workday.

    These compliance criteria are different compared to the State compliance criteria for turbidity, which stipulate turbidity limits of 5 NTU above background when background is less than 50 NTU and 10 percent or less above background when background turbidity is greater than 50 NTU.

2. Two additional locations (Sample Points #3 and #4) will be monitored when water is discharged from those locations to the river.

3. Monitor to establish background turbidity levels upstream of construction, and away from the influence of sediment-generating activities (Sample Point #1). Background turbidity will be monitored at least twice daily (early morning and early afternoon) during sediment-generating activities.

4. To monitor for construction-influenced changes in turbidity, turbidity monitoring will be conducted 1,500 feet downstream of in-water construction activities (Sampling Point #2) as stipulated in the Section 404 permit issued by the Corps of Engineers.

5. Determine the turbidity of each sample by testing with an EPA-approved NTU meter; turbidity meter will be calibrated correctly and documented on a spreadsheet prior to each sample period.

6. Compare the results for Sample Point #1 (background) to Sample Point #2 (in-water work compliance point) and Sample Points #3 and #4 (treatment system discharge; CSWGP combined with dewatering water for the upland point of compliance) to determine whether there is an exceedance.

7. Turbidity at Sample Points 2, 3, and 4 will not exceed 10% above background NTU levels, in accordance with Ecology requirements specified in the CSWGP. If turbidity levels approach 10% above background, discharge from locations #3 and #4 will cease activities causing the exceedance and sediment control measures will be inspected and adjusted. The CSWGP SWPPP will also be modified as required.

8. Initiate response and reporting protocols if there is an exceedance.

In addition to the regular ongoing sampling and monitoring activities, there are specific protocols for the start of sediment-generating activities. Those protocols are outlined below:

Monitoring Protocols for Start of Sediment-Generating Activities

1. For the first 3 hours from the start of sediment-generating activities, monitoring will be conducted at 30-minute intervals. A person will generally be stationed 300 feet below sediment-generating activities along the left bank of the river.

2. If turbidity does not exceed the below-listed levels during the first hour of work, then monitoring will be reduced to once per hour.

3. If turbidity does not exceed the below-listed levels during the first 3 hours of work, then monitoring will be reduced to twice per day, until there is a change in excavation (depth or location within the excavation zone), then monitoring will begin again.

4. Per the conditions stipulated by the USFWS and NMFS BOs, work will cease and sediment control procedures will be re-evaluated if turbidity monitoring results exceed the compliance thresholds defined above based on State water quality standards or the turbidity standards stipulated by the USFWS and NMFS BOs.

<u>pH Monitoring</u>

Concrete pouring activities are planned to begin approximately August 26, 2020. During all concrete pouring activities, any water that comes into contact with concrete will be tested for pH. Should the water be outside the approved limits of 6.5 and 8.5 pH, it will be collected and pumped from the work area below OHWM and it will be retained in two temporary storage tanks (see **Figure 2** for location) until its pH can be normalized by treatment using CO_2 sparging or

dry ice. An adequate supply of these materials for pH treatment will be maintained on site during concrete construction activities below OHWM. Monitoring for pH and any pH adjustments will occur daily, in accordance with the CSWGP, to comply with 40 CFR § 450.21, "Prohibited discharges". Monitoring will be conducted with a digital pH meter and will be recorded in the monitoring logbook and included in the weekly reports. The normalized water will be released below the last sediment pond when pH is within approved pH limits.

Monitoring of Intercepted Seepage Water

Water from the river flow seeps through the riverbed upstream of the excavation and flows into the excavation at multiple points on the upstream wall. That water is relatively clear compared to the typical natural background turbidity of the river because of natural filtration as it flows through sandy riverbed sediments. The dewatering plan includes a collection trench and a pump to collect that water before it contacts the active work areas within the excavation. This component of the dewatering plan prevents relatively clean water from mixing with highly turbid water in the bottom of the excavation. Visual observation of this seepage water indicates that it is much less turbid than adjacent river water. These observations will be verified by visual monitoring for turbidity. Provided the water complies with state water quality standards for turbidity it will be pumped back into the river through the conveyance channel shown on **Figure 2**.

CONTINGENCY PLAN FOR HIGHLY TURBID WATER:

In the event that water discharged from the last sediment pond is highly turbid and the discharge is greater than 10 percent above background, water will be pumped from the sediment pond into the adjacent forested upland area (see **Figure 2** for location). Turbid water will be infiltrated within the forested upland area by discharging the water through a manifold that spreads out the water and dissipates flow energy and prevents soil erosion. When this occurs, monitoring personnel will ensure that infiltration occurs and does not oversaturate the forested area and ensure the water does not flow back into the river without sampling for turbidity first.

REPORTING

Exceedances of turbidity standards (sample results above 10% of background) will be called in as an Environmental Report Tracking System (ERTS) notification within 24-hours of acknowledgement at 360-407-6300 and the area inspector will also be notified.

The CSWGP requires monthly reporting of the highest values of water quality monitoring data (turbidity and pH), exceedances, and corrective measures as specified by the SWPPP and this WQMP. In addition to monthly reporting, Electron Hydro will prepare weekly reports describing construction activities and duration, confirmation of effective isolation of the in-river work area, dewatering system operation, turbidity monitoring activities and results, Field Turf containment and disposal, conservation measures implemented, and incidental takes associated with project activities. This is in accordance with implementing Reasonable and Prudent Measure 2 in the USFWS BO. Weekly reports will be submitted to the Corps of Engineers and Ecology.

In addition to regular weekly and monthly reporting, the following additional notifications are required by Ecology in response to exceedance events and changed conditions:

- High turbidity phone notification – within 24 hours.
- Non-compliance notification by phone – within 24 hours
- Non-compliance reports provide written notification – within 5 days of non-compliance (CSWGP condition S5F).

Additionally, phone and written notifications to Ecology will also be directed to:

Carol Serdar, Hydropower WQ Compliance Manager
(360) 742-9751
Cser461@ecy.wa.gov

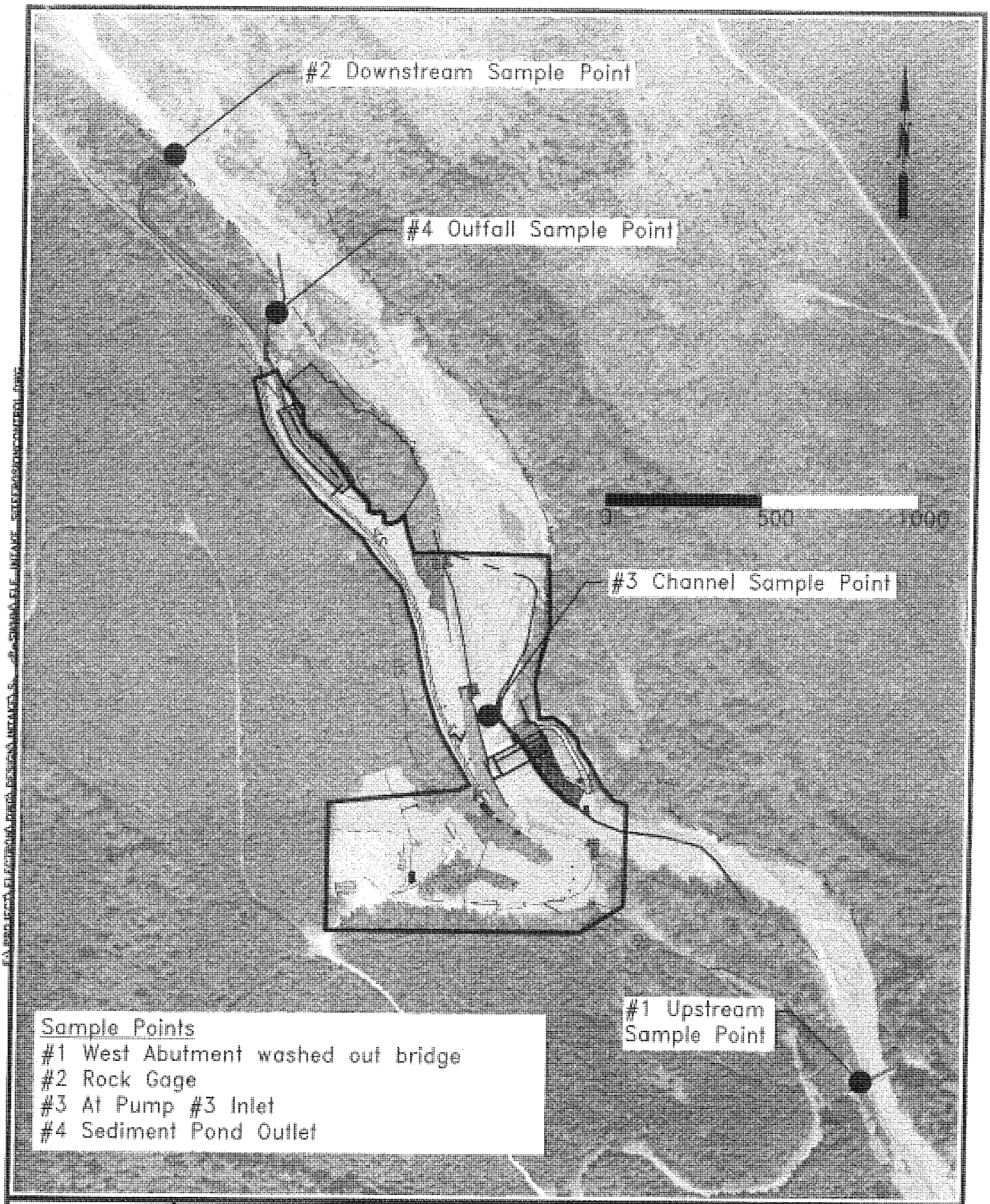


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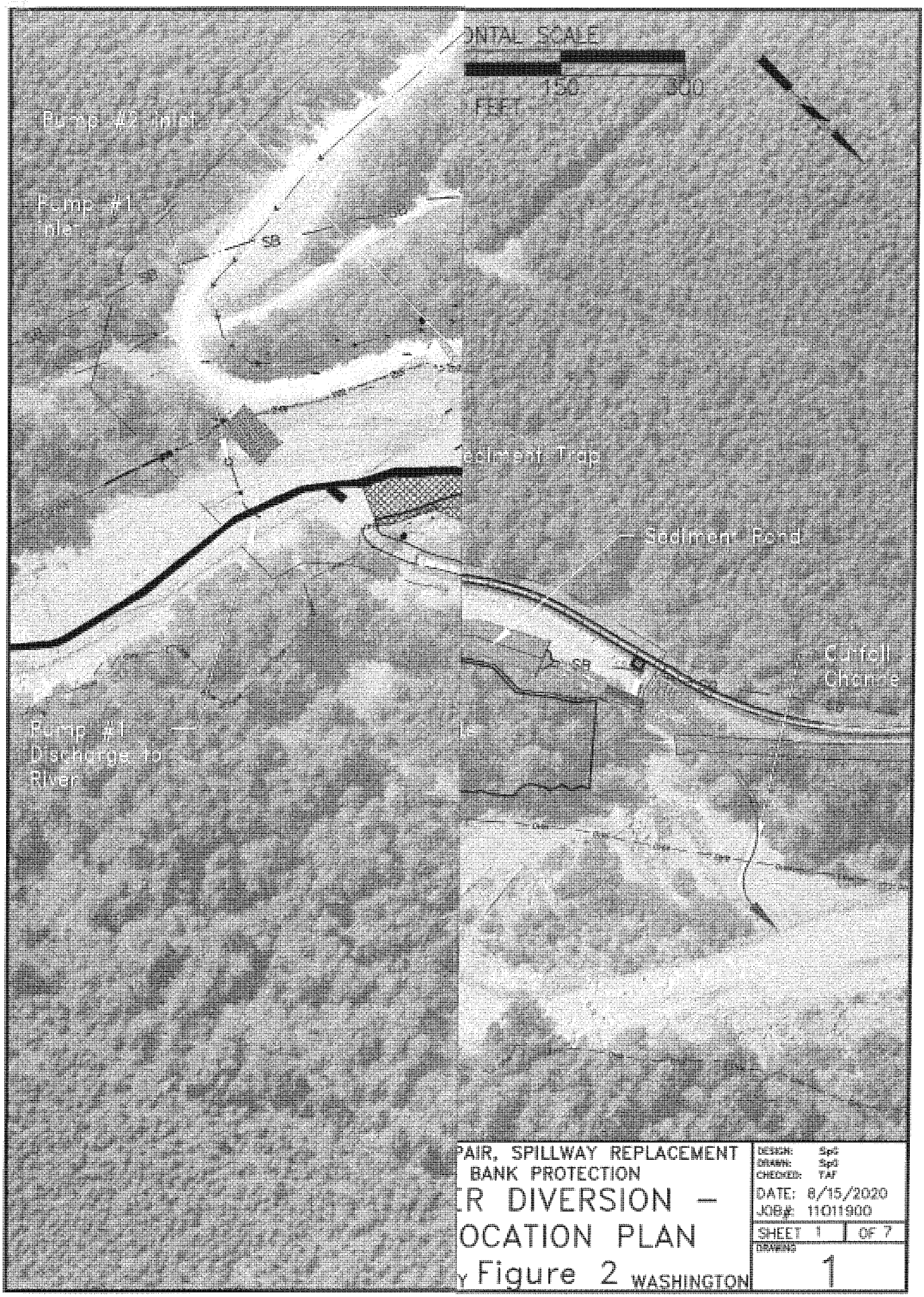
EXHIBIT 1 OF 1	PIERCE COUNTY Figure 1 WASHINGTON	NO.	DATE	REVISION	BY / CK



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August 21, 2020

Electron Response to August 18, 2020 Corps Information Request

Corps information request, August 18, 2020:

"Please be reminded that you have not provided a sufficient response to our two stop work letters. A clear description of description of the work that has been done that was not authorized by the Corps, and an adequate dewatering/diversion and water quality monitoring plan. Until you have provided a clear description of the work that has been conducted to date, especially the work that was done outside your Corps permit, and a sufficient dewatering/diversion and water quality monitoring plan, the full Stop Work Oder will not be lifted.

I recommend provided a clear bulleted list or table of the work that has occurred and that was or was not previously authorized under your Corps permit. Ms. Serdar of Ecology is willing to assist you in developing a sufficient water quality monitoring plan for pH and turbidity. Ms. Serdar can be reached at 360-742-975 or cser461@ecy.wa.gov. In addition, please address the following concerns/questions in response to the plan submitted August 17, 2020:

1. What happens when a storm or high flow event increases flow in the conveyance channel (page 7 of 20) to a rate that exceeds the pumping capacity of Pump 4? What happens when pump 4 fails? This occurrence is inevitable-what are the backups in place?

2. A trench near the position of well point 1 and perpendicular to the flow would provide greater lateral pickup and more effectively control groundwater into the site. What is the backup for pump 1 failure?

3. The existence and operation of the Conveyance Channel depends entirely on river flows staying quite low-presumable under 1000-cfs. What is the plan should the channel be overtopped?

Please let me know if you have any questions about this email.

Sincerely,

Jenae Churchill
Project Manager/Biologist
USACE Seattle District"

Electron Response:

Electron Hydro submits responses to each issue identified in the Aug 18, 2020 Corps communication including a summary of work completed identifying unpermitted activities, a revised Dewatering/Diversion and Water Quality Monitoring Plan, and responses to each of the three Corps questions resulting from their review of the plan submitted by Electron Hydro on August 17, 2020.

Summary of Work Completed

The following bullet list identifies and briefly describes work that has occurred under this permit. Each item includes a statement of whether that work was authorized by the permit.

- As of 8/5/2020, no new permanent work or structures have been constructed within the ordinary high-water mark of the river.
- The wooden diversion structure has been removed within the footprint of new pending construction on the left half of the river channel.
- A temporary cofferdam was installed to isolate the in-river work area from river flow and form a temporary bypass channel along the right bank to convey river flow around the work area. The objective of the cofferdam is to isolate the work area from river flow and minimize water intrusion. As of August 19, 2020 it is performing this task adequately. Page 8 (*Sheet C-3, "Temporary Cofferdam and Water Management Phasing", dated March 28, 2017*) shows the permitted cofferdam phasing plan. Page 9 (*"Spillway", dated August 15, 2020*) shows an as-built aerial view of the project. Actual cofferdam construction deviated from the permitted plan as described below:
    - The alignment of the constructed cofferdam differed from the permitted cofferdam alignment. The temporary cofferdam extends upstream approximately 300 ft beyond the permitted location. The temporary cofferdam also extends only 250 ft downstream instead of the permitted 750 ft, for a subtraction of 500 ft. These changes were made in response to substantial physical channel changes that resulted from 10,000 cfs flooding events (early February 2020) and bedload deposition that occurred after the permitted cofferdam layout was determined 3 years ago. It was necessary to make a field adjustment to the cofferdam locations in response to substantial changes in riverbed conditions. It was necessary to extend the cofferdam upstream to effectively intercept and divert river flow and convey that flow to the right bank, dewatering the left bank as much as possible. The downstream cofferdam was reduced due to substantial bedload deposition from recent flooding. The cofferdams are made of riverbed material.
    - The materials used to construct a portion of the cofferdam differed from the braced wood plank wall authorized by the permit. Rock filled metal containers were used to build the temporary cofferdam wall where the bypass flows over the diversion structure. The temporary containers are stronger and more stable compared to the braced wood plank wall identified in the permit. The rock filled metal containers provide a more stable base and secure positioning. This temporary strategy was selected and applied based on field conditions observed after the start of construction. This field adjustment enhanced job site safety, provided for a higher flow capacity in the bypass channel without breaching, and maintained functionality and stability of the cofferdam at higher velocities.

- An impervious plastic liner was installed in a portion of the bypass channel. The plastic liner is composed of a geomembrane tension fabric which is overlain with an 80 mil high density polyethylene (HDPE) sheet, which extends upstream, above, and downstream of the diversion structure. The HDPE sheet and a geomembrane tension fabric were a permitted component of the bypass channel.
- Field turf material was placed on the dry riverbed within the temporary bypass channel as a soft underlayment for the geomembrane and HDPE to prevent the plastic liner from being torn or breached by rocks or wood debris in the riverbed. **The use of field turf material was not permitted**.
- A partial breach of the plastic liner occurred on July 30, 2020, and as a result approximately 617 square yards of Field Turf material were released to the river. The immediate response to this breach involved securing the plastic liner that remained in place within the bypass channel and recovering and removing from the river all of the loose pieces of plastic liner and Field Turf within approximately 2000 ft downstream of the diversion structure. The immediate response recovered an estimated 550 square yards of the material released by the structure. Placement, release, and recovery of the Field Turf were not permitted.
- Page 10 (*Sheet 1, "Water Diversion Relocation Plan"*) shows the current cofferdam configuration. Pumps were put in place to dewater the in-river excavation, and minor adjustments to the location of those pumps were made as the excavation progressed. The on-site treatment system for stormwater and dewatering water was configured and activated. The treatment system is located outside of Waters of the U.S. except for the pump intakes, which are located within the isolated in-river work area. The treatment system is documented in the current version of the SWPPP prepared in compliance with the Stormwater General Permit issued by Department of Ecology.
- A Conveyance Channel was excavated downstream of the diversion structure on the surface of a dry bar within the ordinary high-water mark (see Page 10). The Conveyance Channel" was excavated within the permitted in-river work area and it extended approximately 200 ft downstream of the permitted limits of work. The extended 200 ft is due to the large amount of bedload deposited recently during a 10,000 cfs flood. The intended function of the Conveyance Channel is to support dewatering of the excavation and allow water to infiltrate into the dry gravel bar.
- Temporary cofferdams were installed interior to the isolated in-river work area. The permit allowed these interior temporary coffer dams to be constructed using supersacks. A field modification was made to construct these cofferdams using concrete manhole casings instead of supersacks. This change was made to improve the ease of removing the temporary cofferdams when demobilizing the in-river work. They make a safer more stable vertical stacked wall. We believe that concrete manhole casings are superior to the use of supersacks. Concrete manholes do not collapse or tear as do supersacks in this environment. The use of concrete manhole casings instead of supersacks was not in the permit.
- Substantial excavation of the riverbed within the permitted in-river work area was completed up until the stop work order was issued. Dewatering of the excavation was

ongoing during earthwork. The excavation was performed in accordance with the requirements of the permit and within the specified limits of work.

All deviations from the permitted plan within the ordinary high-water mark are temporary features related to isolation of the work area from river flow and water management within the excavation. The modifications described above were field decisions made in response to substantial changes in riverbed characteristics between 2018 and mid-2020. These field decisions were motivated by the desire to provide a more secure barrier to protect worker safety and minimize the risk of water intrusion into the in-river work area.

Flood events and extensive bedload deposition grossly modified the riverbed upstream and downstream of the diversion structure compared to the conditions used to design the temporary cofferdam layout in 2018. Extensive bedload deposition reshaped the large gravel/cobble bar occupying the center and left side of the channel. Those changes made it unnecessary to extend the cofferdam downstream as far as previously anticipated. The field determination to reduce the extent of the cofferdam downstream of the diversion was made based on the higher elevation gravel bar that naturally maintains river flow along the right bank further away from the in-water work area. This high and dry gravel bar protects the work site and can also provide an extensive permeable area for infiltration of dewatering discharge.

The formation of the gravel bar was not anticipated and therefore the absence of cofferdam extension downstream is not addressed in the approved permit.

Page 10 shows the current cofferdam configuration. The overall modifications to the cofferdam strategy reflect necessary field adjustments made in response to the substantial natural changes in river channel/bar conditions over the three years that have passed since the original design. The modifications are prudent and necessary to protect the worksite, provide for the safety of workers, and maintain river water quality by effectively isolating the work area under current riverbed conditions. Those field modifications provide a more durable, safe, and effective system to isolate the work area from river flows and reduce water intrusion into the work area. All materials used are temporary and will be removed. Natural riverbed gravels incorporated into the temporary cofferdam will be dispersed.

The original permit plan for dewatering the work site anticipated pumping to an upland forest strip for manifold dispersion and infiltration. A pond system was included thereafter in a SWPPP plan (a State stormwater regulation requirement) and is located on-site outside of the ordinary high-water mark. The pond also evolved into a dual-purpose opportunity: water quality management (sediment pond) and fish acclimation.

Months after the original permit was issued, onsite discussions with resource agency personnel resulted in a preference to avoid disturbing the forested area between the sediment pond and the river. This preference combined with the natural infiltration capacity of the expanded gravel bar downstream of the diversion motivated this change to the water management plan. The current water management system provides a lower impact approach by filtering pumped water through the gravel bar when & where feasible and is compliant with water quality requirements. Water from the in-water construction area may be pumped to the sediment pond when necessary. Prior

referenced Page 10 shows three dewater pump-out locations that would deliver water either to the gravel bar for infiltration, or the sediment trap and pond system (with filter chambers) for suspended sediment removal. Both systems have proven effective during the current construction effort and would preferably continue to be used with appropriate turbidity monitoring.

Most aspects of the original de-watering plan have changed due to changes in river morphology, observed flow-through and infiltration performance and the desire to minimize reliance on pumping when feasible. Although the current de-watering plan is different than the configuration originally proposed, the updated approach is more secure and reliable to perform without damaging either terrestrial or aquatic resources. The construction of the dual- purpose pond (outside of shoreline jurisdiction) provides the insurance that there will be a treatment option with flow controls should it become necessary to temporarily detain all pumped water.

Updated Dewatering/Diversion and Water Quality Monitoring Plan

Electron Hydro communicated with Carol Serdar of Ecology to discuss the necessary components and content for the Dewatering/Diversion and Water Quality Monitoring Plan that complies with applicable permit requirements and aligns with the adjusted limits of work and revisions to the treatment systems for dewatering water and storm water. The revised Water Quality Monitoring Plan (WQMP) is attached to this response and will be incorporated as an update to the SWPPP. Electron Hydro believes that Ms. Serdar is supportive of this new WQMP.

Responses to Corps Questions Re: Plan Submitted August 17, 2020

The Corps raised three specific questions about the plan prepared by Electron Hydro and submitted for Corps review on August 17, 2020. Responses are provided below.

"1. What happens when a storm or high flow event increases flow in the conveyance channel (page 7 of 20) to a rate that exceeds the pumping capacity of Pump 4? What happens when pump 4 fails? This occurrence is inevitable-what are the backups in place?"

Response: The new WQMP shows that there are two 6" pumps and one 3" pump. Electron Hydro will maintain a minimum of five pumps (three 6" pumps and two 3" pumps) on-site to either replace capacity for a failed pump or increase the available pump capacity for high flow conditions. The 6" pumps have a capacity of 2000 gpm. There currently is approximately 100 gpm running through the work area, and an additional 400 gpm below the work area.

The temporary bypass channel was designed to safely convey river flows up to 2000 cfs. That design flow was selected to exceed maximum anticipated river flows for July through September and prevent surface water in the river from spilling into the isolated in-river work area. Storms or high flow events would likely increase the rate of water flowing into the excavation either as stormwater runoff or shallow subsurface water flowing into the sides of the excavation. During higher flow conditions, the rate of water entering the excavation would be limited by the capacity of the subsurface flow paths and the surface area that drains to the excavation. The three pumps

identified in the dewatering plan work together to remove water from the same excavation. Previous operation of one pump prior to the stop work order has demonstrated that it provided sufficient capacity to keep up with the rate of water flowing into the excavation.

"2. A trench near the position of well point 1 and perpendicular to the flow would provide greater lateral pickup and more effectively control groundwater into the site. What is the backup for pump 1 failure?"

Response: Pump 1 picks up water that enters the dried-up riverbed on the left bank. We agree that a trench near the position of the Pump 1 inlet and perpendicular to the river flow direction would provide greater lateral pickup. It would be at the risk of increasing the overall infiltration as the trench gets close to the flowing river. We will widen the intake area, moving toward the river to intercept any water traveling downslope toward the work area. The backup plan for Pump 1 failure is that we will maintain an additional backup pump at the jobsite.

"3. The existence and operation of the Conveyance Channel depends entirely on river flows staying quite low-presumable under 1000-cfs. What is the plan should the channel be overtopped?"

Response: The Conveyance Channel is intended to only pass water that meets water quality standards as it leaves the work area. It also is to facilitate infiltration of water that leaves the in-river excavation area by passive flow. This is expected to be at times when no concrete work is being performed, no excavation work, or no work such as at night. The Conveyance Channel dries up when Pumps 2 and 3 are in operation. The Conveyance Channel will only be used if the water exiting the work area near Pump 3 is within 10% of background and within the required pH levels. Otherwise the water will be pumped into the treatment tanks or sediment ditch. Water entering the Conveyance Channel will infiltrate at the north end or overtop and flow into the river. Overtopping would be acceptable since the water would meet water quality standards.

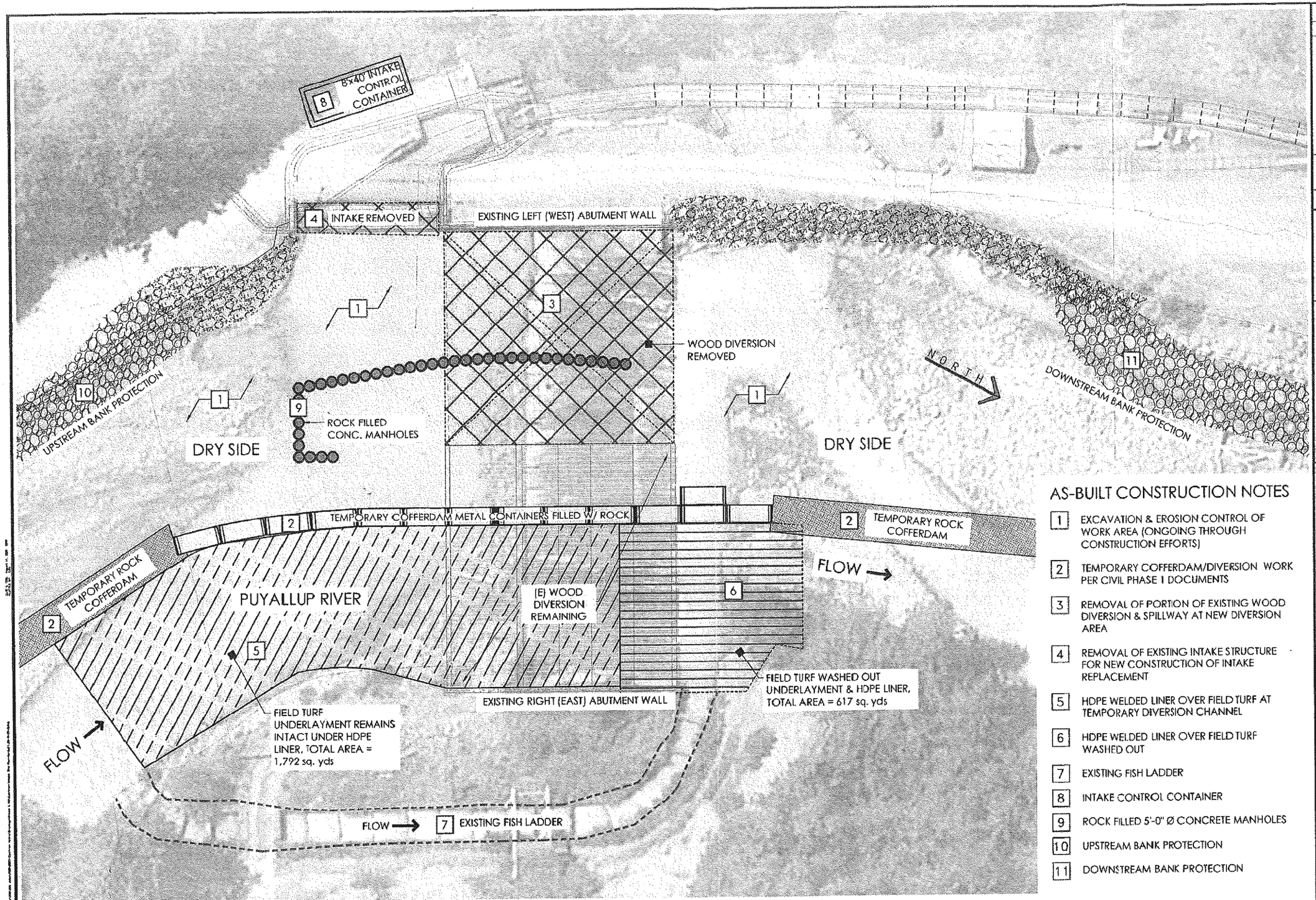
Concluding Remarks

Electron Hydro has made good faith efforts to quickly and thoroughly respond to each of the information requests communicated by the Corps. Our goal is to bring our construction activities into compliance and provide a sound path forward to lift the stop work order and complete the remaining construction expeditiously. We appreciate that you share these goals, and we hope this third response provides you with the information needed to lift the stop work order.

Submitted by:

Thom A. Fischer

Thom A. Fischer, P.E.



1 CONSTRUCTION AS-BUILT SITE PLAN

AS-BUILT CONSTRUCTION NOTES

1. EXCAVATION & EROSION CONTROL OF WORK AREA (ONGOING THROUGH CONSTRUCTION EFFORTS)
2. TEMPORARY COFFERDAM/DIVERSION WORK PER CIVIL PHASE I DOCUMENTS
3. REMOVAL OF PORTION OF EXISTING WOOD DIVERSION & SPILLWAY AT NEW DIVERSION AREA
4. REMOVAL OF EXISTING INTAKE STRUCTURE FOR NEW CONSTRUCTION OF INTAKE REPLACEMENT
5. HDPE WELDED LINER OVER FIELD TURF AT TEMPORARY DIVERSION CHANNEL
6. HDPE WELDED LINER OVER FIELD TURF WASHED OUT
7. EXISTING FISH LADDER
8. INTAKE CONTROL CONTAINER
9. ROCK FILLED 5'-0" Ø CONCRETE MANHOLES
10. UPSTREAM BANK PROTECTION
11. DOWNSTREAM BANK PROTECTION

NO.	DATE	REVISION	BY	CK

Electron HYDRO

PHASE 1 CONSTRUCTION AS-BUILT SITE PLAN AS OF AUG. 10TH 2020

SCALE PER VIEW

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DRAWN: ESK
CHECKED: TAF
DATE: 08-10-20
JOB#:

SHEET 1 OF 20

DRAWING 1

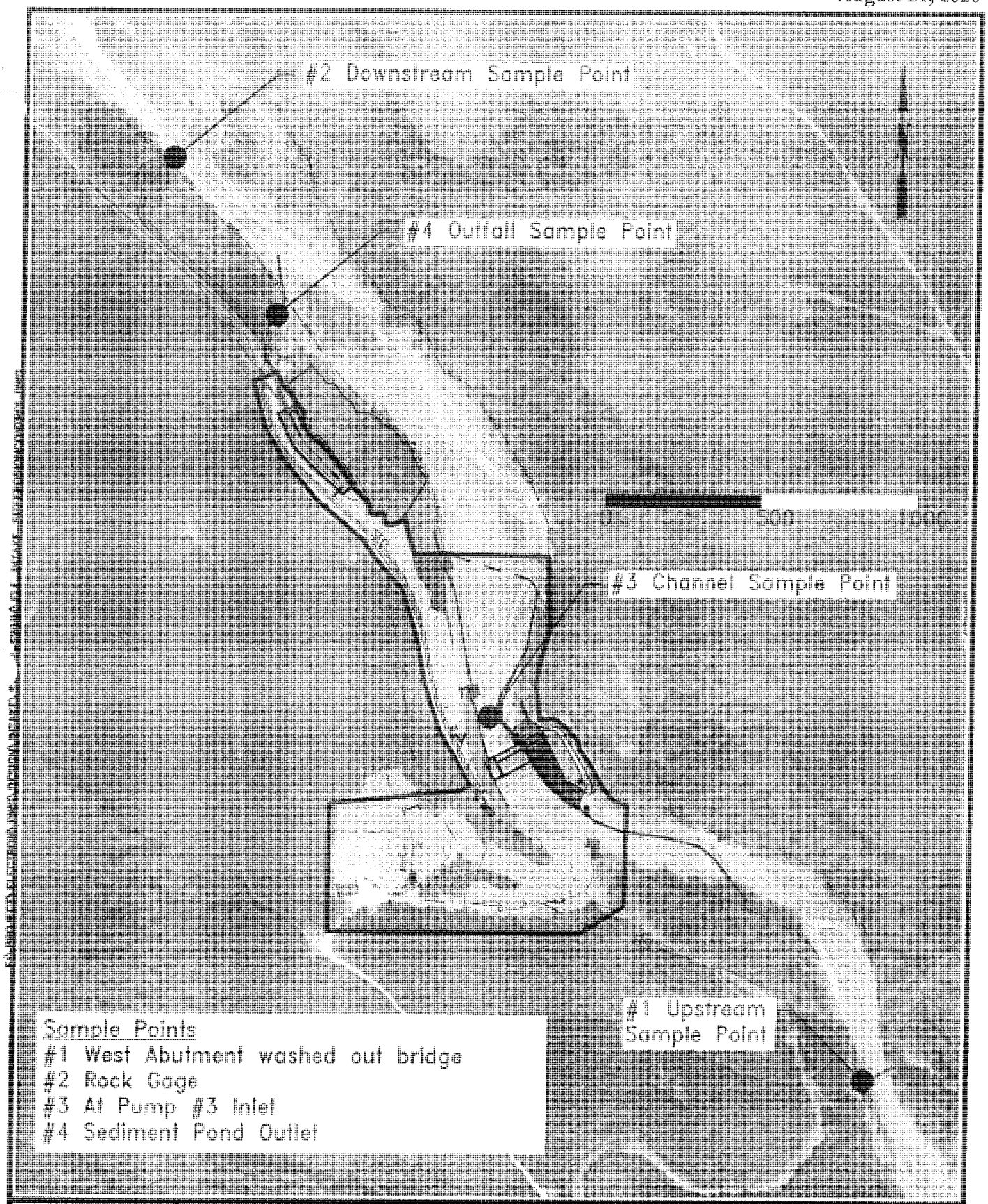

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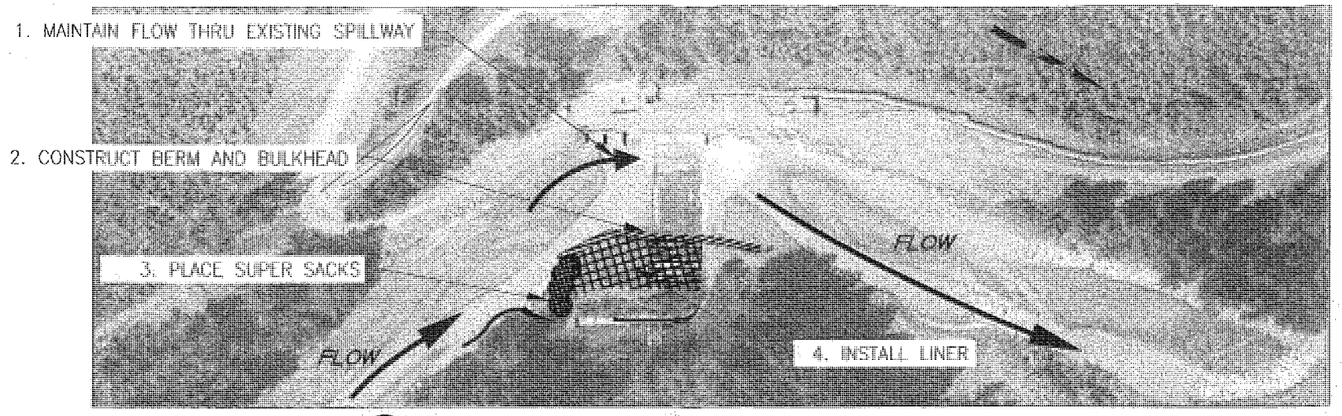
EXHIBIT 1 OF 1	PIERCE COUNTY Figure 1 WASHINGTON	NO.	DATE	REVISION	BY / CK



1 - STAGE I - TEMPORARY SPILLWAY
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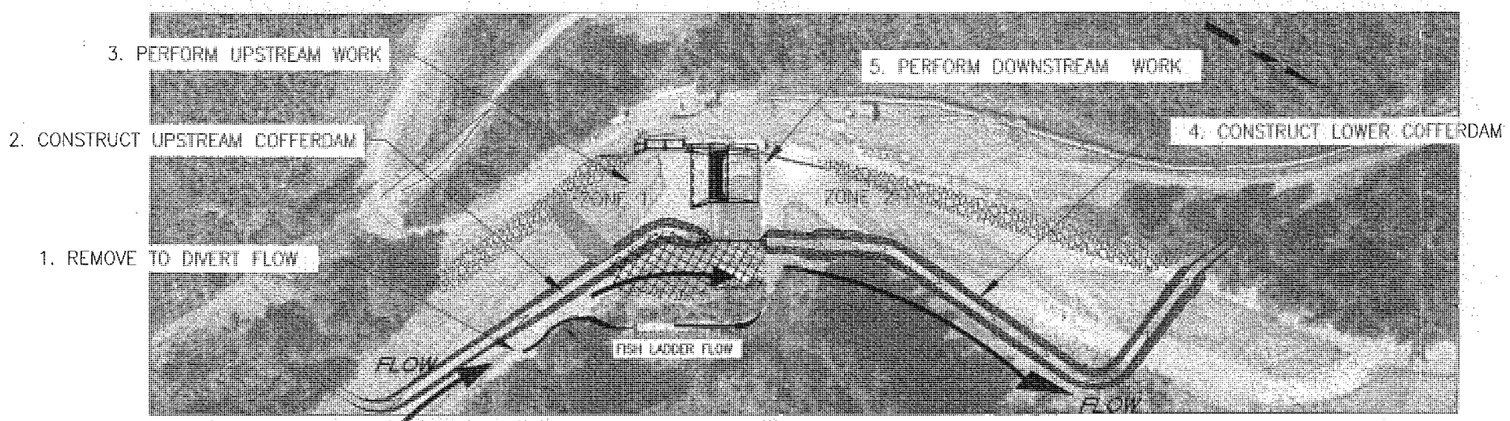
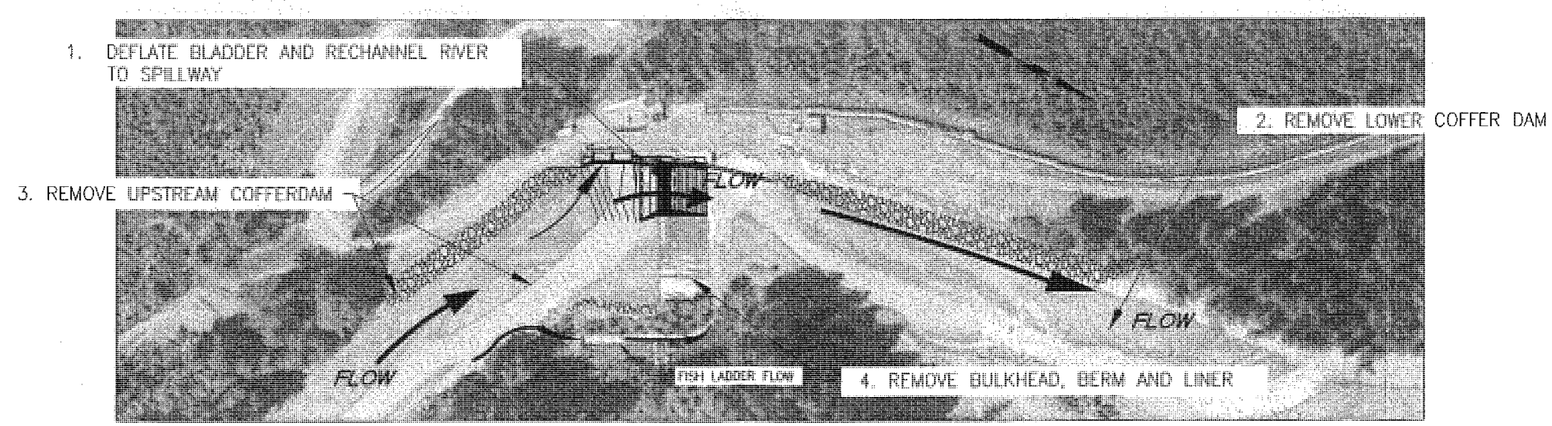


2 - STAGE II - TEMPORARY COFFERDAM WORK
SCHEMATIC ±1"=200'



3 - STAGE III - RESTORE SITE
SCHEMATIC ±1"=200'

NO.	DATE	REVISION	BY	CK
1	3/28/17	PERMIT SET	SG	

Electron HYDRO EST. 1904

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

TEMPORARY COFFERDAM AND WATER MANAGEMENT PHASING

PIERCE COUNTY WASHINGTON

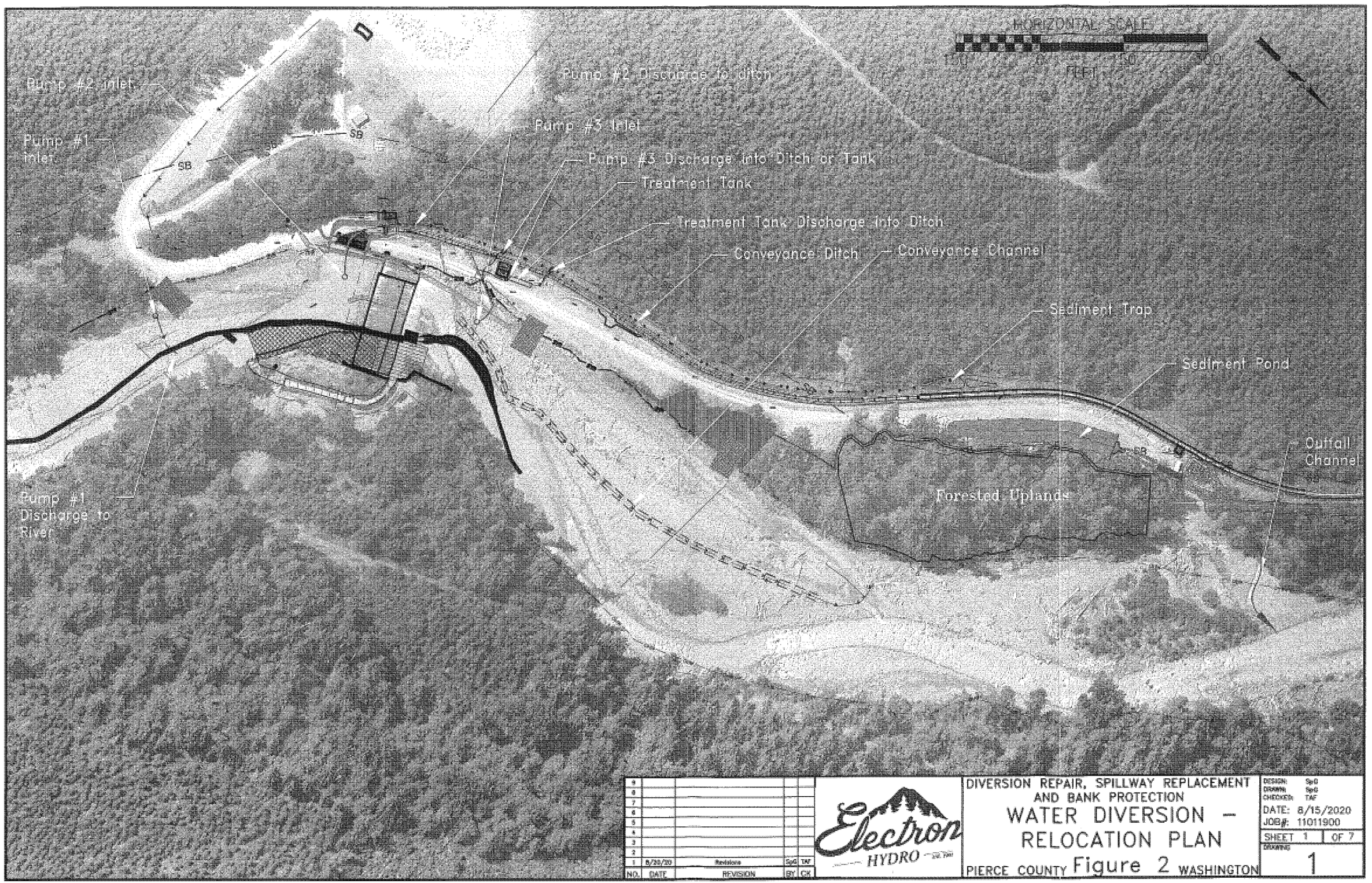
DESIGN: TS
DRAWN: SpG
CHECKED: TAF
DATE: 03/28/2017
JOB#: 11011900

SHEET 8 OF 20

DRAWING C-3

DATE & TIME: March 28, 2017 15:39
PLOTTED BY: TSTUCKS

FILE NAME & LOCATION: H:\M\250\ELECTRON\DWG\DESIGN\Intake\ELE_Intake_TempFeatures-v3.dwg



NO.	DATE	REVISION	BY	CK
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4				
3				
2				
1	8/20/20	Revisions	SpG	TAF

Electron HYDRO

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

WATER DIVERSION – RELOCATION PLAN

PIERCE COUNTY Figure 2 WASHINGTON

DESIGN: SpG
DRAWN: SpG
CHECKED: TAF
DATE: 8/15/2020
JOB#: 11011900
SHEET 1 OF 7
DRAWING 1

FILE NAME & LOCATION: E:\Project\ELECTRON\DWG\Design\Intake\ELE_DEWATER.dwg

DATE & TIME: August 20, 2020 2021 PLOTTED BY: STEVEG

August 21, 2020

Electron Phase I Description and As-Built
as of Stop Work Date of August 5, 2020

County request, 8/18/2020:

"In regards to the Stop Work, we reviewed your August 16 response to the Corps and are greatly concerned with the extent to which the project appears to vary from what was approved in 2018 by the Pierce County Hearing Examiner. Sheet 1 of 7 of the August 16 identifies a different cofferdam configuration than what was approved, and a conveyance channel and pump site in the river channel. The sedimentation facility built in 2019 without the appropriate approvals has been incorporated into the project even though that facility was to be built as Phase II of the larger Electron project.

It would be irresponsible of us to release the Stop Work without a fuller picture of the work that has been completed. It is clear that the project presented to the Hearing Examiner is not the project that has been built.

Please provide for us a summary of those features and actions that deviate from the approved plans, submitted under applications 858766 and 858765 and approved by the Hearing Examiner on June 26, 2018. At such time as we understand what has been done, a decision on lifting the Stop Work will be made."

Dave Risvold | Environmental Biologist 3 – Shoreline Planning Supervisor | Pierce County Planning and Public Works | (253)798-7036 (VM and forwards to cell) (253-307-5929 cell/no VM) |
2401 South 35th Street, Tacoma, WA, 98409-7490 | dave.risvold@piercecountywa.gov | www.co.pierce.wa.us/pals

Electron Response:

- As of Aug 5, 2020, no new permanent work or structures have been constructed within the ordinary high-water mark of the river.
- The wooden diversion has been removed within the footprint of new pending construction.
- Page 8 (*Sheet C-3, "Temporary Cofferdam and Water Management Phasing", dated March 28, 2017*) shows the permitted cofferdam phasing plan.
- The bypass channel is on the right bank as permitted, with temporary cofferdam materials extending upstream and downstream.
- An impervious HDPE plastic liner extends above and below the diversion structure.
- The objective of the cofferdam is to isolate the work area from river flow and minimize water intrusion. It is performing this task adequately.

All the above elements are compliant to date with the County Shoreline Permit and JARPA application. All deviations from the permitted plan within the ordinary high-water mark are

temporary features related to isolation of the work area from river flow and water management within the excavation. Those deviations are summarized below:

- Page 9 (*"Spillway", dated August 15, 2020*) shows an as-built aerial view of the project.
- The alignment of the constructed cofferdam differed from the permitted cofferdam alignment. The cofferdam extends upstream approximately 300 ft beyond the permitted location. The temporary cofferdam also extends only 250 ft downstream instead of the permitted 750 ft, for a subtraction of 500 ft. These changes were made in response to substantial physical channel changes that resulted from 10,000 cfs flooding events (early February 2020) and bedload deposition that occurred after the permitted cofferdam layout was determined 3 years ago. It was necessary to make a field adjustment to the cofferdam locations in response to substantial changes in riverbed conditions. It was necessary to extend the cofferdam upstream to effectively intercept and divert river flow and convey that flow to the right bank, dewatering the left bank as much as possible. The downstream cofferdam was reduced due to the substantial bedload deposition from recent flooding. The cofferdam is made of riverbed material.
- The materials used to construct a portion of the cofferdam differed from the braced wood plank wall authorized by the permit. Rock filled metal containers were used to build the temporary cofferdam wall where the bypass flows over the diversion structure. The temporary containers are stronger and more stable compared to the braced wood plank wall identified in the permit. The rock filled metal containers provide a more stable base and secure positioning. This temporary strategy was selected and applied based on field conditions observed after the start of construction. This field adjustment enhanced job site safety and provided for a higher flow capacity in the bypass channel without breaching and maintained functionality and stability of the cofferdam at higher velocities.
- Field Turf material was placed on the dry riverbed within the temporary bypass channel as a soft underlayment for the geomembrane and HDPE to prevent the plastic liner from being torn or breached by rocks or wood debris in the riverbed. **The use of field turf material was not permitted.**
- A partial breach of the plastic liner occurred on July 30, 2020, and as a result approximately 617 square yards of Field Turf material were released to the river. The immediate response to this breach involved securing the plastic liner that remained in place within the bypass channel and recovering and removing from the river all of the loose pieces of plastic liner and Field Turf within approximately 2000 ft downstream of the diversion structure. The immediate response recovered an estimated 550 square yards of the material released by the structure. Placement, release, and recovery of the Field Turf were not permitted.
- Page 10 (*Sheet 1, "Water Diversion Relocation Plan"*) shows the <u>current</u> cofferdam configuration. Pumps were put in place to dewater the in-river excavation, and minor adjustments to the location of those pumps were made as the excavation progressed. The on-site treatment system for stormwater and dewatering water was configured and activated. The treatment system is located outside of Waters of the U.S. except for the pump intakes, which are located within the isolated in-river work area. The treatment

system is documented in the current version of the SWPPP prepared in compliance with the Stormwater General Permit issued by Department of Ecology.

- A Conveyance Channel was excavated downstream of the diversion structure on the surface of a dry bar within the ordinary high-water mark (see Page 10). The Conveyance Channel" was excavated within the permitted in-river work area and it extended approximately 200 ft downstream of the permitted limits of work. The extended 200 ft is due to the large amount of bedload deposited recently during a 10,000 cfs flood. The intended function of the Conveyance Channel is to support dewatering of the excavation and allow water to infiltrate into the dry gravel bar.
- Temporary cofferdams were installed interior to the isolated in-river work area. The permit allowed these interior temporary coffer dams to be constructed using supersacks. A field modification was made to construct these cofferdams using concrete manhole casings instead of supersacks. This change was made to improve the ease of removing the temporary cofferdams when demobilizing the in-river work. They make a safer more stable vertical stacked wall. We believe that concrete manhole casings are superior to the use of supersacks. Concrete manholes do not collapse or tear as do supersacks in this environment. The use of concrete manhole casings instead of supersacks was not in the permit.

All deviations from the permitted plan within the ordinary high-water mark are temporary features related to isolation of the work area from river flow and water management within the excavation. The above modifications were field decisions made in response to substantial changes in riverbed characteristics between 2018 and 2020. These field determinations were motivated by the desire to provide a more secure barrier to protect worker safety and minimize the risk of water intrusion into the in-river work area.

Flood events and extensive bedload deposition grossly modified the riverbed upstream and downstream of the diversion structure compared to the conditions used to design the temporary cofferdam layout in 2018. Extensive bedload deposition reshaped the large gravel/cobble bar occupying the center and left side of the channel. Those changes made it unnecessary to extend the cofferdam downstream as far as previously anticipated. The field determination to reduce the extent of the cofferdam downstream of the diversion was made based on the higher elevation gravel bar that naturally maintains river flow along the right bank further away from the in-water work area. This high and dry gravel bar protects the work site and can also provide an extensive permeable area for infiltration of dewatering discharge.

The formation of the gravel bar was not anticipated and therefore the absence of cofferdam extension downstream is not addressed in the approved permit.

Page 10 shows the current cofferdam configuration. The overall modifications to the cofferdam strategy reflect necessary field adjustments made in response to the substantial natural changes in river channel/bar conditions over the three years that have passed since the original design. The modifications are prudent and necessary to protect the worksite, provide for the safety of workers, and maintain river water quality by effectively isolating the work area under current riverbed conditions. Those field modifications provide a more durable, safe, and effective

system to isolate the work area from river flows and reduce water intrusion into the work area. All materials used are temporary and will be removed. Natural riverbed gravels incorporated into the temporary cofferdam will be dispersed.

The original permit plan for dewatering the work site anticipated pumping to an upland forest strip for manifold dispersion and infiltration. A pond system was included thereafter in a SWPPP plan (a State stormwater regulation requirement) and is located on-site outside of the ordinary high-water mark. The pond also evolved into a dual-purpose opportunity: water quality management (sediment pond) and fish acclimation.

Months after the original permit was issued, onsite discussions with resource agency personnel resulted in a preference to avoid disturbing the forested area between the sediment pond and the river. This preference combined with the natural infiltration capacity of the expanded gravel bar downstream of the diversion motivated this change to the water management plan. The current water management system provides a lower impact approach by filtering pumped water through the gravel bar when & where feasible and is compliant with water quality requirements. Water from the in-water construction area may be pumped to the sediment pond when necessary. Prior referenced Page 10 shows three dewater pump-out locations that would deliver water either to the gravel bar for infiltration, or the sediment trap and pond system (with filter chambers) for suspended sediment removal. Both systems have proven effective during the current construction effort and would preferably continue to be used with appropriate turbidity monitoring.

Most aspects of the original de-watering plan have changed due to changes in river morphology, observed flow-through and infiltration performance and the desire to minimize reliance on pumping when feasible. Although the current de-watering plan is different than the configuration originally proposed, the updated approach is more secure and reliable to perform without damaging either terrestrial or aquatic resources. The construction of the dual-purpose pond (outside of shoreline jurisdiction) provides the insurance that there will be a treatment option with flow controls should it become necessary to temporarily detain all pumped water.

Another drawing that shows as-built conditions is shown on Page 6. This will be updated weekly as the project progresses.

Updated Dewatering/Diversion and Water Quality Monitoring Plan

Electron Hydro communicated with Carol Serdar of Ecology to discuss the necessary components and content for the Dewatering/Diversion and Water Quality Monitoring Plan that complies with applicable permit requirements and aligns with the adjusted limits of work and revisions to the treatment systems for dewatering water and storm water. The revised Water Quality Monitoring Plan (WQMP) is attached to this response and will be incorporated as an update to the SWPPP. Electron Hydro believes that Ms. Serdar is supportive of this new WQMP.

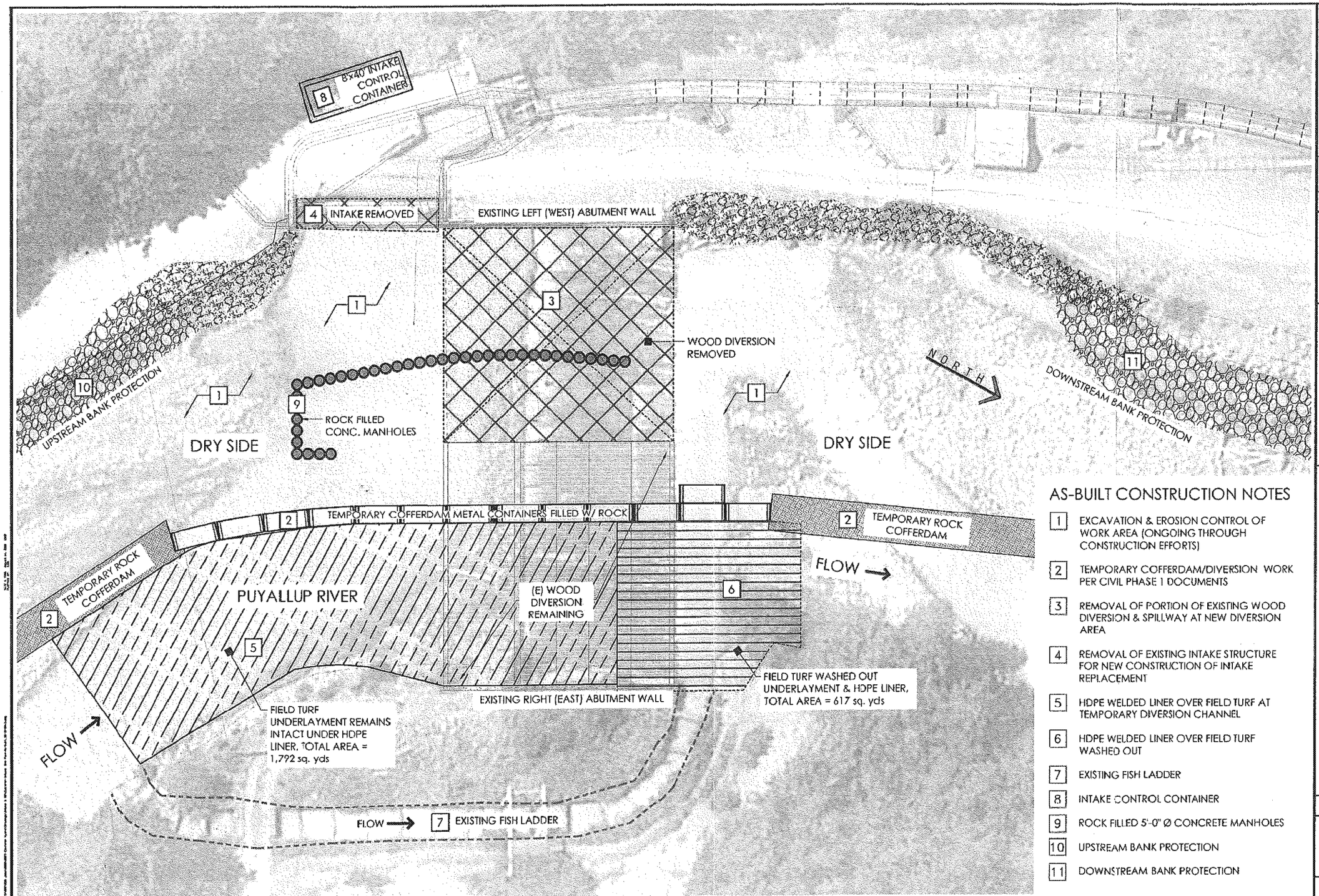
Electron believes that the project is consistent with what was approved by the hearing examiner as there is nothing permanently constructed to date. All permanent project elements will be constructed as shown in the permitted designs. What has been constructed to date is temporary cofferdam construction which will be removed in the next two months. The cofferdams are to manage water and isolate the work area from river flows.

Electron is hopeful that agency staff can recognize that Electron Hydro made the field adjustments to temporary components of the project in response to substantial changes in river morphology, discovered during construction. The permanent construction elements of the in-water work are consistent with the permitted project. We believe the field adjustments and improved water management strategies are more effective at protecting natural resources and maintaining a safe work site. We respectfully request an adaptable administration of permit requirements to restore and maintain project compliance going forward and achieve the desired resource protections. Electron is anxious to get back under construction to complete this essential phase.

Submitted by:

Thom A. Fischer

Thom Fischer, P.E.



1 CONSTRUCTION AS-BUILT SITE PLAN

20 0 20 40
SCALE: 1" = 40'

AS-BUILT CONSTRUCTION NOTES

1. EXCAVATION & EROSION CONTROL OF WORK AREA (ONGOING THROUGH CONSTRUCTION EFFORTS)
2. TEMPORARY COFFERDAM/DIVERSION WORK PER CIVIL PHASE 1 DOCUMENTS
3. REMOVAL OF PORTION OF EXISTING WOOD DIVERSION & SPILLWAY AT NEW DIVERSION AREA
4. REMOVAL OF EXISTING INTAKE STRUCTURE FOR NEW CONSTRUCTION OF INTAKE REPLACEMENT
5. HDPE WELDED LINER OVER FIELD TURF AT TEMPORARY DIVERSION CHANNEL
6. HDPE WELDED LINER OVER FIELD TURF WASHED OUT
7. EXISTING FISH LADDER
8. INTAKE CONTROL CONTAINER
9. ROCK FILLED 5'-0" Ø CONCRETE MANHOLES
10. UPSTREAM BANK PROTECTION
11. DOWNSTREAM BANK PROTECTION

NO.	DATE	REVISION	BY:	CK

Electron HYDRO

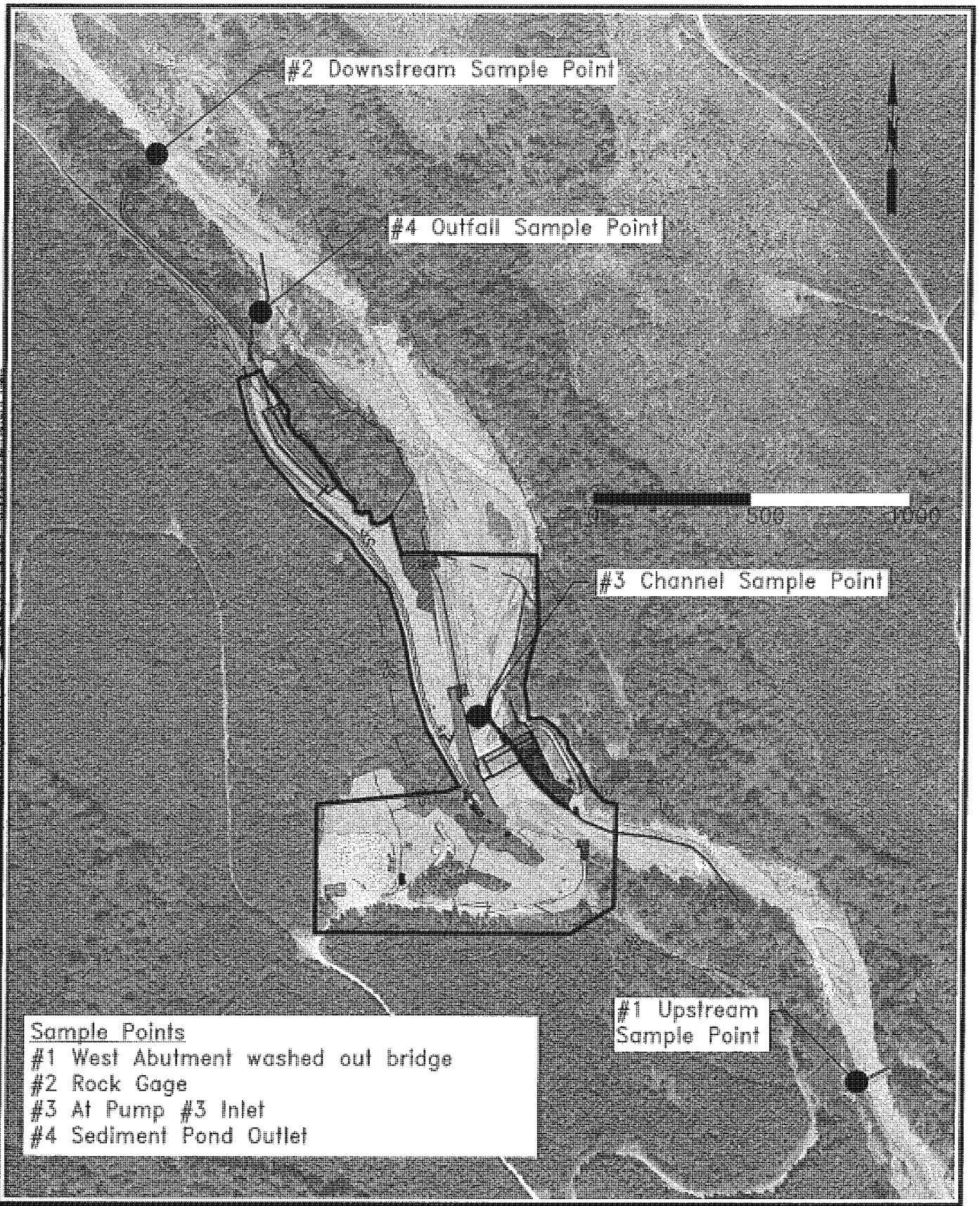
PHASE 1 CONSTRUCTION AS-BUILT SITE PLAN AS OF AUG. 10TH 2020

SCALE PER VIEW

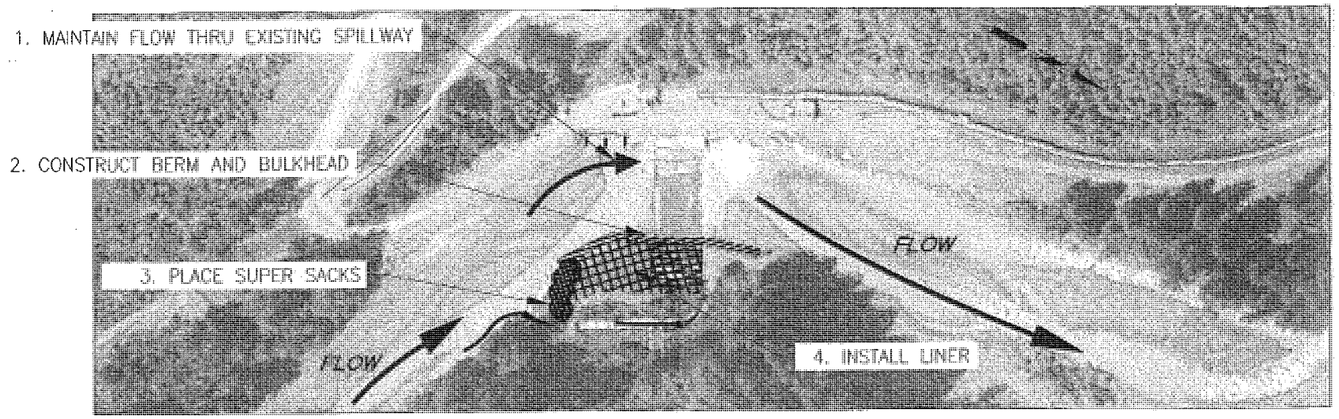
DESIGN: RDM
DRAWN: ESK
CHECKED: TAF
DATE: 08-10-20
JOB#:

SHEET 1 OF 20

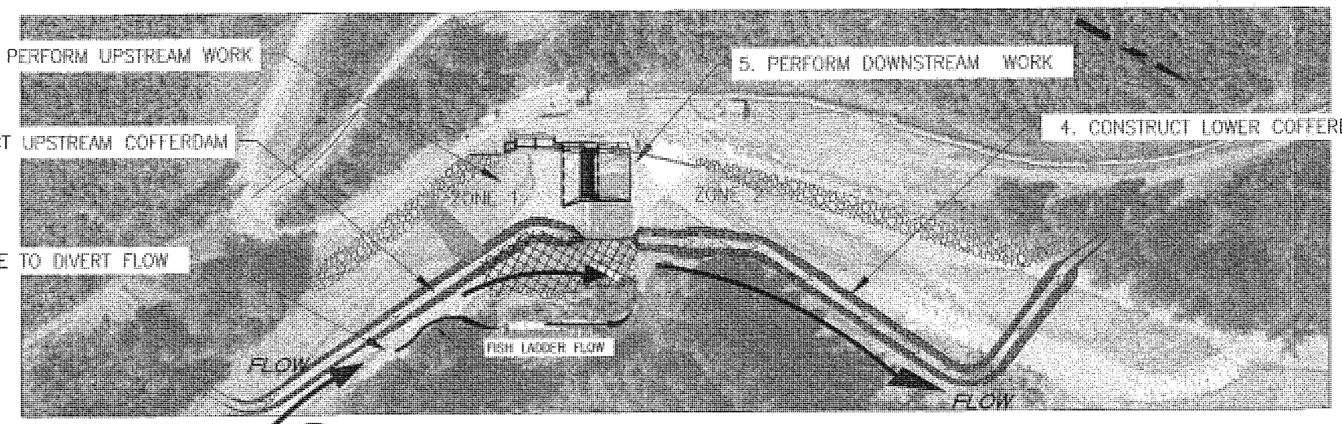
DRAWING 1



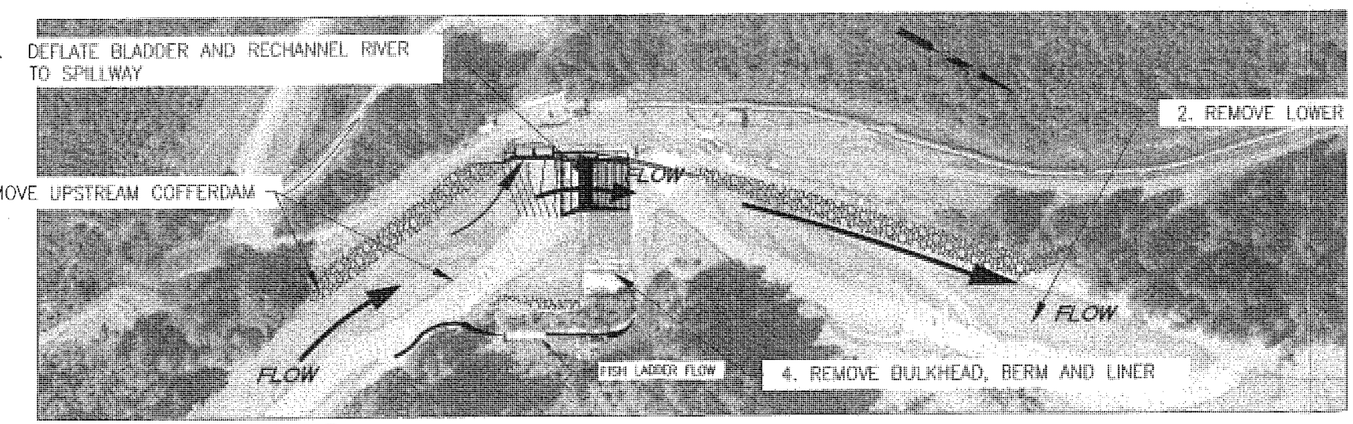
DRAWN: RDM CHECKED: TAF DATE: 08/10/2020	DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION SWPPP SITE PLAN Sample Sites					
				1	8/14/20	Label update	SpG	
EXHIBIT 1 OF 1	PIERCE COUNTY Figure 1 WASHINGTON	NO.	DATE	REVISION	BY	CK



1 - STAGE I - TEMPORARY SPILLWAY
SCHEMATIC ±1"=200'



2 - STAGE II - TEMPORARY COFFERDAM WORK
SCHEMATIC ±1"=200'



3 - STAGE III - RESTORE SITE
SCHEMATIC ±1"=200'

NO.	DATE	REVISION	BY	CK
1	3/28/17	PERMIT SET	SG	

Electron HYDRO EST. 1904

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

TEMPORARY COFFERDAM AND WATER MANAGEMENT PHASING

PIERCE COUNTY WASHINGTON

DESIGN: TS
DRAWN: SpG
CHECKED: TAF
DATE: 03/28/2017
JOB#: 11011900

SHEET 8 OF 20

DRAWING C-3

DATE & TIME: March 28, 2017 15:39
PLOTTED BY: STEVEG

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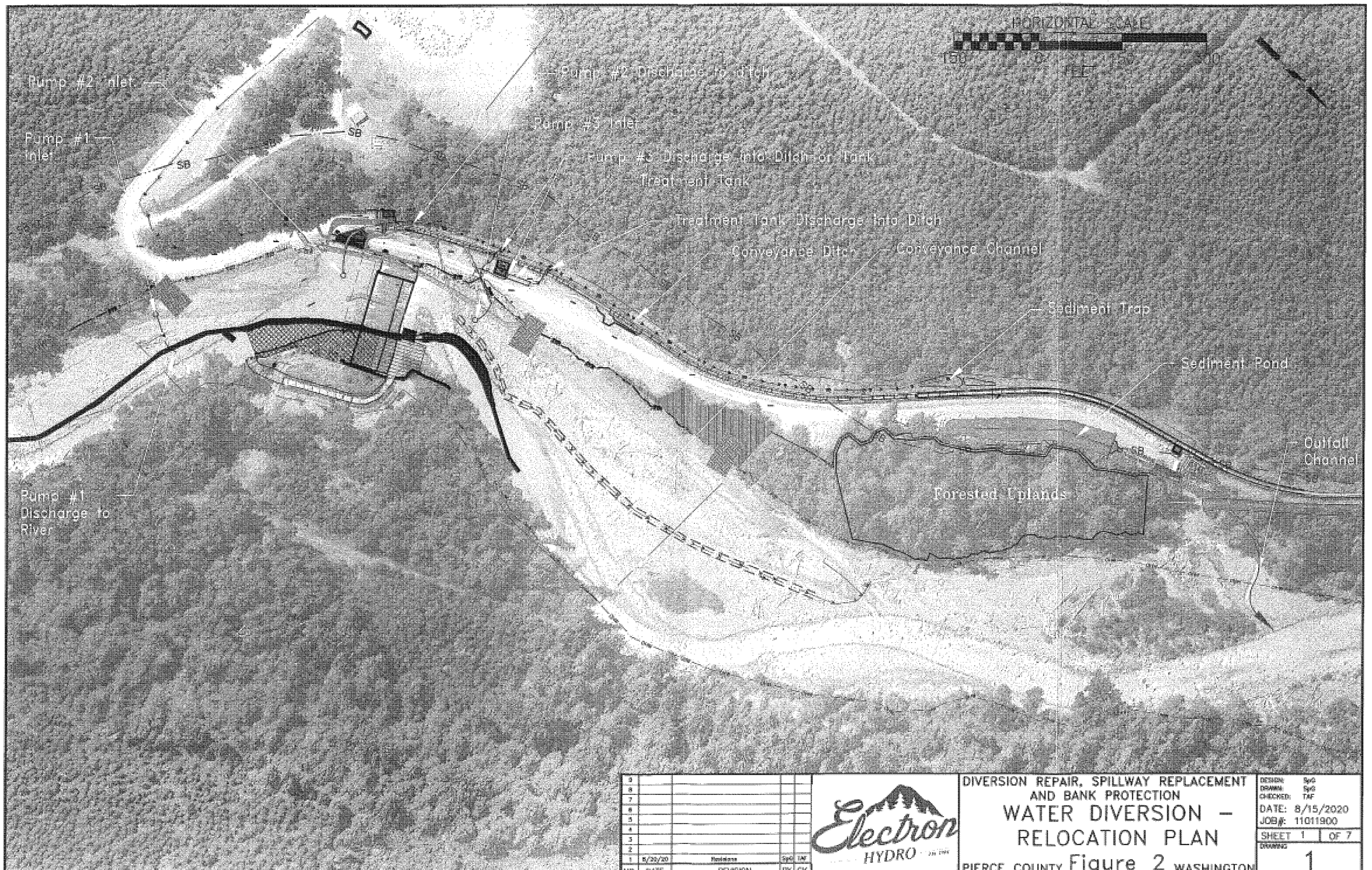

NO.	DATE	REVISION	BY	CK
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1	8/20/20	Revisions	SpG	TAF

Electron HYDRO

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

WATER DIVERSION – RELOCATION PLAN

PIERCE COUNTY Figure 2 WASHINGTON

DESIGN: SpG
DRAWN: SpG
CHECKED: TAF
DATE: 8/15/2020
JOB#: 11011900
SHEET 1 OF 7
DRAWING 1

FILE NAME & LOCATION: E:\Project\ELECTRON\DWG\Design\Intake\ELE_DEWATER.dwg

DATE & TIME: August 20, 2020 20:21 PLOTTED BY: STEVEG

Thom Fischer

From: Dave Risvold <dave.risvold@piercecountywa.gov>
Sent: Tuesday, August 18, 2020 10:54 AM
To: Thom Fischer
Cc: Melanie Halsan; Russ Ladley; Lisa Anderson; Churchill, Jenae N CIV USARMY CENWS (US); Serdar, Carol (ECY); Andrew Van Gordon
Subject: RE: Electron Stop Work order

Hi Thom

Sorry for the delay in responding.

You may take those limited actions needed to prevent overtopping of the cofferdam you describe. Please be extremely judicious in the amount of work you do and provide us with a detailed discussion of the work completed – within 48 hours of the work. Do you know roughly how much height you need to add?

The County's Stop Work remains in effect, save for the cofferdam emergency work and the following two items:

1. Pouring the concrete for the stairs that connect the access road to the staging area
2. Sediment removal from the conveyance channel, sediment pond, and stormwater retention pond.

These last two items were identified in a recent conversation with Carol Serdar, with the Department of Ecology, as being important items to complete. Ms. Serdar also wants to be sure you know she would be happy to assist you with a monitoring plan for pH and turbidity. Ms. Serdar can be reached at 360-742-9751.

... regards to the Stop Work, we reviewed your August 16 response to the Corps and are greatly concerned with the extent to which the project appears to vary from what was approved in 2018 by the Pierce County Hearing Examiner. Sheet 1 of 7 of the August 16 identifies a different cofferdam configuration than what was approved, and a conveyance channel and pump site in the river channel. The sedimentation facility built in 2019 without the appropriate approvals has been incorporated into the project even though that facility was to be built as Phase II of the larger Electron project.

It would be irresponsible of us to release the Stop Work without a fuller picture of the work that has been completed. It is clear that the project presented to the Hearing Examiner is not the project that has been built.

Please provide for us a summary of those features and actions that deviate from the approved plans, submitted under applications 858766 and 858765 and approved by the Hearing Examiner on June 26, 2018. At such time as we understand what has been done, a decision on lifting the Stop Work will be made.

Dave Risvold | Environmental Biologist 3 – Shoreline Planning Supervisor | Pierce County Planning and Public Works | (253)798-7036 (VM and forwards to cell) (253-307-5929 cell/no VM) |
2401 South 35th Street, Tacoma, WA, 98409-7490 | dave.risvold@piercecountywa.gov | www.co.pierce.wa.us/pals

n: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Monday, August 17, 2020 4:08 PM

Steve Goodrich

From: Cherry, Shane <scherry@hgl.com>
Sent: Wednesday, August 19, 2020 11:20 AM
To: Steve Goodrich
Subject: FW: [EXTERNAL] FW: Modified Stop Work Order; NWS-2016-350; Electron Hydro

Steve,

See below the Corps response to the materials we submitted early on Monday. Today we are working on our response to the message below.

Shane

-----Original Message-----
From: Churchill, Jenae N CIV USARMY CENWS (US) <Jenae.N.Churchill@usace.army.mil>
Sent: Tuesday, August 18, 2020 2:31 PM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Dave Risvold <dave.risvold@piercecountywa.gov>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Lisa Anderson <Lisa.Anderson@PuyallupTribe-nsn.gov>; Russ Ladley <Russ.Ladley@PuyallupTribe-nsn.gov>; Lisa Abernathy <lisa.abernathy@noaa.gov>; Muck, Jim <jim_muck@fws.gov>; Bockstiegel, Elizabeth A (DFW) <Elizabeth.Bockstiegel@dfw.wa.gov>
Subject: Modified Stop Work Order; NWS-2016-350; Electron Hydro

Hi Thom,

We have reviewed the information you provided on August 17, 2020, and have determined the Stop Work order remains in effect. However, we have coordinated with Pierce County and the Washington State Department of Ecology, and have determined, you may resume the cofferdam work as described in your email to the Dave Risvold of Pierce County dated August 17, 2020. You may also resume the following work items unless otherwise instructed:

1. Pouring the concrete for the stairs that connect the access road to the staging area 2. Sediment removal from the conveyance channel, sediment pond, and stormwater retention pond

Please be reminded that you have not provided a sufficient response to our two stop work letters. A clear description of description of the work that has been done that was not authorized by the Corps, and an adequate dewatering/diversion and water quality monitoring plan. Until you have provided a clear description of the work that has been conducted to date,

especially the work that was done outside your Corps permit, and a sufficient dewatering/diversion and water quality monitoring plan, the full Stop Work Oder will not be lifted.

I recommend provided a clear bulleted list or table of the work that has occurred and that was or was not previously authorized under your Corps permit. Ms. Serdar of Ecology is willing to assist you in developing a sufficient water quality monitoring plan for pH and turbidity. Ms. Serdar can be reached at 360-742-975 or cser461@ecy.wa.gov. In addition, please address the following concerns/questions in response to the plan submitted August 17, 2020:

1. What happens when a storm or high flow event increases flow in the conveyance channel (page 7 of 20) to a rate that exceeds the pumping capacity of Pump 4? What happens when pump 4 fails? This occurrence is inevitable-what are the backups in place?

2. A trench near the position of well point 1 and perpendicular to the flow would provide greater lateral pickup and more effectively control groundwater into the site. What is the backup for pump 1 failure?

3. The existence and operation of the Conveyance Channel depends entirely on river flows staying quite low-presumable under 1000-cfs. What is the plan should the channel be overtopped?

Please let me know if you have any questions about this email.

Sincerely,

Jenae Churchill
Project Manager/Biologist
USACE Seattle District

Consider the Environment before printing this email.

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This electronic communication, including any attached documents, may contain confidential or legally privileged information intended only for recipient(s) named above. If you are not the intended recipient of this message, you are prohibited from disclosing, reproducing, distributing or otherwise using this transmission. If you received this communication by mistake, please notify the sender immediately and delete the communication and any attachments.

Steve Goodrich

From: Thom Fischer
Sent: Tuesday, August 18, 2020 12:52 PM
To: Steve Marmon; Steve Goodrich; Cherry, Shane; Adam Cleveland
Subject: Fwd: Electron Stop Work order

From: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Tuesday, August 18, 2020 11:44:20 AM
To: Chris Spens <cspens@tollhouseenergy.com>
Subject: Fwd: Electron Stop Work order

From: Dave Risvold <dave.risvold@piercecountywa.gov>
Sent: Tuesday, August 18, 2020 10:53:37 AM
To: Thom Fischer <thom@Tollhouseenergy.com>
Cc: Melanie Halsan <melanie.halsan@piercecountywa.gov>; Russ Ladley <Russ.Ladley@PuyallupTribe-nsn.gov>; Lisa Anderson <Lisa.Anderson@PuyallupTribe-nsn.gov>; Churchill, Jenae N CIV USARMY CENWS (US) <Jenae.N.Churchill@usace.army.mil>; Serdar, Carol (ECY) <cser461@ECY.WA.GOV>; Andrew Van Gordon <andrew.vangordon@piercecountywa.gov>
Subject: RE: Electron Stop Work order

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Dave Risvold | Environmental Biologist 3 – Shoreline Planning Supervisor | Pierce County Planning and Public Works | (253)798-7036 (VM and forwards to cell) (253-307-5929 cell/no VM) |
2401 South 35th Street, Tacoma, WA, 98409-7490 | dave.risvold@piercecountywa.gov | www.co.pierce.wa.us/pals

From: Thom Fischer <thom@Tollhouseenergy.com>
Sent: Monday, August 17, 2020 4:08 PM
To: Dave Risvold <dave.risvold@piercecountywa.gov>
Subject: Electron Stop Work order

Dave, could you call me regarding the Electron Stop Work order? Aside from the need to re-start construction, I have an emergency in that we need to raise the cofferdam just upstream of the fish ladder on the left side (middle of the river). It is already starting to overtop and the river has not yet peaked for the day. We can not just stop and walk away from this project.

This time of year when it gets hot (80 degrees +) the glacier melts, water flow picks up, the river turns brown and brings down thousands of tons of bedload past the diversion. If we were generating and diverting water into the flume, we would be digging out approximately 1000 cy of sand per day from the flume alone. Therefore, the river is rising, the bedload and riverbed is rising, thus wanting to top the gravel cofferdam At this point we could do it in the dry.

I can be reached at my Electron office at 360-760-1585
My cell number is 360-739-9999
Please call.

Thank you,

Thom

Thom A. Fischer, PE President, Tollhouse Energy Company, 1800 James Street, Suite 201, Bellingham, WA 98225
Main: 360-738-9999 Direct: 360-746-3414 Cell: 360-739-9999 www.TollhouseEnergy.com

CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

Section A: General Data

Ecology Inspector(s): Carol Serdar Contaminated CSWGP Inspector Phone: 360.742.9751 Email: carolserdar@ecy.wa.gov	On-Site Representative Name: Thom Fischer Title: Electron Hydro LLC, permittee Additional Participants: Jess Eakens, ECY Sheila Marcoe, ECY Steve Goodrich, Electron Hydro	Inspection Date and Entry/Exit Time: 17 Aug 2020, 9:00/13:30 Receiving waters: Puyallup River	Inspection Type: Compliance Inspection Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. Carol Serdar had previously been to the site a few years' prior, during the JARPA review for the then proposed re-construction of the barrier dam and intake structure and on 11 August 2020 in response to ERTS699710.

Ecology personnel met at Electron Hydro main office at 9AM; then met with Electron Hydro representatives Thom Fischer and Steve Goodrich (CESCL). Thom provided maps of the construction area. Individuals then drove the Hancock forestland road to the site of the barrier dam and intake structure construction staging area.

Once at the staging area, we convened in the job office and reviewed paperwork. We discussed the site is permitted for a total of 30 acres with 4.5 acres of disturbance; currently more than 4.5 acres have been disturbed*. The expansion of the disturbed area into the already permitted total area, will require the permittee submit a CSWGP Modification Form for the total area to be disturbed over the lifetime of the permit. Site will adjust the disturbed area to match the total amount of expected disturbance over lifetime of the CSWGP. See Corrections Required for link to required form. The site log book was missing DMR reports and site inspection reports were not present from previous inspections, not keeping weekly site inspection reports is a violation of CSWGP condition S4.B.5.. Other CSWGP required paperwork was present. After the 11 August 2020 site visit, Steve had immediately begun using the weekly Site Inspection Report form found on Ecology's website with all 13 Elements; this was provided during this inspection. Carol requested Steve send electronic copies of the weekly site inspection report for the next two weeks**.

Discussed prioritization of reports and plans the site is currently developing; ERTS #699710 summary report had still not been submitted (based on CSWGP condition S5.F.)***.

Site map/SWPPP map with notes (BMP installations) was hanging on the wall of the job office. Discussed adding dates and initials of when the BMPs were installed or removed. Discussed updating SWPPP and SWPPP map with the mulch BMP that was currently being applied to the exposed and unworked soils within the staging area.

Discussed DMR monthly reports; reporting is up-to-date but did not account for upland discharges into construction area. Thom and Steve explained the sampling is tied into the required sampling for the in-water work (comparing upstream/background sample for turbidity and downstream sample). Downstream sample must not exceed 110% of background. Data for monitoring was present and sufficed for construction sampling to date. Carol requested the water quality monitoring plan (hard copy provided during inspection-dated 14Aug2020) and mentioned that the required sampling for the CSWGP and the in-water work might be able to be combined, based on the comingling of riverbed dewatering water with upland stormwater. Carol explained the required turbidity and/or pH sampling from other potential areas that would not discharge into the construction area of the riverbed would need additional monitoring if discharges occur; site intends to use a turbidity meter.

Weather at time of inspection: Sunny and 80s

Precipitation in the past 24 hours?
☐ Yes
☑ No

On site observations:

As a group we walked the upland staging area and discussed newly added mulch on side slopes.

Forms for concrete stairs have been constructed, concrete not able to be poured due to 6 August 2020 stop work orders (Pierce County and USACE). Discussed pH laden stormwater water management from concrete curing; if concrete is not poured during the dry period, large tanks or lined pond would need to be installed at base (near road parallel to Puyallup River).

Walked around the newly graded staging area and discussed slope discharges. The berms of wood slash at the base of the slope and adjacent to flat forested area appears to provide reasonable assurance as an adequate BMP; discussed adaptive management if not. Thom agreed that the CESCL would inspect the perimeter of the disturbed area for turbid discharges, including the area adjacent to the road that leads away from this newly sloped, flat staging area. If there is a discharge into the ditch along this forest road, it will be sampled for turbidity.

Area with 55 gallon drums identified on 11 August 2020 inspection had newly installed storage units for storage of chemicals and fuel.

Discussed concrete wash out area was appropriately lined, but must be contained until cured and the pH laden water to be managed according to the Stormwater Management Manual of Wester Washington (SWMMWW) – it may not be infiltrated unless it meets CSWGP benchmark (pH 6.5-8.5). No concrete wash has been discharged from the pond.

Sports turf was delivered to the area adjacent to the crane, Carol and Jess walked the area and did not observe any black rubber bits; left bank upstream of the crane had been graded and the rock berm adjacent to river was installed for water diversion of construction area. Parked along the road parallel to the Puyallup River at the barrier dam and intake structure.

Walked same direction as on 11 August 2020; beginning above the intake structure. Discussed exposed slope management. Exposed and unworked soil is **a violation of CSWGP condition S9.D.5.d.**. This area may be a challenge to temporarily stabilize based on proximity to active riverbed construction.

Generator for riverbed dewatering had a straw wattle surrounding it, but no plastic lining. All equipment with fuel must meet 110% capacity of the fuel tank; not having secondary containment is **a violation of CSWGP condition S9.D.9.b.**.

Stormwater management was explained; water from upland and dewatering water from the river construction area is comingled and enters the ditch between the base of the hillslope and the flume, comingled water flows into the sediment pond with the standpipe and rack on top, then into the stormwater ponds with three weirs (now constructed with siltfences, straw bales have been removed). Before discharge, water is sampled and if it is less than 110% of background sample, then the water may be discharged from the last stormwater pond into ditch with check dams to discharge into the Puyallup River. If water in the stormwater pond is greater than 110% of background sample, the water would be pumped from the stormwater pond to infiltrate into the adjacent forestland (visual monitoring would occur around the forested area)****. The stormwter system needed maintenance as soon as possible for additional stormwater capacity (CSWGP condition S9.D.3. and S9.D9.4.).

Post inspection:
**Carol roughly digitized disturbed area using Google Earth after the inspection on 11 August 2020*
***CESCL has provided weekly site inspection reports for three consecutive weeks*
****ERTS report (CSWGP condition S5.F.) was mistakenly submitted via Ecology's webportal then emailed to Carol on 28 August 2020*
*****The final Water Quality Monitoring Plan (WQMP) (dated 27Aug2020) was accepted by the USACE, and this system has been removed and WQMP now specifies infiltration into the forested area.*

Section C: Compliance
Note: See Corrections Required Form 8 September 2020

Inspection Checklist

Is the Permit Coverage Letter on-site?	Is a copy of the CSWGP on-site?	Is the Site Log Book Current?	Is the Site Log Book Adequate?
X Yes ☐ No	X Yes ☐ No	☐ Yes X No	☐ Yes X No
Are Site Inspections Recorded?	**Are Site Inspections Adequate?**	**Permittee has Prepared and Implemented a SWPPP?**	**Is the SWPPP Adequate?**
X Yes ☐ No	☐ Yes X No	X Yes ☐ No	X Yes ☐ No

Violations and action required to achieve compliance	Complete or submit date	Guidance
SEE CORRECTIONS REQUIRED – dated 8 September 2020		

ADDITIONAL RESOURCES FOR COMPLIANCE:

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 (or 2019) Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Carol Serdar Date: 8 September 2020
Ecology Inspector (print name): Carol Serdar

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
SWRO Tel: 360-407-6300

All photos taken by Carol Serdar

Photo 1

Photo Description: Thom provided maps for site visit; map from the plans dated 14 August 2020. Feature names on this map have changed since this inspection (Conveyance Channel from Work Area is now referred to Conveyance Ditch – refer to WQMP dated 27Aug2020 for most current feature names).

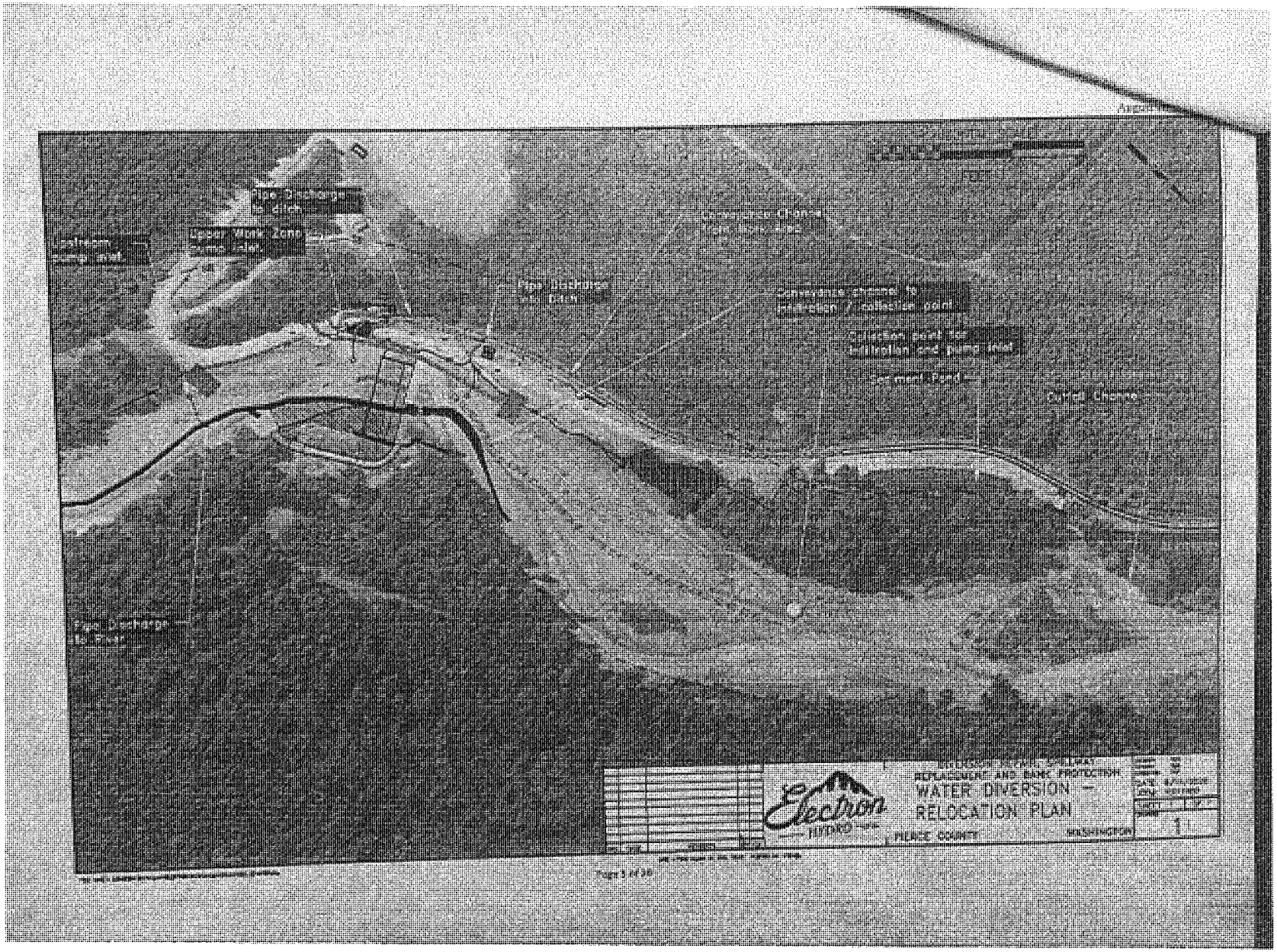


Photo 2

Photo Description: Parked adjacent to intake structure; discussed upland CSWGP area and BMPs to stabilize exposed and unworked soil.

Date:2020/08/17

Photo 3

Photo Description: Access/haul road on left bank of Puyallup River, bend is location where rolls of sports turf were delivered. Inspectors stopped and did not observe any black rubber bits. Streambed (left bank) upstream of crane has been modified for construction work.

Date:2020/08/17

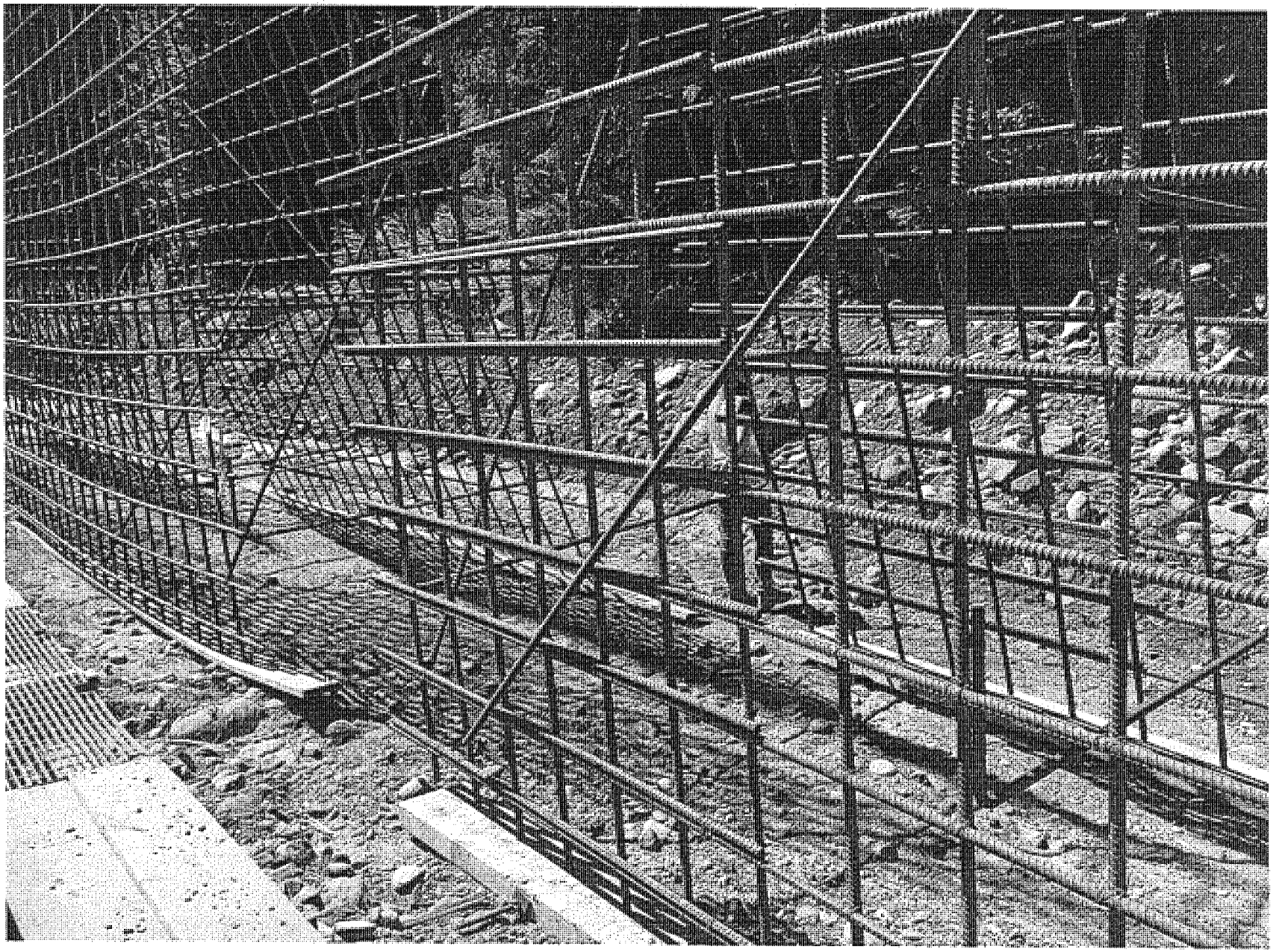
Photo 4

Photo Description: Portion of sports turf under black liner was ripped away during headward erosion of streambed at lower section of channelized river, at the downstream end of the fish ladder (fish ladder at black plastic gap on bank across river).

Date:2020/08/17

Photo 5

Photo Description: Stormwater and dewatering water are comingled in ditch between base of slope and reconstruction of flume; conveyance ditch flows into a Sediment Pond.



Date:2020/08/17

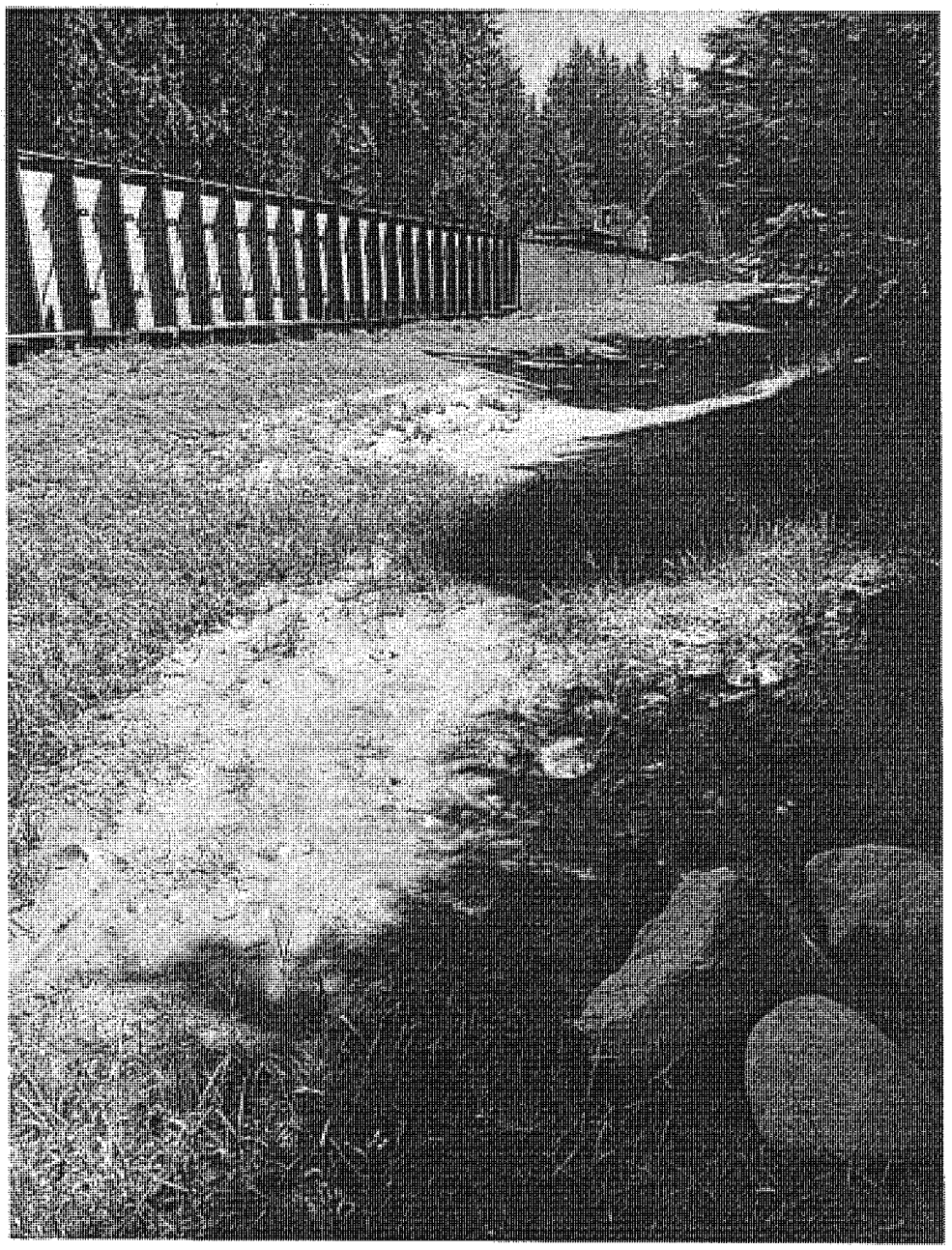
Photo 6

Photo Description: Conveyance Ditch contains fines from Puyallup River dewatering water; discussed appropriate ditch management and cleaning schedule as soon as possible.

Date:2020/08/17

Photo 7

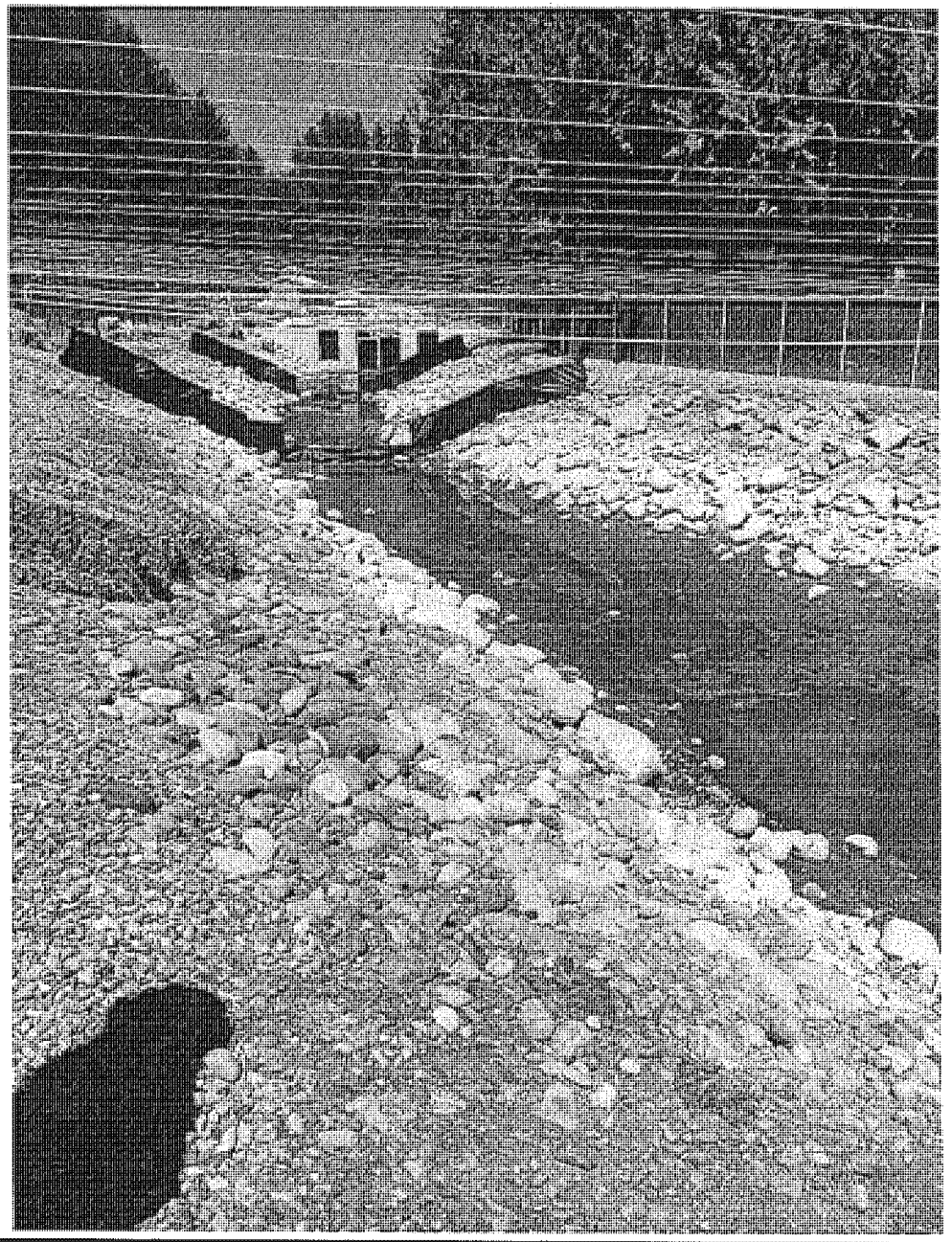
Photo Description: Sediment Pond has a standpipe and outlet structure (in shadow); discussed BMPs for additional settling out of fines and cleaning schedule.



Date:2020/08/17

Photo 8

Photo Description: Stormwater pond with checkdams settle out additional fines before last ditch (at far end of pond); discussed cleaning schedule and ability to overflow into forest to right of pond if turbidity is 110% or greater than background water sample.



Date:2020/08/17

DEPARTMENT OF ECOLOGY State of Washington

Water Quality Program
Corrections Required

Construction Stormwater General Permit (CSGP) ☒	Industrial Stormwater General Permit (ISGP) ☐	Sand and Gravel General Permit (S&G) ☐

Site name: Electron Hydro LLC Intake		Mailing address – 1800 James St Ste 201
Site address: Puyallup River (closest town – Orting)		City, State, Zip: Bellingham, WA 98225-4631
City, State, Zip: Orting, WA		Phone: 360.738.9999
Site contact: Thom Fischer,		Permit #:WAR306648
Ecology inspector(s): Carol Serdar		Inspection date: 17 August 2020
Inspector phone: 360.742.9751	FAX: 360.407.6305	E-mail: cser461@ecy.wa.gov
Notice of Penalty issued ☐ Yes ☒ No	Field Citation #	Latitude and longitude: Lat:46.90587 Long:-122.03973

The Department of Ecology (Ecology) is responsible for overseeing environmental laws that protect human health and the environment in Washington. Ecology observed violations of Chapter 90.48 of the Revised Code of Washington (RCW), Chapter 173-226 of the Washington Administrative Code (WAC), Waste Discharge General Permit Program during this site visit. Violations observed are checked below.

Violation No.	Violation	Reason	Permit Condition
☐ 1	RCW 90.48.160	Operating or discharging without a permit (all)	Does not apply.
☐ 2	RCW 90.48.080	Polluting waters of the state (all)	
☐ 3	RCW 90.48.080	Polluting impaired waters, discharge exceeds 303(d) limit (CSGP and ISGP)	
☐ 4	WAC 173-201A or WAC 173-200	Violating Water Quality Standards *(List specific standard violated.)* (all)	
☐ 5	RCW 90.48.090	Denial or withdrawal of access (all)	
☐ 6	RCW 90.48.080, WAC 173-226-070	Process water discharge without treatment in lined impoundment (S&G)	
☐ 7	RCW 90.48.080, WAC 173-226-070	Failure to clean up oil spills or repair leaking equipment (S&G)	
☐ 8	RCW 90.48.080, WAC 173-226-070	Cover or containment not provided for chemical or petroleum products (all)	
☐ 9	RCW 90.48.080, WAC 173-226-070	Corrective Action not taken (ISGP)	
☐ 10	RCW 90.48.080, WAC 173-226-070	No Stormwater Pollution Prevention Plan (SWPPP) (all)	
☐ 11	RCW 90.48.080, WAC 173-226-070	SWPPP does not meet permit requirements (all)	
☒ 12	RCW 90.48.080, WAC 173-226-070	☒ Not maintaining best management practices (BMPs) (all) ☒ Not implementing BMPs (all) ☐ Failure to modify SWPPP per permit or Dept. of Ecology Notice (all)	**S9.D.5.; S9.D.9.**
☐ 13	RCW 90.48.080, WAC 173-226-070	☐ BMPs not maintained per permit or Dept. of Ecology Notice (all) ☐ BMPs not implemented per permit or Dept. of Ecology Notice (all)	
☐ 14	RCW 90.48.080, WAC 173-226-070	☐ Inspections not completed as required by permit (CSGP and ISGP) ☐ Inspections do not comply with permit requirements (CSGP and ISGP)	
☐ 15	RCW 90.48.080, WAC 173-226-090	☐ Monitoring not conducted as required by permit (all) ☐ Sampling does not comply with permit requirements (all)	
☐ 16	RCW 90.48.080, WAC 173-226-070	☐ Not keeping site log book (CSGP and ISGP) ☐ Not keeping inspection reports or checklists (CSGP)	
☐ 17	RCW 90.48.080, WAC 173-226-090	☐ Did not telephone report turbidity greater than 250 NTU (CSGP), or threshold exceeded (ISGP) ☐ No Discharge Monitoring Reports available (all) ☐ Failure to notify Dept. of Ecology of noncompliance with permit requirement (all)	
☒ 18	RCW 90.48 WAC 173-226	Operating within the total permitted area, but beyond the permitted disturbed area.	**G20**
☐ 19			

Violation No.	Observation(s) and action(s) required to achieve compliance. (see permit conditions)	Complete or Submit Date
12	Exposed and unworked soil (slope from road to riverbed) that has not been temporarily stabilized within seven days is a violation of CSWGP condition S9.D.5.d.; and Equipment containing fuel was observed not having secondary containment and is a violation of S9.D.9.b. TO DO: 1. Temporarily stabilize all exposed and unworked soil after seven days; update SWPPP and SWPPP map with dates and initials; and 2. Provide secondary containment for ALL equipment containing fuel, fuel tanks, and chemical totes (100% capacity of tank).	18 September 2020
18	Site is permitted for a total area of 30 ac and disturbed area of 4.5 ac; more than 4.5 ac is disturbed in the upland (including all staging areas, haul road, and side slopes). TO DO: Fill out and submit a CSWGP Modification Form (email to Carol Serdar and Melinda Wilson (MEWI461@ecy.wa.gov) and hard copy of the form must be sent to Ecology) https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Construction-stormwater-permit go to Applications and forms; then Changes in coverage; then Modifications and updates.	22 September 2020
	Left blank intentionally	

Instructions:

- These corrective action requirements are not an enforcement order and are **not appealable.**
- If a penalty accompanies these corrective action requirements, **the penalty is appealable.**
- **Appeal directions are on the back of the penalty.**
- Failure to comply with these corrective action requirements may result in enforcement action.

1. To comply with the water quality regulations, complete the actions identified in the table above.
2. If you have questions, contact Carol Serdar, Ecology inspector, at 360.742.9751.
3. To request an extension, **send a written request** to the Ecology inspector by 15 September 2020.

   Ecology will notify you if an extension is granted. Please include all of the following:
   - Reason extension is needed.
   - Steps already taken.
   - Description of work that remains to be completed.
   - Anticipated completion date.

Send required document(s) to the appropriate Ecology office:

Bellingham Field Office
1440 10th St Ste 102
Bellingham WA 98225
360-715-5200

Vancouver Field Office
2108 Grand Blvd
Vancouver WA 98661
360-690-7171

Central Regional Office
15 W Yakima Ave Ste 200
Yakima WA 98902
509-575-2490

Northwest Regional Office
3190 160th Ave SE
Bellevue WA 98008-5452
425-649-7000

Southwest Regional Office
PO Box 47775
Olympia WA 98504-7775
360-407-6300

Eastern Regional Office
4601 N Monroe
Spokane WA 99205-1295
509-329-3400

Ecology Inspector (signature): Carol Serdar Date: 8 September 2020

Owner/Operator (signature): ***sent via email 8 September 2020*** Date:

Owner/Operator (print name): Date:

If you need this publication in an alternate format, call the Water Quality Program at 360-407-6722. Persons with hearing loss call 711 for the Washington Relay Service. Persons with a speech disability call 877-833-6341

Electron Hydro Diversion Repair and Spillway Replacement Project

Modified Water Diversion/Relocation Plan
Fish Ladder Operation and Maintenance Plan
Turbidity and pH Monitoring Plan
Construction Sequencing
Construction Notification Plan

19318 Electron Rd. E.
Orting, Washington 98360

Prepared by:

Steven P. Goodrich, P.E.

STEVEN P. GOODRICH
STATE OF WASHINGTON
27026
REGISTERED
PROFESSIONAL ENGINEER

August 14, 2020

Modified Water Diversion/Relocation Plan

Construction of the spillway repair relies on effective dewatering of the excavation to establish a sound footing and foundation for the concrete infrastructure components of the spillway. The excavation is located within the Puyallup River channel, and the porous riverbed material composed of boulders, cobbles, and sand readily convey water from the river into the excavation unless intercepted, redirected, or removed. The temporary bypass channel along the right bank conveys surface water flow around the work area. The bypass channel is lined with HDPE plastic to limit the amount of water that flows into the excavation, and that element of the dewatering plan is serving its intended function and has the greatest single effect on drying the excavation compared to the effects of passive drainage downstream and pumping water out of the excavation. Electron Hydro proposes to maintain the lined temporary bypass channel in its current condition until after in-water construction is complete and river flows can be safely routed to the left bank of the river channel.

The ends of the HDPE liner within the bypass channel approximately correspond with the entrance and exit of the fish ladder along the right bank. The total length of the HDPE lined segment of the bypass channel is approximately 500 ft, and the upstream end of the liner is approximately 200 ft upstream of the edge of the excavation. On August 9, Electron Hydro observed relatively clean water flowing out of the upstream wall of the excavation at two locations. That water originates from the Puyallup River upstream of the liner and flows through the coarse riverbed material. No water was observed flowing into the excavation from the left bank or from the right bank along the lined segment of the bypass channel. Water passively drains from the excavation in the downstream direction and infiltrates into a dry gravel bar. Prior to the Stop Work orders from Pierce County and the Corps, the pump system used to dewater the excavation had sufficient capacity to keep pace with the water flowing into the excavation.

Several dewatering techniques may be used to accomplish the necessary dewatering of the excavation to support installation of the foundation of the spillway repair. The proposed techniques focus on two primary strategies: 1) prevent water from flowing into the excavation along the upstream wall, and 2) pump water out of the excavation from a sump situated at the lowest point in the excavation where water collects. The proposed elements added to the existing dewatering plan are summarized below.

wells cut off or interception ditch, etc

Install a shallow sump pit upstream of the blue 100-ton crane on the left bank to intercept and collect the relatively clear river water flowing into the excavation. Install a 3" trash pump (Pump-1) to remove this water and discharge it back to the river, provided the water meets applicable water quality standards and thresholds for turbidity and pH specified in permit documents. Water collected this way would be managed separately from the turbid water pumped out of the bottom of the excavation and routed through the on-site treatment system. Doing this will reduce the amount of water in the excavation and it will reduce the pressure on the treatment system in place to handle dewatering water.

need calcs
- Pond
- Ditch
- Rev

Point withdrawl manhole intercept

Dewatering for Concrete Placement

3 levels observed Need elev.

The Electron diversion excavation was being prepared for dewatering and concrete forming when the jobsite was shut down. The water level at the diversion is currently at elev. 1602. (1) The bottom of foundations is generally at elev. 1600.

Photo 1 to the right shows concrete manholes used to temporarily contain the mudflow to isolate the east footing. The bottom of the footing is approximately 2' below the water in the photo. It is expected that when Pumps 1 and 2 are put in place, then the water level will go down an additional 5 feet, 3' below the concrete foundation.

On the left side of Photo 2 shows the 40' control building container, above the intake (with railing), mudflow at elev. 1603, concrete manholes, and water at 1602. The mudflow between the manholes and the intake will be excavated, suitable material placed back to control water, and a pond excavated for Pump 2. The location of the hole will be just above the third manhole from the left at the toe of the left slope. This will lower the water table for all of the diversion and intake foundations.

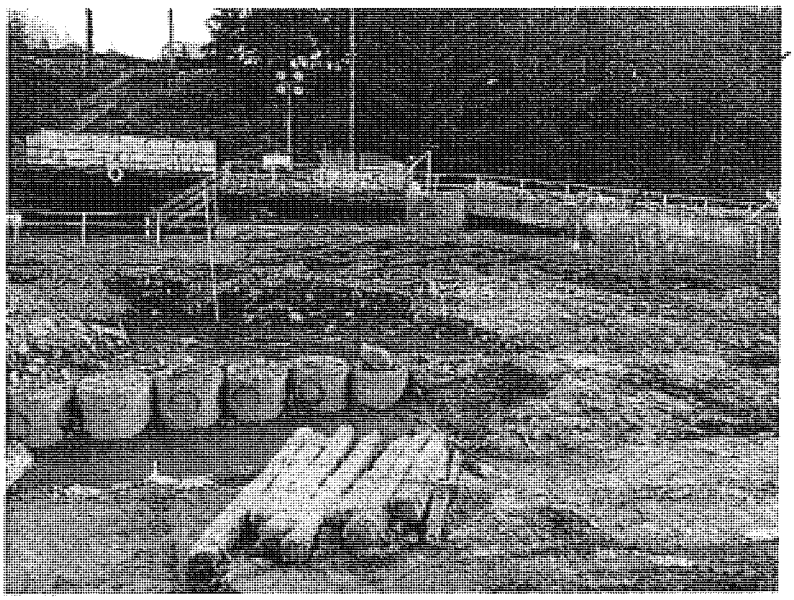
Mud

Existing Abutment

Manhole dam

Spillway

Photo 1 looking downstream at the diversion location.



Abutm

Photo 2 looking west at the intake location.

Flows Min 300gpm to 1000gpm
high of ± 2000gpm

layered

At a second location is just east of the intake structure excavate to remove mudflow material and replace with suitable rock. In the center of this area install a sump pit in which to remove remaining inflow water from upstream. Pump water out of the sump to continue drawing down and draining the adjacent soils in the bottom of the excavation. This water will be pumped with a 6" trash pump (Pump-2) through the intake and discharged into the conveyance ditch.

Basin depth Modify

The conveyance ditch lies between the existing flume and the hillside to the west. The conveyance ditch starts at the flume entrance and ends approximately 1000' ~~north at a~~ sedimentation trap (small pond). At the center of the sedimentation trap is an elevated manhole that takes excess water through an 18" pipe under the flume into the sedimentation pond.

Not spread

The sedimentation pond is 310' long and approximately 40' wide. At the north end is a controlled exit made of concrete and wood boards to fix the pond height. There are (3) silt fences that trap sediment into three ponds.

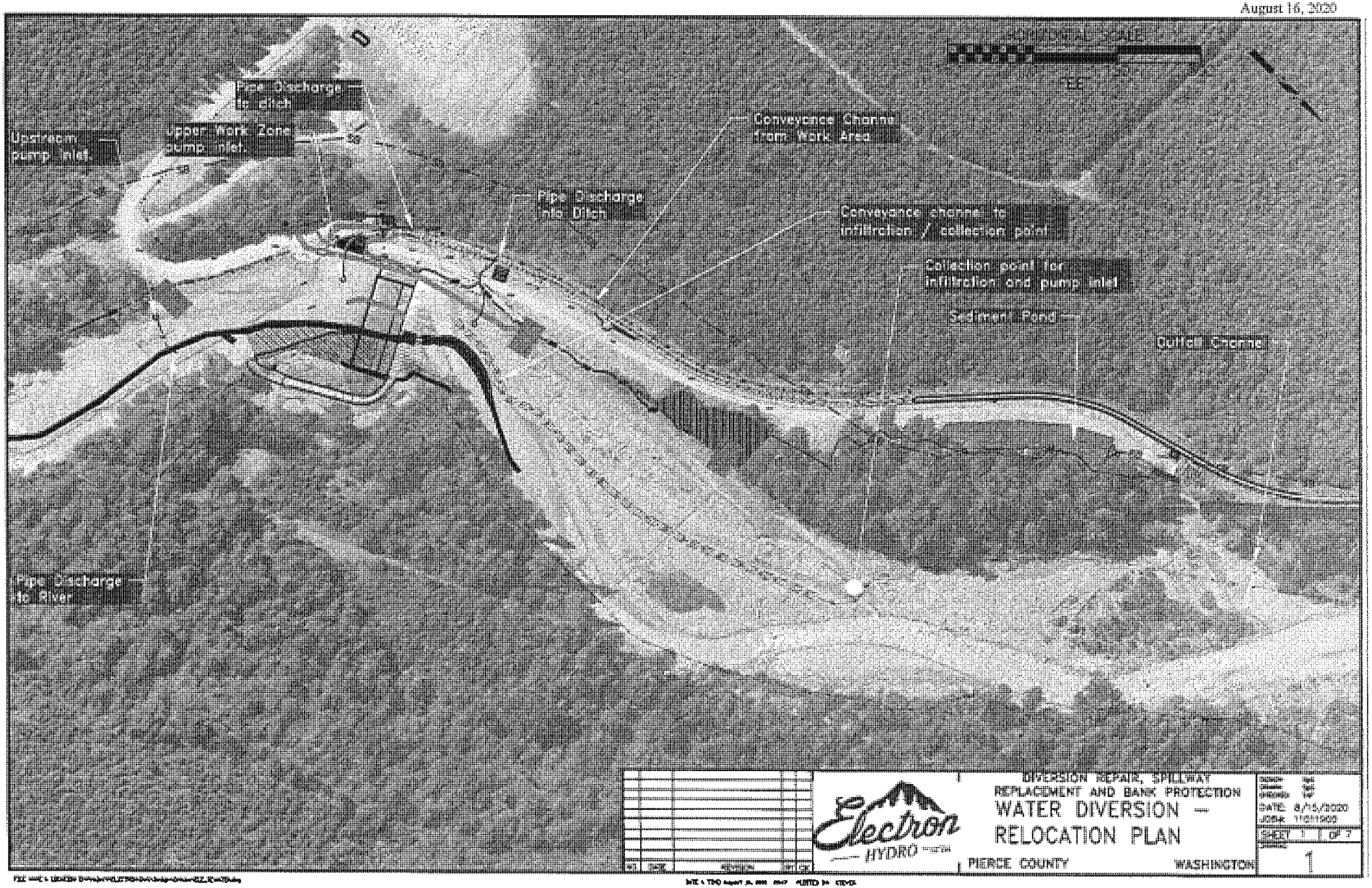
Fix outlet

Water exiting the sedimentation pond is monitored for turbidity and pH. Water not meeting turbidity requirements could be pumped into the treed area between the sedimentation pond and the river. Water not meeting pH requirements will be retained until its pH can be normalized via CO_2 sparging or dry ice.

Excess water from the work area will be either pumped by a 6" trash pump (Pump 3) into the conveyance ditch and on to the sedimentation trap and pond, or released into the conveyance channel.

The conveyance channel is a rectangular ditch with check dams to infiltrate water prior to entering the river. At the north end is an infiltration pond that needs widening to spread flow. At the infiltration pond will be a shallow sump pit to allow for water to be pumped. If the water does not meet turbidity or pH requirements, it will be pumped into the sedimentation pond via a 6" trash pump (Pump-4).

A sequence of photos showing water diversions and relocations is located on pages 5 to 10.



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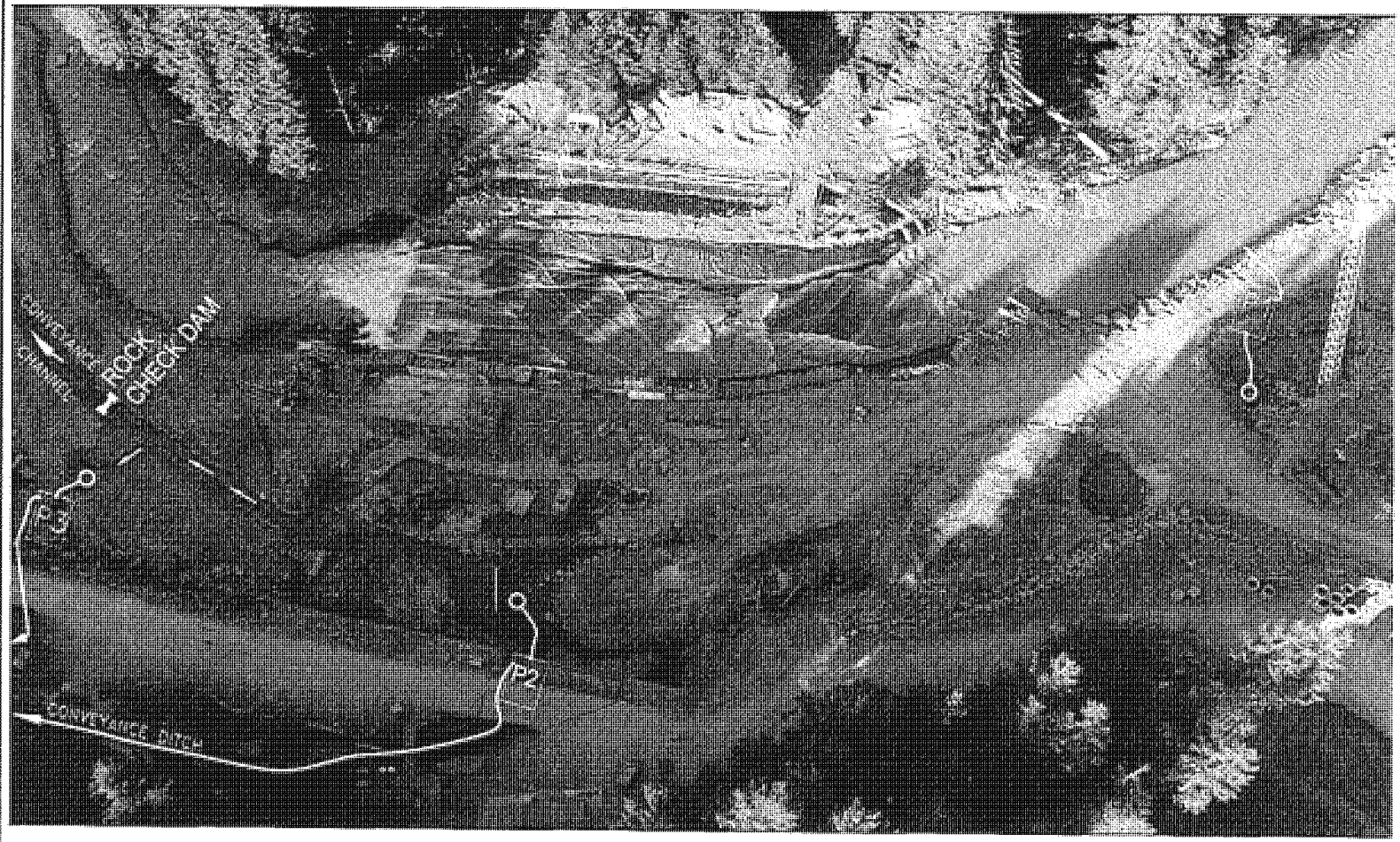

NO.	DATE	REVISION	BY	CK
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Electron HYDRO

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

SPILLWAY

PIERCE COUNTY WASHINGTON

DESIGN: TAF
DRAWN: BPB
CHECKED: TAF
DATE: 8/15/20
JOB#: 11011900

SHEET 2 OF 7

DRAWING 2

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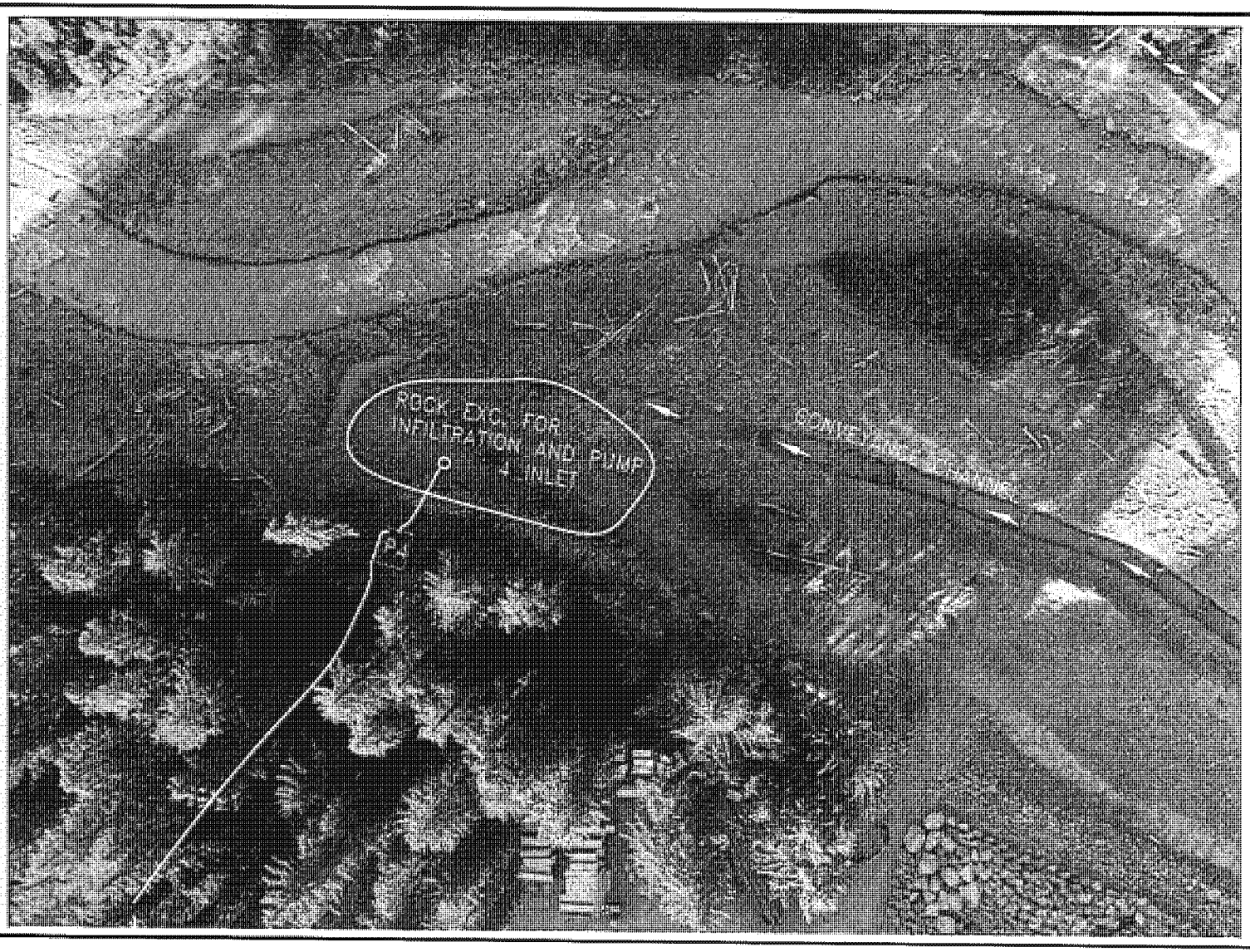
EH-USA000567

ED_005624_00000045-00234

EH-USA000568



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Electron HYDRO

DIVERSION REPAIR, SPILLWAY
REPLACEMENT AND BANK PROTECTION
CONVEYANCE CHANNEL
OUTFALL
PIERCE COUNTY WASHINGTON

DESIGN: TAF
DRAWN: RPG
CHECKED: TAF
DATE: 8/16/20
JOB#: 11011900

SHEET 4 OF 7

DRAWING
4

ED_005624_00000045-00235

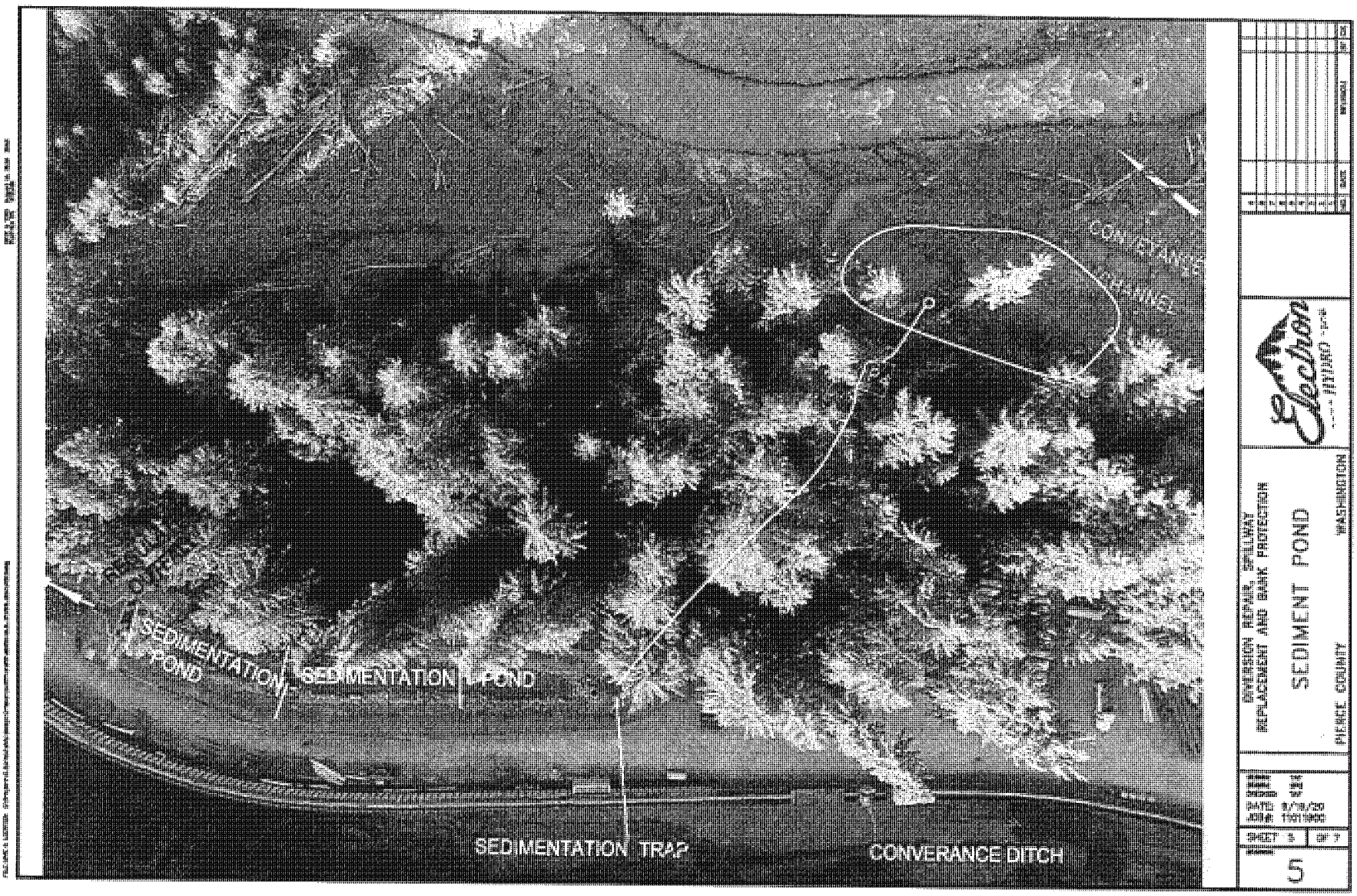
EH-USA000569

DIVERSION REPAIR, SPILLWAY REPLACEMENT AND BANK PROTECTION

POND OUTLET

PIERCE COUNTY WASHINGTON

Electron HYDRO



EH-USA000571
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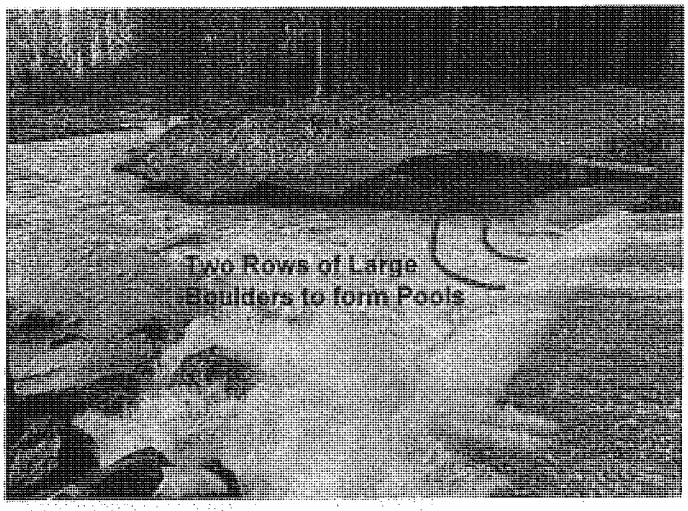
Fish Ladder Operation and Maintenance Plan

The Electron fish ladder, located on the right bank of the Puyallup River at the Electron Diversion, provides fish passage around the Diversion. The ladder is approximately 200 ft in length and 12 ft wide. The V-shaped weir ladder cells provide pools for fish to rest in, and the incline "step" between each pool is approximately 8". The ladder functions as designed with a 10-55 cfs flow running through the ladder. If the cells fill with gravel, then the ladder functions as a roughened channel. It works well either way.

Presently the first step from the river to the first pool cell is too high for juvenile and sub-adult salmon to leap into the ladder, given current water discharge. This condition restricts passage and will be remedied. Electron Hydro will reduce the water velocity and adjust the height of the exit pool below the fish ladder to enable all life stages of fish to utilize the ladder.

Electron propose to use river rock carefully placed below the fish ladder in semi-circular 'steps' to temporarily create additional pools to lower the transition height between the river level and the entrance to the lowest ladder cell. This will require utilizing heavy equipment that can reach up and over the stabilized bank downstream of the ladder, and placement of substrate within the river itself. No material will be excavated from the river immediately surrounding the fish ladder. The stabilization materials and liner of the diversion will not be disrupted or moved during this process. Multiple step pools may be created as necessary in this manner to achieve the design step height.

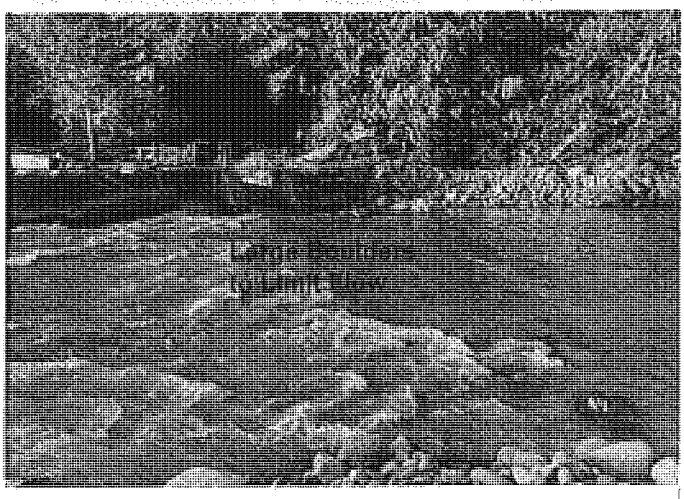


Downstream Fish Ladder Exit

The upstream ladder entrance may be periodically manipulated with river rock placed slightly upstream of the entrance as necessary to help manage flow volume and velocity.

Ladder access and functionality will be monitored and maintained as necessary to ensure functionality.

Change in channel capacity is what.


Upstream Fish Ladder Entrance

Turbidity and pH Monitoring Plan

Detailed in this document is the schedule and protocol Electron Hydro LLC will adhere to during in-water construction work during the diversion repair, spillway replacement, and bank protection project for 2020. Fisheries monitoring, water quality, stormwater monitoring, and erosion control measures will be fully compliant with all applicable permits.

Work below the ordinary high-water mark will only occur between July 15th and end of work, scheduled for September 15th of 2020. Turbidity will be monitored daily until the removal of the cofferdam, river re-diversion, and all in-water work, including groundwater removal from de-watered site, is complete. During this time, turbidity will be monitored in accordance with the Terms and Conditions set in the USFWS ("BO"), submitted July 2018. In addition to compliance with USFWS Biological Opinion Terms and Conditions, Electron Hydro will also fully comply with implementing all reasonable and prudent measures outlined in the NMFS Biological Opinion BO, submitted July 2018. These criteria set in the BOs also satisfy the criteria set by the Construction Stormwater General Permit, submitted by the WA Dept. of Ecology (Ecology) in July 2018. The results of monitoring efforts will be sent weekly as requested to the US Army Corps of Engineers.

GS Permit Doc 5

Turbidity Monitoring

To Control Turbidity, Electron Hydro will:

1. Monitor turbidity daily, via EPA-approved turbidimeter and on-site transparency analysis with a 1 ¾" diameter, 60-centimeter (cm)-long transparency tube.
2. Monitor to establish background turbidity levels upstream of construction, and away from the influence of sediment-generating activities. Background turbidity will be monitored at least twice daily during sediment-generating activities. In the event of a visually appreciable change in background turbidity, an additional sample will be taken.
3. To monitor for construction-influenced changes in turbidity, turbidity monitoring will be conducted 1,500 feet downstream of in-water construction activities.
4. For the first 3 hours from the start of sediment-generating activities, monitoring will be conducted at 30-minute intervals.
5. If turbidity does not exceed the below-listed levels during the first hour of work, then monitoring will be reduced to once per hour.
6. Work will cease and sediment control procedures will be re-evaluated if:
    - background turbidity is exceeded by 56 NTU at any time,
    - background turbidity is exceeded by 37 NTU for more than a cumulative hour during a 10-hour workday,
    - background turbidity is exceeded by 13 NTU for more than a cumulative 3 hours in a 10-hour workday,
    - background NTU levels are exceeded by 8 NTU for more than 7 hours over a 10-hour workday.

7. Will also monitor two additional locations within the construction site that have been identified as possible point discharge locations into the Puyallup River. These additional sites will be monitored at least twice daily during sediment-generating activities. In the event of a visually appreciable change in background turbidity, an additional sample will be taken. These discharge locations will not exceed 10% above background NTU levels, in accordance with Ecology requirements. If turbidity levels approach 10% above background, discharge from this location will cease and sediment control will be re-evaluated.

In addition to BO - compliant turbidity monitoring, Electron Hydro will prepare weekly reports, describing construction activities and duration, results of project site isolation and dewatering, turbidity monitoring efforts and findings, any artificial turf containment and disposal, any conservation measures implemented, and any incidental takes associated with project activities. This is in accordance with implementing Reasonable and Prudent Measure 2 in the USFWS BO, and weekly reports will be submitted to the US Army Corps of Engineers.

The turbidity assessment protocol is as follows:

1. Sample 4 locations (as designated on Attachment 1, "Site Sample Locations") daily, at the intervals specified by USFWS Biological Opinion.
2. Collect a water sample from our control site 1,000 feet upstream of sediment-generating activity, and a sample from our test site 1,500 feet downstream of sediment-generating activity. Both samples will be tested with a transparency tube and an EPA-approved NTU meter to compare our construction activity's effect on background turbidity levels.
3. Collect samples at two additional sites (as designated on Attachment 1, "Site Sample Locations") in between our upstream and downstream-compliant locations for internal verification that we are meeting requirements to reduce turbidity to appropriate levels. These samples will be collected at the same frequency as the upstream control sample but will be assessed via transparency tube only.
4. An appropriately trained and knowledgeable Electron Hydro staff member will be available during every day of in-water construction activity to take and report turbidity measurements.

It is desirable to remove river water from the worksite prior to the work area. The existing cofferdam with a lined bypass is performing well in this regard. There is some seepage from the upper gravel cofferdam which allows water to flow in the existing otherwise dry right river channel. This water could be pumped back into the river, requiring less pumping in the work area. It is being filtered through porous sediment of the riverbed and is less turbid than adjacent river water. Electron Hydro will remove river water upstream of the work area and pump it back into the river. As the water quality is significantly less turbid than adjacent river water, this pumped river seepage will not negatively affect the river water to which it is returning. If this water is pumped back into the river, the discharge will be monitored as well per the above protocol.

pH Monitoring

During this phase of the project, concrete pouring will tentatively commence one week after project approval to continue has been received. During all concrete pouring events, any water that may penetrate into the pouring area and thus come into contact with concrete will be tested for pH. Should the water be outside the approved limits of 6.5 and 8.5 pH, then subsequently pumped from the area below the ordinary high-water mark and will be retained until its pH can be normalized via CO_2 sparging or dry ice. Monitoring for pH and pH adjustments will occur daily, in accordance with the CSWGP, to comply with 40 CFR § 450.21, "Prohibited discharges". Monitoring will be conducted with a digital pH meter and will be recorded with daily temperature readings. The normalized water will be released into the riverbed gravel bar for infiltration when pH is within approved pH limits.

Construction Sequencing

The following is a brief construction sequencing plan for the Electron intake and spillway:

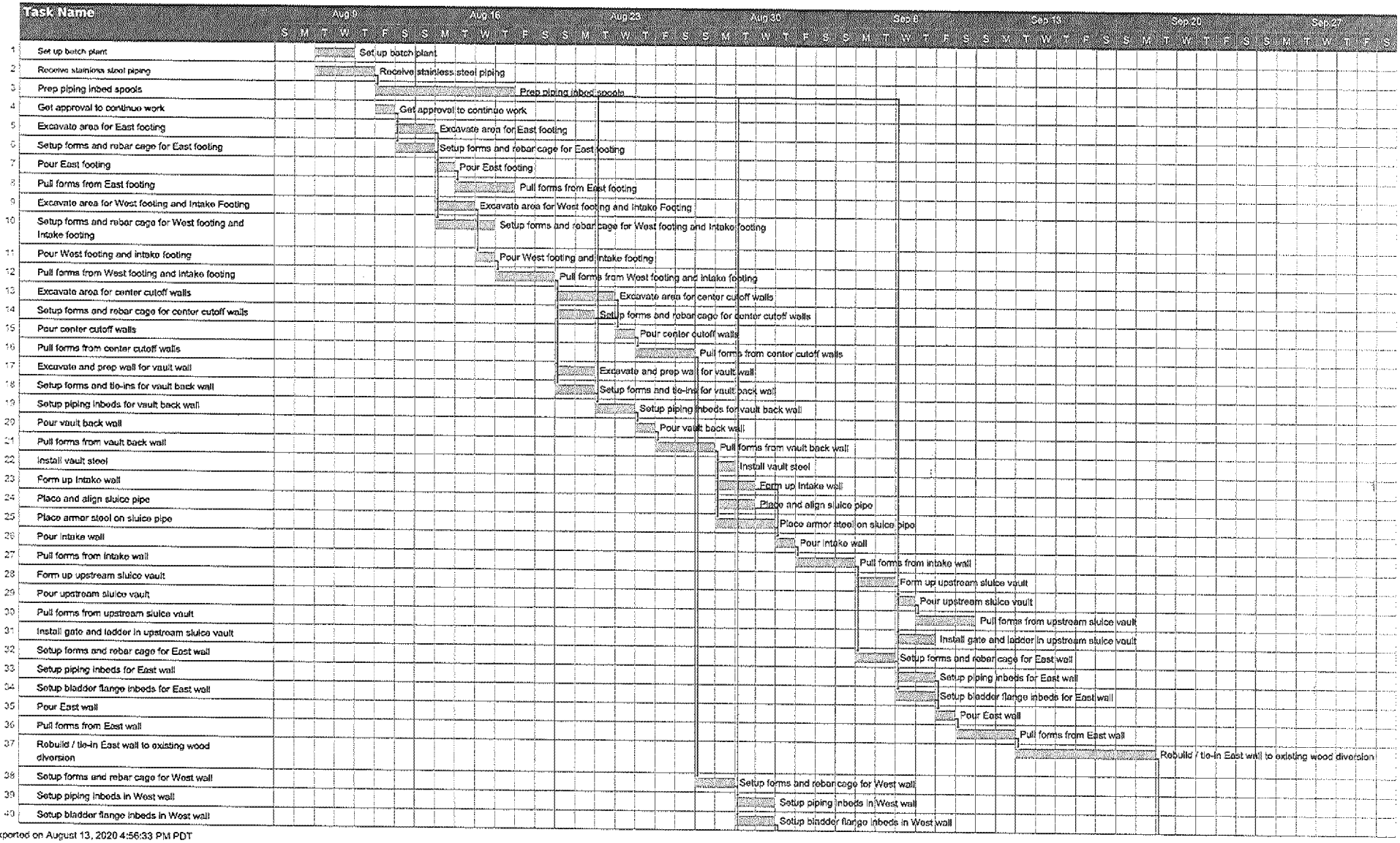
1. Stop Work order is lifted
2. Locate and remove Field Turf from the Puyallup River
3. Improving the fish ladder per the Fish Ladder Operation and Maintenance Plan
4. Complete excavation and dewatering efforts per the Modified Water Diversion/Relocation Plan
5. Form and pour foundations for the east abutment wall then west abutment wall
6. Form and pour the two center cutoff walls
7. Form intake wall, place and align the sluice pipe
8. Set the embed pipes for the bladder
9. Form up, place embeds, and pour the East wall
10. Form up, place embeds, and pour the West wall
11. Form and pour the two sluice pipe vaults, and the mechanical drain equipment vault
12. Once the East abutment wall is poured, connect the remaining existing wood diversion to the East abutment wall.
13. Concurrent to this, form, place embeds, and poured between the two abutment walls
14. Form and pour downstream abutment foundation
15. Form and pour downstream abutment wall section
16. Form and pour upstream and downstream cutoff walls
17. Pour and place boulder armoring between these two cutoff walls and the center slab
18. Place large rip rap downstream of the downstream of lower cutoff wall, and upstream of the upstream cutoff wall
19. Concurrent to building cutoff walls and boulder armoring, position and bolt down the bladder on the center slab
20. Once the bladder is in place, connect the air piping, drain piping, and blowers before testing the bladder operations
21. Once the bladder is in place and tested, redivert the river away from the temporary spillway on the right bank
22. Once the temporary spillway area is dry, remove all turf, liner, and other materials per the Cofferdam and Temporary Bypass Channel Removal Plan.

Retaining wall

See Attached Gant Chart.

Electron Intake Project

August 16, 2020



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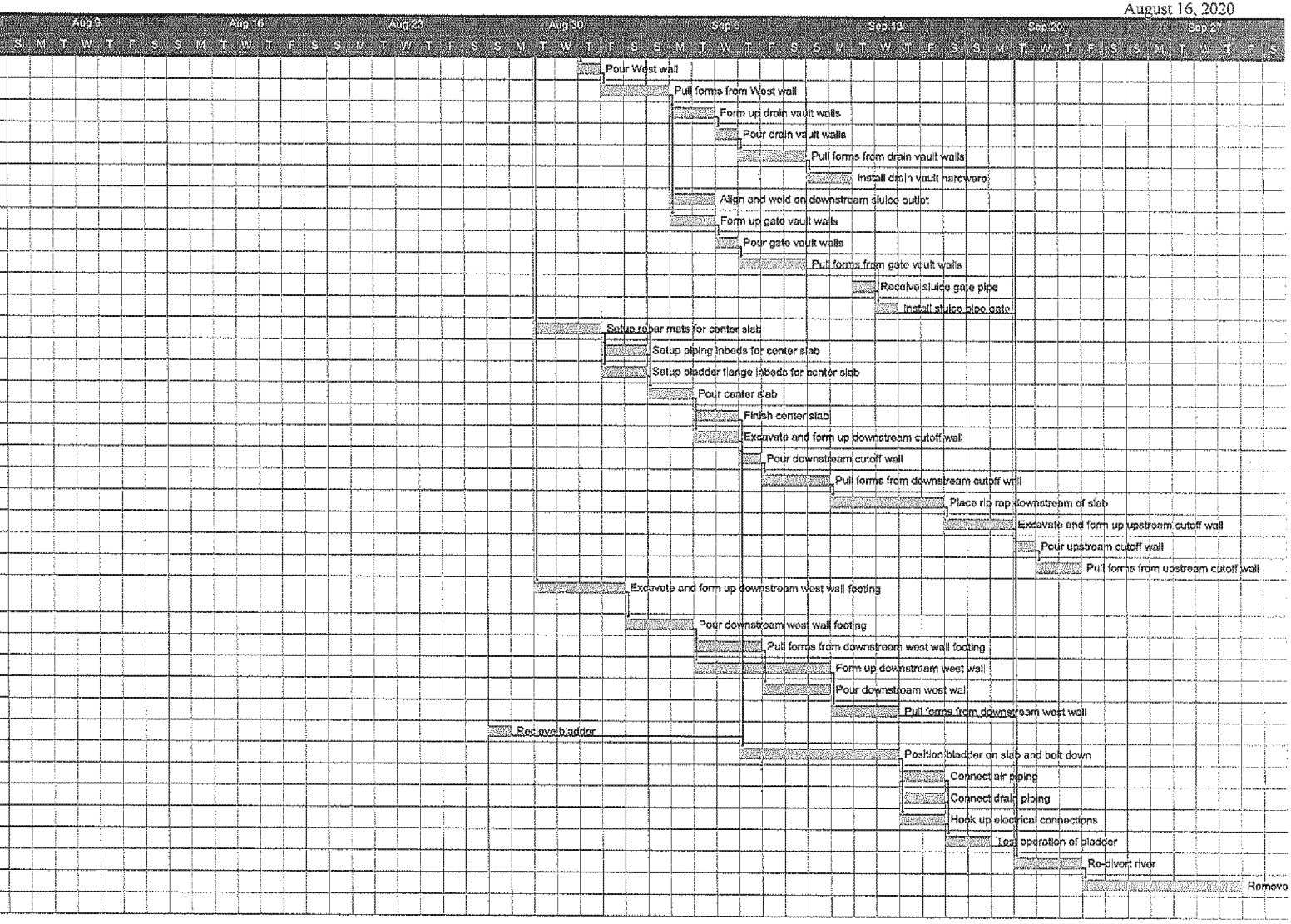
August 16, 2020

	Task Name
41	Pour West wall
42	Pull forms from West wall
43	Form up drain vault walls
44	Pour drain vault walls
45	Pull forms from drain vault walls
46	Install drain vault hardware
47	Align and weld on downstream sluice outlet
48	Form up gate vault walls
49	Pour gate vault walls
50	Pull forms from gate vault walls
51	Receive sluice gate pipe
52	Install sluice pipe gate
53	Setup rebar mats for center slab
54	Setup piping inbeds for center slab
55	Setup bladder flange inbeds for center slab
56	Pour center slab
57	Finish center slab
58	Excavate and form up downstream cutoff wall
59	Pour downstream cutoff wall
60	Pull forms from downstream cutoff wall
61	Place rip rap downstream of slab
62	Excavate and form up upstream cutoff wall
63	Pour upstream cutoff wall
64	Pull forms from upstream cutoff wall
65	Excavate and form up downstream west wall footing
66	Pour downstream west wall footing
67	Pull forms from downstream west wall footing
68	Form up downstream west wall
69	Pour downstream west wall
70	Pull forms from downstream west wall
71	Recieve bladder
72	Position bladder on slab and bolt down
73	Connect air piping
74	Connect drain piping
75	Hook up electrical connections
76	Test operation of bladder
77	Re-divert river
78	Remove temporary spillwal
79	



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Construction Notification Plan

Electron Hydro will prepare and transmit a weekly report to the Corps that provides a status update on weekly construction activities. The report will include five primary components:

- Summary of construction activities completed
- Fish passage status
- Dewatering/diversion status
- Water quality monitoring data
- Field Turf containment and disposal activities

Verify elev. locations

Each of the five components of the report is described below with an explanation and rationale for the information and level of detail that would be included.

Summary of Construction Activities Completed

Weekly reports will include a summary of construction activities completed during the preceding week along with a list of construction activities and any construction milestone planned for the upcoming week. The weekly summary will list construction activities and provide a brief (1 – 2 sentence) description of each. The typical summary will follow this outline:

- List of construction activities performed, and milestones completed for the previous week
- Problems encountered and solutions applied
- Description of any changed conditions and their effects on the construction work plan
- Request for agency concurrence on changes requiring deviation from permitted actions
- Look ahead identifying construction activities planned for the upcoming week

Fish Passage Status

Fish passage around the in-water work area is provided by the permanent fish ladder on the right bank. The weekly report will document the weekly observations and any actions taken to maintain the fish ladder in a condition that is passable by adult and juvenile fish. The typical summary will follow this outline:

- Record of weekly observations documenting fish ladder compliance
- Problems encountered and solutions applied
- Request for agency concurrence on changes requiring deviations from permitted actions
- Description of any required notifications related to fish passage

Dewatering/Diversion Status

The temporary bypass channel (flow diversion) maintains river flow around the in-water work area. A segment of the bypass channel approximately 500 ft in length adjacent to the in-water excavation is lined with HDPE thermo-weld plastic to limit the flow of river water into the excavation. The bypass is an essential component of the dewatering plan for the in-water excavation. Other components include measures to intercept and remove water from the

excavation by pumping into an on-site treatment system. The typical weekly summary documenting the status of the dewatering/diversion system will following this outline:

- Confirmation that the bypass channel is intact and functioning properly
- Description of any damage, repair, and maintenance activities for the bypass channel
- Confirmation that components of the dewatering plan are functioning properly (e.g. sumps, pumps, treatment system(s), points of discharge). Hours Pump estimate
- Problems encountered and solutions applied
- Request for agency concurrence on changes requiring deviations from permitted actions

Water Quality Monitoring Data

Electron Hydro conducts ongoing water quality monitoring in accordance with regulatory requirements of the permits issued by the Corps, Ecology, and Pierce County. The weekly construction notification will include a table reporting the water quality monitoring data collected during the previous week. In addition to the table, the weekly summary will include the following:

- Identification of any water quality exceedances and a description of corrective measures taken (per the SWPPP) to restore compliance
- Description of any required notifications related to water quality monitoring

Field Turf Containment and Disposal Activities DRAFT

Recover on land

Electron Hydro prepared a Material Removal Plan to guide the recovery of Field Turf material placed in the river under the HDPE liner within the temporary bypass channel. Under that plan, Electron Hydro would begin a visual survey and removal effort to collect, quantify, and dispose of Field Turf material released to the river as soon as the stop work order for in-water work is lifted. The initial survey and removal effort are expected to be completed within a week. Follow up surveys will be conducted over subsequent weeks, and any Field Turf material located will be removed from the river. The Material Removal Plan proposed to retain the temporary bypass channel in its current location until river flows can be diverted back to the left bank once in-water construction elements are completed. After that, the Field Turf that remains in place under the HDPE liner in the temporary bypass channel would be removed from the channel in dry conditions.

The weekly summary will include the following:

- Summary of the areas of the river surveyed that week
- Estimated quantity of Field Turf removed from the river
- Description of removal methods and approximately locations
- Inspection results documenting the condition of the temporary bypass channel and whether any Field Turf was released
- Description of Field Turf removal, handling, and disposal activities (after flow is removed from the temporary bypass channel) including estimated quantity removed

Points of Contact

The Electron Hydro point of contact for this weekly report will be Thom A. Fischer, P.E. Reports will be transmitted by email to the Corps addressed to Jenae Churchill.

Steve P Goodwin

Thom A. Fischer
Electron Hydro, LLC
1800 James Street, Ste 201
Bellingham, WA 98225
thom@tollhouseenergy.com
W 360-738-9999 ext 1
C 360-739-9999

Jenae Churchill
USACE Seattle District
P.O. Box 3755
Seattle WA 98124
Jenae.N.Churchill@usace.army.mil
W 206 764-5527

Water Diversion/Relocation Plan

Construction of the spillway repair relies on effective dewatering of the excavation to establish a sound footing and foundation for the concrete infrastructure components of the spillway. The excavation is located within the Puyallup River channel, and the porous riverbed material composed of boulders, cobbles, and sand readily convey water from the river into the excavation unless intercepted, redirected, or removed. The temporary bypass channel along the right bank conveys surface water flow around the work area. The bypass channel is lined with HDPE plastic to limit the amount of water that flows into the excavation, and that element of the dewatering plan is serving its intended function and has the greatest single effect on drying the excavation compared to the effects of passive drainage downstream and pumping water out of the excavation. Electron Hydro proposes to maintain the lined temporary bypass channel in its current condition until after in-water construction is complete and river flows can be safely routed to the left bank of the river channel.

The ends of the HDPE liner within the bypass channel approximately correspond with the entrance and exit of the fish ladder along the right bank. The total length of the HDPE lined segment of the bypass channel is approximately 500 ft, and the upstream end of the liner is approximately 200 ft upstream of the edge of the excavation. On August 9, Electron Hydro observed relatively clean water flowing out of the upstream wall of the excavation at two locations. That water originates upstream of the liner and flows through the coarse riverbed material. No water was observed flowing into the excavation from the left bank or from the right bank along the lined segment of the bypass channel. Water passively drains from the excavation in the downstream direction and infiltrates into a dry gravel bar. Prior to the Stop Work orders from Pierce County and the Corps, the pump system used to dewater the excavation had sufficient capacity to keep pace with the water flowing into the excavation.

Several dewatering techniques may be used to accomplish the necessary dewatering of the excavation to support installation of the foundation of the spillway repair. The proposed techniques focus on two primary strategies: (1) prevent water from flowing into the excavation along the upstream wall, and (2) pump water out of the excavation from a sump situated at the lowest point in the excavation where water collects. The proposed elements added to the existing dewatering plan are summarized below:

[Thom is working on the rest of this section below. Here is some text I previously prepared that he could revise or use if appropriate.]

1. Install a shallow trench along the toe of the upstream wall of the excavation to intercept and collect the relatively clear water flowing into the excavation. Install a pump to remove this water and discharge it back to the river provided the water meets applicable water quality standards and thresholds for turbidity and pH specified in permit documents. Water collected this way would be managed separately from the turbid water pumped out of the bottom of the excavation and routed through the on-site treatment

system. Doing this will reduce the amount of water in the excavation and it will reduce the pressure on the treatment system in place to handle dewatering water.

2. Over-excavate and backfill with suitable material

3. Install a sump pit or trench deeper than the overall excavation to collect water that seeps into the excavation. Pump water out of the sump to continue drawing down and draining the adjacent soils in the bottom of the excavation.

CONSTRUCTION STORMWATER GENERAL PERMIT INSPECTION REPORT

State of Washington Department of Ecology

DEPARTMENT OF ECOLOGY State of Washington

Section A: General Data

Ecology Inspector(s): Carol Serdar Contaminated CSWGP Inspector Phone: 360.742.9751 Email: carolserdar@ecy.wa.gov	On-Site Representative Name: Thom Fischer Title:	Inspection Date and Entry/Exit Time: 11 Aug 2020, 14:45/18:44	Inspection Type: ERTS Response (#699710)
		Receiving waters: Puyallup River	Permit webpage: https://fortress.wa.gov/ecy/paris/FacilitySummary.aspx?FacilityId=70091

Section B: Background

Note: See Corrections Required Form

The Electron Hydro LLC Intake project is covered under the State of Washington's Construction Stormwater General Permit (CSWGP). The CSWGP is a National Pollutant Discharge Elimination System (NPDES) and a State Waste Discharge permit for discharge of construction-related stormwater. Carol Serdar had previously been to the site a few years' prior, during the JARPA review for the then proposed construction of the barrier dam and intake structure.

The purpose of this inspection is to follow up with a site visit/inspection based on an Environmental Report Tracking System (ERTS) complaint (ERTS #699710) and to provide technical assistance as appropriate. On 3 August 2020, Ecology learned of the ERTS for the use of the sports turf (and small rubber bits that have degraded off the turf) in the river. Carol called the permittee, Thom Fischer to discuss the ERTS reported by a member of the public and the violation of CSWGP condition S5.F. Noncompliance Notification (permittee is obligated to self report) . Thom explained he had used geotextile fabric below the 80 ml liner but was unable to prevent ripping of the liner, so he used the sports turf below the liner. Rolls of sports turf were delivered from a nearby rock quarry. The rolls were delivered to the site (at the staging area along the bend in the haul road to the in-water construction zone area), then a crane was used to place the rolls of sports turf in the riverbed. The crane is on the left bank of the Puyallup River. The river is now flowing in the lined portion of the channel (right bank). The river removed a portion of the sports turf (originally placed below the liner), and is currently in the river substrate several thousand feet downstream from the construction zone. Thom explained that Shane Cherry, consultant, is developing a removal plan for the sports turf. Carol and Thom set up time to meet the afternoon of 17 August 2020 for a CSWGP compliance inspection. Carol made the initial inspection on 11 August 2020 to ensure the site was in compliance with the ERTS issues.

Carol and Thom met at the dam office and drove out to the site along the forest road. Thom was present during inspection and all listed observations and recommendations were discussed. Steve Goodrich, CESCL was present for most of this site visit. Carol explained the main reason for site visit was for ERTS #699710 and the use of sports turf in the riverbed. Carol requested to go to the location in which the rolls of sports turf were delivered to the site.

Thom, Steve, and Carol discussed discharge monitoring reports (DMRs) that have been reported for the site since it was permitted. Each monthly report states "No Discharge" which would not be possible based on the storm events that occurred during winter 2019-20 and the amount of ground disturbance that was present during the last winter. It was explained that the water quality sampling done in the river was to suffice CSWGP sampling requirements. The permittee incorrectly assumed that sampling background (above all ground disturbing activities within the ordinary high water) and downstream of the activities would be inclusive of CSWGP requirements. Monthly filing of the DMRs is up-to-date, and it was explained that no data associated with the upland work is available to fix previous DMR filings. The permittee now understands that they are expected to sample for turbidity and pH if discharges occur from the upland, and they will continue to file the monthly DMRs (CSWGP condition S5.B.) during the next storm event, and weekly until the CSWGP permit is terminated.

The CSWGP weekly Site Inspection Report, currently utilized, is an old form; Carol recommended they immediately begin using the updated form that specifies the 13 Elements.

No additional CSWGP paperwork was reviewed during this inspection.

Weather at time of inspection: Sunny and 60s
Precipitation in the past 24 hours?
☐ Yes
☑ No

On site observations:

Drove out a Hancock forestland road to the site of the barrier dam and intake structure construction, and parked along the road parallel to the Puyallup River at the barrier dam. The area where the sports turf was delivered was pointed out to be back up the road, and Carol decided to look when driving out of the site.

Currently, the site is permitted under the CSWGP, for 4.5 acres of disturbance. Carol noted the upland area of disturbance appears to be greater than 4.5 acres. Discussed there may be a need for the disturbed area to be expanded for compliance with the CSWGP, which may require additional public notification (CSWGP condition G.20). *(post script: The disturbed area was roughly digitized on Google Earth after this inspection, using observations from this inspection, appears to be over 9 acres in total)*

The long, bare/exposed and unworked soil slopes from the road down toward the Ordinary High Water (OHW) of the Puyallup River was discussed and based on the CSWGP must be stabilized within seven days (CSWGP condition S9.D.9.d.); the driving surface of the road consists of fine silt/dirt which likely will cause a significant discharge into waters of the state at the first storm event. Thom agreed the road surface needed to be modified and we discussed BMP options.

Light pole with generators appeared to not have secondary containment, on closer inspection, the light poles have built in secondary containment. Other generators, including a large one for the pumping of dewatering water in construction zone, do not have secondary containment. Secondary containment is a requirement of CSWGP condition S9.D.9.b. (secondary containment means placing tanks or containers within an impervious structure capable of containing 110% of the volume contained in the largest tank within the containment structure).

Construction stormwater management was explained: water from upland staging and dewatering water from the construction zone in the riverbed are comingled in the CSWGP stormwater system. This system includes a conveyance ditch near the base of the hillslope, sediment pond containing an outlet structure, which when overflows, drains to the stormwater pond. Water from the stormwater pond is settled out through a series of weirs constructed of straw bales. Discussed that although many sites use straw bales, the usage of straw bales as a BMP were removed from the Stormwater Management Manual of Western Washington (SWMMWW) in 2014. Use of the 2019 SWMMWW is now the requirement of the CSWGP (as of 31 December 2020 – CSWGP revision in process now).

No rubber bits from the sports turf were observed in the area along the big bend in the access/haul road. Thom stated he would have his employees look for and remove any additional black rubber bits from the sports turf and dispose of them properly (garbage bags and brought to an appropriate landfill).

Drove out of construction area at 6:00PM

Section C: Compliance
Note: See Corrections Required Form

A complete compliance inspection was not conducted at this inspection (see Violations Section for Compliance issues) ~~Inspection Checklist~~

~~Is the Permit Coverage Letter on-site?~~	~~Is a copy of the CSWGP on-site?~~	~~Is the Site Log Book Current?~~	~~Is the Site Log Book Adequate?~~
~~☐ Yes~~	~~☐ Yes~~	~~☐ Yes~~	~~☐ Yes~~
~~☐ No~~	~~☐ No~~	~~☐ No~~	~~☐ No~~

~~Are Site Inspections Recorded?~~	~~Are Site Inspections Adequate?~~	~~Permittee has Prepared and Implemented a SWPPP?~~	~~Is the SWPPP Adequate?~~
~~☐ Yes~~ ~~☐ No~~	~~☐ Yes~~ ~~☐ No~~	~~☐ Yes~~ ~~☐ No~~	~~☐ Yes~~ ~~☐ No~~

Violations and action required to achieve compliance	**Complete or submit date**	**Guidance**
S5.F Noncompliance Notification **Failure to report high sediment discharge.** **Failure to meet S5.F:** In the event the Permittee is unable to comply with any part of the terms and conditions of this permit, and the resulting noncompliance may cause a threat to human health or the environment (such as but not limited to spills of fuels or other materials, catastrophic pond or slope failure, and discharges that violate water quality standards), or exceed numeric effluent limitations, the Permittee must, upon becoming aware of the circumstance: either call the applicable Ecology Region's Environmental Report Tracking System (ERTS) number by phone within 24 hours of analysis or submit an electronic ERTS report (or submit an electronic report through Ecology's Water Quality Permitting Portal (WQWebPortal) – Permit Submittals when the form is available). A follow up report is to be submitted to Ecology within five days, explaining the manner in which the violation occurred and steps taken to remedy the violation.	Within **24 hours** of analysis.	Call the Southwest Region ERTS number: (360) 407-6300.
S5.B. Discharge Monitoring Reports (DMRs) **Failure to file monthly DMRs.** **Failure to meet S5.B.:** Permittees are required to conduct water quality sampling in accordance with Special Considitons S4.C (Turbidity/Transparency), S8. (303[d]/TMDL Sampling), and/or G13 (Additional Sampling) and submit the results to Ecology within 15 days following the end of each month.	As soon as possible (**ASAP**)	WQWebDMR web application: http://www.ecy.wa.gov/programs/wq/permits/paris/portal.html

For assistance with any of these compliance issues or recommendations regarding BMPs, please see the 2014 Stormwater Management Manual for Western Washington (SWMMWW), Volume II, Construction Stormwater Pollution Prevention which includes BMPs for Source Control and Runoff Conveyance and Treatment BMPs. The full SWMMWW is available at: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

The Department of Ecology has the authority to issue formal enforcement actions including issuance of orders and civil penalties of up to $10,000 per day per violation for violations of your NPDES permit and/or state laws and regulations.

Noncompliance with the limits, monitoring requirements, terms and/or conditions established in your permit may result in formal enforcement action by the Department of Ecology.

Ecology Inspector (signature): Carol Serdar Date: Aug 11, 2020
Ecology Inspector (print name): Carol Serdar

Water Quality Program
Southwest Regional Office
PO Box 47775 Olympia, WA 98504-7775
SWRO Tel: 360-407-6300

All photos taken . Carol Serdar

Photo 1

Photo Description: Light pole with generator has built in secondary containment.

Date:2020/08/11 Time:15:52:00 Lat:46.90587 Long:-122.03973 Direction degrees:197.46

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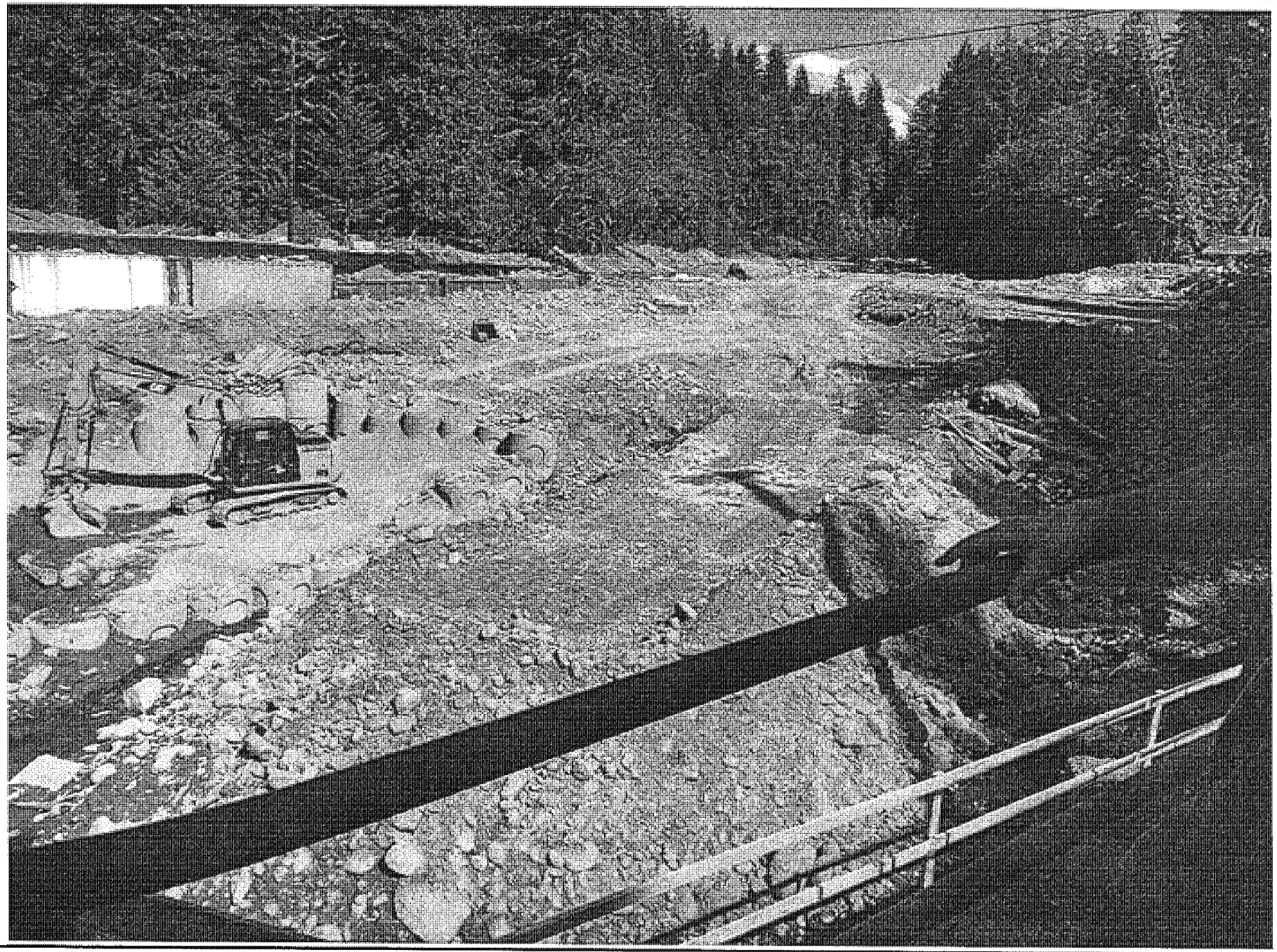
Photo 2

Photo Description: Looking up river from the haul road above the intake structure.

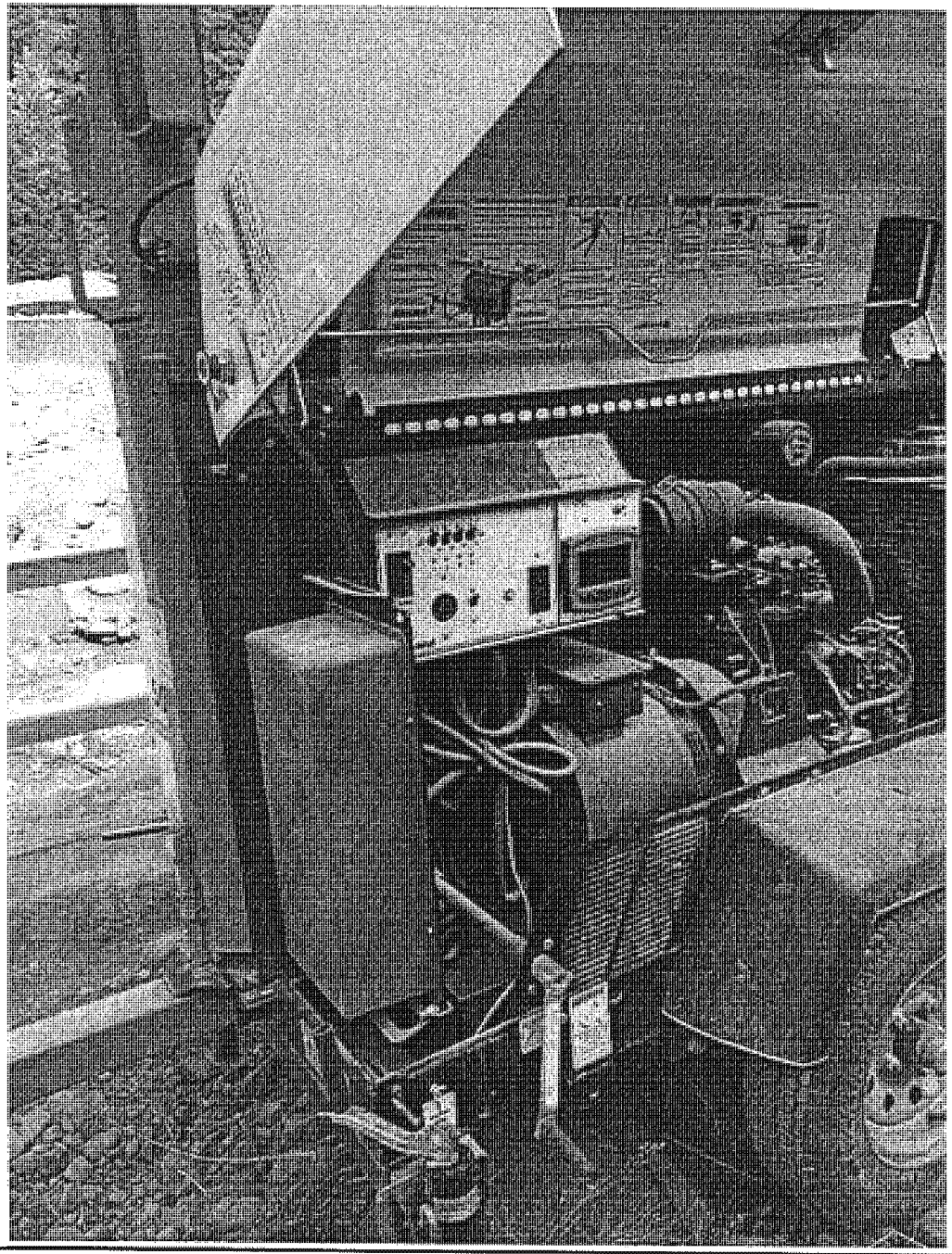


Date:2020/08/11 Time:15:52:37 Lat:46.90584 Long:-122.03972 Direction degrees:268.4

EH-USA000589

Photo 3

Photo Description: Light pole generator with secondary containment.

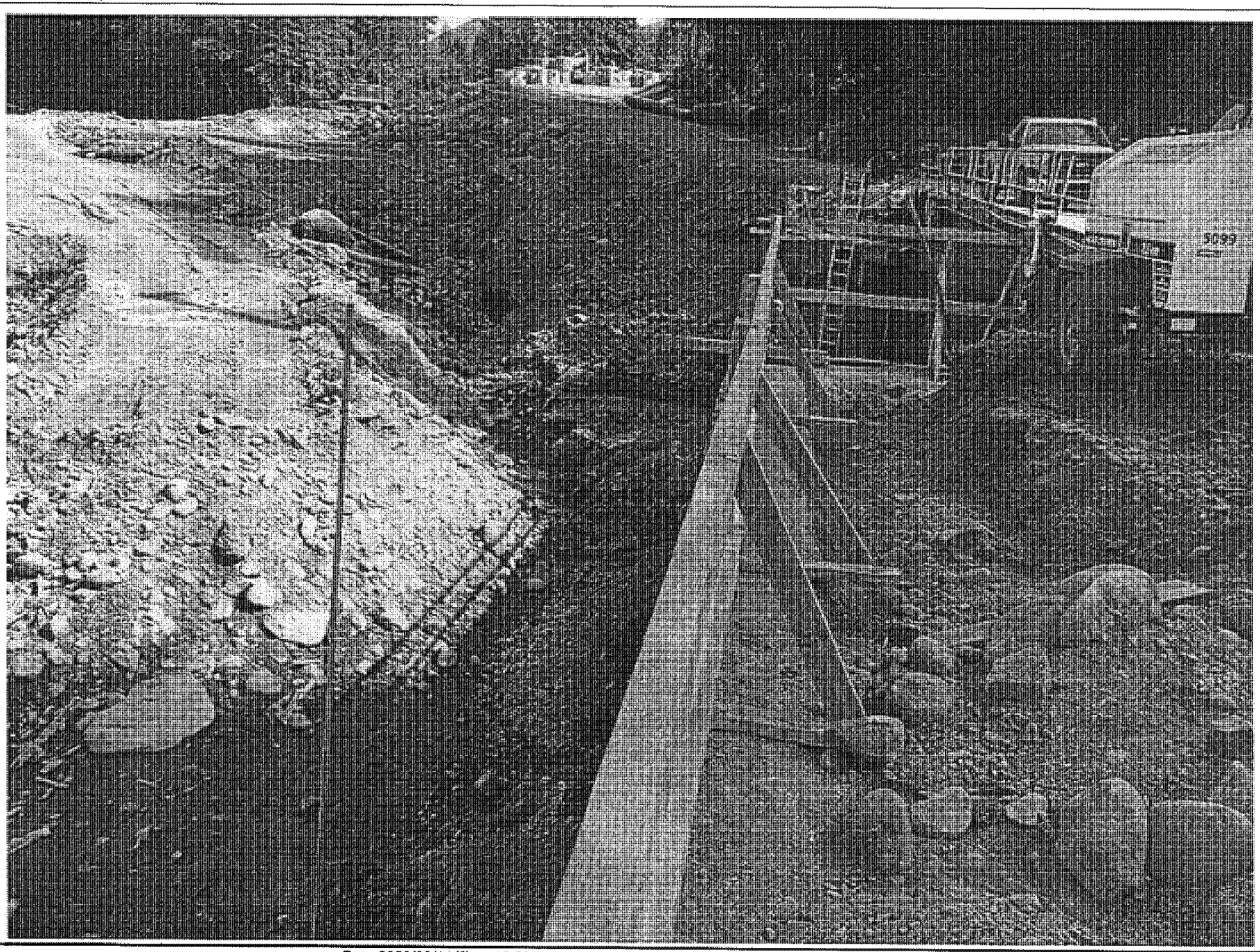


Date:2020/08/11 Time:15:57:17 Lat:46.90586 Long:-122.03975 Direction degrees:268.4

ED_005624_00000045-00257

Photo 4

Photo Description: Intake structure along the left bank of the Puyallup River, note water seeps along base of slope. The concrete vaults at the bend in the road (upper center of photo) is the location of where the sports turf was delivered.

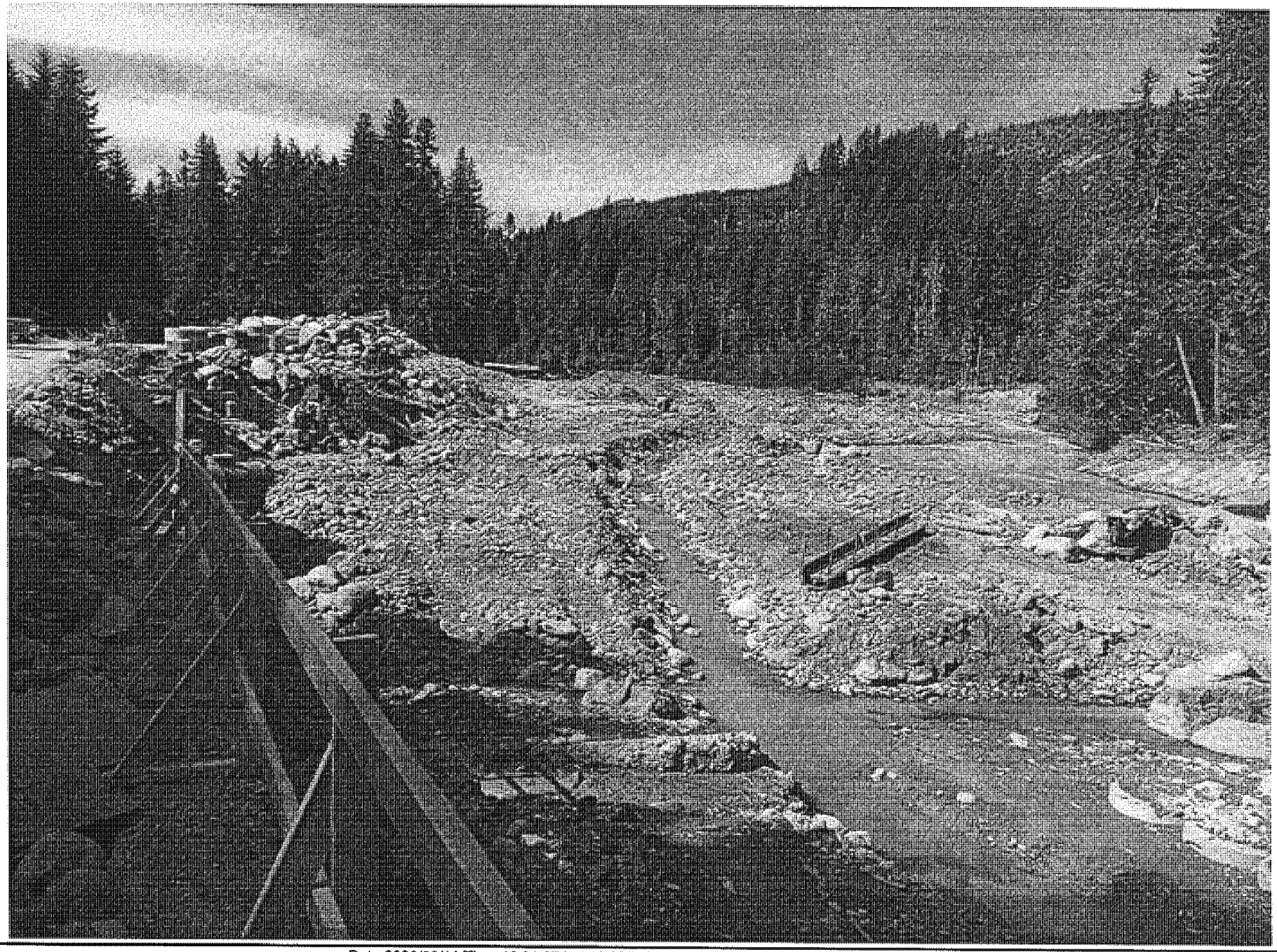


Date:2020/08/11 Time:15:58:08 Lat:46.90589 Long:-122.03975 Direction degrees:36.52

EH-USA000591

Photo 5

Photo Description: No secondary containment for green pump for dewatering the construction zone.



Date:2020/08/11 Time:16:01:07 Lat:46.9059 Long:-122.03977 Direction degrees:247.86

ED_005624_00000045-00259

Photo 6

Photo Description: Fine silt/dirt and rounded river rock is the haul route surface.

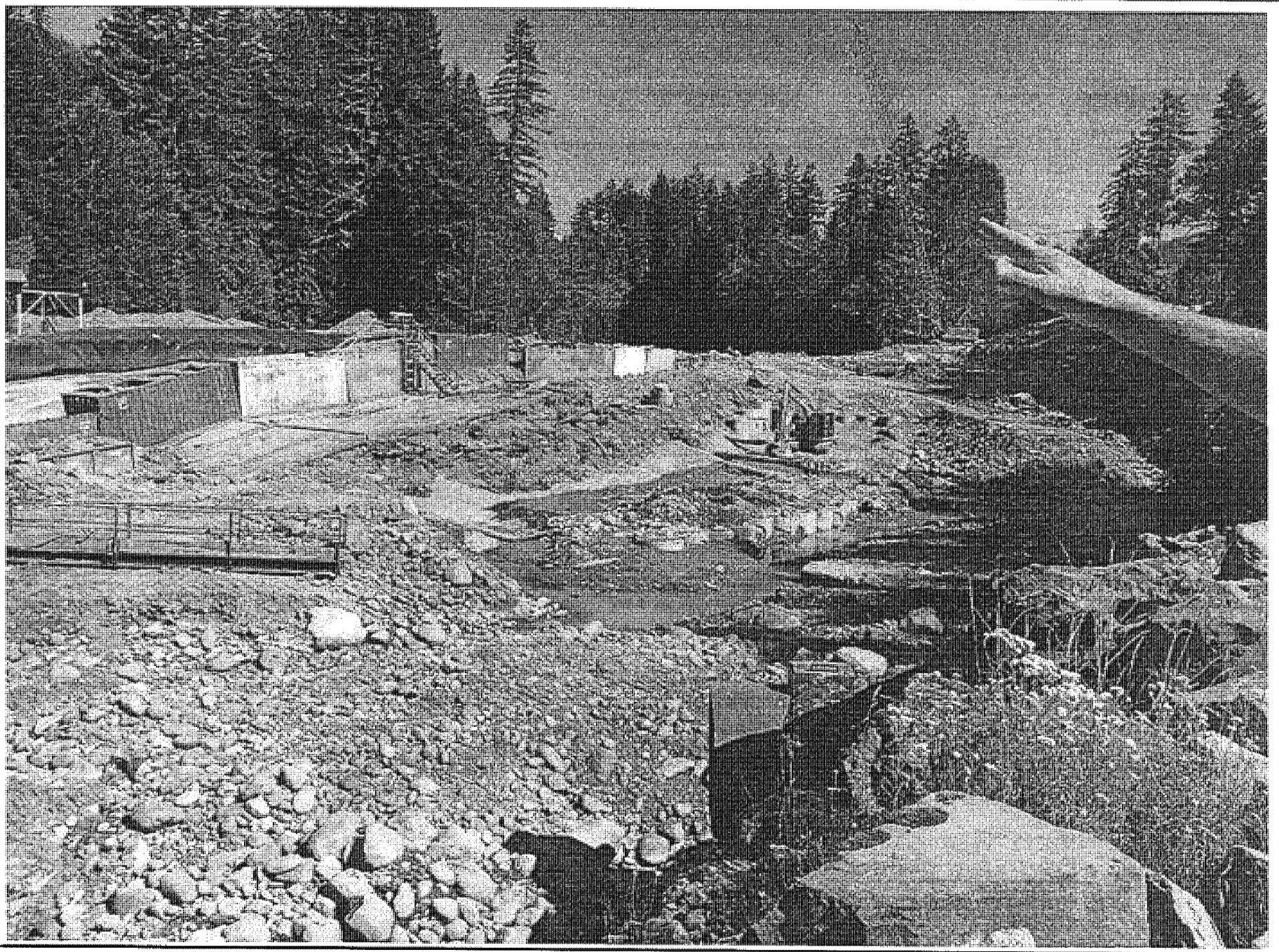
Date:2020/08/11 Time:16:03:08 Lat:46.90613 Long:-122.04009 Direction degrees:84.18

EH-USA000593

ED_005624_00000045-00260

Photo 7

Photo Description: The Puyallup River is located flowing toward the left behind the old wood dam with truck containers. Note the construction zone depth below the channelized river.



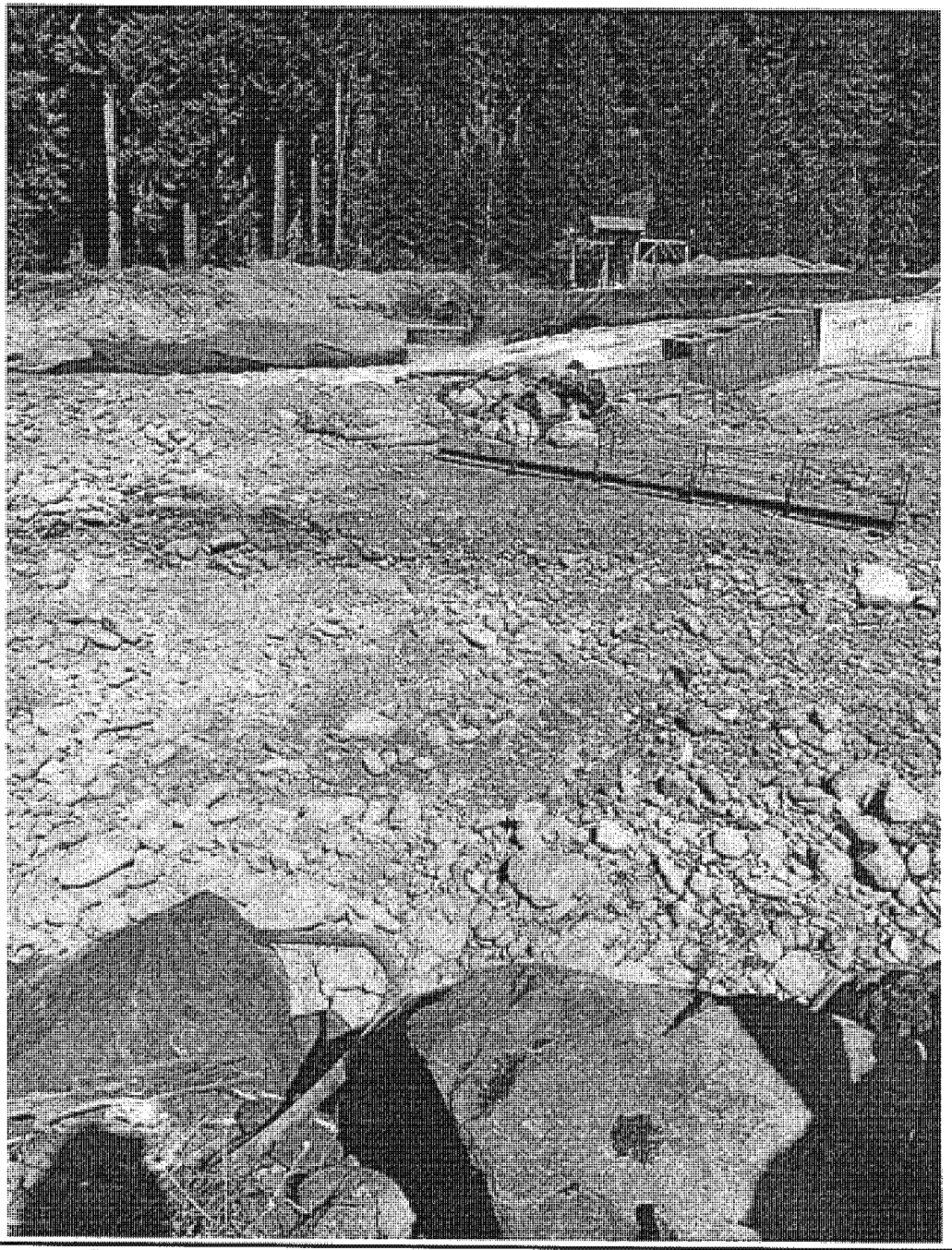
Date:2020/08/11 Time:16:04:29 Lat:46.90628 Long:-122.04008 Direction degrees:20.99

EH-USA000594

ED_005624_00000045-00261

Photo 8

Photo Description: End of channelized river, location of sports turf that the river undercut and moved portions of the turf downstream.

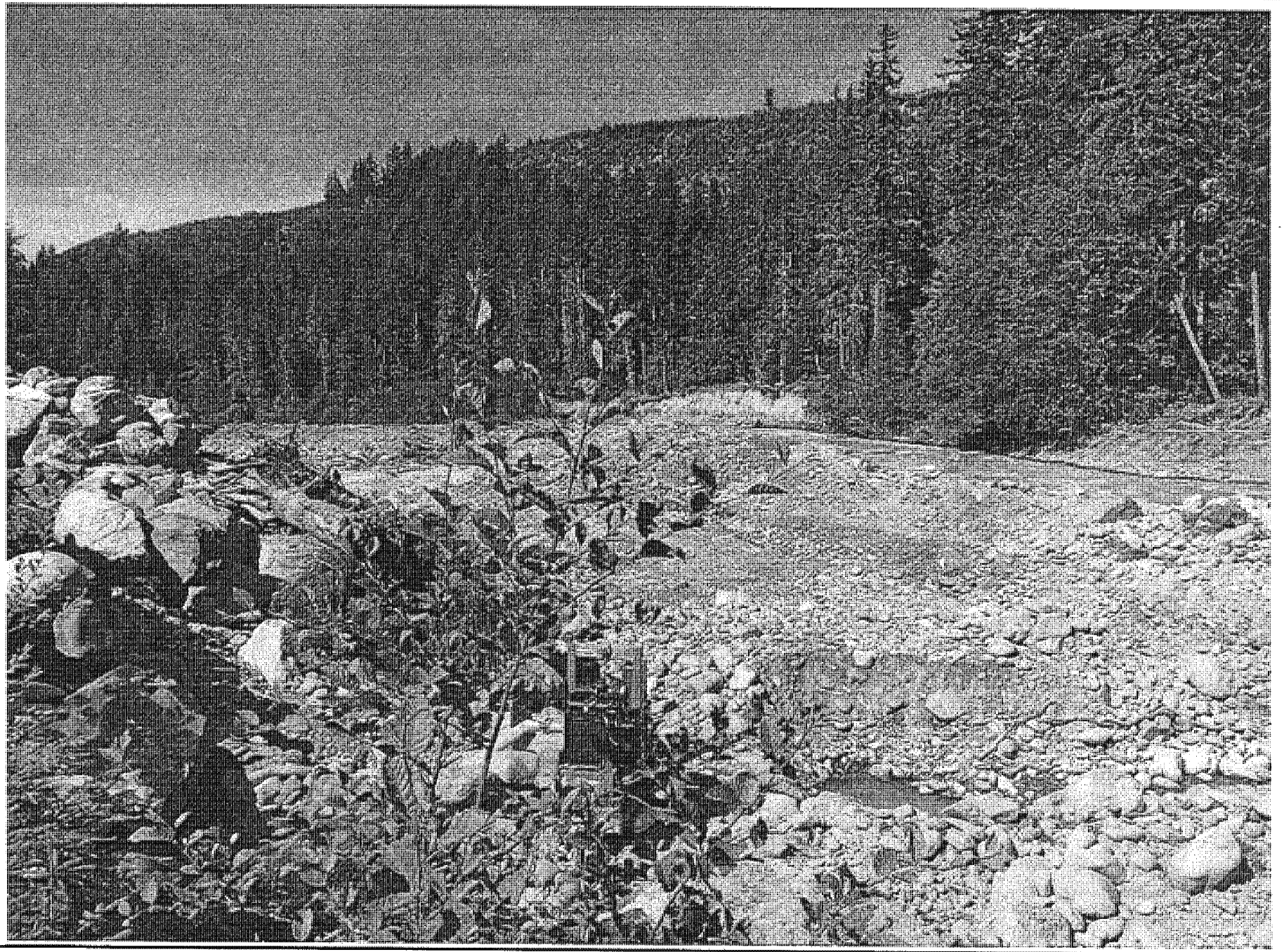


Date:2020/08/11 Time:16:04:55 Lat:46.90629 Long:-122.04005 Direction degrees:72.65

EH-USA000595

Photo 9

Photo Description: Looking downstream.



Date:2020/08/11 Time:16:05:08 Lat:46.90629 Long:-122.04005 Direction degrees:285.48

ED_005624_00000045-00263

Photo 10

Photo Description: No BMPs along haul road and side slopes; during storm events, this slope will likely deliver additional turbid water to the construction area in the riverbed.

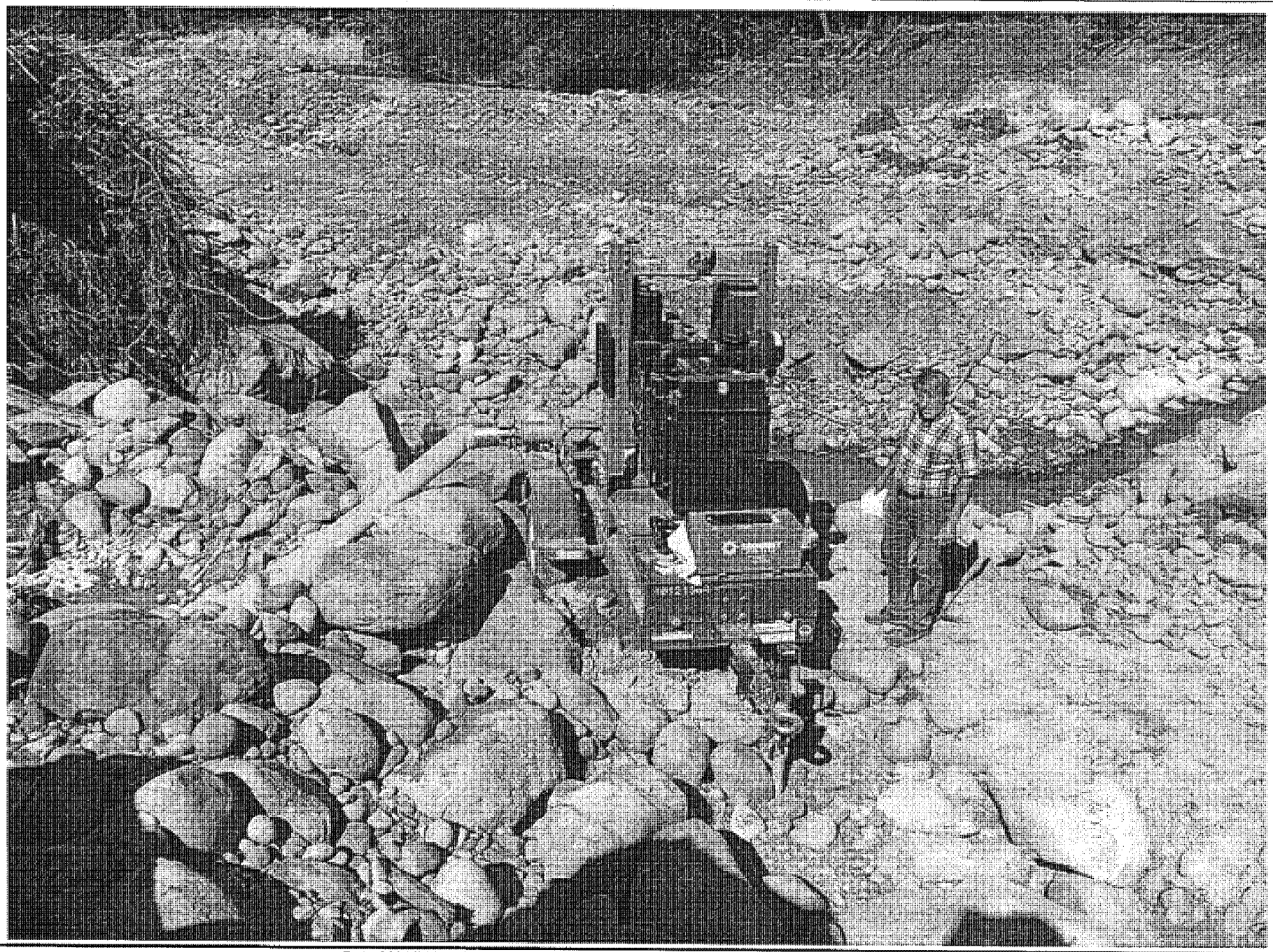
Date:2020/08/11 Time:16:05:53 Lat:46.9063 Long:-122.04005 Direction degrees:31.02

EH-USA000597

ED_005624_00000045-00264

Photo 11

Photo Description: In water construction zone pump for dewatering has no secondary containment for (110% capacity) of the fuel in the generator.



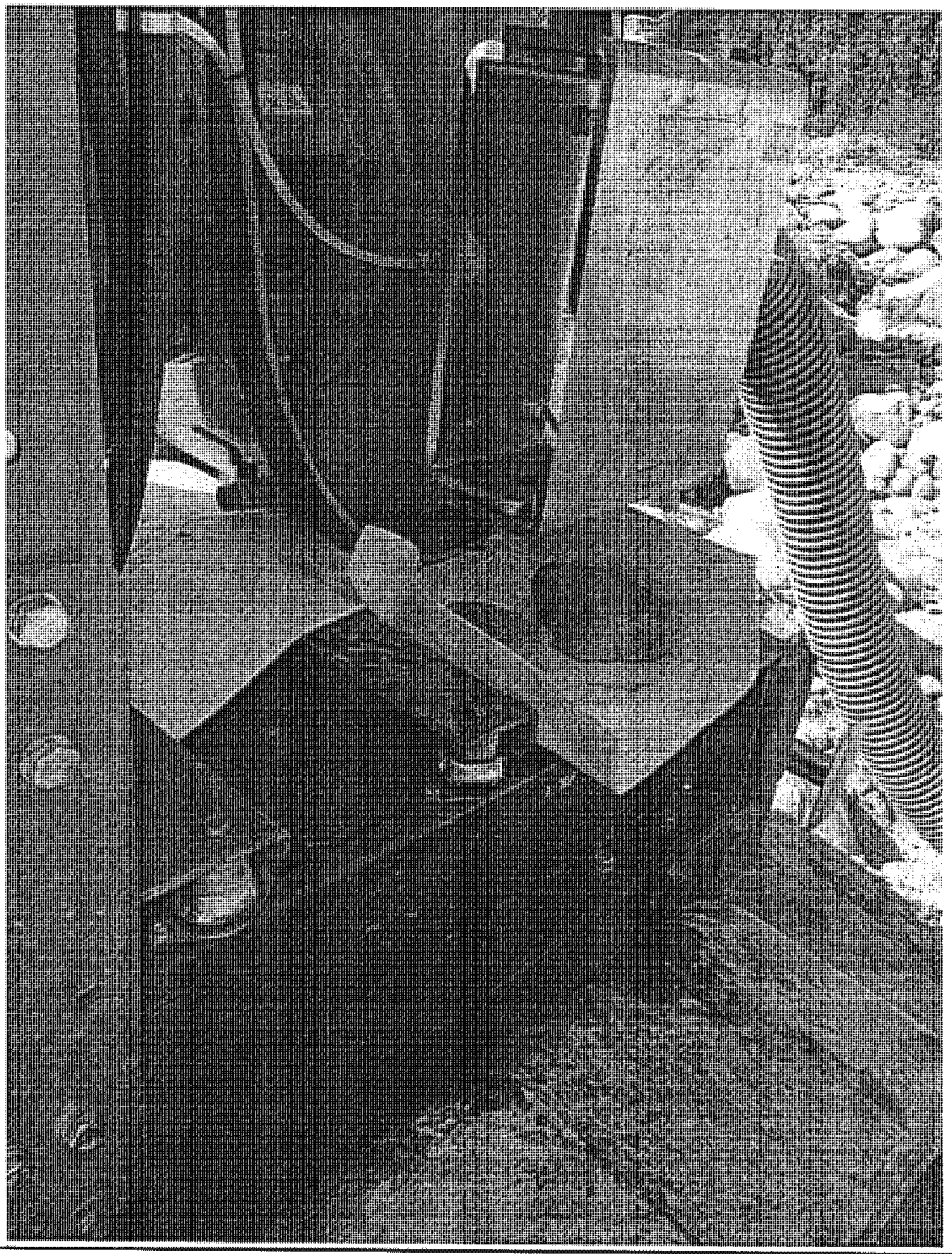
Date:2020/08/11 Time:16:07:37 Lat:46.90628 Long:-122.04006 Direction degrees:275.02

EH-USA000598

ED_005624_00000045-00265

Photo 12

Photo Description: Generator for pumping water from the construction zone; water is pumped to CSWGP stormwater management BMPs (conveyance ditch, sediment pond, then stormwater pond); river water is comingled with construction water.

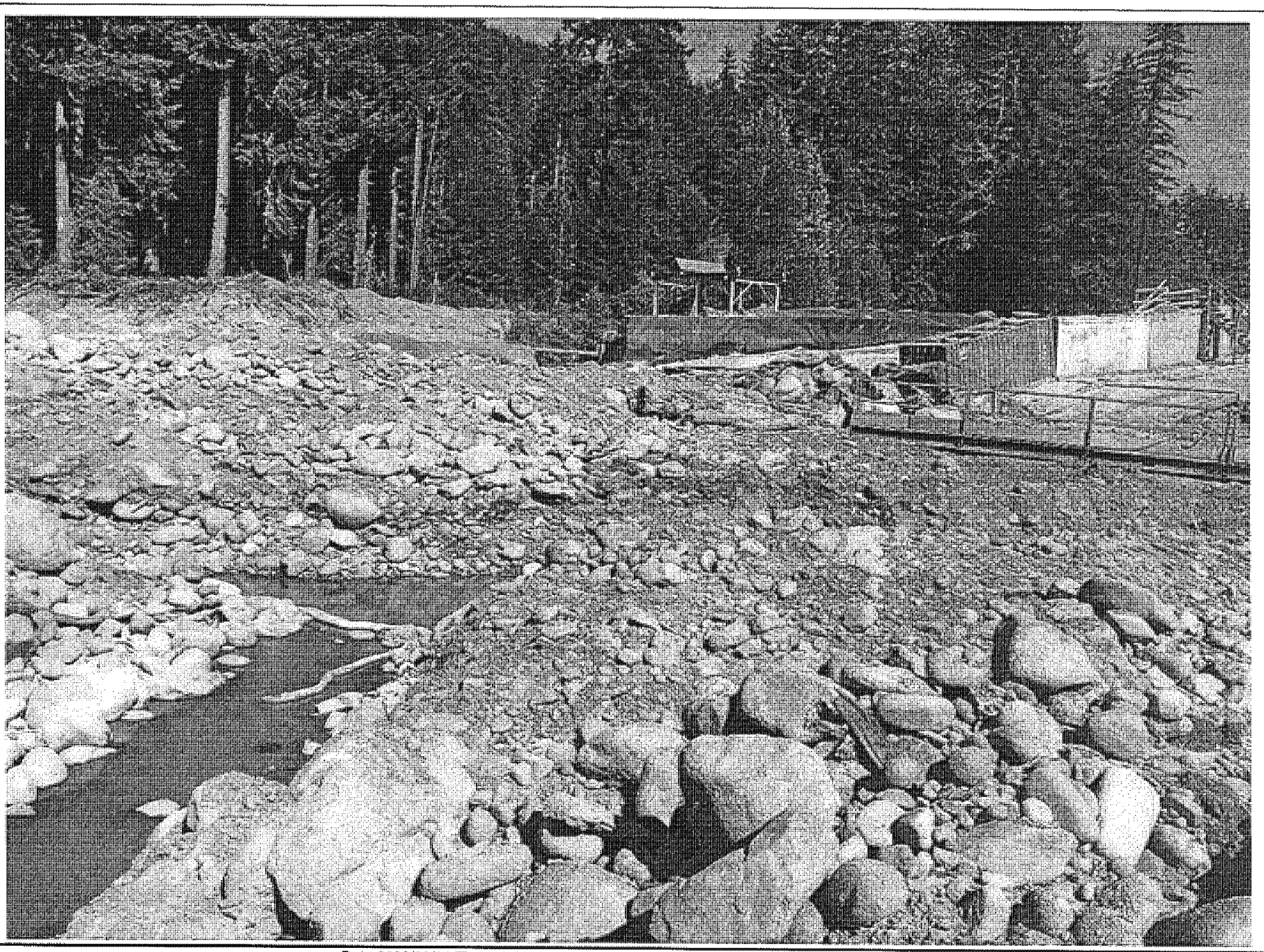


Date:2020/08/11 Time:16:09:36 Lat:46.90642 Long:-122.04 Direction degrees:323.78

EH-USA000599

Photo 13

Photo Description: Oil booms are not functional when not secured as intended.

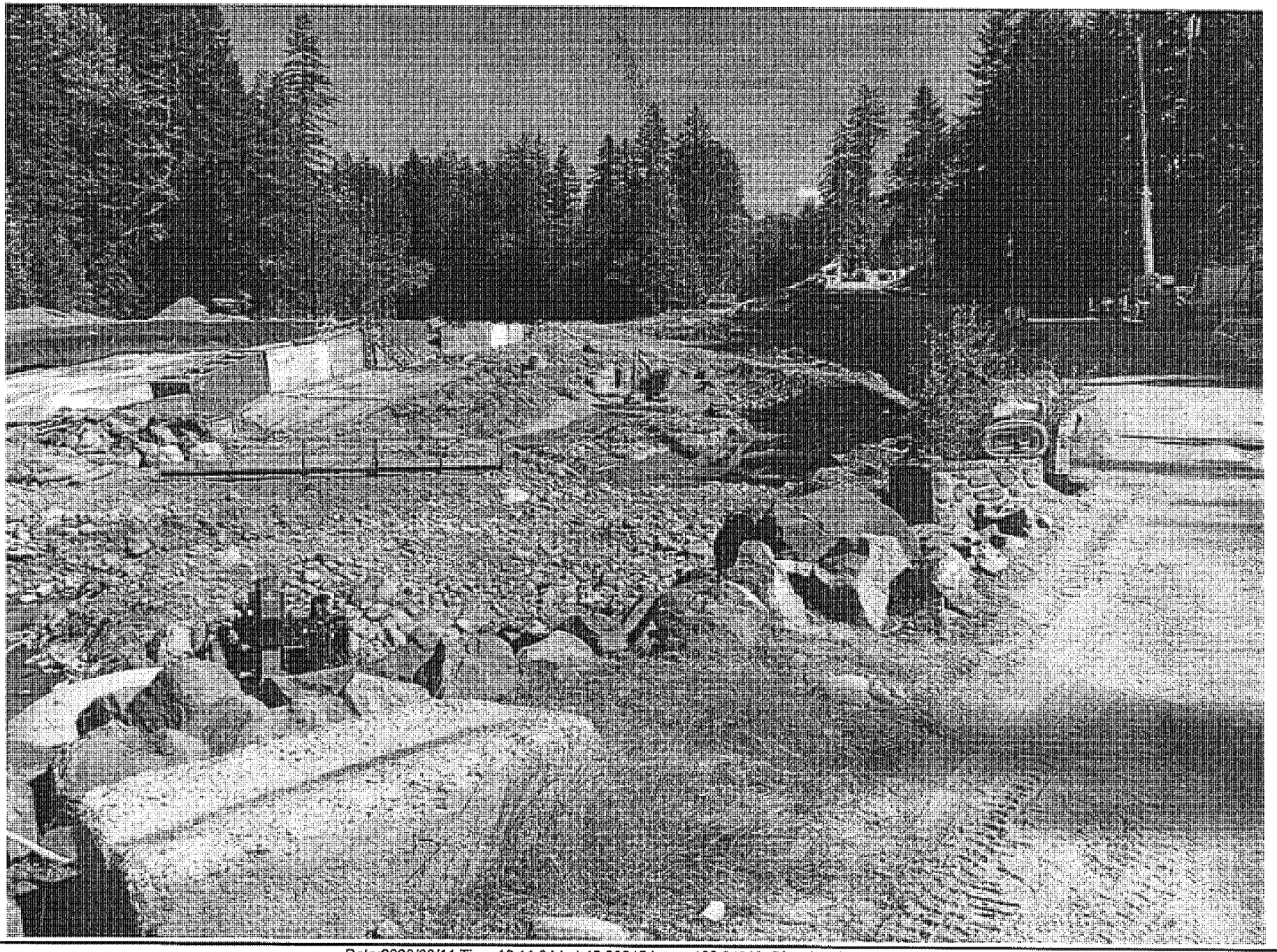


Date:2020/08/11 Time:16:10:30 Lat:46.9064 Long:-122.03996 Direction degrees:340.29

ED_005624_00000045-00267

Photo 14

Photo Description: Upland haul road and construction zone in the Puyallup riverbed.



Date:2020/08/11 Time:16:11:34 Lat:46.90645 Long:-122.04019 Direction degrees:34.97

EH-USA000601

ED_005624_00000045-00268

Photo 15

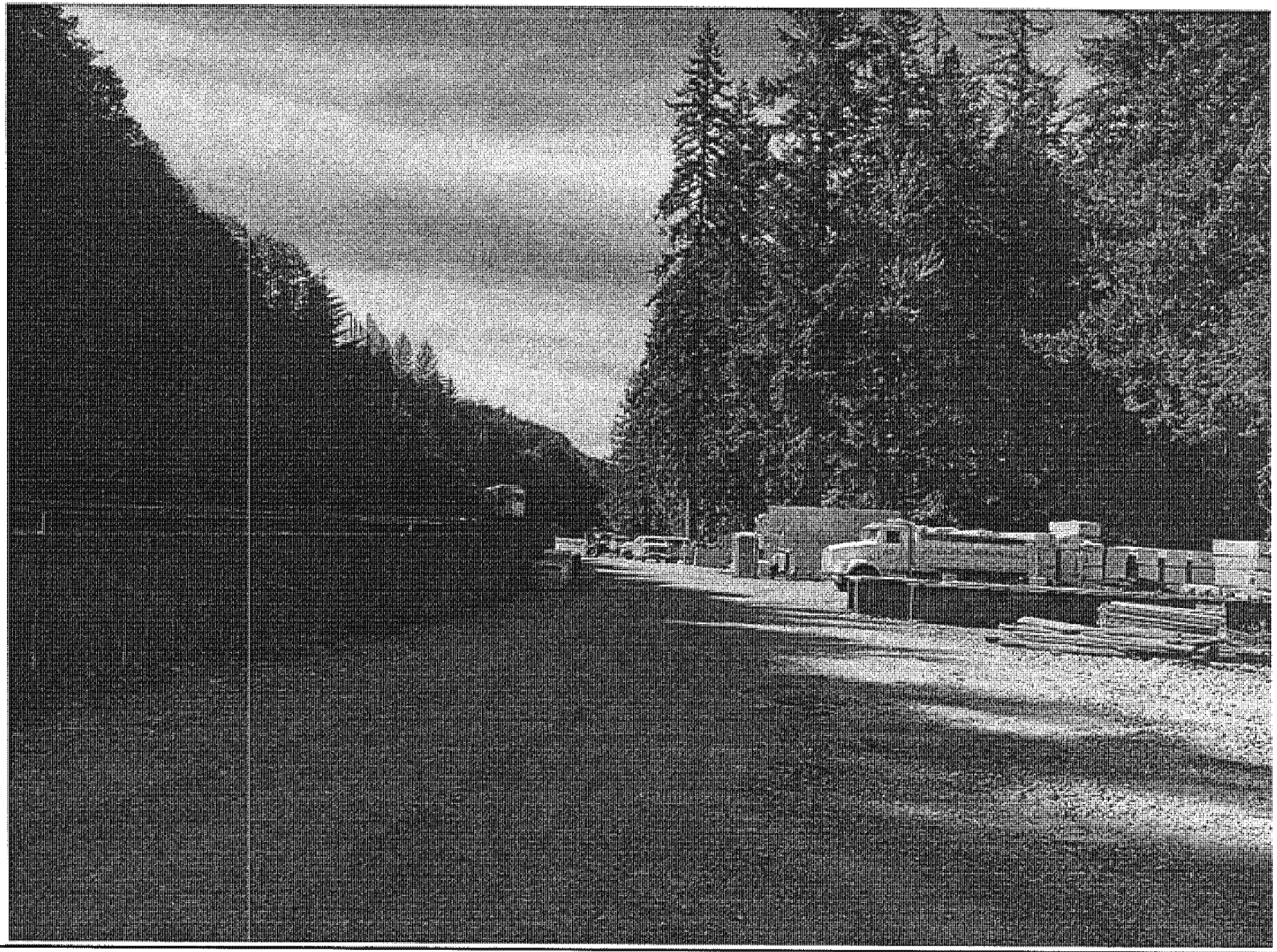
Photo Description: Upland construction, new flume section under construction. Haul road needs additional BMPs.

Date:2020/08/11 Time:16:12:05 Lat:46.90656 Long:-122.04034 Direction degrees:212.63

EH-USA000602

Photo 16

Photo Description: Haul road on left bank of river, staging area for flume construction.



Date:2020/08/11 Time:16:14:15 Lat:46.90749 Long:-122.04078 Direction degrees:256.16

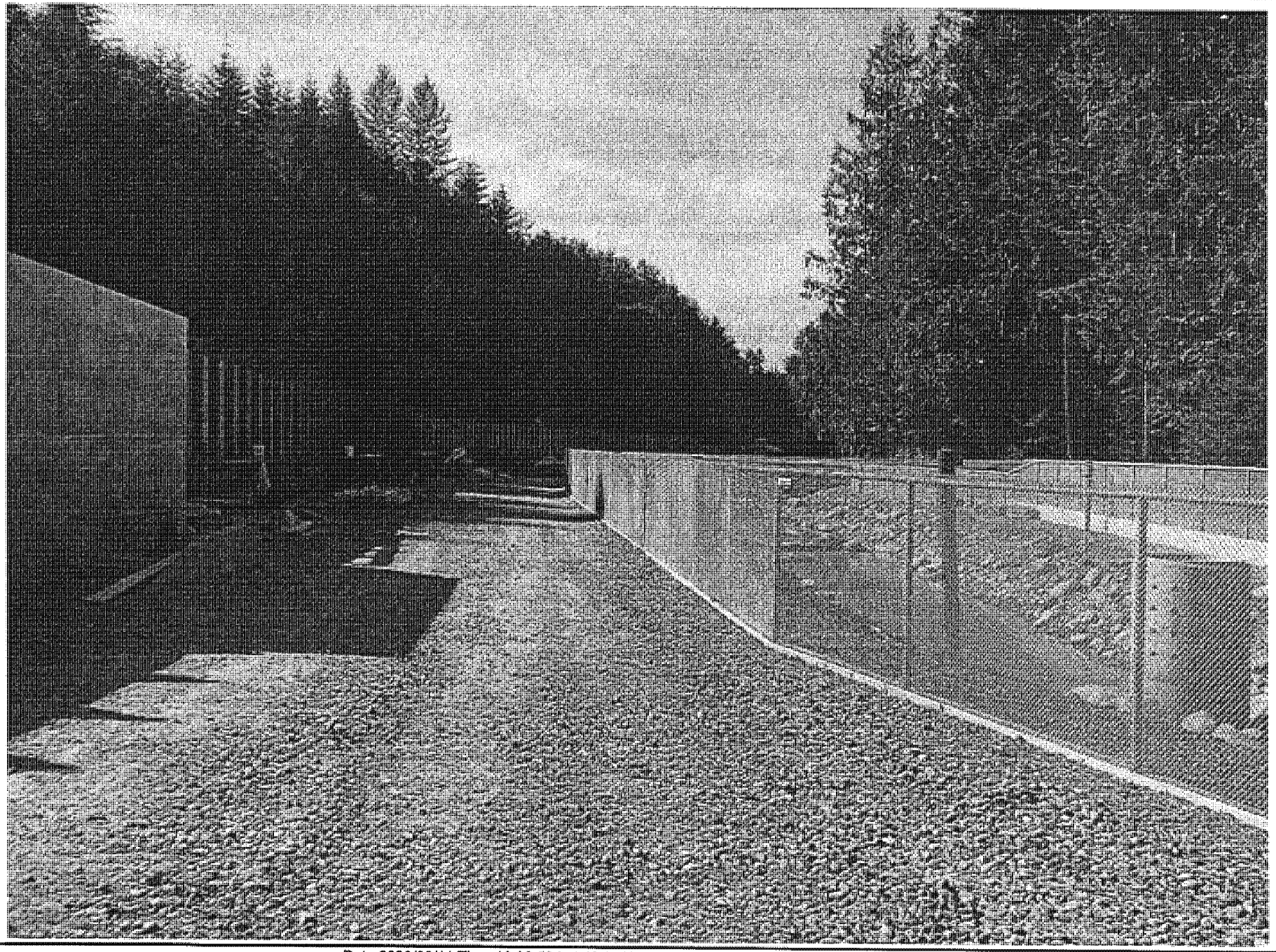
Photo 17

Photo Description: Equipment is checked for leaks at beginning and end of work day.

Date:2020/08/11 Time:16:15:31 Lat:46.90781 Long:-122.04094 Direction degrees:284.93

Photo 18

Photo Description: Stormwater pond (potentially a future acclimation pond for salmonids). Water enters this stormwater pond after traveling along the conveyance ditch, into the sediment pond (Photo 19).

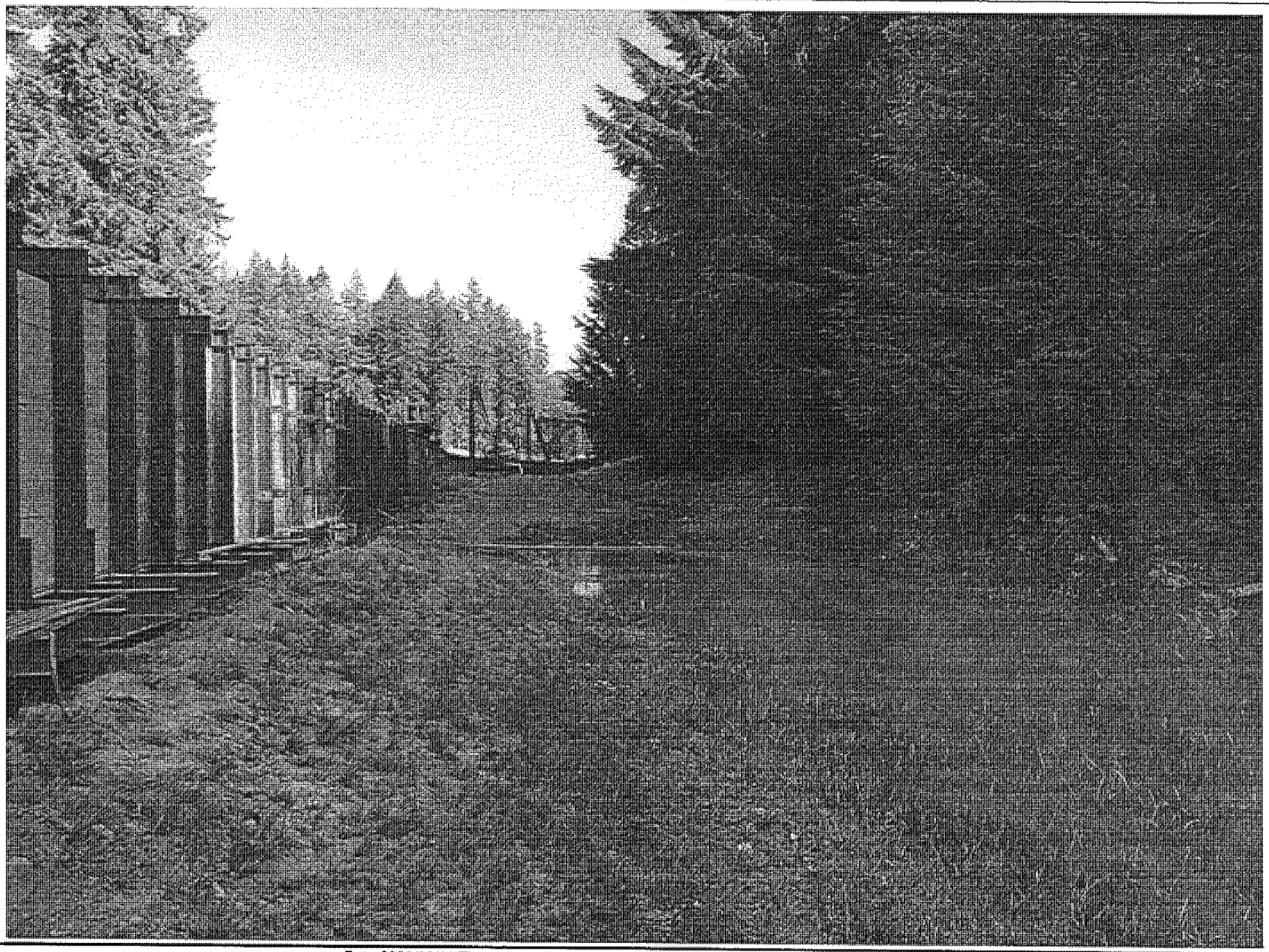


Date:2020/08/11 Time:16:38:59 Lat:46.90837 Long:-122.04177 Direction degrees:222.73

ED_005624_00000045-00272

Photo 19

Photo Description: Conveyance ditch discharges into the Sediment Pond with a standpipe and trash rack for overflow to the Stormwater Pond.



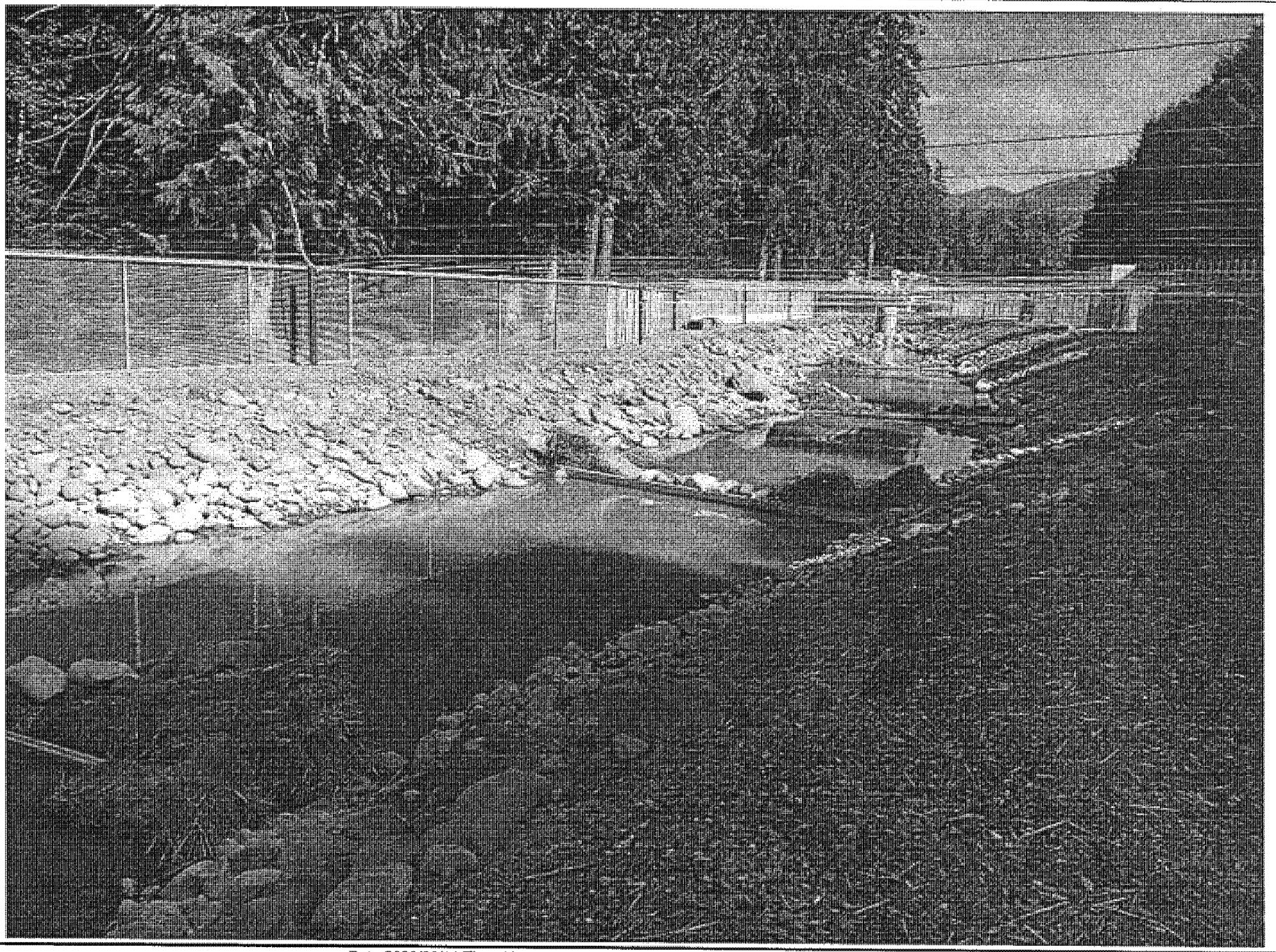
Date:2020/08/11 Time:16:40:30 Lat:46.90849 Long:-122.04218 Direction degrees:36.34

EH-USA000606

ED_005624_00000045-00273

Photo 20

Photo Description: Looking upstream in the Stormwater Pond. Three bays, constructed with straw bales.

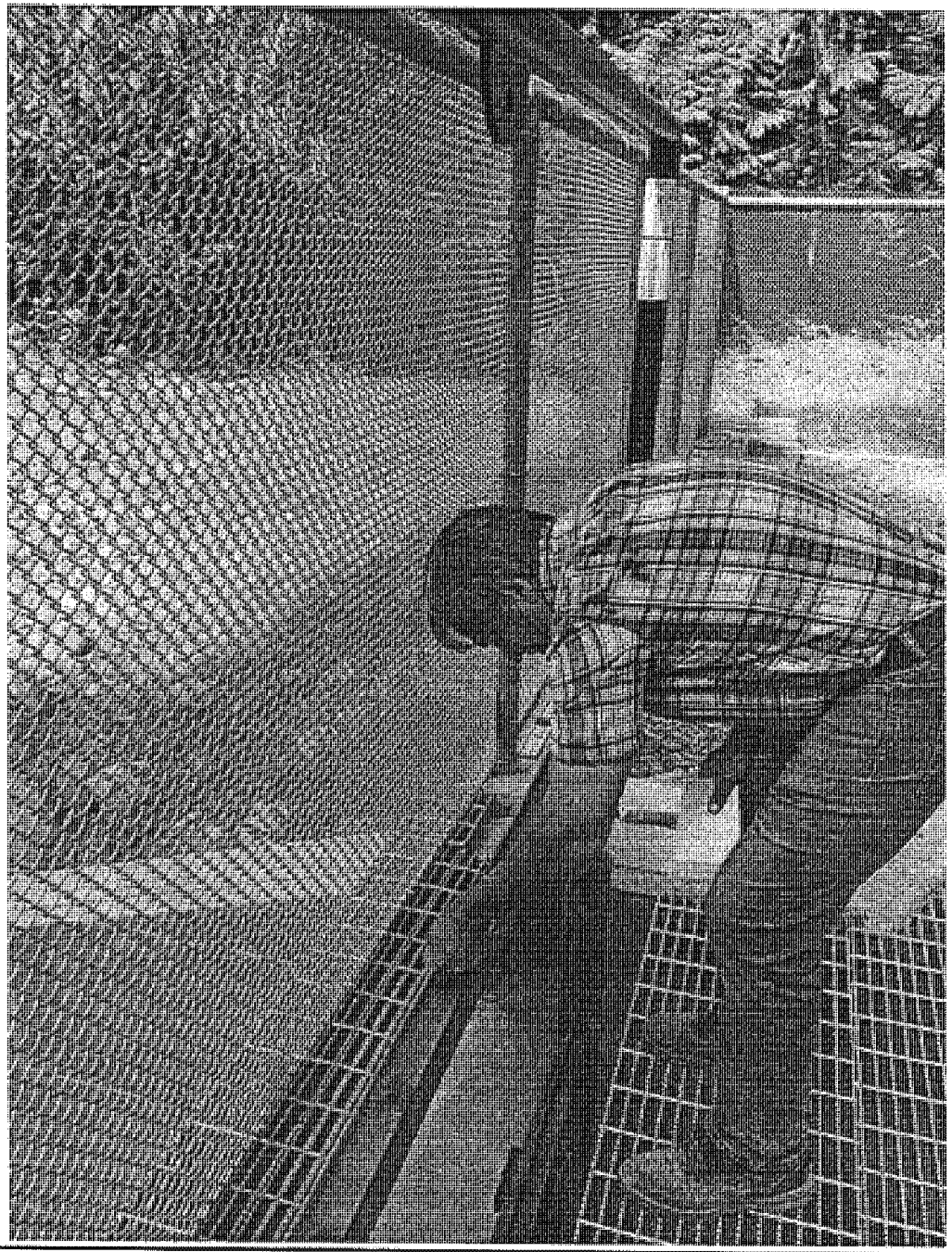


Date:2020/08/11 Time:16:46:20 Lat:46.90901 Long:-122.0426 Direction degrees:23.74

EH-USA000607

Photo 21

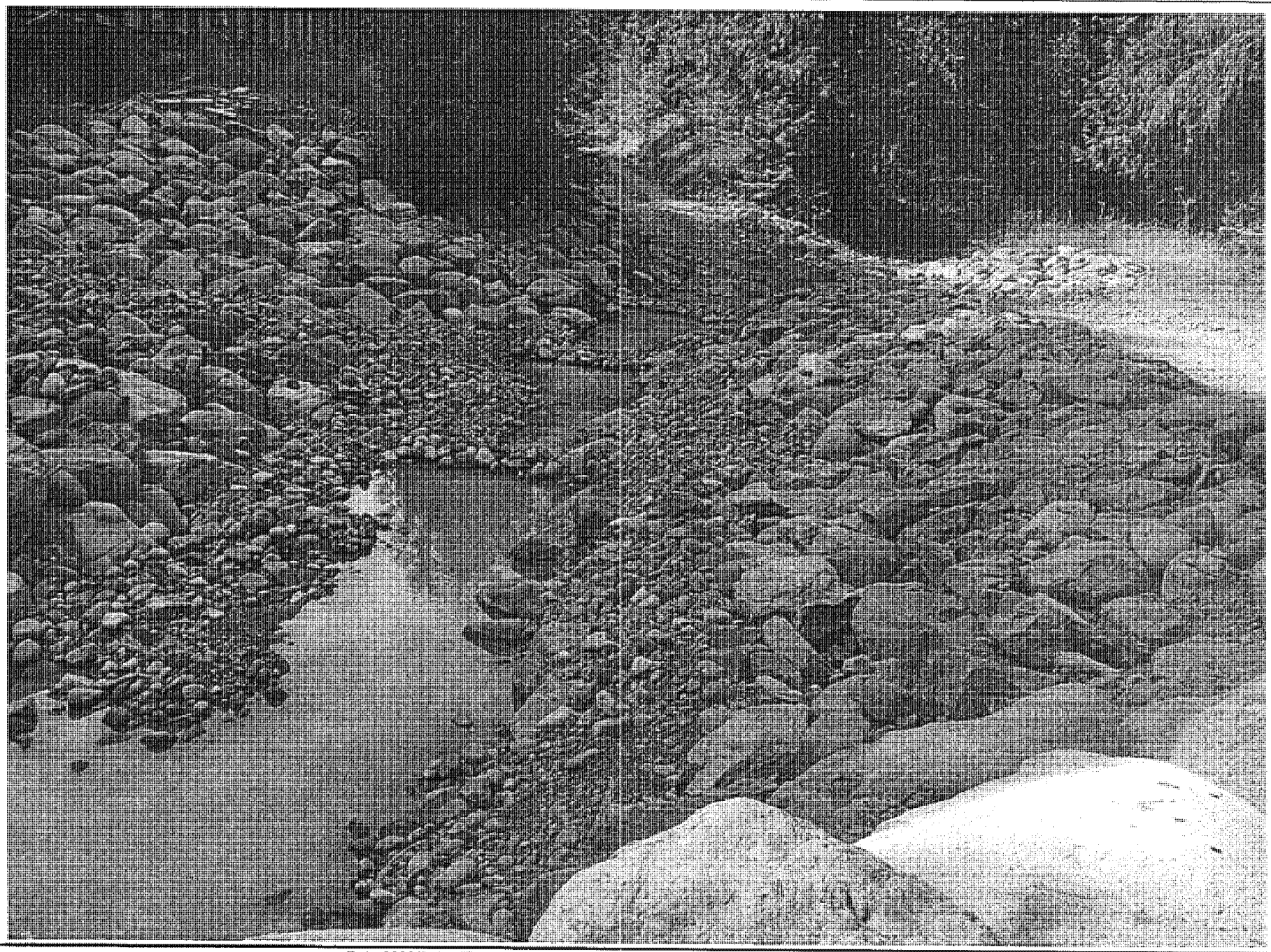
Photo Description: Thom explained the stormwater management system and the outlet of the Stormwater Pond.



Date:2020/08/11 Time:16:55:26 Lat:46.90905 Long:-122.04255 Direction degrees:19.71

Photo 22

Photo Description: Checkdams directly downstream of the Stormwater Pond (check dams through trees (off the photo – top right) are needed).



Date:2020/08/11 Time:16:57:26 Lat:46.90939 Long:-122.0427 Direction degrees:230.78

ED_005624_00000045-00276

Photo 23

Photo Description: Puyallup River on right side, close to area of sampling point from the Stormwater Pond.

Date:2020/08/11 Time:16:58:22 Lat:46.90947 Long:-122.04269 Direction degrees:226.43

EH-USA000610

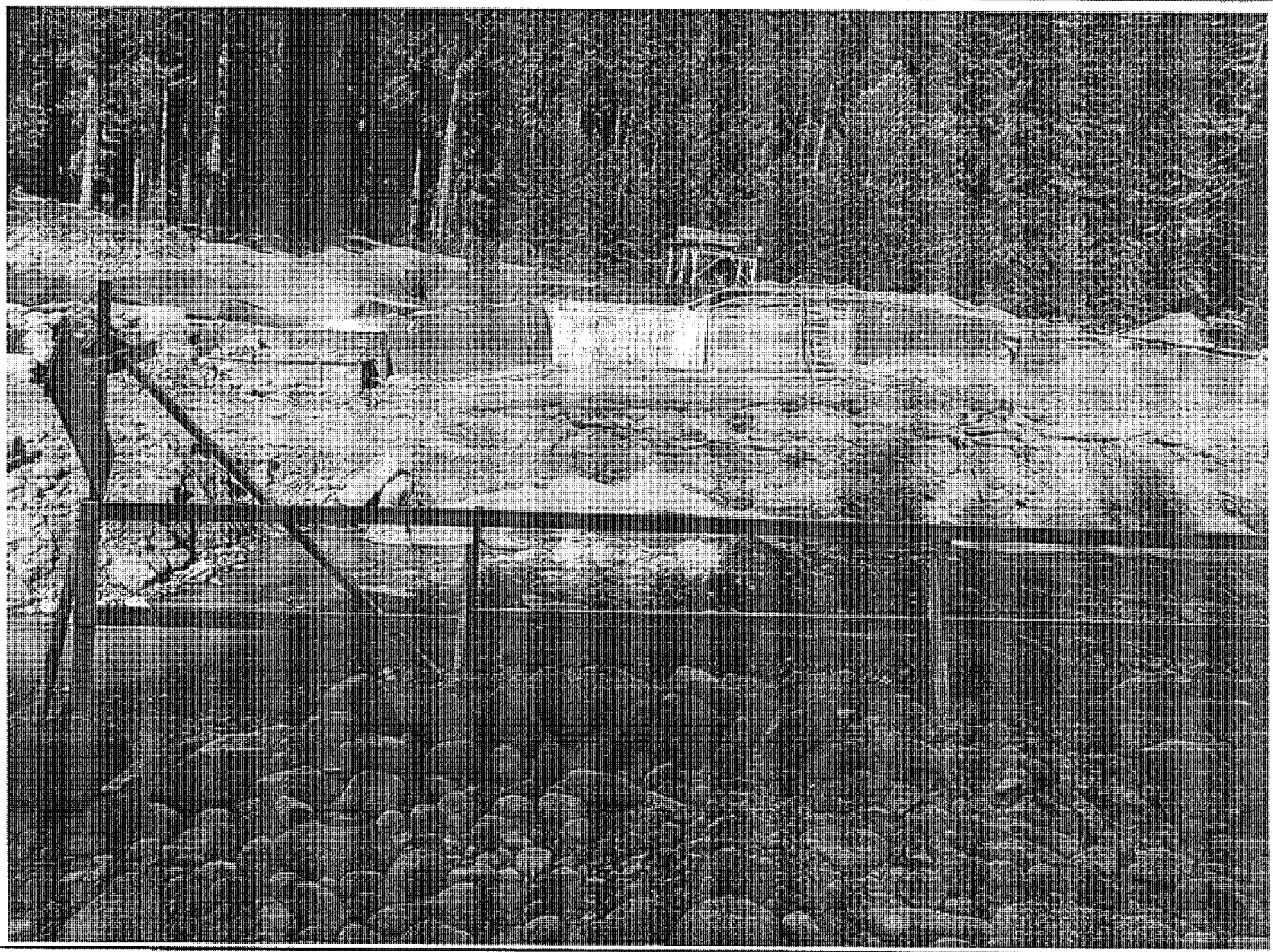
Photo 24

Photo Description: Re-construction of the flume, adjacent to the Sediment Pond (fence on left side of photo).

Date:2020/08/11 Time:16:59:21 Lat:46.90918 Long:-122.0428 Direction degrees:63.94

Photo 25

Photo Description: Old wooden diversion dam structure; Puyallup River is flowing through a lined channel behind the storage trailers.

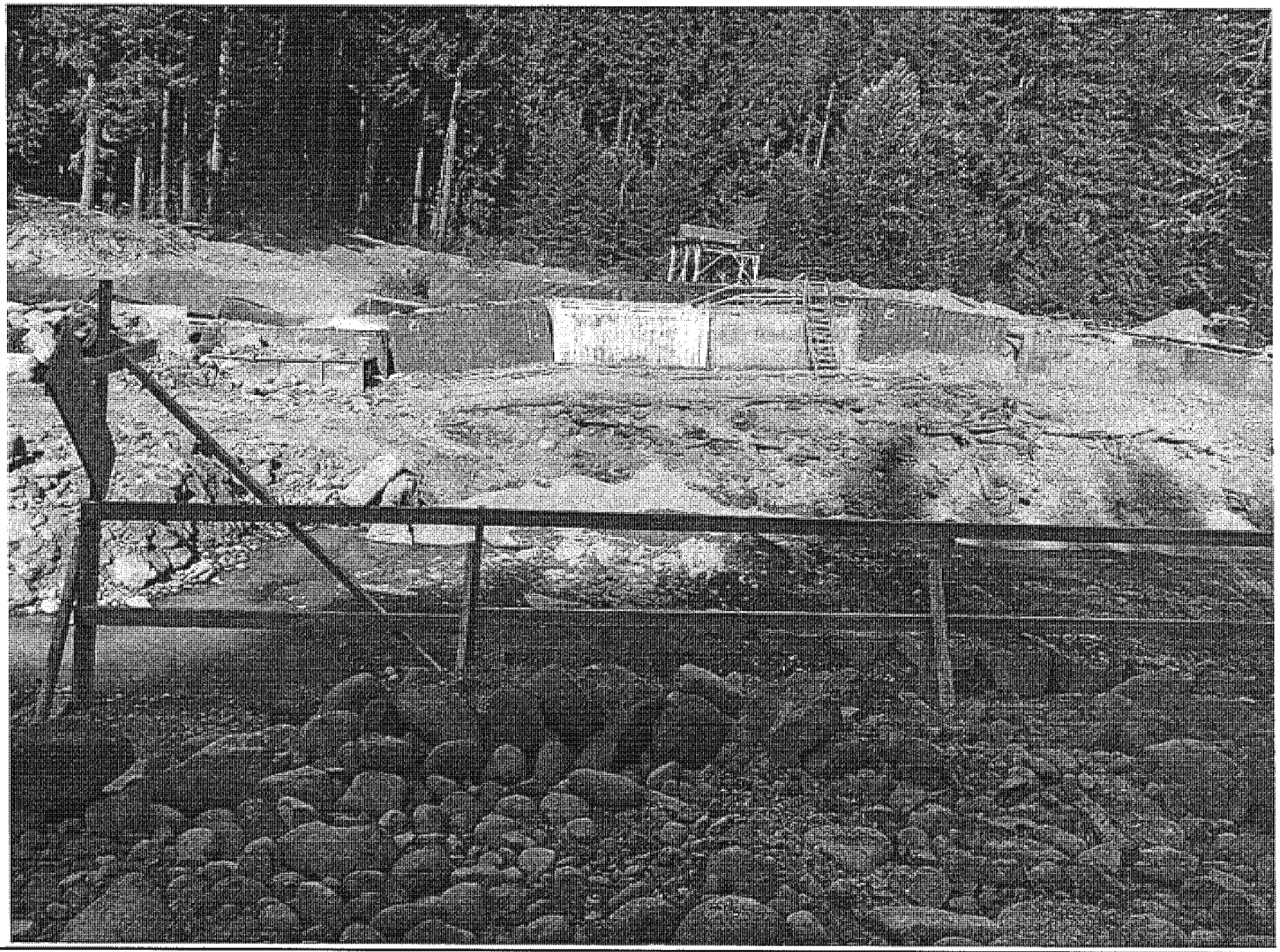


Date:2020/08/11 Time:17:18:37 Lat:46.90609 Long:-122.04004 Direction degrees:89.06

ED_005624_00000045-00279

Photo 25

Photo Description: Old wooden diversion dam structure; Puyallup River is flowing through a lined channel behind the storage trailers.



Date:2020/08/11 Time:17:18:37 Lat:46.90609 Long:-122.04004 Direction degrees:89.06

EH-USA000613

ED_005624_00000045-00280

Photo 23

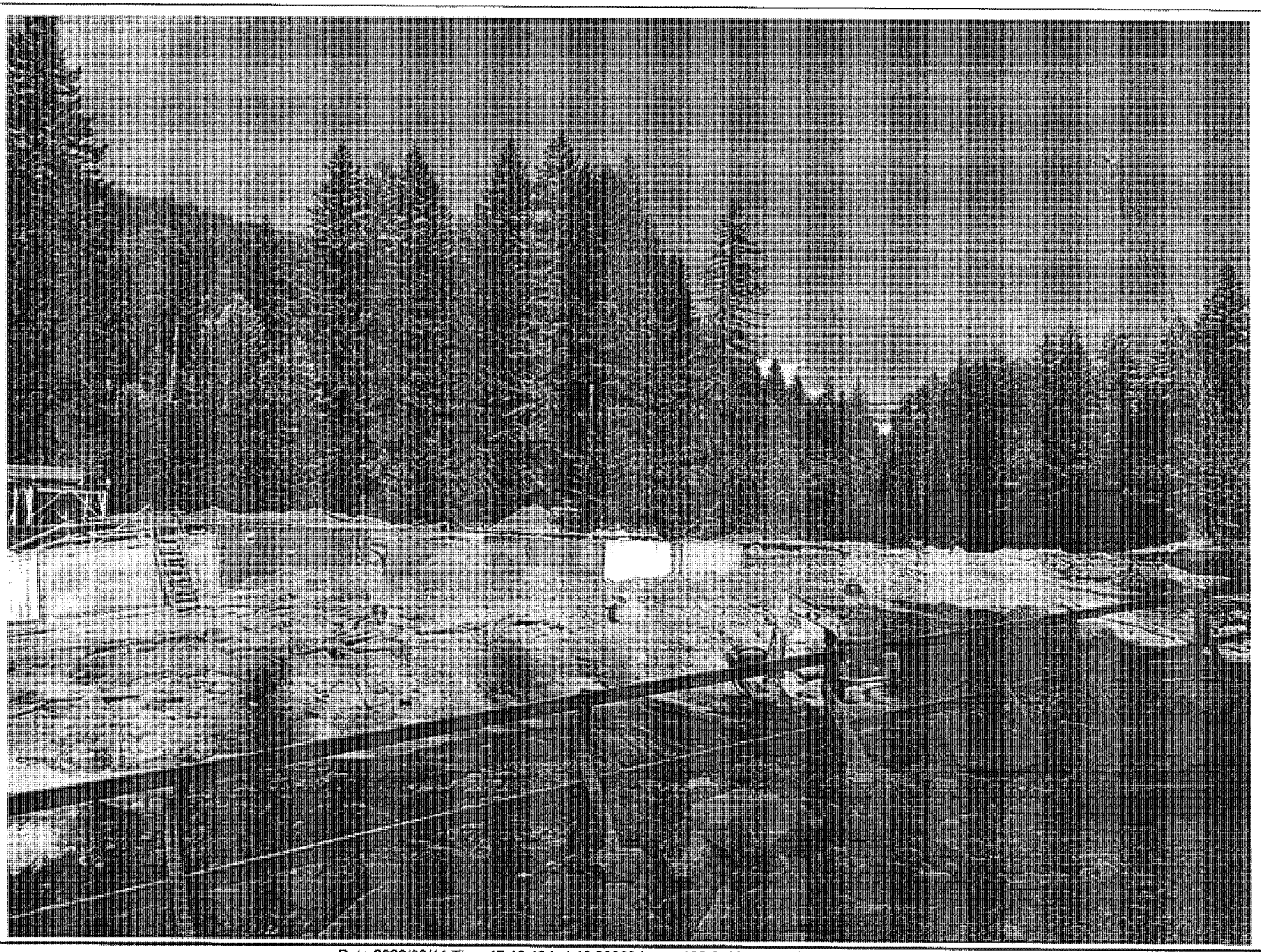
Photo Description: Puyallup River on right side, close to area of sampling point from the Stormwater Pond.

Date:2020/08/11 Time:16:58:22 Lat:46.90947 Long:-122.04269 Direction degrees:226.43

EH-USA000614

Photo 26

Photo Description: Upstream end of the construction area for the intake structure.



Date:2020/08/11 Time:17:18:43 Lat:46.90609 Long:-122.04004 Direction degrees:122.22

Photo 27

Photo Description: Downstream end of the construction area for the intake structure.

Date:2020/08/11 Time:17:19:05 Lat:46.90556 Long:-122.03951 Direction degrees:69.69

ED_005624_00000045-00283

Photo 28

Photo Description: Fish ladder opening to the right of the black liner of the channelized river.

Date:2020/08/11 Time:17:19:19 Lat:46.90539 Long:-122.03912 Direction degrees:309.03

EH-USA000617

Photo 29

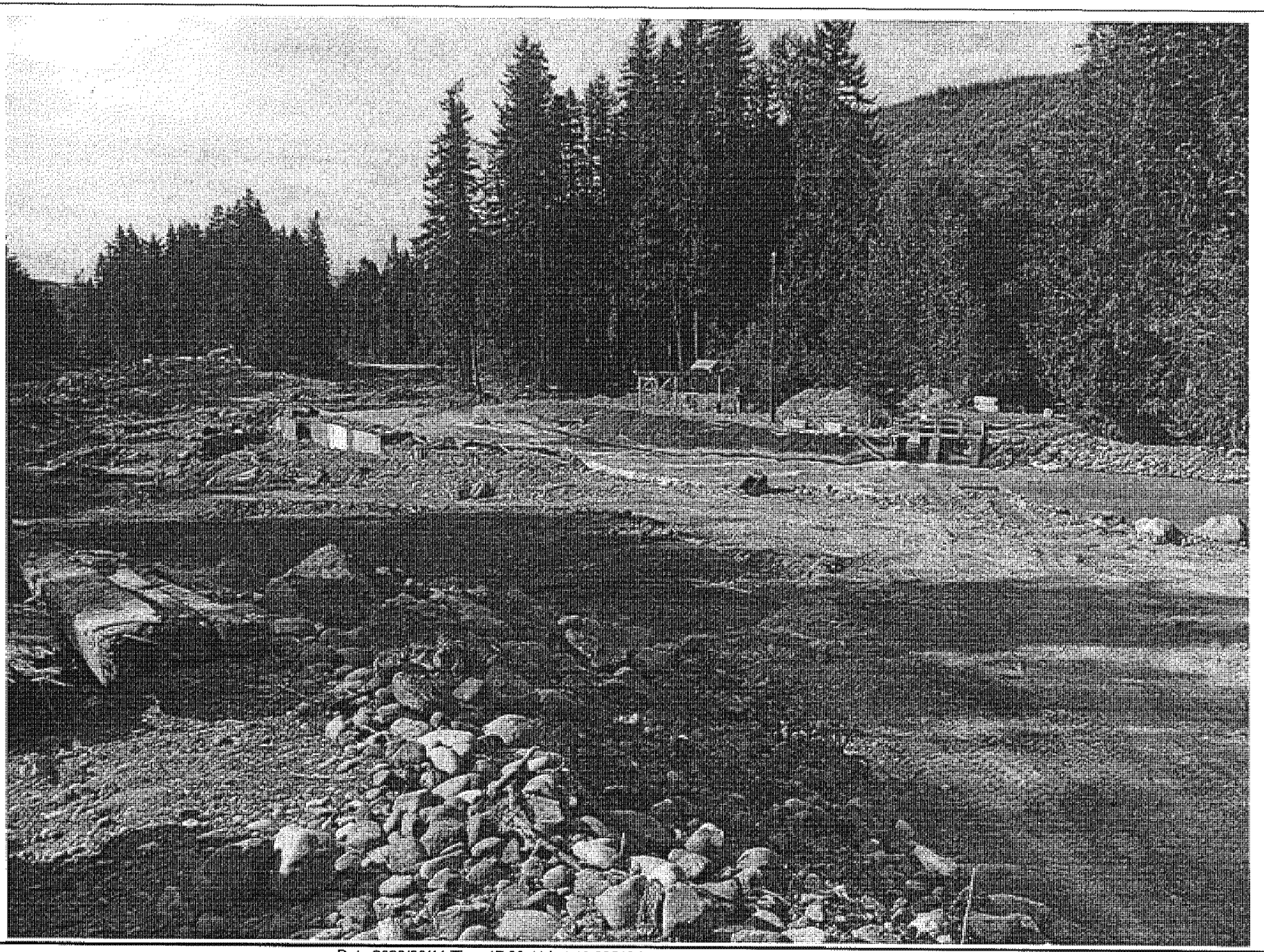
Photo Description: Mostly dry pond on opposite side of the crane. Crane used to move rolls of sports turf to area of placement (below black liner). Berm along the left bank of the Puyallup River is part of the coffer dam setup.

Date:2020/08/11 Time:17:20:28 Lat:46.90519 Long:-122.03872 Direction degrees:306.08

ED_005624_00000045-00285

Photo 30

Photo Description: Fish ladder across river from the crane.



Date:2020/08/11 Time:17:20:41 Lat:46.90519 Long:-122.03874 Direction degrees:253.66

EH-USA000619

ED_005624_00000045-00286

Photo 31

Photo Description: Looking downstream from crane location; this is the area rolls of sports turf was delivered. No black rubber bits were observed on the ground in this location.

Date:2020/08/11 Time:17:21:42 Lat:46.90519 Long:-122.03866 Direction degrees:53.43

EH-USA000620

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

Regulatory Branch

August 13, 2020

Mr. Thom Fischer
Electron Hydro, LLC
1800 James Street, Suite 201
Bellingham, Washington 98225

Reference: NWS-2016-350
Electron Hydro, LLC
(Diversion Repair and
Spillway Replacement)

Dear Mr. Fischer:

We have reviewed the information you provided in the *Corps Response Letter* dated August 10, 2020, related to the work performed on your property located in the Puyallup River near Electron, Pierce County, Washington. As previously mentioned in our letter dated August 7, 2020, you are in violation of your permit, and you are still directed to do no further work waterward of ordinary high water mark at this site until otherwise authorized by the Corps. Please be reminded that failure to cooperate in this matter could also result in the assessment of administrative civil penalties under 33 CFR Part 326 and/or a directive to remove any fill placed under this permit.

The response provided did not answer all our initial questions but based on our understanding of the current situation at the site and ongoing impacts to the aquatic environment, we are prepared to allow you to continue work but first need to ensure ongoing impacts to the aquatic environment are minimized once work is allowed to continue. We will also be following up with you on a more complete response to our initial questions. To address the current situation at the site and minimize potential impacts to the aquatic resources on continuing work, we request you submit a construction plan to include the following best management practices:

a. A modified water diversion/relocation plan, as your current methods have not sufficiently dewatered the work site.
b. A plan to ensure the existing fish ladder is properly functioning for all life stages during construction.
c. A construction notification plan including a weekly update submitted to the Corps on the construction activities that took place that week, fish passage, dewatering/diversion, water quality monitoring, and any astro-turf containment/disposal.

Please furnish the requested construction plan within 10 days from the date of this letter and please be reminded you are instructed to do no work until we have reviewed and approved of the construction plan. Once we more fully understand the situation and we have authorized work to begin again, we can work with you and our other agency partners to figure out the best path forward to address the additional impacts, potential permit modifications and mitigation measures. Your comments will be beneficial in resolving this matter. If you have any questions concerning your reply, please contact Ms. Jenae Churchill at jenae.churchill@usace.army.mil or at (206) 764-5527.

Sincerely,

Alexander "Xander" L. Bullock
Colonel, Corps of Engineers
District Engineer

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