

**OFFICIAL MEMO of COORDINATION (MOC) FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE**

COORDINATION TITLE- 17 LGS 14 Unit 6 station service validation testing

COORDINATION DATE- July 10, 2017

PROJECT- Little Goose Dam

RESPONSE DATE- July 24, 2017

- 1. Description of problem:** Turbine unit 5 is used to provide station service to Little Goose Lock and Dam. Unit 5 is currently out of service and is not projected to return to service until February 28, 2018. Little Goose operates on an emergency diesel generator when station service is unavailable, however the generator has limited capacity and requires us to shed multiple critical mission loads until power can be restored. The project needs to complete station service validation testing on August 1 for unit 6. This will determine the feasibility of using this unit for station service. This testing will require a line outage, removing all units from service for approximately 2 hours during the switching process. Once switching is complete, units 1-4 will return to service. During the testing process, units could potentially remain out of service or cycle on and off to determine proper function of unit 6 for station service power.
 - 2. Type of outage required:** Powerhouse line outage (All 6 turbine units will be OOS)
 - 3. Dates of impacts/repairs:** August 1, 2017
 - 4. Length of time for repairs:** One day or less.
 - 5. Impact on fish facility operation:** Juvenile fish facility will continue to operate using the emergency generator.
 - 6. Impact on project operations:** Unit priority will be impacted during the switching procedure as all units will be out of service. Once switching is complete, units 1-4 will be restored. During testing, units will be cycled on and off to determine proper function of unit 6 as station service power. Adult fish attraction water pumps will also cycle on and off throughout the day.
 - 7. Analysis of potential impacts to fish:** Upstream adult passage and juvenile outmigration numbers will be very low. The 10-year average adult passage on August 1 includes 47 steelhead, 217 Chinook and 5 sockeye salmon (Graph 1). Adult passage could be delayed slightly while units are out of service and fish pumps are briefly off-line. Juvenile outmigration will consist mainly of subyearling Chinook salmon. The 10-year average is 1,447 subyearling Chinook smolts passing Little Goose on August 1 (Graph 2). Juvenile fish will likely not be as attracted to the juvenile bypass system (JBS) while the units are offline due to the decrease in water flow.
 - 8. Final judgement on scale of expected impacts:** Impact to fish passage will be minimal as fish passage numbers, adult and juvenile, are very low during that portion of August.
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9. Comments from agencies.

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

From: Bill Hevlin - NOAA Federal [mailto:bill.hevlin@noaa.gov]
Sent: Wednesday, August 16, 2017 4:49 PM
To: Hockersmith, Eric E CIV USARMY CENWW (US) <Eric.E.Hockersmith@usace.army.mil>
Cc: Bill Hevlin <bill.hevlin@noaa.gov>
Subject: [Non-DoD Source] Re: 17 LGS 14 MOC Unit 6 station service validation testing updated with after action

Hi Eric,

Unit 6 at Goose may prove to be valuable for the 1st priority unit during the attempt next spring to reach gas cap without delaying adults. What is its status now? When will it need future work? How reliable will it be?

Bill

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

From: Tom Lorz [mailto:lort@critfc.org]
Sent: Wednesday, August 16, 2017 4:06 PM
To: Hockersmith, Eric E CIV USARMY CENWW (US) <Eric.E.Hockersmith@usace.army.mil>
Cc: Trevor Conder <Trevor.Conder@noaa.gov>
Subject: [Non-DoD Source] RE: 17 LGS 14 MOC Unit 6 station service validation testing updated with after action

So when is this scheduled to occur and what is the actual unit operations going to be, ie units cycled for an hour, 10 hours, what will the operation be and could the unit cycling be done at night? Appears we need some more info so I can better understand what you guys are proposing.....

Thanks

Tom Lorz

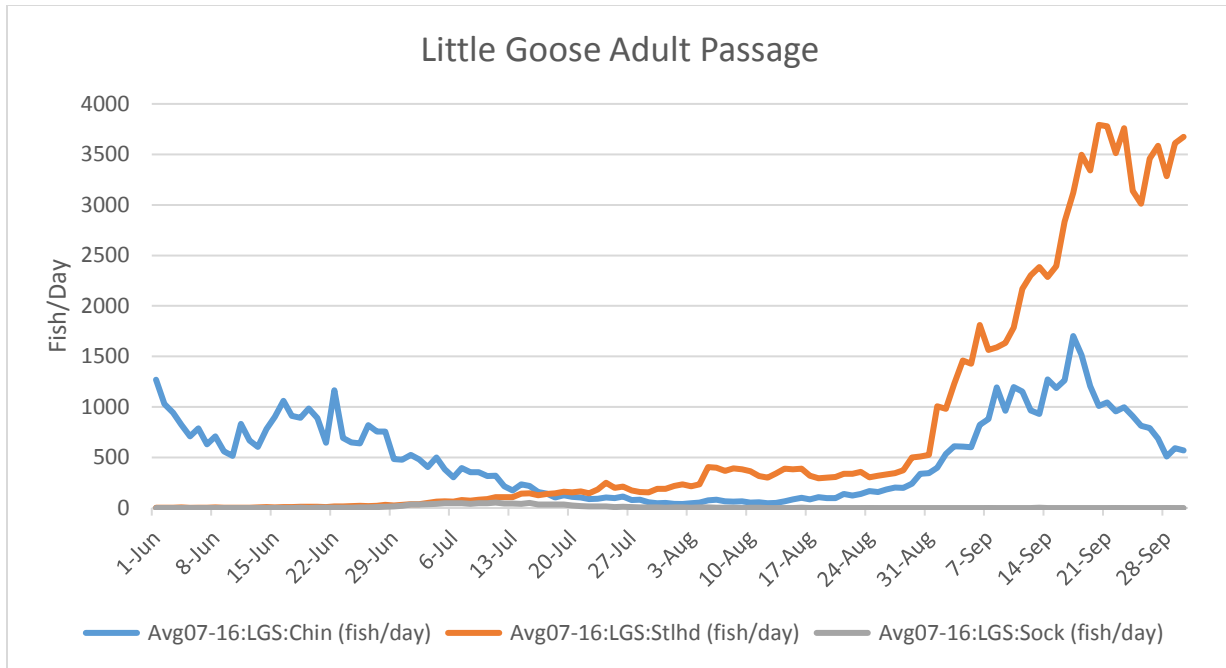
10. Final coordination results.

Approved.

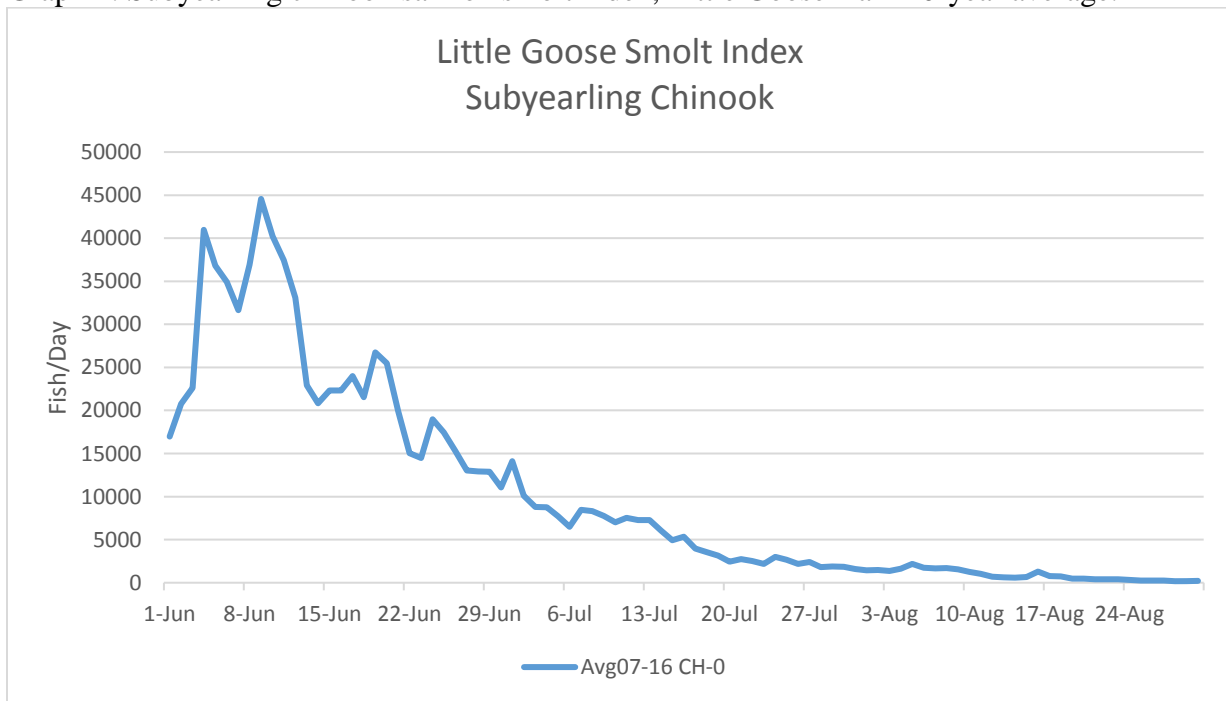
11. After Action update.

Unit 6 station service validation testing was conducted during the week of August 7th rather than on August 1st due to a delayed return to service date from annual maintenance. The Unit 6 station service validation testing outage utilized the scheduled outage for Doble Testing. Doble testing was not conducted during the coordinated outage of August 7 – 11, 2017 due to scheduling issues.

Graph 1: Adult salmon and steelhead passage, Little Goose Dam 10-year average.



Graph 2: Subyearling chinook salmon smolt index, Little Goose Dam 10-year average.



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

Scott St. John
Little Goose Dam

Project Fish Biologist
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