

ENVIRONMENTAL DOCUMENT REVIEW COMMENT & RESPONSE FORM WITH INSTRUCTIONS

BNSF Sandpoint Junction Connector (SJC) Project

Instructions to Reviewers:

Please read and follow these instructions. Attached please find the BNSF SJC Biological Assessment, dated 8/22/2018.

- Use the comment/response form provided. All draft materials are provided as PDF files, which facilitate printing but do not allow modification. Note these on the comment form in the columns provided to help us locate the subject of your comment. This will also make it easier to compare and consolidate comments from multiple reviewers. When entering your comments, please use the example on the first row. In the page number column, please only write the actual number or Roman numeral of the page, not the word "Page #." Comments will be sorted according to priority and page number.
- Prioritize your comments as shown in the footnote on the comment-response form. As a reviewer you should consider:
 - Is the information factually correct?
 - Is the analysis complete and at the appropriate level of detail?
 - Can it be clearly understood?

Use the following priority system to characterize the level of importance of your comments:

- 1 Critical issues requiring discussion/resolution
 - 2 Substantive comment (including issues pertaining to Agency policy or precedent setting conclusions)
 - 3 Factual or substantive issue (regarding legal principles or regulatory error that should be corrected prior to publication)
 - 4 Editorial comment (suggestions to improve readability of the document/report or typographical error)
- Please explain your comments. It is appropriate to insert a comment on a high priority issue that states: "We need to discuss this", however, Comments that request rewrites without a clear explanation of why the revision is needed, can't be addressed appropriately.
 - All comments will be consolidated, addressed, and circulated back to the reviewers in a timely manner.

Because we are on a schedule to deliver this project document on time and on budget, it is imperative that comments are returned in time for consolidation by the stated due date.

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BNSF SJC Draft Biological Assessment (BA) (Jacobs Project W3X76600)				FOR INTERNAL USE ONLY	Task Order #	
				QA Reviewer: _____	Date: _____	
Title of Document	Type of Document	Version of Document	Date Released for Review	Comments:		
Draft Revised BA for USCG/USFWS	USCG NEPA/Section 7 Consultation	Comments per 4/10/2018 BA Update Responses per 8/22/2018 Revised BA				
Name and Affiliation of Document Author & Contact Information	Diane Williams, Environmental Planner	Diane.Williams@jacobs.com 208-920-6042 (office)				
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Name and Initials of Reviewer(s) & Agency Represented	USFWS – Marshall Williams (MW) USACE – Shane Slate (SS USACE) USCG – Shelly Sugarman (SS USCG) Jacobs – Jason Smith (JS); Diane Williams (DW); Sue PaDelford (SP); Craig Broadhead (CB); Maggie Buckley (MB)					
Date of Request		COMMENTS DUE BY		<input type="checkbox"/> Pass	<input type="checkbox"/> Resubmit	

No.	Chapter	Resource Section	Page*	Line No.	Exhibit No.	Priority**	Reviewer Comment	Reviewer Initials	Author Response	Status Code***	Responder Initials	QC Back-check	QA Check
1		General items to include - overall					Lake is FMO habitat Discuss duration of impacts – year-round? Barotrauma impacts to fish from pile driving Okay with using NOAA pile driving impact calculator Okay with using Montana BA docs sent by B. Matibag, USFWS General discussion about spawning tributaries, migratory movements, timing/fluctuations Not a lot is known about bull trout presence in area of Br. 3.9	MW 10/2/17	BA addresses these issues in the following sections: <ul style="list-style-type: none"> LPO foraging, migration, and overwintering (FMO) habitat (in Federally Proposed and Listed Species and Designated Critical Habitat section/Columbia River DPS Bull Trout subsection & Bull Trout Designated CH subsection; Analysis of Effects to Bull Trout section/Indirect Effects subsection) Duration of impacts (in Tables 1, 3; Analysis of Effects to Bull Trout section/Direct Effects subsection; Conclusions and Effect Determinations section; Appendices C, F, H) barotrauma impacts from pile driving (in Analysis of Effects to Bull Trout 	A	DW	MB	JWS

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* Page No. or "G" for general comment about the section/chapter

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									section/Direct Effects subsection; Conclusions and Effects Determination section; Appendices D, F, H) <ul style="list-style-type: none"> • spawning tributaries, and migratory movements including timing/fluctuation (in Federally Proposed and Listed Species and Designated Critical Habitat section/Columbia River DPS Bull Trout subsection; Conclusions and Effect Determinations section; Appendices C, F) Per USFWS subsequent 6/14/18 request to follow WSDOT BA guidance re pile driving analysis, BA converted from Montana BA template to WSDOT BA template, and content prepared using WSDOT BA guidance.				
2		General - overall					If no effect from Sand Creek bridges (temp & permanent), a BA is not required Do not need separate BAs for Bridges 3.1 and 3.9	MW 10/11/17 SS, USACE	BA addresses/includes Sand Creek bridges (temporary & permanent) due to pile driving effects to BT extending into main body of LPO. BA is inclusive for Bridges 3.1 and 3.9.	A	DW	MB	JWS
3		General - overall					Emailed topic sheet "Deconstructing an Action" (FWS Region 6) providing level of detail needed for deconstruction of an activity; also the following guidance links provided: https://www.fws.gov/midwest/endangered/section7/section7.html https://www.fws.gov/midwest/endangered/section7/ba_guide.html https://www.fws.gov/endangered/esa-library/index.html#consultations https://www.fws.gov/midwest/endangered/section7/index.html	MW 6/27/2018	BA addresses Deconstruction in Table 3 and in Detailed Project Description-Construction Key Elements section. Provided guidance links were reviewed and applied as appropriate in BA.	A	DW	MB	JWS
4							Bridge 3.1 location over "Sand Creek" is a Lake Pend Oreille inlet and therefore is designated bull trout critical habitat (see USFWS IPAC). Feds go by naming in GNIS system, despite local name, and fed'l permits require use of GNIS name.	MW 6/7/18	6/14/18 – DW discussed with MW how to reconcile Sand Creek naming in document; MW advised to acknowledge as LPO CH, but for purposes of BA note as being over Sand Creek. BA acknowledges in Environmental Baseline section/Sand Creek subsection.	A	DW	MB	JWS

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5							"Connect the dots" better for a take statement – what are effects, how affecting BT & CH, what is being done to mitigate effects	MW 6/14/18	Effects, how they affect BT and CH, and mitigation of effects is addressed in Impact Avoidance and Minimization Measures section; Mitigation Measures section; Analysis of Effects to Bull Trout section/Direct Effects subsection and Indirect Effects subsection; Conclusions and Effect Determinations section; and Appendices C, D, F, H.	A	DW	MB	JWS
6							Justify prelim determination of NE or NLTAA on Sand Creek per life history (no SR, FMO), timing of work (low water), duration of work, existing conditions (high temps), etc.	MW 6/14/18	BA revised and no longer has a separate NE or NLTAA for Sand Creek; determinations revised to LTAA due to presence of BT CH (Sand Creek at Bridge 3.1 considered to be LPO inlet-see Comment No. 4 above) and pile driving effects extending into main body of LPO. Overall BA determinations revised to LTAA bull trout and CH.	A; B	DW	MB	JWS
7							Expand pile driving discussion: <ul style="list-style-type: none"> - Hydroacoustic effect on behavior, etc. - Include/discuss Sand Creek driving effects into lake proper - Better define/note 2 BT migrations in LPO - Refer to & better use detailed <u>analysis</u> in 2015 USFWS BiOp & WSDOT BA manual - Assess how bubble curtains will mitigate noise effects - Address that larger bubble curtains needed due to pile driving at an angle (not perpendicular) - Mercury listing and potential metals in sediments due to mining in upstream tributaries & address if these could be released during pile driving or removal - Effects from vibrating in piles, not just impact driving 	MW 6/14/18	6/18/18 – DW discussed with MW: <ul style="list-style-type: none"> - Two BT migrations out of lake FMO to SR habitat in spring, and return to FMO habitat after spawning late in fall - Address that sub-adult reside in lake year-round until sexually mature, rather than migrating to spawning tributaries - Does vibrating a piling have effects? If not state it and cite source - Proofing pilings – what type of system? Total impacts (more than one operation at same time or a series?) If simultaneous, what are additive effects? Can operations be sequenced to limit effects? - What is in sediment? Any studies in action area? Will disturbing sediment put toxic metals in water? <ul style="list-style-type: none"> o 6/20/18 & 7/9/18 - No sediment studies in action area and none planned (per J. Bergquist, IDEQ) - Bubble curtains – how big a curtain is needed (angled piles vs perpendicular piles)? How is system built and how it will be employed? Cite the source. Will it be surrounded by a sediment curtain? How long will it remain in place after proofing pile? Will there still be sediment in water column when 	A	DW	N/A	JWS
										D	DW	MB	JWS
										A	DW	MB	JWS

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									<p>curtain is removed, or does curtain remain until sediment settles out?</p> <p>- What are sediment effects to bull trout? How will bubble curtains and sediment curtains limit the effects range from these measures?</p> <p>Pile driving discussion has been expanded USFWS 6/14 and 6/18 comments are addressed in Impact Avoidance and Minimization Measures section; Mitigation Measures section; Analysis of Effects to Bull Trout section/Direct Effects subsection and Indirect Effects subsection; Conclusions and Effect Determinations section; Appendices C, D, E, F, G, H.</p>				
8							Obtain results of IDEQ lakebed velocity study.	SS, USCG 7/20/18	<ul style="list-style-type: none"> 7/9/18 - Flow conditions/velocity study at Br. 3.9 location; no results yet (per J. Bergquist, IDEQ) 7/27/18 - Study had complications; no results yet (per J. Bergquist, IDEQ) 8/6/18 - Study done by Bob Steed; study had complications, no results yet (per T. Herron, IDEQ) No response from Bob Steed to inquiries. 	D	DW	MB	JWS
9							<p>Address removal of temporary bridge piles</p> <ul style="list-style-type: none"> Will it disturb sediment? Are there metals released from sediment? If yes, can piles be cut at sediment surface and remain in place? If not, will they be surrounded by a sediment curtain and for how long? How long does it take for sediment to settle out? Will disturbed metals be at a concentration that impacts biota? Explain how you know it does or does not. 	MW 6/18/18	BA addresses removal of temporary bridge piles in Impact Avoidance and Minimization section/Minimization Measures subsection; Federally Proposed and Listed Species and Designated Critical Habitat section/Columbia River DPS Bull Trout subsection & Bull Trout Designated CH subsection; Analysis of Effects to Bull Trout section/Direct Effects subsection & Effects to Bull Trout Designated Critical Habitat subsection; Conclusions and Effect Determinations section; Appendices G, H.	A	DW	MB	JWS
10							<p>Address cumulative impacts:</p> <ul style="list-style-type: none"> BT bycatch during IDFG/Avista lake trout suppression BT bycatch during recent IDFG/Avista walleye netting BT mortality at Avista trap & haul at CFR dams 	MW 6/14/18	<p>6/19/18 - DW discussed with MW: Get specifics and details re lake trout suppression and walleye netting w/ Matt Corsi, IDFG - details, implication/impact of their actions, long-term application, projected outcomes.</p> <p>6/19/18 & 6/27/18 - DW Contacted Avista & IDFG and obtained bycatch nos. and future plans.</p>	A	DW	MB	JWS

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									BA addresses in Cumulative Effects section.				
11							<p>BMPs</p> <ul style="list-style-type: none"> - <i>Where did BMPs come from?</i> - <i>How do you know that they are BMPs? Is there a national or industry database?</i> - <i>Cite the source and explain what the BMPs are and how they prevent effects to bull trout.</i> - <i>For example, BA states BMPS will be installed to avoid erosion from exposed soils. What are these measures? Who says they are BMPs? BA should state what these measures are, who developed them, and why they are accepted as BMPs.</i> 	MW 6/18/18	BMPs addressed and sources noted as applicable in Detailed Project Description-Construction Key Elements section; Impact Avoidance and Minimization Measures section/Minimization Measures subsection; Analysis of Effects to Bull Trout section/Direct Effects subsection, Bull Trout Designated Critical Habitat subsection, & Effects to Bull Trout Designated Critical Habitat subsection; Conclusions and Effect Determinations section/Bull Trout-Designated Critical Habitat subsection.	A	DW	MB	JWS
12							<p>See paragraph from current BA that highlights items that will slow down consultation if not appropriately addressed in revised BA if additional info was requested, or if into is not sufficient enough to provide consultation:</p> <ul style="list-style-type: none"> - Mention of "three separate studies of radio-tagged bull trout from 2005 to 2009 documented a few bull trout at or in close proximity to Br 3.9..." These are not referenced and should be, otherwise how does one know what studies they are, how many fish were tracked, etc. - Check logic and assumptions – in the Dupont, et al (2007) study researchers put radio transmitters in 6 fish. The BA paragraph states that, only a "few" bull trout were near the action area. If there were only a "few" tagged bull trout from the study that were in the action area, by inference they don't occupy the action area. This is an inaccurate portrayal when the adult population of bull trout LPO is estimated to be at 12,000. Check assertions, inferences, and logic in the next BA. - Check accuracy of info – this refers to issue of two migrations, sub-adult BT in lake all year, and misnaming of East "Fork" River reference in 2015 USFWS BO. 	MW 6/28/18	<p>This reference deleted in BA because studies were limited and/or could not be completely sourced.</p> <p>BA acknowledges presence of bull trout in action area and discusses their status in Federally Proposed and Listed Species and Designated Critical Habitat Section/Columbia River DPS Bull Trout subsection.</p> <p>Two BT migrations and sub-adult bull trout year-round presence are discussed, and correction of "East Fork River" to East River, are in in Federally Proposed and Listed Species and Designated Critical Habitat Section/Columbia River DPS Bull Trout subsection.</p>	B	DW	MB	JWS
										A	DW	MB	JWS
13							While the only listed species likely to be impacted by the project is bull trout, please retain section 2.1.1. Listed Species/Designated Critical Habitat in Action Area, and information that follows in BA. You will however, need to	MW 8/3/18	Information has been retained and expanded in Federally Proposed and Listed Species and Designated Critical Habitat section. MBTA and	A	DW	MB	JWS

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							determine effects under the Migratory Bird Treaty Act (MBTA) and Bald and Gold Eagle Protection Act (BGEPA) in your NEPA document		BGEPA have been addressed in the project EA (NEPA document).				
14							Re species/critical habitat PBFs in action area, I don't think the USFWS agreed that using TSS to tie to sediment levels in the action area was an appropriate approach, in so much as we agreed that BNSF could look at that as an option - it's your choice. Before you do, however, I recommend you consider TSS vs SCC: USGS determined that TSS used to quantify concentrations of suspended solid-phase material in surface water are "fundamentally unreliable for analysis of natural-water samples" (USGS, 2000).	MW 8/3/18	BNSF would use turbidity curtains and extraction BMP's to address potential sedimentation when impact driving piles for the permanent bridges and during vibratory pile placement and extraction for the temporary work bridges, where possible, considering water levels and use of bubble curtains. This is noted in BA in: Table 3; Minimization Measures subsection; Bull Trout Designated Critical Habitat subsection; Effects to Bull Trout Designated Critical Habitat subsection.	A	DW	MB	JWS
15							I'm also curious how tying current suspended sediment levels will provide any relevant data of heavy metals in sediments of the action area that could be disturbed by pile driving or pile extraction activities. Alternatively, consider that perhaps slow vibratory removal of the temporary piles results in sediments sloughing off at the mudline, which results in low levels of suspended sediment and contaminants; place clean sand in a ring around the pile to help prevent sediment suspension; use a sediment curtain during removal. If these mitigation measures are not an option, then perhaps cutting the temporary bridge piles off at the sediment surface and abandoning them in place will prevent sediment suspension. Whatever BNSF decides, support the decision with best available science.	MW 8/3/18	BNSF proposes to use slow vibratory removal of the temporary bridge piles and employ turbidity curtains. Bridge 3.9 turbidity curtains would be placed around each pile or bent, anchored to the lakebed for total water column seal, and tied off to withstand maximum current conditions. Since pile removal for Bridge 3.1 is proposed during winter drawdown/low water conditions, turbidity curtains would be employed around the piles or bents that are in water. (Placement of sand around the piles would be regulated as fill by the USACE and was not proposed in permit applications. BNSF and contractors determined that cutting off steel piles and abandoning in place is not feasible for economic, safety, and potential regulatory issues.) See BA Table 3, Minimization Measures subsection, Bull Trout Designated Critical Habitat subsection, and Effects to Bull Trout Designated Critical Habitat subsection.	A B	DW DW	MB MB	JWS JWS
16							Re proposed minimization measures: The FWS recommends that you include a comparison of in-situ hydroacoustic data that BNSF collected from driving 24-inch piles on Lake Pend Oreille to reference table data on 24-inch piles to help determine if the reference data is close to actual conditions; this is not to be considered as a surrogate for hydroacoustic analysis for the 36-inch piles. If the comparison of the hydroacoustic data from the 24-inch pile driving sound elevation levels (SEL) are not similar, it would be appropriate to measure SELs during the 36-inch pile installation to determine actual affects, and their extent.	MW 8/3/18	Hydroacoustic monitoring data (Miner 2008) was reviewed for comparison to assumptions in draft BA. Revised BA reduces expected attenuation from bubble curtain use to more conservative 3dB from 5dB based on 2008 study, and pile driving calculators and impact analysis revised accordingly. See Aquatic Impact Zone section, Analysis of Effects to Bull Trout section/Direct	A, B	DW	MB	JWS

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									Effect subsection, Figure 8, and Appendices D and E.				

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