INDEPENDENT REVIEW: TRANSPORTATION IMPACTS OF LOWER SNAKE RIVER DAM REMOVAL

2nd Quarterly Report
Joint Transportation Committee of the Washington State Legislature

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EXECUTIVE SUMMARY

The independent review of the WSDOT Transportation Impacts of Lower Snake River Dam Removal has resulted in the following key summary findings.

- The information flow and data sharing between the two teams continues to be excellent.
- Through regular meetings and email exchanges the JTC team has shared concerns about the grain transportation model construction and assumptions with the WSDOT team and the consultants have worked to address these concerns.
- The WSDOT team has addressed most of the modeling issues raised and is iterating towards development of a model that accurately reflects transportation movements throughout the region.
- The JTC team has convened monthly River Transportation Work Group meetings to collect feedback from vested stakeholders.
- Some of these stakeholders (ports and grain shippers) have expressed concerns that information they have provided hasn't been included into the modeling of current conditions or that not all nuances of their industries and the transportation system are taken into consideration.
- The JTC reviewed the current conditions report (now called the LSRD December 2024 Status Report) and offered feedback. That review is provided in the appendix.

INTRODUCTION

This report documents activities continuing throughout the last three months (September, October, November 2024) associated with the independent review being conducted by Freight Policy Transportation Institute at Washington State University for the Joint Transportation Committee. This review evaluates activities being undertaken by the collection of consulting firms (Jacobs Engineering, CPCS, & others) under the direction of the Washington State Department of Transportation (Jim Mahugh) for the Transportation Impacts of Lower Snake River Dam Removal Study. The review is segmented into three primary activities, including 1) the review of modeling activities by the WSDOT team 2) the stakeholder engagement component for both teams and 3) the reactions from the Current Conditions report (later named the LSRD December 2024 Status Report).

TRANSPORTATION MODELING ACTIVITIES

The two teams continued having bi-weekly meetings focused on the total logistics cost model for September-November. These meetings typically involved the WSDOT team first summarizing changes to the model since the prior meeting, based upon feedback they were receiving. The WSDOT team would usually forward the specific model code so that the JTC team could validate any changes or modifications. Much of these meetings involved getting on the same understanding regarding exactly where the model stood in terms of parameter, constraints, how it is solved, etc. This iterative process has ultimately led to significant improvements in model performance. The JTC team essentially evaluated the model in two ways: 1) evaluating whether the code is consistent with what the WSDOT has explained to us verbally and 2) whether the flows are consistent with our understanding of how products are moving across different modes, facilities and transportation infrastructure. The most recent model recommendations included the following suggested changes:

- Modify wheat volume growth rate to 2040 to something more realistic (around 8 or 9 percent).
- Apply volume constraints on upland grain elevators, consistent with feedback from River Transportation Working Group and grain stakeholders.
- Allow greater flexibility on river port elevators capacity and throughput volume increases, also consistent with stakeholder feedback.
- Increase alternative routing flexibility (which they did apply).
- The shuttle rail facility at Plymouth, while technically capable of originating grain, functionally doesn't given that barge possesses a significant cost advantage. So including it is an origination option may yield unrealistic flows.

The review of model outputs, in terms of grain flows on different modes appears close to what WSU has modeled in the past, as illustrated by the summation of ton-miles across truck, rail and barge between the WSDOT model and the WSU model.

	Tonmiles			
	WSDOT		WSU	
Truck	264,452,534	12%	210,889,351	10%
Rail	755,842,985	35%	818,854,333	39%
Barge	1,152,311,617	53%	1,086,083,464	51%
Total	2,172,607,136		2,115,827,148	

STAKEHOLDER ENGAGEMENT

The RTWG communication activities during this quarter have included monthly meetings, emails and conversations with concerned stakeholders who have reached out to the JTC team. Most of the earlier time period throughout the summer involved collection of data and compiling information regarding the specific logistics to be incorporated into the model being developed by the WSDOT team. That activity continues today, which will be represented by a model illustrating the region's freight movement and infrastructure condition needed to support this unique logistics supply chain.

RTWG stakeholders (most of whom are also part of the WSDOT technical advisory committee) have been engaged by the WSDOT team to provide data and logistics assumptions which informs the modeling process. The complexity of the model design has resulted in a number of delays and rescheduling of RTWG communication meetings. As a result, there is some erosion of stakeholder confidence in the process, and we are making our best efforts to keep the stakeholders engaged.

Over the summer names were added to the RTWG distribution list and efforts to increase representation and communication with the fishing and cruise industry as well as the railroads and tribal nations were undertaken. Our attendance during monthly calls varies based upon the agenda topics. Our call participation is generally between 20-30 per call, which represents a high participation of key ag and marine stakeholders.

The website designed to capture RTWG comments and contacts has not been extensively used but individual call volumes have increased due to mounting concerns over the delay in the model development. It is likely that this is due to the complexity of the topics, and issues the stakeholders have. Concerned stakeholders seem to have multiple topics and want to be sure their message is heard. The two areas of greatest concern include 1) will the modelers get it right and 2) without modeling progress updates showing allocation and distribution, stakeholder confidence in the process is waning.

During ongoing consultations, it was identified that export marine terminals play a key role in global trade and logistics efficiencies for regional freight stakeholders. To address this gap additional interviews were completed to ensure these important nodes are included. Short Line Railroads are making an effort to encourage Class 1 carriers to participate in RTWG meetings. Additional transload service representatives and Class 1 railroad contacts have been added to the RTWG distribution list.

A key stakeholder noted that delays in the modeling process are concerning and may result in a reduced level of stakeholder engagement if deliverables continue to be delayed.

The WSDOT Interim Report was reviewed, and revisions were recommended to tailor the document to key areas of interest for the stakeholders of this important transportation modeling effort.

INDEPENDENT REVIEW: JOINT TRANSPORTATION COMMISSION

Review of WSDOT Current Conditions Report

Study Completed by:

Jacobs Engineering and CPCS
For
Washington State Department of Transportation

Reviewed by:

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November 18, 2024

1. REPORT ORGANIZATION

The WSU Team was provided the Lower Snake River Dams Transportation Study: Current Conditions Report on November 12th, 2024 from Jim Mahugh at WSDOT. Jim requested that our review of this report be completed by November 19th, 2024 and returned. Two copies of that report will be returned with comments/edits from Libby Ogard and Eric Jessup, each of whom provided review comments.

Overall, the report doesn't achieve what the review team understood was the purpose of the current conditions report, namely documenting how the system is currently being utilized by Snake River navigation stakeholders (grain, fertilizer and wood) across the multiple modes of transportation (barge, rail and highway). The presentation of aggregate flows in the three maps at the end the report, with almost no discussion or evaluation is confusing, given that so much depends upon those distribution of current conditions flows across the transportation system.

The organization of the report could be improved significantly. The introduction doesn't fully set the stage for why this study is being conducted and the specific scope being established by the legislature. This would help mitigate questions/criticism regarding items omitted in the analysis which were outside the scope. Additionally, the objective of the report isn't clearly explained. The one sentence objective weakly claims to explain existing conditions for barge, rail and truck and work to date on the transportation model. But the report offers no explanation or discussion of the transportation model which generates the map/flows at the very end of the report. Those maps are the primary products of the existing conditions report, yet no where in the report is there any discussion/explanation regarding how those are created, reliability of data/information utilized, sensitivity to external factors and others.

The report could be better organized by separating out the explanation regarding the industries dependent upon multimodal transportation (grain, fertilizer and wood), up front and offering a more through description of those industries. Currently, most of that industry description is included within the Existing Conditions for Barge traffic, yet each of those industries depend on all modes, not just barge transportation. The industry descriptions that are offered are very simplistic and don't reflect the actual dependency of each industry to multimodal transportation services, or how they are likely to be impacted should one option be eliminated. If that detailed industry information is pulled up front, an additional section could be added within each industry summary that explains how the consulting team developed a model to allocate flows onto each component of the multimodal transportation system. This explanation could be offered in layman's terms (not mathematical or model code), so that the reader may understand everything that went into building that existing, baseline flow for each industry. It was our understanding that was the primary purpose of the interim report (Current Conditions Report). Asking the reader to trust that those flows were done well is a big ask. But ignoring any discussion/explanation and just offering three maps at the end is very confusing.

Also, the three different existing conditions sections could be better explained and allow the flows pertinent for each to be more finely discussed. The maps for flows at the end of the report aggregate across all modes, making any analysis within any one mode difficult. If these were separate within each industry, readers would be able to draw more understanding about the relationship between/across modes for each.

2. EXISTING CONDITIONS BY MODE

The WSU team believes the each of the three existing conditions sections by mode could be considerably improved. Below are comments and suggestions for each.

BARGE TRAFFIC:

Most of the information provided in this section is general/descriptive regarding the grain, fertilizer and wood supply-chains. There is very little information specific to river navigation. This seems out of place, given that each of those industries rely upon all transportation. Thus, we recommend separating that discussion up front, as mentioned above. What would be very useful is more data/discussion regarding the Columbia/Snake River navigation, operating attributes/characteristics, funding, maintenance, serviceability, necessary investments, companies offering services, rates/relative to operating cost, and how they are determined, etc. There is practically no information or discussion of these attributes of that transportation system, which is fundamental to understanding why each of those industries depend upon the service. Once that is provided, then the river volumes/flows from each industry can be displayed and discussed in more granular detail, particularly relative to where each of them accesses the river and by different degrees. The reader then has a solid understanding of which sections of the river are important for the different industries and better confidence that the current condition flows reflect actual conditions. At a minimum, we would have expected to have more detail/discussion of volumes by pool and from where that volume is originating by pool or location.

RAIL TRAFFIC:

This information appears to have been primarily sourced from the existing Washington State Freight Rail plan. There is nothing wrong with providing this information, but that should be a starting point as a basis for then explaining how those industries included (grain, fertilizer and wood) compete for rail services in the region, and particularly as it relates to the alternative (river navigation). Additionally, for the state-owned (public) component of the rail infrastructure, more detailed data on how that system is maintained (funded), maintenance costs, track condition, needed investments, etc. should have been provided.

The rail volumes provided (trains per day and capacity estimates) are aggregate volumes, predominantly for rail freight neither originating nor destined to the region of interest (Snake River draw area). The rail traffic section should include rail traffic specific to the study area, for those products evaluated. The data/information collected as part of this effort should have identified these attributes to allow this discussion/analysis, including number of trains (per day or week or month) moving grain, fertilizer and wood on different portions of the rail network and how that volume compares to the capacity availability relative to other commodities being moved on the rail network (both at the Class I and shortline network). Both historical and projected as part of the current conditions flows, so that readers would be able to understand which facilities are likely to be impacted and how.

ROADWAY TRAFFIC:

The roadway traffic existing conditions section is similar to that provided by rail, meaning that there is general traffic data provided, but not specific to the study scope. Figure 22 displays roadway or bridges in need of repair or replacement, but no discussion about how this may impact existing transportation of grain, fertilizer or wood products, route choice, loading capacity, cost impacts or others. The highway traffic volume maps, while certainly useful for identifying areas with more or less traffic isn't particularly helpful for making the connection between all roadway traffic and impacted industries (in this case, grain, fertilizer and wood). Even the trucking volumes are in aggregate, across all truck types. Since the products that utilize river system aren't separated from total truck volumes, identifying potential bottlenecks or congestion areas isn't completed. The evaluation of roadway congestion analysis is for all traffic and the three locations identified within Table 2 as being overcapacity is overwhelmingly due to non-truck traffic. But that non-truck traffic will exist regardless and doesn't appear to be incorporated into the transportation model route/cost assignment process.

It was our understanding that describing the existing conditions of roadway traffic was for those products modeled, including grain, fertilizer and wood. The total logistics cost model does assign trucks to the roadway, and by providing that information on current/existing flows, readers would then be able to understand how traffic from movement of these products compares/competes for space being utilized by other travelers and freight transportation movements. But there is none of this information/data provided, nor any analysis discussed. Ideally, this could be provided in very concentrated detail, by facility type (shuttle rail or river port terminal), and that would allow for revealing where potential or likely congestion problems could arise with subsequent changes.