

Tailored Impact Statement Guidelines - Disposition Table

Response requested by: **April 7, 2021**

Department/Agency: Fisheries and Oceans Canada	
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Section / Page	Issue (i.e. rationale, including if critical or recommended, project-specific or general)	Suggested edit (show original text with Track Changes)
3.2, page 5	Recommended, general: Suggested language is more technically applicable to the subject matter.	<ul style="list-style-type: none"> all permanent, and intermittent, or ephemeral temporary waterbodies and watersheds potentially affected by the project;
7.1, page 17	Recommended, general: It is common to see baseline sampling programs that are not well linked to the ability to verify predictions made in the effects assessment or post-impact data collection (ie monitoring program). It is critical that proponents are aware from the start of project planning that these links should be considered before deciding on data collection programs or modelling approaches.	<ul style="list-style-type: none"> <u>clearly describe the study design, including how use of existing data, and data collected for the project will inform the effects assessment and monitoring programs;</u> include baseline data collected in a way that makes analyses, extrapolations and reliable predictions possible. The collated data should make it possible to carry out analyses to estimate pre-project baseline conditions, predict impacts, assess and compare post-project conditions, all at the scale of the project, and the local and regional assessment areas; provide detailed descriptions of data sources and data collection methods including sampling, survey and research protocols, modeling methods, error estimates, and any assumptions or biases; <u>where applicable, provide rationale for the baseline condition data collection sampling program and describe how it will enable comparison to post-impact conditions. This may include discussion on whether data can be collected in an equivalent manner, discussion on natural variability and ability to detect change for a given variable, power analyses, plans for ongoing data collection, etc.;</u>

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7.4, page 22	<p>Recommended, general: Effects assessment criteria should take into consideration the biology of the VC when defining the criteria.</p> <p>The reason that I think this needs to be stressed is that I have seen effects assessment criteria where the scale of the operation of the project is used, but the life history of the animals that could be impacted could see meaningful change in much shorter time periods. Sometimes by zooming out too far temporally, the impacts on the local scale are diluted too much.</p>	<p>The description of the effect can use either qualitative or quantitative criteria, taking into account any important contextual factors. In the case of quantitative predictions derived from models, the Impact Statement must detail the model assumptions, parameters, the quality of the data and the degree of certainty of the predictions obtained. For other effects, it may be more appropriate to use other criteria, such as the nature of the effects, directionality, causation and probability. The effects assessment should also set out the probability or likelihood of that effect occurring and describe the degree of scientific uncertainty related to the data, information, and methods used. The degree of confidence must be discussed in the analyses. <u>Depending on the VC, it may be necessary to define the effects criteria based on the biological context (ex: duration may be defined based on life history cycles or migration timing).</u></p>
	<p>Note, all of DFOs comments on section 8.5 were made in relation to the version of the section that was rearranged by NRCan staff during the public comment period.</p>	<ul style="list-style-type: none"> •
8.5.1, page 33	<p>Critical, general: Suggested additional bullet - There are many ways in which data required to characterize surface water and groundwater must be used to inform the effects assessment for other valued components (ex: fish, fish habitat, human health). The proponent should be mindful of these requirements when they decide on the approaches taken. How the data collection from this section will be used in other assessments should be elucidated in a study design description, recommended in section 7.1.</p>	<ul style="list-style-type: none"> • <u>ensure that baseline data is gathered, and modelling is developed, at a scale and resolution that allows for application of results to be applied to assessments of other valued components associated with the Project (including fish and fish habitat, and human health);</u>
8.5.1, page 33	<p>Critical, project-specific:</p> <p>The focus on crossings is from a previous pipeline project. Further, the request to show project components (including crossings) belongs in other sections; this requirement is reflected in both 8.5.2 and 8.7.3.</p>	<ul style="list-style-type: none"> • describe and illustrate on one or more topographic maps, at appropriate scales, the drainage basins in relation to key project components. On the map(s), identify all waterbodies and watercourses, including intermittent streams, wetlands, watershed and sub-watershed boundaries, <u>and direction of flow;</u> and <u>indicate the intended locations of crossings of water bodies or watercourses, if applicable, and any watercourse diversions;</u>

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<p>8.5.1, page 33-34</p>	<p>Critical, project-specific: The classification by stream width is not biologically relevant, and excludes lotic (not flowing) aquatic components. This approach, and wording related to crossings is specific to a pipeline installation project. I have provided more applicable language here.</p> <p>This paragraph was repeated in the fish/habitat section as well but I suggest removing it from there (see below).</p>	<ul style="list-style-type: none"> • <u>indicate the type of watercourse impacted (e.g. lotic or lentic system, lake, river, pond, temporary or permanent stream); the size of the water bodies and watercourses, the width at the ordinary high water mark (OHWM) based on the following classes: large stream (over 20m in width), medium stream (between 5 and 20m in width), small permanent and intermittent streams less than 5m in width);</u> • <u>provide a list of all waterbodies and watercourses (permanent, intermittent, and ephemeral) that may be directly or indirectly affected by the project. Provide a table that groups waterbodies and watercourses by sub-watershed and provide the following information about each:</u> <ul style="list-style-type: none"> ○ <u>the type of waterbody or watercourse (e.g. lotic or lentic system, lake, river, pond, ephemeral, intermittent or permanent stream);</u> ○ <u>the size of the waterbodies and watercourses as applicable: the width at the ordinary high water mark (OHWM), linear length, area.</u>
<p>8.5.1, page 34</p>	<p>Recommendation, general: Previous bullet already asks for area of waterbodies.</p>	<ul style="list-style-type: none"> • provide for each water body affected by the project, <u>the total surface area</u>, bathymetry, maximum and mean depths, and sediments composition (e.g. particle size analysis, sediment quality, total organic carbon);
<p>8.5.2</p>	<p>Critical, general: Suggested additional bullet. There are many ways in which data required to characterize changes to surface water and groundwater must be used to inform the effects assessment for other valued components (ex: fish, fish habitat, human health). The proponent should be mindful of these requirements when they decide on the approaches taken to assess change.</p>	<ul style="list-style-type: none"> • <u>ensure that changes to surface and groundwater are characterized, and modelling is developed, at a scale and resolution that allows for the application of the information to the assessment of other valued components associated with the Project (including fish and fish habitat, and human health).</u>
<p>8.5.2, page 37</p>	<p>Suggested, general: (This comment is based on preliminary changes to the section made by NRCan): Changes to geomorphology are primarily applicable to impacts to fish habitat, and that word should be removed and from this bullet to retain focus on water quality from sedimentation. Suggested expansion on describing changes to geomorphology are below.</p>	<ul style="list-style-type: none"> • describe changes to <u>geomorphology</u> and suspended solid concentrations in surface waters due to changes in surface flows and potential changes to surface water quality due to any project-derived erosion and sedimentation; including alteration of the Beaver River and Poplar Creek watersheds

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8.5.3, page 40	Recommended, general: Impacts to flow are common with large scale impacts to watersheds. Supplementation is a possible mitigation measure. This approach, however, has questions related to long term feasibility which should be discussed if proposed.	<u>If flow supplementation is an anticipated mitigation measure, discuss the feasibility of long term supplementation and the account for impacts post-closure when supplementation will no longer be feasible;</u>
8.7	Suggested edits for section 8.7 are provided in the form of traced changes within the document, as edits were too extensive to feasibly track within the table format.	

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