

## **Moderate–High Habitat Suitability Watercourses**

## Moderate–High Habitat Suitability Watercourses

## Before You Begin

This workbook and associated worksheets are provided to assist with compiling information to support project proposals for submission to the Yukon Environmental and the Socio-economic Assessment Board (YESAB) and the Yukon Water Board (YWB). Once completed, the worksheets must be submitted for review as a component of both the YESAB and Yukon Water Board applications.

The guidance provided focuses on the requirements of the *Authorizations for Works or Undertakings affecting Fish Habitat for Specified Streams in the Yukon Territory* (Federal Fisheries Act) for watersheds in the Yukon (herein referred to as Watershed Authorizations). Please note that this workbook and associated worksheets may undergo revisions in the future, and users are encouraged to ensure that they use the current version.

**In order to achieve compliance with the Watershed Authorizations, the placer mining proposal must meet the requirements outlined in this workbook for the watershed type and specific habitat suitability type at the location where the activities are to occur (see Yukon Placer Fish Habitat Suitability Maps).**

In addition to this workbook and worksheets, the following documents provide the required information to support the development and submission of proposals for placer mining activities. All supporting documents are available online through the Yukon Placer Secretariat web page, [www.yukonplacersetariat.ca/howto\\_prepare\\_project\\_proposal.html](http://www.yukonplacersetariat.ca/howto_prepare_project_proposal.html) or through the web addresses given for the specific documents.

1. ***Authorization for Works or Undertakings affecting Fish Habitat for Specified Streams in the Yukon Territory***  
[www.yukonplacersetariat.ca/placer\\_authorizations.html](http://www.yukonplacersetariat.ca/placer_authorizations.html) – Provides the legal authority, with respect to placer mining, to carry on a work, undertaking or activity that results in the permanent alteration and destruction of fish habitat. Also specifies sediment discharge standards for placer mine effluent and the sensitivity category of the watershed (i.e. Category A or B). Please note that the death of fish is not authorized.
2. **Yukon Placer Fish Habitat Suitability Maps**  
[www.yukonplacersetariat.ca/maps.html](http://www.yukonplacersetariat.ca/maps.html) – Identifies the watershed sensitivity and habitat suitability of the watercourse where placer mining activities are proposed to occur.
3. **Guidebook of Mitigation Measures for Placer Mining in the Yukon**  
[www.yukonplacersetariat.ca/infocentre.html](http://www.yukonplacersetariat.ca/infocentre.html) – Provides technical information related to best management practices, mitigation measures, and design considerations to achieve compliance with the Watershed Authorizations and to assist with proposal development.

**Note: Complete and submit only the worksheets that are relevant to your operation.**

**Note: There are no Watershed Authorizations in place for the Liard and Alsek watersheds. Applications for review, forms and process to apply for a placer mine in the Liard or Alsek watershed can be obtained from the Yukon Placer Secretariat, contact information can be found online at, [www.yukonplacersetariat.ca/index.html](http://www.yukonplacersetariat.ca/index.html).**

For assistance completing the worksheets please contact the Yukon Placer Secretariat (contact information is available at, [www.yukonplacersetariat.ca/index.html](http://www.yukonplacersetariat.ca/index.html)) or the Yukon Government Client Services & Inspections office in your mining district (contact information is available at, [www.emr.gov.yk.ca/cmi/cmi\\_district\\_offices.html](http://www.emr.gov.yk.ca/cmi/cmi_district_offices.html)).

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### If Your Project Does Not Comply With The Requirements

Placer mine operators are encouraged to design proposals that comply with the requirements described in this workbook. However, if the proposal is not able to achieve these requirements and the operator would like to proceed with the regulatory review process, an application for site-specific review should be submitted to Fisheries and Oceans Canada (DFO) for consideration **prior to the submission of the proposal to the YESAB and the YWB.**

When a proposal is submitted for site-specific review, DFO will review the information to determine whether a site-specific authorization is required. In some cases, DFO may recommend measures to avoid or mitigate the harm to fish and fish habitat to allow the application to proceed under the Watershed Authorization.

Applications for site-specific review, forms and process to apply can be obtained from the Yukon Placer Secretariat, contact information can be found online at, [www.yukonplacerecretariat.ca/index.html](http://www.yukonplacerecretariat.ca/index.html). Should it be determined that a site-specific authorization is required, a more detailed application, including a fish habitat offsetting plan and a letter of credit, will have to be submitted to DFO. Information on the site-specific authorization application process, offsetting plans, and letters of credit can be found on DFO's Projects Near Water website, [www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/application-eng.html](http://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/application-eng.html).

## Fish Habitat Design, Operation and Reclamation Requirements for Moderate–High Habitat Suitability Watercourses

Moderate–High habitat suitability watercourses are defined as watercourses that are highly suitable for rearing juvenile Chinook salmon. Typically these watercourses provide locally desirable conditions for feeding, growth and development. These watercourses also provide habitats that are highly suitable for a broad range of adult and juvenile resident fish species.

Please use the following instructions and information to complete the worksheets relevant to your proposal (located in Appendix A to H). The completed worksheets will be submitted as part of your project description to the Yukon Environmental and Socio Economic Assessment Board (YESAB) and your application to the Yukon Water Board (YWB)

### SUMMARY OF GENERAL RESTRICTIONS IN MODERATE–HIGH HABITAT SUITABILITY WATERCOURSES

Activity Type / Operation	Restrictions in Moderate–High Habitat Suitability Watercourses
Riparian Zone	Designated Riparian Zone is 20 metres from the high water mark. Conditions and reclamation requirements apply to clearing surface vegetation within the Designated Riparian Zone. Sub-surface works not authorized.
Fords	Construction of new Fords not authorized. Mitigative measures should be applied to use of existing Fords.
Diversion Channels	Construction of Seasonal and Temporary diversion channels not authorized. Construction of Permanent diversion channels subject to design restrictions and construction and reclamation requirements.
In-stream Works	In-stream settling facilities, in-stream reservoirs, stream as a conduit not authorized.

**Note:** The table above summarizes those placer mining activities which are not authorized by the Watershed Authorizations and will require a site-specific review (see “If your project does not comply with the requirements” section at the beginning of this document).

To determine how to proceed, please answer the following questions regarding a work, undertaking or activity in or around Moderate–High habitat suitability watercourses.

**Do you propose to undertake placer mining activities in, or within, 30 m of a watercourse? Activities may include discharging effluent, constructing stream crossings, clearing riparian vegetation, constructing channel diversions, or withdrawing water.**

**NO:** No further review pursuant to the *Fisheries Act* is required.

**YES:** Proceed to Step A, Project Information.

## Moderate–High Habitat Suitability Watercourses

### A. Project Information

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The first step in compiling a project proposal that involves activities proposed to occur in or around fish habitat areas is the completion of the Project Location Worksheet (Appendix A).

**Note: The Project Location Worksheet (Appendix A) is required for all applications.**

- A1. On the Project Location Worksheet enter the stream name, the watershed name (as per Yukon Placer Fish Habitat Suitability Maps), identify the watershed sensitivity and habitat suitability classification for the reaches you proposed to work in, if any reaches are designated as “previous/prior development”, a short description of the location, the proposed duration of activities and a copy of a map of the specific location of the site.

**Does the Previous Development designation apply to your project?**

**NO:** Proceed to the next question.

**YES:** See below.

#### Historical Development

If your project falls within a “Historical Development” zone, the requirements for settling pond discharge, riparian zones, seasonal or temporary diversions, watercourse crossings, water acquisition and in-stream works that normally apply to Moderate–Moderate habitat suitability watercourses will apply to your operation.

**Note: Permanent diversion channels and all reclamation work must conform to the requirements for Moderate–High habitat suitability watercourses.**

#### Current Development or Extensive Development

If your project falls within a “Current Development” or “Extensive Development” zone, the requirements for settling pond discharge, riparian zones, seasonal or temporary diversions, watercourse crossings, water acquisition and in-stream works that normally apply to Moderate–Low habitat suitability watercourses will apply to your operation.

**Note: Permanent diversion channels and all reclamation work must conform to the requirements for Moderate–High habitat suitability watercourses.**

- A2. Based on the previous development type, please select the appropriate Operation and Restoration standard on the Project Location Worksheet.

Once the sections noted above are completed on the Project Location Worksheet, proceed to the next question.

**Do you propose to discharge effluent from your mine site?**

**NO:** Proceed to Step C, Riparian Zones.

**YES:** Proceed to Step B, Settling Pond Discharge.

### B. Settling Pond Discharge (effluent concentration)

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Point source sediment discharges from gold recovery processes are typically managed through the use of settling facilities. The action level approach is a key element of the risk-based approach to sediment management for Yukon placer mining. For more information on the action level approach or settling pond design, operation, recirculation systems, and settling pond reclamation refer to the Guidebook.

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Water quality objectives and sediment discharge standards for settling ponds in Moderate–High habitat suitability watercourses are identified in the Watershed Authorizations for the specific watershed you propose to work in. Please ensure to verify your specific discharge standard in the respective watershed you plan to work in (specifically if any exemptions exist) prior to proceeding with your application.

### B1. Record the Design Target, Action Level and Compliance Level on the Project Location Worksheet (Appendix A).

Once the effluent discharge standards are recorded on the Project Location Worksheet proceed to the next question.

**Do you propose to construct works other than diversion channels within the Riparian Zone (see Step C for the definition of the Riparian Zone) – this could include stripping, construction of reservoirs, construction of settling ponds, etc.?**

**NO:** Proceed to Step D, Diversion Channels

**YES:** Proceed to Step C, Riparian Zone

## C. Riparian Zones

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The Riparian Zone is defined as the portion of the stream bank (either vegetated or not) immediately adjacent to the stream channel.

The designated Riparian Zone in Moderate–High habitat suitability watercourses is **20 metres**, measured from the ordinary high water mark on each bank of the watercourse and following the pattern/morphology of the channel.

The Riparian Zone designation applies to original (un-modified) channels, previously reclaimed channels and Permanent Diversion Channels.

Activities proposed within the Riparian Zone must comply with the surface vegetation clearing provisions outlined below. The only other activity permitted within the Riparian Zone is the clearing of surface vegetation within a corridor to provide access to the stream (typically for water acquisition purposes). The maximum width of the corridor is to be no more than **3 metres**. Riparian Zones must be staked out by the operator prior to development.

**Do you propose clearing of surface vegetation or subsurface works in the Riparian Zone? (this could include stripping, construction of reservoirs, construction of settling ponds, etc.)**

**NO:** Proceed to Step D, Diversion Channels.

**YES:** Proceed to next question.

**Do you propose to construct a new stream crossing (Ford)?**

**NO:** Proceed to next question.

**YES:** Review Step E, Watercourse Crossings, prior to proceeding to next question.

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### Do you propose to clear surface vegetation only?

**NO:** The proposal includes both clearing of surface vegetation and subsurface works - please refer to “If your project does not comply with the requirements” section at the beginning of this document. Proceed to next question.

**YES:** Proceed to Step C1, Surface Vegetation Clearing.

### C1. Surface Vegetation Clearing

If surface vegetation clearing is proposed within the Riparian Zone, refer to the conditions identified in the table below and use the information to fill out the Riparian Zone / Bank Modification Worksheet (Appendix B).

Under Vegetation Clearing record the following:

- Record the Habitat Suitability Type where vegetation clearing in the Riparian Zone is proposed.
- Record the Designated Riparian Zone (see the beginning of this section).
- Record the Proposed Duration of Vegetation Clearing prior to reclamation (cannot exceed restriction in table below).
- Record the Total Length of Proposed Vegetation Clearing in the Riparian Zone (cannot exceed restriction in table below).
- Record the Width of Proposed Vegetation Clearing in the Riparian Zone.
- From the table below record the Minimum Vegetation Setback from Stream.
- Record the width of the Proposed Vegetation Setback from Stream (cannot be less than the minimum setback distance).
- Record the Required Reclamation Works for Vegetation (see table below).
- In space provided on Appendix B, draw a diagram of the proposed location where vegetation clearing in the Riparian Zone is planned (include north arrow, flow direction and use symbols identified on worksheet to compose your diagram).

### Conditions and Reclamation Required When Proposing Surface Vegetation Clearing in Riparian Zones in Moderate–High Habitat Suitability Watercourses

Design Component (Vegetation Clearing)	Requirement
Minimum Vegetated Setback from Stream	5.0 metres
Maximum Length of Clearing	100 metres
Minimum Space Between Cleared Areas	500 metres
Maximum Duration Prior to Reclamation	5 years
Reclamation Requirement (surface)	Full topsoil coverage
Reclamation Requirement (vegetation)	30% live staking

### Do you propose a Seasonal, Temporary or Permanent relocation of a channel?

**NO:** Proceed to step E, Watercourse Crossings.

**YES:** Proceed to step D, Diversion Channels.



## D. Diversion Channels

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Design and construction of a diversion channel is required if the proposal includes Seasonal, Temporary or Permanent relocation of a watercourse or channel. It is the responsibility of the applicant to ensure that when transferring water into a diversion channel, it is completed in such a manner as to avoid stranding of fish in the dewatered channel. If it is likely that stranding of fish will occur in a dewatered channel, the applicant should retain a qualified professional to conduct a fish salvage prior to dewatering the channel.

Provided the diversion channel design proposal meets the conditions identified in the following sections, the diversion channel may be constructed pursuant to the respective Watershed Authorization. Specific criteria related to channel design and restoration requirements are described in the following sections while general information regarding design, construction and reclamation of diversion channels is provided in the Guidebook.

If you are unable to achieve the requirements described in the following sections please see “If your project does not comply with the requirements” section at the beginning of this document.

### D1. Original Channel and Site Parameters Worksheet

On the Original Channel and Site Parameters Worksheet (Appendix C), record the information for the original channel (pre-diversion conditions). Refer to the Guidebook reference sections identified on the worksheet to assist you with the data collection and entry process.

**Note:** The above worksheet must be completed prior to proceeding with the following steps.

**Do you propose a Seasonal relocation of a channel? (A Seasonal Channel is in place for a period of less than one year and is replaced before winter).**

**NO:** Proceed to next question.

**YES:** Not permitted in Moderate–High habitat suitability watercourses. Proceed to next question.

**Do you propose a Temporary relocation of a channel? (A Temporary Channel is in place for a period of less than five years).**

**NO:** Proceed to next question.

**YES:** Not permitted in Moderate–High habitat suitability watercourses. Proceed to next question.

**Do you propose a Permanent relocation of a channel? (A Permanent Channel is in place for a period of five years or more).**

**NO:** Proceed to next question.

**YES:** Proceed to Step D4, Permanent Diversion Channels.

### D4. Permanent Diversion Channels

Permanent diversion channels are defined as a constructed channel that will convey stream flow for a period of over five years. All permanent diversion channels must include provisions for construction of fish habitat features. Refer to the channel design considerations in the Guidebook for more information on permanent diversion channels. You will need to complete and submit the Channel Design Flood Estimate Worksheet

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(Appendix D3), the Channel Design Method Worksheet (Appendix E) and the Fish Habitat Features Worksheet (Appendix F) for your Permanent Diversion Channel to the YESAB and the YWB.

Flood design interval for Permanent Diversion Channels in Moderate–High habitat suitability is **1:50**.

**D4a.** On the Channel Design Flood Estimate Worksheet (Appendix D3), enter the flood design interval (line 1).

**D4b.** On the Channel Design Flood Estimate Worksheet (Appendix D3), enter the information required and complete the calculations. Refer to the Guidebook reference sections identified on the worksheet to assist with the data collection, entry and calculation process. Please ensure to include the completed Channel Design Flood Estimate Worksheet with your submission to the YESAB and the YWB.

**Note:** The Channel Design Flood Estimate Worksheet must be completed prior to proceeding with the following steps.

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### D4c. Selecting a Channel Design Method

The selection of a channel design method for channel construction is dependent upon the site geography, channel conditions and channel type. The design method selected is used to define the diversion channel dimensions and drop structure requirements.

The Channel Design Method table provides a list of recommendations to guide the selection of a suitable channel design method.

Design Method	Parameter	Condition
Channel Replication	Channel Duration	Seasonal or Temporary or Permanent
	Channel Gradient	> 2%
	Channel Material in Diversion	Similar or Coarser than Original (not in seasonal channel)
	Diversion Channel Length	Any
	Floodplain	Limited to none
	Valley Type	Incised or entrenched
	Channel Stability	Stable (if original channel is diversion it must have been in place for >10 Years)
<b>Note: Optional when channel gradient is &lt; 2%</b>		
Floodplain Design	Channel Duration	Permanent
	Channel Gradient	< 2%
	Channel Material in Diversion	All
	Diversion Channel Length	At least 2/3 length of original channel
	Floodplain	Narrow to Wide
	Valley Type	Narrow to Wide
	Channel Stability	Any
<b>Note: Can be used in areas with no floodplain when relocation site has space to support floodplain</b>		
Regime Channel	Channel Duration	Seasonal or Temporary or Permanent
	Channel Gradient	All
	Channel Material in Diversion	Similar or Coarser than Original (not in seasonal channel)
	Diversion Channel Length	Any
	Floodplain	Narrow to Wide
	Valley Type	Narrow to Wide
	Channel Stability	Any
<b>Note: Use when site data is insufficient to use other methods</b>		

Select a Channel Design Method based on the criteria listed in the table above.

In the following steps you will need to use a specific worksheet for the Channel Design Method you have selected: Channel Replication Worksheet (Appendix E1); Floodplain

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Design Worksheet (Appendix E2); or Regime Channel Worksheet (Appendix E3). Do not proceed until you have selected a Channel Design Method.

**Note:** Each diversion channel planned requires only one channel design method.

**Note:** The Channel Design Flood Estimate Worksheet must be completed prior to proceeding with the following sections as it contains the information necessary to complete the Channel Design Method Worksheet.

D4d. On the Channel Design Method Worksheet you have selected, enter the information required and complete the design calculations. Refer to the Guidebook reference sections identified on the worksheets to assist with the data collection, entry and calculation process. Please ensure to include the completed Channel Design Method Worksheet with your submission to the YESAB and the YWB.

The following tables identify design restrictions and fish habitat reclamation requirements for Permanent Diversion Channels which must be incorporated to be in compliance with the respective Watershed Authorization.

### Design Restrictions for Permanent Diversion Channels

Design Component (Permanent Diversion)	Criteria
Overall Length of Diversion Channel	< 500 metres
Conveyance (flood design) Capacity	1:50
Channel Design	As per channel design worksheets
Fish Habitat Features	As per reclamation tables

**Note:** In the next step you will need to refer to the Original Channel and Site Parameters Worksheet (Appendix C) in order to select the appropriate category of the original channel type (Pool-riffle, Dune-riffle, Plane-bed, Step-pool or Cascade Channel). For more information on channel types, see the Guidebook.

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## CONSTRUCTION AND RECLAMATION REQUIREMENTS FOR PERMANENT DIVERSION CHANNELS

Pool-riffle / Dune-riffle and Plane-bed Channel Type	
Fish Habitat Features	Spacing Requirements (multiply the number in this column by the width of the channel in metres)
Rock Island (channel width < 5 metres)	5
Boulder Grouping (channel width > 5 metres)	3
Anchored or Buried Trees	10
Top Soil Spreading	Continuous (both banks)
Willow Staking	Continuous (both banks)
Transplanting	At sharp bends
Rip-rap	Based on channel design method

**Note:** Topsoil spreading is to occur for the full width of the Riparian Zone (20 metres), willow planting is to be completed to a width of 5 metres from the bank, willow planting / transplanting is not required for the floodplain design method.

## CONSTRUCTION AND RECLAMATION REQUIREMENTS FOR PERMANENT DIVERSION CHANNELS

Step-pool and Cascade Channel Type	
Fish Habitat Features	Spacing Requirements (multiply the number in this column by the width of the channel in metres)
Rock Island (channel width < 5 metres)	4
Boulder Grouping (channel width > 5 metres)	3
Anchored or Buried Trees	8
Top Soil Spreading	Continuous (both banks)
Willow Staking	Continuous (both banks)
Transplanting	At sharp bends only
Rip-rap	Based on channel design method

**Note:** Topsoil spreading is to occur for the full width of the Riparian Zone (20 metres), willow planting is to be completed to a width of 5 metres from the bank, willow staking / transplanting is not required for the floodplain design method.

D4e. Use the information above to complete the Fish Habitat Feature Worksheet (Appendix F) to identify the type, spacing and relative location of the fish habitat features. Draw a diagram of the diversion channel (include north arrow, flow direction and reclaimed Riparian Zone) (use symbols identified on worksheet to compose your diagram).

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Once the Fish Habitat Feature Worksheet is completed, proceed to the next question.

### Do you propose to use an Existing Ford?

**NO:** Proceed to next question.

**YES:** Proceed to Step E, Watercourse Crossings, then E1, Use of Existing Ford.

### Do you propose to construct a New Ford?

**NO:** Proceed to Step F, Water Acquisition.

**YES:** Not authorized by the Watershed Authorizations, see “if your project does not comply with requirements “ section at the beginning of this document.

## E. Watercourse Crossings (Fords)

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Fording is defined as the crossing of creeks, streams and / or rivers at locations where a bridge, causeway or elevated embankment does not exist or is not utilized by a vehicle or equipment. Fording typically involves driving directly through a watercourse, across the banks and bed. In some instances, Fording locations (Fords) have been “improved” or constructed through watercourses by way of adding materials such as rocks or gravel, the modification of approaches, or the modification of the bed of a watercourse.

### E1. Use of Existing Ford

Use of existing Fords is often the least preferred option for crossing watercourses however it is recognized that there are instances where it is the only viable option. Refer to the Guidebook for additional information on Fords. The following measures should be adhered to when utilizing existing Fords.

**Note:** Please identify if you intend to use Existing Fords on the Project Location Worksheet (Appendix A).

- Ensure water depth is sufficiently shallow to allow passage of vehicles / equipment.
- Plan your activities in advance to minimize the number of crossings required.
- Avoid crossing during extreme rain or flood events.
- Access approaches at 90° to the bank, when entering or exiting the Ford.
- Maintain speed at a very slow and steady pace throughout the crossing.
- Avoid rapid acceleration while on approaches or while in the water.

### Do you propose to withdraw water from a Moderate–High habitat suitability watercourse?

**NO:** Proceed to Step G, In-stream Works.

**YES:** Proceed to Step F, Water Acquisition.

## F. Water Acquisition

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Acquisition of water is required for processing materials during placer mining. Effective water management is a key consideration at all placer mine sites. The following requirements must be achieved to meet compliance with the respective Watershed Authorization.

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### F1. Water Intake Screens

In order to meet the requirements of the *Fisheries Act*, all water intakes must be screened. A general summary of the screening requirements are provided in the Guidebook.

**Note:** The objective behind the installation of intake screens is to prevent the death of fish caused by the acquisition of water. If screens of the correct mesh size are deployed between a watercourse and the intake to a water reservoir or gravity feed ditch, it is not necessary to screen the pump intake that removes water from within these structures provided these structures do not already contain fish. In the case of total recirculation systems, the operator shall ensure that any areas where fish could enter the system have barriers to prevent the entry of fish.

### G. In-stream Works

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In-stream works are defined as works that occur within the high water mark of a watercourse, but do not include diversion channels or Fords. Some in-stream works can lead to effects on fish and fish habitat such as erosion/scouring, sediment inputs, loss of habitat area, changes in channel morphology, blockages to passage, and reduced productivity.

**Do you propose to carry out in-stream works within a watercourse? In-stream works may include small dugouts or wing dams to facilitate water acquisition, in-stream settling facilities, in-stream reservoirs, and use of a stream channel as a conduit to transport process water to out-of-stream settling ponds.**

**NO:** Review complete – proceed with submission of all completed worksheets along with your project description to the YESAB and your application for water use license to the YWB.

**YES:** Proceed to Step G1, Severity of Effects Assessment.

### G1. Severity of Effects Assessment and Risk Management Decisions for In-stream Works

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In-stream settling facilities, in-stream reservoirs, and use of a stream channel as a conduit to transport process water to out-of-stream settling ponds are not authorized under the auspices of a Watershed Authorization in habitats of Moderate–High habitat suitability watercourses.

Certain physical works that pose a low risk to fish and fish habitat are authorized in Moderate–High habitat suitability watercourses provided that design conditions are met. Physical works authorized are limited to the construction of small dugouts or wing dams to facilitate water acquisition.

The following table is to be used to evaluate the risk of proposed in-stream works in Moderate–High habitat suitability watercourses. The design elements of the proposed works must achieve a risk score of no higher than the maximum risk score identified to be in compliance with the respective Watershed Authorization.

The maximum permitted score in this habitat suitability zone is **twelve**.

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Design Component	Range	Risk Score
Channel Width Constriction	>30% channel constriction	N/A
	5% - 30% of the channel	2
	< 5%	1
Above and Below the Structure – Difference in Water Surface Level	>2.0 metres	N/A
	0.3 – 2.0 metres	2
	< 0.3 metres	1
Material Type	Fine (silt-sand)	N/A
	Compactable (fine gravel and sand)	2
	Metal/ riprap/ structure	1
Construction Method	Moderately compacted/ placement	2
	Compacted shallow lift (or rip-rap, gabions, or boulders)	1
Amount of In-water Work	Completely in water	3
	Partially in water (more than ½)	2
	In dry	1
Structure Height	Above bank full	3
	Between bank full and channel bed	2
	Below channel bed	1
<b>MAXIMUM PERMITTED SCORE FOR IN-STREAM WORKS</b>		<b>12</b>

Calculate and record your total score and maximum permitted score on the Severity of Effects Assessment for In-stream Works Worksheet (Appendix G1), and record details of proposed in-stream works on the In-stream Works Worksheet (Appendix G2). Proceed with submission of proposal.