



## Acceptable Practices for Placer Hand Mining South Central Region

Hand work miners are permitted to operate on their placer tenures in-the-dry on unvegetated portions of gravel bars without submitting a Notice of Work application and obtaining a permit providing they meet the following conditions:

1. Hand work miners are only allowed to operate on unvegetated portions of the gravel bar. Excavated material from the bar cannot be transported outside of the high water mark of the watercourse for processing.
2. The sluice box, settling pond, tailings and excavations shall not be located within 3 metres of the water's edge.
3. The sluice box shall be readily moved by hand and cannot contain any moving parts driven by mechanical means. Only hand tools may be used with the exception of a small portable water pump.
4. A sluice box shall not be used within the flowing water of any stream.
5. There must be no discharge of silt laden water into the watercourse.
6. All excavations must be leveled and contoured as gravel is processed in order to ensure that all depressions are filled to avoid the entrapment of fish should water levels fluctuate.
7. The only impact to the riparian leave strip will be a narrow footpath for access to the gravel bar.
8. No fuel shall be stored neither within the 10 metre riparian setback nor below the natural high water mark of any water course, wetland or waterbody. Fuel storage in excess of 25 litres shall have impermeable secondary storage equal to 110 %.
9. Emergency spill kits shall be retained on site.
10. All garbage and waste shall be disposed of in a manner that provides full protection to the watercourse. Wooden toilets may be constructed a minimum of 30 m away from the high water mark of the watercourse and must be removed at the end of the work season.
11. Water intakes shall be screened in accordance with DFO specifications (screen openings shall not exceed 2.5 mm). Size of pumps shall not exceed a 38 mm (1.5 inches) suction intake.
12. Construction of cabins, sheds or other structures is not permitted. Tents, trailers or campers are permitted outside of the riparian leave strip but must be removed at the end of the work season.
13. Placer claims cannot be used for recreational camping and must be used only for legitimate placer exploration activities.



## Ministry of Energy & Mines

# GUIDE TO PLACER HAND MINING ACCEPTABLE PRACTICES FOR HAND MINING

### Information Letter No. 1

Hand miners are permitted to operate in-the-dry on unvegetated portions of gravel bars providing that they adhere to the following conditions:

- a) The term "operate in-the-dry" applies to all aspects of hand mining including the excavation of gravel.
- b) The sluice box and settling pond must be located a minimum of 3 metres from the waters edge.
- c) There must be no discharge of silty water into the watercourse.
- d) All excavations must be levelled and contoured as gravel is processed in order to avoid the persistence of any depressions which might entrap fish should the water levels fluctuate.
- e) The storage of fuel is not permitted on gravel bars or anywhere else within the 10 metre riparian buffer.

It should be noted that these additional conditions were not written in consideration of hand panning (i.e. no sluice box/settling pond present). In general, hand panning has very little potential to impact the fisheries resource. An exception may be in cases where the miner has the potential to disturb salmon eggs incubating within instream gravels. Fisheries and Oceans Canada (DFO) may, in some instances, require that a work window for hand panning be adhered to (i.e. hand panning site is known to have high salmon spawning habitat values).

#### Comments on basic guidelines

The additional conditions listed above all apply specifically to hand mining. Although the "Fish Habitat Protection Guidelines for Placer Mining" apply in general terms to both machine and hand mining, it is obvious that these basic guidelines were not written with the intention of detailing all permissible hand mining activities (i.e. operations in-the-dry on unvegetated portions of gravel bars). The purpose of the following comments is to further clarify how the seven (7) basic fish habitat guidelines apply to hand mining on gravel bars.

1. **Forest cover and vegetation within a minimum of 10 horizontal metres of the natural boundary of any watercourse shall not be disturbed or removed.**

Although hand mining is not permitted within the 10 metre wide riparian buffer, hand miners are allowed to work in-the-dry on gravel bars within the highwater marks of a stream providing that they do not disturb any vegetation (i.e. grass, shrubs, etc...) on these gravel bars. It is preferred that hand miners restrict their activities to unvegetated gravel bars.

2. **Gravel and other material shall not be displaced, or removed from, within a stream channel or within minimum 10 horizontal metres of the natural boundary of any watercourse.**

Hand miners are allowed to process gravel from a gravel bar only with the use of a sluice box located on the same gravel bar and cannot transport this gravel outside of the highwater marks of the stream. Furthermore, gravel must be returned as promptly as possible to the site of excavation so that any depressions can be properly levelled and contoured.

3. **Machinery or equipment shall not be operated within the wetted stream perimeter of any watercourse and all stream crossings by mechanical equipment must receive prior approval.**

Some limited machinery/equipment can be operated within the highwater marks of the stream but this machinery/equipment must only be used in-the-dry. This machinery/equipment is expected to consist of nothing much more than a shovel, bucket and sluice box with or without a pump. Working on gravel bars within the highwater marks of the stream does not give the miner permission approval to affect any portions of the wetted stream. Permission is required for the use of any motorized vehicles (i.e. quads) for crossing the stream.

4. **Neither tailings nor any part of any tailings pond or settling pond shall be located within 10 horizontal metres of any watercourse, and where water infiltrates to ground, this must not result in the entry of suspended solids into watercourses downstream of the operation.**

For hand mining, which entails work in-the-dry within the highwater marks of a stream, the sluice box and settling pond must be located a minimum of 3 metres away from the waters edge on the gravel bar.

- 5a. **Every effort shall be made to minimize the impacts of access development and mining operations on fisheries and wildlife habitats, and to maximize the opportunity to reclaim mine site upon abandonment.**

It is expected that the only visible impact within or adjacent to a stream as a consequence of a hand mining operation will be a narrow path through the riparian buffer for gravel bar access. Hand miners, especially in situations where there are multiple camp residents, must ensure that their campsites have no impact on fish habitat.

- 5b. **Forest cover, topsoil and debris shall be disposed of in such a manner as to prevent their entry into any watercourse, defined as any stream, lake, pond, river, creek, spring, ravine or swamp.**

The only apparent forest cover, topsoil or debris disposal issues associated with hand mining concern campsites. Hand miners must address these concerns through the pursuance of disposal strategies which provide full protection to the stream.

- 5c. **All mined or otherwise disturbed ground surfaces, including cutbanks, fill slopes and tailings piles, shall be stabilized annually by contouring and revegetating to prevent erosion and surface run-off from carrying sediment into adjacent watercourses.**

In the case of hand mining, mined areas should not be an issue relative to stabilization concerns. Other than levelling and contouring mined surfaces (i.e. refilling in gravel bar excavations), is unlikely that hand miners will need to pursue any stabilization works. This is, of course, assuming that there are no significant campsite concerns which need to be addressed.

6. Location for storage of fuels shall be sited and designed in a manner which will prevent any spillage entering any watercourse. Fuel storage in excess of 25 litres shall be located on an impermeable base within a berm of sufficient height to fully contain any spillage.

As with machine mining, the storage of fuel is not permitted within the 10 metre riparian buffer. Fuel storage is definitely not permitted on gravel bars. It should be noted that hand miners may be required to transport small quantities (i.e. less than 5 litres) of fuel onto a gravel bar for refuelling of their pump. This must be conducted in a manner which will prevent any spillage from entering the stream. Fuel storage in excess of 25 litres (i.e. at the campsite) must follow the aforementioned guideline (i.e. impermeable base with a berm of sufficient height to accommodate 115% of container capacity).

7. Water intakes shall be screened in accordance with specifications provided by DFO to prevent the entry of fish.

The same water intake screening specifications which apply to machine mining must be followed by hand miners. The general guideline is that the clear openings of the screen (space between strands) shall not exceed 0.10 (3/32) of an inch. The recommended screen is 8 strands per lineal inch, square-mesh wire cloth with .028 or .025 inch diameter wire. Locating the water intake in a plastic bucket with screened windows is a suitable screening technique for hand mining.

## CONCLUSION

Although there is a relatively low risk to fish and fish habitat associated with hand mining, at least in comparison to machine mining, it is still essential that all of the conditions/guidelines which apply specifically to hand mining are properly adhered to. Many streams have the potential for large numbers of active hand miners and this raises the risks for measurable cumulative impacts to fish and fish habitat.

It is hoped that the preceding information has properly clarified acceptable practices for hand mining. Adherence to the conditions/guidelines discussed within this document will provide protect to fish and fish habitat and help placer miners comply with the Fisheries Act.

Questions regarding these guidelines or any other DFO matter should be directed towards the nearest DFO office. A full listing of Pacific Region office locations is available at the following Web address: [http://www.pac.dfo-mpo.gc.ca/pages/offices\\_e.htm](http://www.pac.dfo-mpo.gc.ca/pages/offices_e.htm). Several local offices are listed below.

**Prince George**  
3690 Massey Drive  
Prince George, BC  
V2N 2S8  
250-561-5366

**Quesnel**  
1205 N. Caribou Hwy. 97  
Quesnel, BC  
V2J 2Y3  
250-992-2434

**Williams Lake**  
310A N. Boundary  
Williams Lk. BC  
V2G 2Y7  
250-398-6544

Questions regarding Notice of Work applications, approvals and permits should be directed towards the nearest Mining Operations Branch office.

**Northeast - Central Region**  
350-1011 4<sup>th</sup> Ave.  
Prince George, BC  
V2L 3H9  
250-565-4240

**Kootenay Region**  
2<sup>nd</sup> Floor, 42 - 8<sup>th</sup> Ave.  
South Cranbrook, BC  
V1C 2K3  
250-426-1557

**South - Central Region**  
162 Oriole Rd.  
Kamloops, BC  
V2C 4n7  
250-371-6051

**Northwest Region**  
3793 Alfred Ave.  
Smithers, BC  
V0J 2N0  
250-847-7383

**Southwest Region**  
4<sup>th</sup> floor, 1810 Blanshard St.  
Victoria, BC  
V8T 4J1  
250-952-0495

For further information on mine permitting go to [www.em.gov.bc.ca](http://www.em.gov.bc.ca)

This document is a revision of Department of Fisheries and Oceans' "Fish Habitat Protection Guidelines for Placer Mining, Acceptable Practices for Hand Mining"