

NIMPKISH RIVER PESTICIDE USE PERMIT 2022-2025

Pesticide Use Permit Application 738-033-22-25

TREATMENT PLAN

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INTRODUCTION

Knotweeds present a significant threat to aquatic ecosystems, including fish and wildlife habitat, bank stability and water quality. Knotweed also presents a threat to the structural integrity of infrastructure, such as bridge abutments, roads and pumps. Knotweed is present in limited amounts, and it is imperative to control these infestations while they remain small, to protect the important values of the Nimpkish River system.

This Pesticide Use Permit (PUP) proposes to continue the work previously done under PUP #738-0027-18/21, which treated knotweed infestations within the Pesticide Free Zone adjacent to Nimpkish River and rights-of-ways using Roundup WeatherMAX (a.i. glyphosate) foliar and stem injection applications.

The 2022 to 2025 PUP will use both Roundup WeatherPro (a.i. glyphosate) and aquatic herbicide Habitat Aqua (a.i. imazapyr). The glyphosate product change is due to manufacturer label changes which now permits stem injection to occur only under the Roundup WeatherPro label. This management plan proposes to treat all knotweed clones detected growing in or adjacent to Upper and Lower Nimpkish Rivers, as well as Vernon and Nimpkish Lake to protect the Nimpkish River system. Wherever feasible, foliar application methods will be used to limit the volume of herbicide entering the environment. Stem injection using Roundup WeatherPro may be required in some instances if the knotweed foliage cannot be effectively accessed using foliar application. Habitat Aqua is specifically formulated for use in and adjacent to aquatic environments and will be the preferred product for knotweed treatments during the 2022 to 2025 treatment period. These treatments will occur as foliar applications. The addition of Habitat Aqua to the management plan will also limit the risk of knotweed developing herbicide resistance, as Habitat Aqua chemistry and modes of action are different from that of the glyphosate products. In addition, Habitat Aqua is well-suited for knotweed treatments not only to water's edge but also emergent, wetted plant applications. All foliar treatment applications will be made as targeted spot treatments with the intention of limiting drift and non-target vegetative damage.

The extent of knotweed adjacent to Nimpkish River is currently limited to a total area of 0.48 ha. The total area proposed for inclusion in the PUP is significantly larger at 7000 ha, including both Upper and Lower Nimpkish Rivers as well as Vernon and Nimpkish Lakes. The large PUP boundary will allow for the treatment of newly detected knotweed clones that may be introduced to Vernon and Nimpkish lakes or the Lower Nimpkish River as a result of high-water events or disturbance. The limit to total treatment area each year will not exceed 5 ha, however it is anticipated that the actual annual treatment area will be significantly less based on currently known knotweed locations.

The management plan includes surveys, three treatment passes of all sites (known and newly detected) and ongoing monitoring annually.

The goal of the Nimpkish Knotweed Management Plan is to prevent knotweed from expanding outside of Upper Nimpkish River and eventually eradicate knotweed from the Nimpkish River system in its entirety.

TREATMENT AREA & SITES

Knotweed is present in limited amounts along the Upper Nimpkish River. The general area for this project includes Vernon Lake, which is upstream from current sites, as well as Nimpkish Lake and Lower Nimpkish River downstream (See Appendix 1 – Map: Project Area & Treatment Sites). The project area includes locations where no knotweed has been observed in the past (e.g. Nimpkish Lake and Lower Nimpkish River) as well as known sites which will be surveyed and treated if new growth appears (See Appendix 2 - Treatment Site Summary).

HERBICIDE PRODUCTS

Table 1. Proposed herbicide and adjuvant products to be used for Knotweed treatments at Nimpkish River, 2022 to 2025.

Trade Name	Habitat Aqua	Aquasurf Adjuvent	Roundup WeatherPro
Active Ingredient	Imazapyr	Surfactant blend	Glyphosate
PCP #	32374	32152	33653
Application Rate	3.0 to 4.68 L/ha (foliar)	0.25% v/v (added to Habitat Aqua)	6 L/ha foliar, 5 mL/stem (injection)
Comments	Well suited for use in and adjacent to aquatic ecosystems and will provide protection from herbicide resistance developing in the knotweed by using a different herbicide chemistry as compared to glyphosate products. This is the preferred herbicide product for use on and adjacent to the Nimpkish River.	Used with Habitat Aqua to achieve better efficacy.	Retained as a secondary foliar treatment option or where stem injection is the preferred treatment method at a given site.

METHODS

Several factors can influence treatment efficacy and it is important to have access to more than one herbicide and treatment method to ensure effective control can be obtained under varying site and growth conditions over the course of the growing season.

Foliar Spray

- Selective, foliar spot applications are the preferred treatment method as it minimizes the volume of herbicide product entering the environment. Foliar spray applications can be made by backpack or quad mounted sprayers. These sprayer options will be used to make careful targeted applications, directly and uniformly to the leaves of invasive knotweed.
- Habitat Aqua is specifically formulated for use in and adjacent to aquatic environments and will be the preferred product for knotweed treatments during the 2022 to 2025 treatment period. These treatments will occur as foliar applications. Targeted foliar spray applications of Habitat Aqua in and adjacent to water are considered safe for aquatic life and the overall environment.
- RoundupWeatherPro will be retained as a secondary foliar treatment option and is not suitable for use over water. In order to eliminate incidental contact with water when using RoundupWeatherPro in close proximity, drift shielding in the form of a nozzle cone or wind barrier will be employed.
- Foliar applications in close proximity to culturally sensitive or recreational structures will employ drift shielding in the form of a nozzle cone or wind barrier if deemed necessary by the applicator.

Stem Injection

- Applied through hand-held injection devices that deliver specified amounts of herbicide to hollow-stem plants (knotweed spp.)
- Inject 5 mL per stem of concentrated RoundupWeatherPro into each cane between the second and third internode. Most effective if stems are at least 1.25 cm in diameter.
- Plants are to be actively growing at the time of application.

Timing

- June to September - Treatment application will occur during the dry season when water levels will not rise for an extended period following pesticide application, allowing for the breakdown of glyphosate (half-life 32 days when not exposed to water).

TREATMENT HERBICIDE & APPLICATION METHOD SELECTION

Non-chemical treatment options were critically evaluated for efficacy in treating knotweed during project development, along with the potential unintended risks. The outcome of this evaluation determined that the proposed herbicide products will achieve the greatest treatment efficacy while minimizing impacts to adjacent ecosystems, aquatic life and the public.

Herbicide and application methods were selected based on chemistry suitability to site type, treatment efficacy, product toxicology, limiting the quantity of herbicide entering the environment and potential non-target effects.

All knotweed sites (existing and new) will be monitored throughout the growing season for treatment efficacy and non-target effects.

Foliar Spray

Wherever feasible, foliar application methods will be used to limit the volume of herbicide entering the environment. Habitat Aqua is specifically formulated for use in and adjacent to aquatic environments

and will be the preferred product for knotweed treatments during the 2022 to 2025 treatment period. These treatments will occur as foliar applications. All foliar treatment applications will be made as targeted spot treatments with the intention of limiting drift and non-target vegetative damage.

Stem Injection

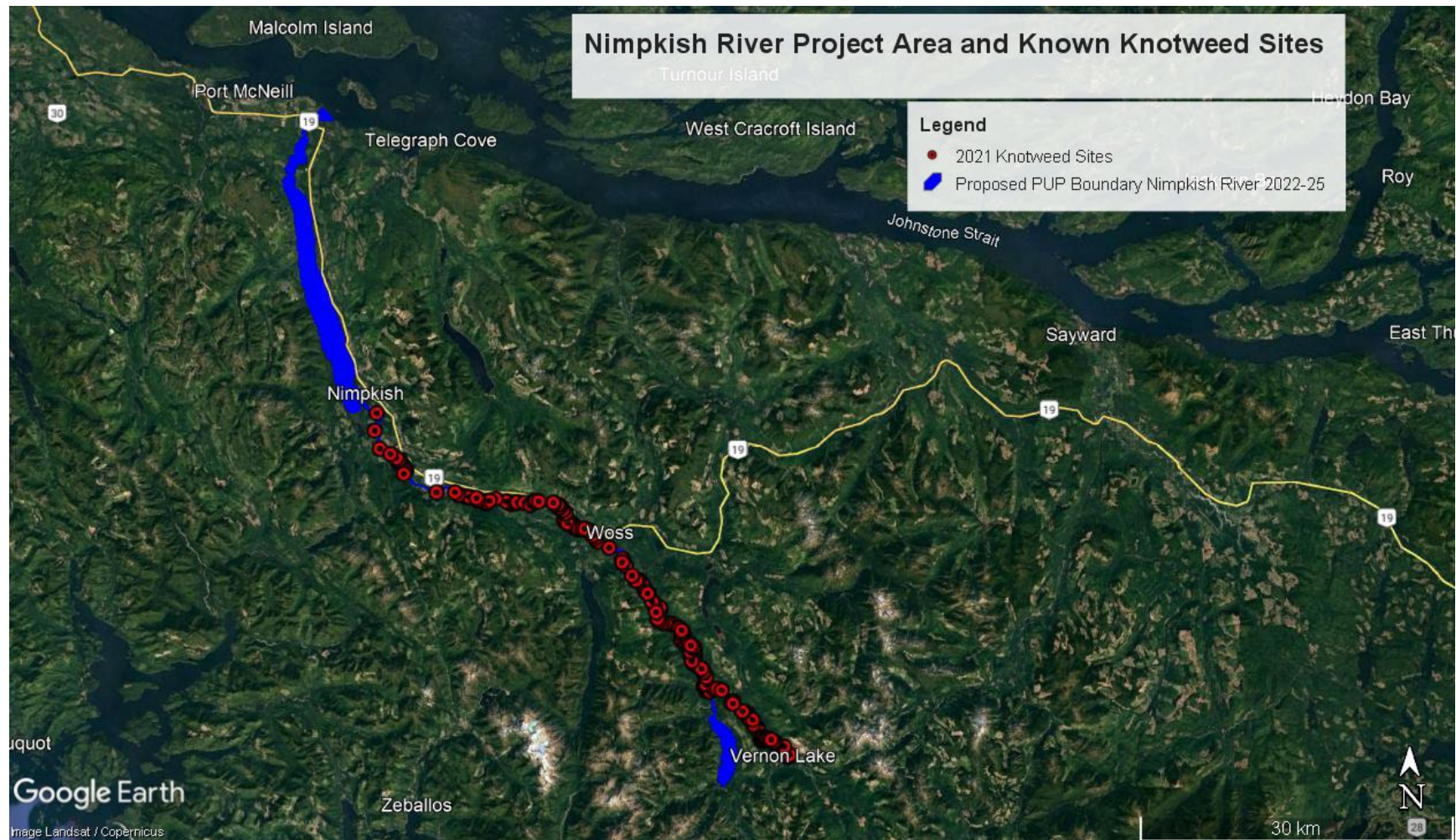
Stem injection *may* be selected as the preferred treatment method in the following circumstances:

- Where knotweed foliage cannot be effectively accessed using foliar application
- Where Habitat Aqua herbicide is not available and the knotweed clone occurs in close proximity to water or a private residence and shrouding/shielding, to prevent foliar drift, is not practicable
- Where foliar applications are not achieving effective control of knotweed. For example, if treatment monitoring after the first treatment pass is indicating low efficacy, the stem injection method may be preferred for the second treatment pass to ensure sufficient translocation of herbicide to the root system.

Table 2. Summary of herbicide site type and application method suitability at Nimpkish River, 2022 to 2025.

Site Type	Herbicide	Application Method	Comments
Emergent, wetted plants	Habitat Aqua	Foliar	Habitat Aqua is a registered aquatic herbicide formulated to be used for the treatment of emergent plants in and adjacent to water. The toxicology data indicates that there are no ill effects to aquatic life when used in accordance with the herbicide label.
Plants occurring within 5 m of wetted edge to High Water Mark	Habitat Aqua	Foliar	Preferred herbicide and method for this site type.
	Roundup WeatherPro	Foliar with shrouding to prevent risk of drift.	Shrouding may include nozzle cone or wind barrier.
Plant foliage that cannot be effectively accessed using foliar application	Roundup WeatherPro	Stem injection	Roundup WeatherPro is currently the only herbicide product registered for the use of stem injection in Canada.

Appendix 1 – Map: Nimpkish River Project Area & Treatment Sites



Appendix 2 - Knotweed Treatment Site Summary Nimpkish River, December 2021.

Site ID	UTM Zone	UTM Easting	UTM Northing	Site Location
319387	9	681688	5550870	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River gravel bar on east side (above Nimpkish Lake), no road access.
343698	9	681720	5551045	On west bank
319384	9	682086	5550802	RD Mount Waddington, Nimpkish River both banks (above Nimpkish Lake), no road access.
319386	9	681866	5550794	RD Mount Waddington, Nimpkish River gravel bar north side (above Nimpkish Lake), no road access.
357055	9	681498	5551222	RDMW - Nimpkish River - site on southwest bank of river at the north end of ecological reserve where tributary meets main channel
319388	9	681782	5551242	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River east bank (above Nimpkish Lake), boat access via Rona Rd.
319389	9	681656	5551282	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River north bank (above Nimpkish Lake), boat access via Rona Road.
319391	9	681692	5551462	RD Mount Waddington, Nimpkish River far east bank gravel bar (above Nimpkish River), boat access by Rona Road.
319394	9	681568	5552335	RD Mount Waddington. Nimpkish River east bank of island on west side of channel (upstream of Nimpkish Lake), may be road access on secondary FSR.
319395	9	681252	5552906	RD Mount Waddington, Nimpkish River west bank gravel bar (upstream of Nimpkish Lake), may be accessible by utility ROW.
337729	9	680693	5553284	RDMW, Nimpkish River, East side of the river.
357056	9	680620	5553425	RDMW - Nimpkish River - site is approx. 100 m down flood channel on northeast side of main channel
319397	9	680557	5554235	RD Mount Waddington, Nimpkish River gravel bar and both banks (upstream of Nimpkish Lake), may be accessible by secondary FSR.
344786	9	680314	5553841	RDMW - Forested area approximately 100 m west of Nimpkish River.
357131	9	680475	5553895	RDMW - Nimpkish River - site located up flood channel in large forested island.
344785	9	680392	5553907	RDMW - Nimpkish River. Site is located approximately 110 m down a side channel off of the main stem of the Nimpkish River.
319401	9	679543	5555707	RD Mount Waddington, Nimpkish River west shore main channel (above Nimpkish Lake), may be accessible by secondary FSR.
350637	9	679196	5555575	RDMW - Nimpkish River - side channel on west side of river

319400	9	679669	5555523	RD Mount Washington, Nimpkish River gravel bar in channel (above Nimpkish Lake), may be accessible via secondary FSR.
357124	9	679288	5555511	RDMW - Nimpkish River - dry side channel (previously main river channel) on west side of large forested island at the tree line
337725	9	679905	5555349	RDMW, Nimpkish River, East side of the river.
357125	9	679632	5555281	RDMW - Nimpkish River - dry channel (previously main channel) at southwest corner of large forested island across from site 319400
357130	9	679939	5555227	RDMW - Nimpkish River - west bank of river
344365	9	680367	5554950	RDMW - Nimpkish River - east bank of Nimpkish River approximately 5.95 km northwest of Maquilla Reload
337728	9	680519	5554595	RDMW, Nimpkish River, East side of the river.
315609	9	688802	5545872	Mt Waddington RD; NE bank of Nimpkish River along forest edge.
315608	9	688863	5545829	Mt Waddington RD; Nimpkish River; no road access (as the crow flies approx. 24.5km NE of Tahsis 27km SE of Woss).
350453	9	689337	5545839	RDMW - Nimpkish River - east bank just downstream of Holbrook dysentery
315606	9	689828	5544920	Mt Waddington RD; west side of Nimpkish Rd; adjacent to east side of reclaimed Vernon Camp and tributary to Nimpkish River.
350470	9	688317	5546254	RDMW - Nimpkish River - east side of main channel
350773	9	679316	5556286	RDMW - Nimpkish River - side channel on the west side of river
343473	9	679223	5556482	On west bank.
337719	9	678956	5556699	RDMW, Nimpkish River, On east side of the river.
319404	9	678396	5557015	RD Mount Waddington, Nimpkish River west bank of channel (above Nimpkish Lake), no road access.
315611	9	688742	5545872	Mt Waddington RD; gravel bar in Nimpkish River; no road access.
350466	9	688603	5545951	RDMW - Nimpkish River - up side channel from west bank of river
315612	9	688660	5545989	Mt Waddington RD; gravel bar in Nimpkish River; no road access.
315613	9	688467	5546070	Mt Waddington RD; east bank of Nimpkish River; no road access.
350468	9	688516	5546194	RDMW - Nimpkish River - up side channel off east bank of river
343461	9	688370	5546229	RDMW - Nimpkish River on the west bank
343471	9	679300	5555867	Located in large gravel bar in the middle of the river.
319403	9	679361	5556114	RD Mount Waddington, Nimpkish River gravel bar on east side of channel (above Nimpkish Lake), may be accessible by secondary FSR.

319622	9	676244	5559221	RD Mount Waddington; W shore Nimpkish River; upstream of Woss; approx. 65km east of Rona Rd as the crow flies (no direct road access).
315658	9	677937	5557117	Mt Waddington RD; south gravel bar on upper Nimpkish River; 65m west of BC Hydro ROW; access ROW by Rona Road south of site.
337714	9	677334	5557126	RDMW, Nimpkish River, On east bank and in the middle of the river.
319405	9	677679	5557092	RD Mount Waddington, Nimpkish River gravel bar on south bank (above Nimpkish Lake), may be accessible by utility ROW.
319406	9	677061	5557288	RD Mount Waddington, Nimpkish River gravel bar and both sides of channel (above Nimpkish Lake), accessible by Rona FSR.
319621	9	676322	5559106	RD Mount Waddington; east shore Nimpkish River; upstream of Woss; approx. 130m east of Rona Rd as the crow flies (no direct road access).
337708	9	676738	5558130	RDMW, Nimpkish River, East bank.
350740	9	677102	5558358	RDMW - Nimpkish River - east bank of river (left hand side looking upstream) on gravel bar
319619	9	677069	5558574	RD Mount Waddington; W bank Nimpkish River; upstream of Woss; no road access.
319620	9	676518	5558834	RD Mount Waddington; S cobble Nimpkish River; upstream of Woss; approx. 100m east of Rona Rd as the crow flies, no direct road access.
319407	9	676886	5557515	RD Mount Waddington, Nimpkish River gravel bar on east side of channel (above Nimpkish Lake), access by Rona FSR.
337701	9	675844	5559872	RDMW, Nimpkish River, West side of river.
343762	9	675942	5559919	RDMW - Nimpkish River gravel bar on west bank at tree line.
337698	9	675646	5560048	RDMW, Nimpkish River, East side of the river.
350743	9	675379	5560685	RDMW - Nimpkish River - located on gravel bar on west bank of river (right hand side when looking upstream)
337481	9	675217	5560770	RDMW - Nimpkish River - both banks of main channel in relatively short area between two river bends
337480	9	675103	5560985	RDMW, Nimpkish River, east bank of river (left hand side when looking upstream)
343454	9	674739	5561053	West side of river.
357134	9	674921	5561113	RDMW - Nimpkish River - south bank of river
344788	9	674329	5561501	RDMW - west bank of Nimpkish River.
357141	9	673708	5562404	RDMW - Nimpkish River - west bank of river approximately 3.9 km upstream from Woss Bridge
357142	9	673350	5562716	RDMW - Nimpkish River - east bank of channel at river bend approximately 3.3 km upstream of Woss Bridge
357143	9	673347	5563053	RDMW - Nimpkish River - west bank of channel approximately 3 km upstream of Woss Bridge

350766	9	669684	5565760	RDMW - Nimpkish River - west bank of river (right hand side looking upstream) across channel from tributary inlet on first riverbend downstream of Woss
357144	9	669430	5565762	RDMW - Nimpkish River - south bank of channel approximately 330 m downstream of Gold Creek
315652	9	687368	5546308	Mt Waddington RD; gravel bar on upper Nimpkish River; no road access.
343446	9	688001	5546462	RDMW - Nimpkish River on the west bank
315651	9	688083	5546472	Mt Waddington RD; upper Nimpkish River gravel bar; no road access.
319375	9	687544	5546461	RD Mount Waddington, Nimpkish River gravel bar on east side of bend (above Nimpkish Lake), no road access.
319376	9	687101	5546451	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), no road access.
319372	9	687752	5546483	RD Mount Waddington, Nimpkish River north bank (above Nimpkish Lake), no road access.
319373	9	687631	5546533	RD Mount Waddington, Nimpkish River northeast bank (above Nimpkish Lake), no road access.
319377	9	687173	5546518	RD Mount Waddington, Nimpkish River east bank (above Nimpkish Lake), no road access.
319374	9	687542	5546548	RD Mount Waddington, Nimpkish River north bank (above Nimpkish Lake), no road access.
319378	9	687254	5546609	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), no road access.
319379	9	687093	5546648	RD Mount Waddington, Nimpkish River north bank of bend (above Nimpkish Lake), no road access.
358765	9	686805	5547288	RDMW - Nimpkish River - east side of channel
350471	9	686631	5547468	RDMW - Nimpkish River - east bank of river on end of gravel bar at river bend
337733	9	686669	5547545	RDMW, Nimpkish River, West side of the river.
350956	9	672057	5564057	RDMW - Nimpkish River - south bank approximately 310 m upstream of confluence with Davie River
315654	9	683215	5550951	Mt Waddington RD; gravel bar in upper Nimpkish River; several road access points.
344787	9	670931	5564590	RDMW - Nimpkish River. West gravel bar on Nimpkish River below and just north of Woss Bridge.
350770	9	670473	5565162	RDMW - Nimpkish River - both banks of river
350768	9	670212	5565477	RDMW - Nimpkish River - both sides of channel for approx. 175m upstream and downstream from UTM's
350769	9	670020	5565668	RDMW - Nimpkish River - east bank (left hand side looking upstream) just below HWY 19
343466	9	686492	5547737	RDMW - Nimpkish River on the west bank
319381	9	684337	5549726	RD Mount Waddington, Nimpkish River east bank (above Nimpkish Lake), may be road access via Nimpkish Rd.

319382	9	684214	5549804	RD Mount Waddington, Nimpkish River east bank gravel bar (above Nimpkish Lake), may be road access via Nimpkish Rd.
343475	9	684311	5549902	RDMW - Nimpkish River - east side of river on floodplain between main channel and side channel.
343474	9	684278	5549973	RDMW - Nimpkish River - obscure side channel of river approximately halfway between main channel and FSR to the east of the river.
343467	9	686327	5547804	RDMW - Nimpkish River on the east bank
319380	9	686258	5548263	RD Mount Waddington, Nimpkish River south end small island (above Nimpkish Lake), no road access.
337732	9	685870	5548419	RDMW, Nimpkish River, East side of the river.
350488	9	685739	5548819	RDMW - Nimpkish River - west bank of main channel at river bend
350491	9	685339	5549003	RDMW - Nimpkish River - west bank of river
350495	9	685247	5549024	RDMW - Nimpkish River - east bank of river
350771	9	670693	5564919	RDMW - Nimpkish River - west bank of river across from WFP facilities
315607	9	689575	5544968	Mt Waddington RD; reclaimed Vernon Camp, approx 60km SE of Woss (5km east of Vernon Lk as the crow flies), surrounded by Nimpkish Rd.
319383	9	682787	5551083	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), may be road access via Vernon Lake Rd.
315657	9	682511	5551003	Mt Waddington RD; NW gravel bar on upper Nimpkish River; no road access.
350765	9	669034	5565707	RDMW - Nimpkish River - west bank of river (right hand side looking upstream).
350764	9	668752	5565787	RDMW - Nimpkish River - west bank of river (right hand side looking upstream)
357145	9	668544	5566085	RDMW - Nimpkish River - south bank of river on gravel bar approx. 1.3 km downstream of Gold Creek
337473	9	668313	5566122	RDMW, Nimpkish River, middle gravel bar in the river channel.
357149	9	667778	5566351	RDMW - Nimpkish River - west bank of channel
315607	9	689575	5544968	Mt Waddington RD; reclaimed Vernon Camp, approx 60km SE of Woss (5km east of Vernon Lk as the crow flies), surrounded by Nimpkish Rd.
319634	9	667548	5567446	RD Mount Waddington; cobble bar in Nimpkish River; downstream of Woss; approx. 340m south of Hwy 19 road access.
357152	9	667173	5567677	RDMW - Nimpkish River - 260 m down side channel on south side of river. Entrance to side channel starts approx. 1 km downstream of Hydro ROW
357151	9	667273	5567783	RDMW - Nimpkish River - gravel bar on south bank of main channel across from hwy 19
351019	9	666711	5568047	RDMW - Nimpkish River - east end of gravel bar on south side of river downstream of Woss

351023	9	667806	5567177	RDMW - Nimpkish River - south end of gravel bar on west side of river at riverbend just north of hydro RoW
357156	9	663190	5568044	RDMW - Nimpkish River - south side of channel just downstream of Hydro ROW
351026	9	660285	5567907	RDMW - Nimpkish River - east end of gravel bar on north bank of river downstream from Woss
350966	9	661092	5568296	RDMW - Nimpkish River - north bank
319639	9	665258	5568209	RD Mount Waddington; cobble bar on south side Nimpkish River; downstream of Woss; approx. 120m south of Hwy 19 (opposite side of river; no direct road access).
350971	9	664438	5567859	RDMW - Nimpkish River - side channel on south bank
350973	9	664769	5568140	RDMW - Nimpkish River - at the far east end of a gravel bar on the south bank across from HWY 19
357160	9	659298	5568307	RDMW - Nimpkish River - gravel bar on south side of channel at river bend
319630	9	669060	5565757	RD Mount Waddington; north cobble bar Nimpkish River; downstream of Woss; approx. 220m north of Airport Rd.
350762	9	668740	5565952	RDMW - Nimpkish River - gravel bar on east bank of river (left hand side when looking upstream)
337473	9	668313	5566122	RDMW, Nimpkish River, middle gravel bar in the river channel.
343463	9	668144	5566169	RDMW - Nimpkish River - site located on south gravel bar of mid-channel island downstream of Woss
343460	9	668358	5566275	RDMW - Nimpkish River - dried up flood channel on mid-channel island
357155	9	664935	5568266	RDMW - Nimpkish River - side channel on north side of river directly below hwy 19
337472	9	668169	5566328	RDMW, Nimpkish River, middle gravel bar in the river channel.
350957	9	668024	5566234	RDMW - Nimpkish River - site located on western end of mid-channel island gravel bar
357150	9	667741	5566518	RDMW - Nimpkish River - east bank of channel approx. 400 m upstream of Hydro ROW
357153	9	667064	5567964	RDMW - Nimpkish River - gravel bar on north side of channel adjacent to hwy 19
357154	9	666640	5568154	RDMW - Nimpkish River - north side of channel just downstream of Eagles Nest Rest Area on hwy 19
357158	9	662162	5568072	RDMW - Nimpkish River - gravel bar on east side of channel
357157	9	662637	5567859	RDMW - Nimpkish River - north bank of channel
350968	9	662967	5567963	RDMW - Nimpkish River - south bank
319641	9	659488	5568101	RD Mount Waddington; cobble bar on east side of Nimpkish River; downstream of Woss; approx. 115m east of Nimpkish Rd (opposite side of river, no direct road access).
351025	9	660162	5567868	RDMW - Nimpkish River - north bank of river
357159	9	660548	5568095	RDMW - Nimpkish River - north bank of channel
350964	9	658622	5568367	RDMW - Nimpkish River - north bank gravel bar
350970	9	663865	5568007	RDMW - Nimpkish River - north bank

357162	9	657245	5568777	RDMW - Nimpkish River - south bank of channel immediately adjacent to Nimpkish FSR
337469	9	657549	5568543	RDMW, Nimpkish River, east bank of the river (left hand side when looking upstream)
357163	9	655476	5568715	RDMW - Nimpkish River - north side of channel growing on rocky outcrop
350963	9	658286	5568388	RDMW - Nimpkish River - north bank
357185	9	651930	5571482	RDMW - Nimpkish River - gravel bar on south side of channel at river bend
357183	9	651997	5571319	RDMW - Nimpkish River - large gravel bar on west side of channel
357182	9	652100	5571200	RDMW - Nimpkish River - east bank of channel
357175	9	652278	5570346	RDMW - Nimpkish River - west side of channel adjacent to Nimpkish forestry road
357181	9	652278	5571030	RDMW - Nimpkish River - gravel bar on north bank of side of channel
357186	9	651788	5571655	RDMW - Nimpkish River - side channel on north side of river
319643	9	652436	5570870	RD Mount Waddington; large cobble bar on Nimpkish River; downstream of Woss; no road access.
357176	9	652458	5570707	RDMW - Nimpkish River - east side of channel
357187	9	651518	5571820	RDMW - Nimpkish River - side channel on north side or river. Site located where tributary enters side channel close to downstream end of side channel
319644	9	651624	5571575	RD Mount Waddington; cobble bar north side of Nimpkish River; downstream of Woss; no road access.
357184	9	651787	5571359	RDMW - Nimpkish River - side channel on south side of river
357174	9	652378	5570575	RDMW - Nimpkish River - east side of channel
357189	9	649480	5576012	RDMW - Nimpkish River - gravel bar on north side of channel approximately 2.2 km upstream of Nimpkish Lake
357188	9	649359	5574341	RDMW - Nimpkish River - east bank of river approximately 4.1 km upstream of Nimpkish Lake
357190	9	649905	5572651	RDMW - Nimpkish River - gravel bar on west side of channel
357191	9	650946	5572181	RDMW - Nimpkish River - south side of channel
343698	9	681720	5551045	On west bank
319388	9	681782	5551242	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River east bank (above Nimpkish Lake), boat access via Rona Rd.
319389	9	681656	5551282	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River north bank (above Nimpkish Lake), boat access via Rona Road.
319387	9	681688	5550870	RD Mount Waddington, Nimpkish River Ecological Reserve, Nimpkish River gravel bar on east side (above Nimpkish Lake), no road access.
319384	9	682086	5550802	RD Mount Waddington, Nimpkish River both banks (above Nimpkish Lake), no road access.

319386	9	681866	5550794	RD Mount Waddington, Nimpkish River gravel bar north side (above Nimpkish Lake), no road access.
319393	9	681718	5552121	RD Mount Waddington, Nimpkish River east gravel bar (upstream of Nimpkish Lake), may have road access on secondary FSR.
319391	9	681692	5551462	RD Mount Waddington, Nimpkish River far east bank gravel bar (above Nimpkish River), boat access by Rona Road.
343697	9	681652	5551372	On east bank of river on a large gravel bar.
357263	9	680448	5553365	RDMW - Nimpkish River - west bank of river
319400	9	679669	5555523	RD Mount Washington, Nimpkish River gravel bar in channel (above Nimpkish Lake), may be accessible via secondary FSR.
319399	9	680126	5555089	RD Mount Waddington, Nimpkish River east bank (above Nimpkish Lake), not accessible by road.
357264	9	681455	5552604	RDMW - Nimpkish River - east side of river
319396	9	681052	5553071	RD Mount Waddington, Nimpkish River west bank (upstream of Nimpkish Lake), may be accessible by utility ROW.
319397	9	680557	5554235	RD Mount Waddington, Nimpkish River gravel bar and both banks (upstream of Nimpkish Lake), may be accessible by secondary FSR.
357193	9	680290	5553613	RDMW - Nimpkish River - braided side channels on west side of main river channel
319380	9	686258	5548263	RD Mount Waddington, Nimpkish River south end small island (above Nimpkish Lake), no road access.
337732	9	685870	5548419	RDMW, Nimpkish River, East side of the river.
350490	9	685482	5548953	RDMW - Nimpkish River - on east bank of river and mid channel gravel bar
350491	9	685339	5549003	RDMW - Nimpkish River - west bank of river
350495	9	685247	5549024	RDMW - Nimpkish River - east bank of river
357125	9	679632	5555281	RDMW - Nimpkish River - dry channel (previously main channel) at southwest corner of large forested island across from site 319400
319401	9	679543	5555707	RD Mount Waddington, Nimpkish River west shore main channel (above Nimpkish Lake), may be accessible by secondary FSR.
319402	9	679239	5555768	RD Mount Waddington, Nimpkish River west bank of main channel at downstream start of dry oxbow (above Nimpkish Lake), may be accessible by secondary FSR.
343471	9	679300	5555867	Located in large gravel bar in the middle of the river.
319403	9	679361	5556114	RD Mount Waddington, Nimpkish River gravel bar on east side of channel (above Nimpkish Lake), may be accessible by secondary FSR.
337726	9	680449	5554829	RDMW, Nimpkish River, West side of the river.
344368	9	680175	5554117	RDMW - Nimpkish River - west bank of secondary channel of river
357193	9	680290	5553613	RDMW - Nimpkish River - braided side channels on west side of main river channel

319397	9	680557	5554235	RD Mount Waddington, Nimpkish River gravel bar and both banks (upstream of Nimpkish Lake), may be accessible by secondary FSR.
319406	9	677061	5557288	RD Mount Waddington, Nimpkish River gravel bar and both sides of channel (above Nimpkish Lake), accessible by Rona FSR.
344366	9	680116	5554505	RDMW - Nimpkish River - both banks of secondary channel of Nimpkish River approximately 5.8 km northwest of Maquilla Reload
344367	9	680104	5554287	RDMW - Nimpkish River - west bank of secondary river channel (west of main channel)
315609	9	688802	5545872	Mt Waddington RD; NE bank of Nimpkish River along forest edge.
315605	9	689893	5545068	Mt Waddington RD; Nimpkish River, 60m east of Nimpkish Rd, east of reclaimed Vernon Camp.
315611	9	688742	5545872	Mt Waddington RD; gravel bar in Nimpkish River; no road access.
350466	9	688603	5545951	RDMW - Nimpkish River - up side channel from west bank of river
315613	9	688467	5546070	Mt Waddington RD; east bank of Nimpkish River; no road access.
350468	9	688516	5546194	RDMW - Nimpkish River - up side channel off east bank of river
319407	9	676886	5557515	RD Mount Waddington, Nimpkish River gravel bar on east side of channel (above Nimpkish Lake), access by Rona FSR.
337714	9	677334	5557126	RDMW, Nimpkish River, On east bank and in the middle of the river.
350471	9	686631	5547468	RDMW - Nimpkish River - east bank of river on end of gravel bar at river bend
350190	9	687098	5546819	RDMW - Nimpkish River - east bank of river
319379	9	687093	5546648	RD Mount Waddington, Nimpkish River north bank of bend (above Nimpkish Lake), no road access.
319378	9	687254	5546609	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), no road access.
319377	9	687173	5546518	RD Mount Waddington, Nimpkish River east bank (above Nimpkish Lake), no road access.
319376	9	687101	5546451	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), no road access.
315651	9	688083	5546472	Mt Waddington RD; upper Nimpkish River gravel bar; no road access.
319375	9	687544	5546461	RD Mount Waddington, Nimpkish River gravel bar on east side of bend (above Nimpkish Lake), no road access.
319383	9	682787	5551083	RD Mount Waddington, Nimpkish River gravel bar (above Nimpkish Lake), may be road access via Vernon Lake Rd.

343474	9	684278	5549973	RDMW - Nimpkish River - obscure side channel of river approximately halfway between main channel and FSR to the east of the river.
319381	9	684337	5549726	RD Mount Waddington, Nimpkish River east bank (above Nimpkish Lake), may be road access via Nimpkish Rd.
319382	9	684214	5549804	RD Mount Waddington, Nimpkish River east bank gravel bar (above Nimpkish Lake), may be road acces via Nimpkish Rd.
337473	9	668313	5566122	RDMW, Nimpkish River, middle gravel bar in the river channel.
315607	9	689575	5544968	Mt Waddington RD; reclaimed Vernon Camp, approx 60km SE of Woss (5km east of Vernon Lk as the crow flies), surrounded by Nimpkish Rd.
337472	9	668169	5566328	RDMW, Nimpkish River, middle gravel bar in the river channel.