







Ministry of Environment Debris Action Plan

November 23, 2022





Executive Summary - Debris Close-out for 2022

The total number of known large debris sites across the Province was assessed at **577**. As of this report, approximately **13** sites remain to be cleaned up in Summer 2023.

Phase 1 (debris removal prior to freshet) has been completed for all major watercourses and is shown in Appendix D.

Phase 2 (post-freshet) has now been completed.

Details of Phase 3 (remaining sites) are discussed on pages 8-10 of this report.

Without the combined efforts of the First Nations and local communities, the Ministry of Environment would not be able to report on the successes below. Although a lot of work still remains to be done, we would like to acknowledge the impacts everyone's combined efforts have lead to:

First Nations and Local Communities	1000+ Touchpoints with Communities	1000+ Employment opportunities created	+40 +60 First Nations engaged Communities engaged	460 Community members trained	150+ Site visits and Face-to-Face meetings
Debris and Waste Removal	16,000+ Metric Tonnes of debris removed	4,725 Metric Tonnes sent to landfills	445 Debris sites cleared	130+ Sites sampled for hazardous chemicals	128 Sediment projects identified

Executive Summary

Watercourse	Outstanding Permits	Number of Known Debris Items (all identified, photographed and geotagged)	Removal Timeline
Nicola River	None	 115 debris sites identified of which: 83 debris sites have removal completed; 21 have been assessed and concluded not to be removed or be removed by a third-party; and 11 sites remaining identified. 	 All identified debris that was assessed for removal in Nicola River has been completed; and Remaining items to be re- assessed and removed summer 2023.
Coldwater River	None	82 debris sites identified of which: 65 debris sites have removal completed; and 17 have been assessed and concluded not to be removed or to be removed by a third-party. 	All identified debris that was assessed for removal in Coldwater River has been completed.
Thompson River	None	 19 debris sites identified of which: 18 debris sites have removal completed; and 1 has been assessed and concluded not to be removed or to be removed by a third-party. 	All identified debris that was assessed for removal in Thompson River has been completed.
Tulameen River	None	 95 debris sites identified of which: 72 debris sites have removal completed; 22 have been assessed and concluded not to be removed or be removed by a third-party; and This leaves 1 sites remaining as work in progress. 	 All identified debris that was assessed for removal in the Tulameen River has been completed and woody debris has been stock piled along the bank awaiting permit for final removal.

Watercourse	Outstanding Permits	Number of Known Debris Items (all identified, photographed and geotagged)	Removal Timeline
Similkameen River	None	 53 debris sites identified of which: 42 debris sites have removal completed; and 11 have been assessed and concluded not to be removed or be removed by a third-party. 	All identified debris that was assessed for removal in the Similkameen River has been completed.
Fraser River	None	79 debris sites identified of which • 66 debris sites has removal completed; and • 13 sites have been assessed and concluded not to be removed or be removed by a third-party	 All large debris that was assessed for removal in the Fraser River has been completed. Linear debris removal to be completed by end of November.
Chilliwack River & Vedder River/Canal	None	 69 debris sites identified 59 debris sites has removal completed; 8 have been assessed and concluded not to be removed or be removed by a third-party This leaves 2 sites remaining as identified or work in progress. 	 Large debris removal completed. Remaining items to be re- assessed and removed summer 2023. Linear debris removal to be completed by end of November.
Coquihalla River	None	 51 debris sites identified of which: 40 debris sites have removal completed; and 11 have been assessed and concluded not to be removed or to be removed by a third-party 	All identified debris that was assessed for removal in the Coquihalla River has been completed.
Other sites (Bella Coola & Kingcome)	ARC, DFO and MOF	14 debris sites identified. • 7 Bella Coola sites concluded not to be removed • 3 Kingcome sites concluded not to be removed; and This leaves 4 additional sites also concluded not to be removed - Chehalis and Nahatlatch. 2 sites awaiting removal.	Removal expected in November 2022 pending regulatory approvals.

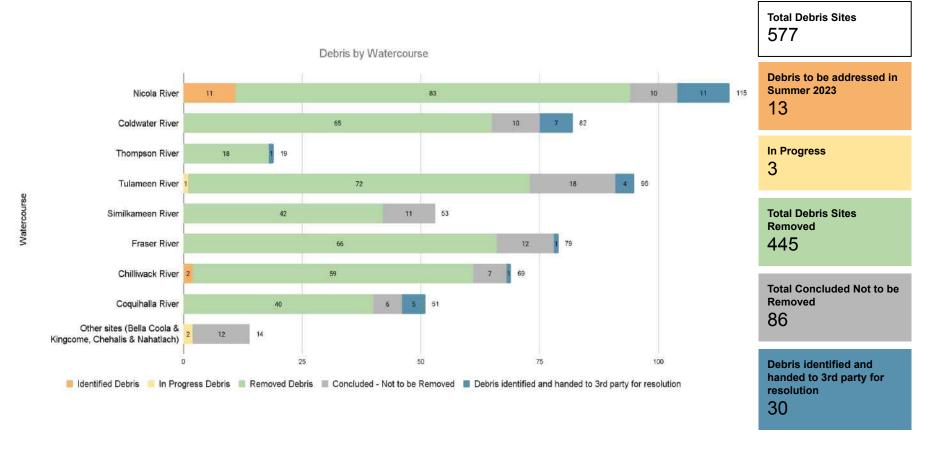
Executive Summary - continued

Watercourse	Contractors	First Nations Contacted To Date
Nicola	 Debris removal: Quattro Constructors, Arnett & Burgess (A&B), Remote Helicopters, Rock Solid Industries, Coastal Restoration Society (CRS), Ocean Legacy Foundation (OLF) Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess (A&B) 	 Cooks Ferry IB: Continuous and ongoing Shackan IB: Continuous and ongoing Nooaitch IB: Continuous and ongoing Lower Nicola IB: Continuous and ongoing Coldwater IB: Continuous and ongoing Lytton IB: Continuous and ongoing
Coldwater	 Debris removal: Quattro Constructors, Arnett & Burgess (A&B), Valley Helicopters, Rock Solid Industries, Coastal Restoration Society (CRS) Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess (A&B) 	 Cooks Ferry IB: Continuous and ongoing Shackan IB: Continuous and ongoing Nooaitch IB: Continuous and ongoing Lower Nicola IB: Continuous and ongoing Upper Nicola IB: Continuous and ongoing Lytton IB: Continuous and ongoing Coldwater IB: Continuous and ongoing Nicomen IB: Continuous and ongoing
Thompson	 Debris Removal: Quattro Constructors, Arnett & Burgess, Remote Helicopters, Coastal Restoration Society (CRS) Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess (A&B) 	 Cooks Ferry: Continuous and ongoing Nicomen IB: Continuous and ongoing
Tulameen	 Debris Removal: Clearview Demolition, Tri Valley Construction Qualified Environmental & Archeological Professional: Tetra Tech Field Work Management: Clearview Demolition 	 Upper Similkameen IB: Continuous and ongoing Lower Similkameen IB: Continuous and ongoing

Executive Summary - continued

Watercourse	Contractors	First Nations Contacted To Date
Similkameen	 Debris Removal: Clearview Demolition, Tri Valley Construction Qualified Environmental & Archeological Professional: Tetra Tech Field Work Management: Clearview Demolition 	 Upper Similkameen IB: Continuous and ongoing Lower Similkameen IB: Continuous and ongoing
Fraser River	 Debris Removal: Stqó:ya Construction Qualified Environmental Professional: Stantec Qualified Archeological Professional: Stolo Nation Field Work Management: RAM Consulting Linear Debris Removal: SWAT Consulting 	 Mainland Coast Salish First Nations continuous and ongoing Biweekly call with First Nations groups in progress
Chilliwack River & Vedder River/Canal	 Debris Removal: Stqó:ya Construction Qualified Environmental Professional: Stantec Qualified Archeological Professional: Stolo Nation Field Work Management: RAM Consulting Linear Debris Removal: SWAT Consulting 	 Mainland Coast Salish First Nations continuous and ongoing Biweekly call with First Nations groups in progress
Coquihalla River	 Debris Removal: Stqó:ya Construction Qualified Environmental Professional: Stantec Qualified Archeological Professional: Stolo Nation Field Work Management: RAM Consulting Linear Debris Removal: SWAT Consulting 	 Mainland Coast Salish First Nations continuous and ongoing Biweekly call with First Nations groups in progress

Executive Summary - continued



Remaining sites to be addressed in Summer 2023

A total of 13 debris sites remain to be addressed in Summer 2023:

- Remaining debris will be re-assessed in Spring/Summer 2023;
- Applicable permits will be obtained to conduct debris removal works; and
- Remaining debris sites will be removed by the end of Summer 2023.

Map ID	Geo-coordinates	Riverway	Description	Туре
NR-84	-121.089; 50.222	Nicola River	Culvert	Human-made
NR-85	-121.061; 50.184	Nicola River	Culvert, fish ladder and green tank lid	Human-made
NR-86	-121.050; 50.158	Nicola River	Embedded metal in gravel bar, horse trailer	Human-made
NR-88	-121.046; 50.155	Nicola River	Tire, lumber and fence posts	Human-made
NR-101	-121.084; 50.206	Nicola River	Farm equipment, black fridge and sheet metal	Human-made
NR-106	-121.306; 50.417	Nicola River	Jersey barriers	Human-made
NR-107	-121.287; 50.398	Nicola River	Red fence	Human-made
NR-109	-121.258; 50.379	Nicola River	Fencing, piping, pieces of asphalt on bank, metal roof	Human-made
NR-110	-121.246; 50.367	Nicola River	Jersey barriers and pipe	Human-made
NR-118	-120.950; 50.141	Nicola River	Metal sheets, metal roofing	Human-made
NR-120	-120.924; 50.142	Nicola River	Metal, appliance, cement pieces, black appliance	Human-made
CH-56	-121.904; 49.078	Chilliwack River	Woody debris	Natural
CH-65	-121.942; 49.084	Chilliwack River	Trailer frame	Human-made

Nicola River - Summer 2023 NR106. Jersey barriers NR110. Jersey barriers NR101. Farm equipment, black fridge and sheet metal Stumbles Lakes Spences Bridge Nooaitch NR85. Culvert, fish ladder and green tank lid Nooaltch Indian Band Soap Lake Ecological NR86. Embeded metal in gravel bar, horse trailer Reserve Nicola River NR88. Tire, lumber and fence posts appliance, cemer pieces, black Nicomen Indian Band Nicola River

Chilliwack River - Summer 2023



Overview

The Purpose of this document is to give the reader a pictorial overview of the debris sites (human-made and natural) found to date across the province of British Columbia that were affected by the November 2021 atmospheric river flooding event.

A list of known debris sites found to date are summarized under each watercourse section. In some cases the debris sites have human-made debris mixed with woody debris or debris that has been buried. The photos on the map may not always highlight all the debris in the area, they are updated as new information becomes available. There are ongoing assessments of known debris, as assessments are completed debris concluded as not in scope for removal will be shown as such on this document.

The identification, assessment and removal of work for Phase 1 has been completed and moved into Appendix D for all watercourses. Phase 1 refers to work completed prior to freshet. Phase 2 work is in progress.

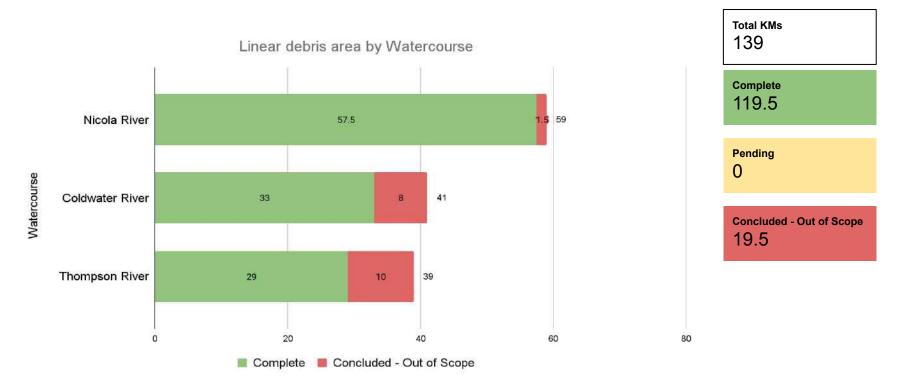
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Merritt Region Linear Debris Removal

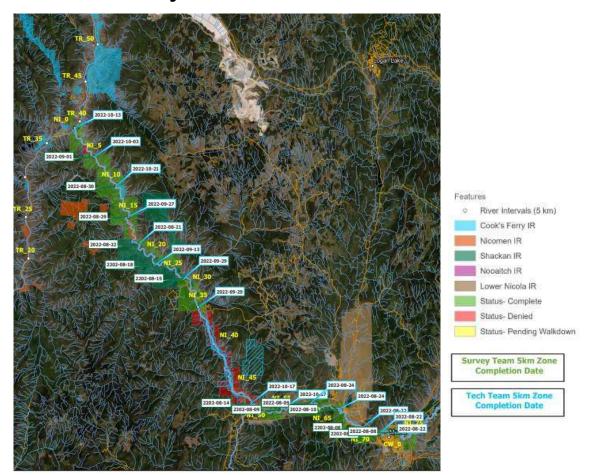
CRS Linear Debris Progress in KMs - Merritt Region Phase 2



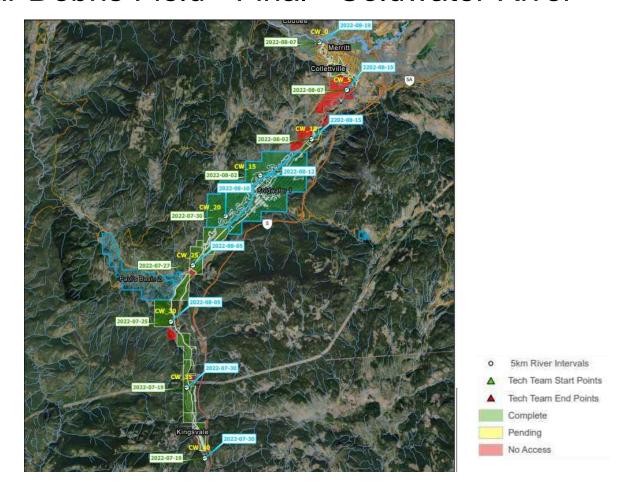
CRS Linear Debris Progress - Merritt Region

Work completed prior week	Upcoming work to be completed
• N/A	All identified debris that was assessed for removal has been completed.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors:

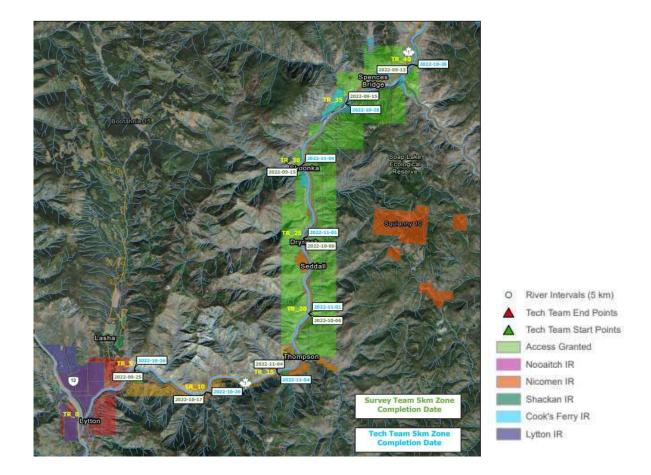
CRS Linear Debris Survey - Final - Nicola River



CRS Linear Debris Field - Final - Coldwater River



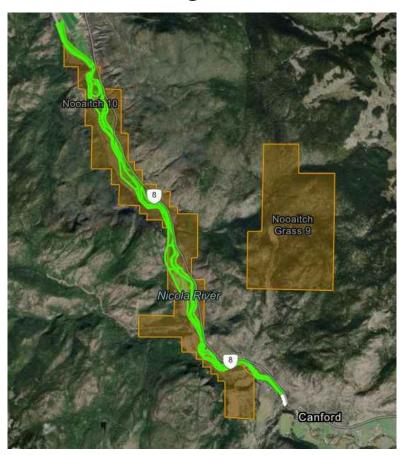
CRS Linear Debris Survey - Final - Thompson River



OLF Linear Debris Progress - Merritt Region

Work completed prior week	Upcoming work to be completed
• N/A	All identified debris that was assessed for removal has been completed.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: Survey of the Nicola River within Nooaitch IB reserve lands and Spius Creek is now complete; Linear debris removal along the Nicola River within Nooaitch IB reserve lands is now complete; and Close-out reports for Phase 2 to be submitted by end of November 2022.

OLF Linear Debris Field Progress - Nicola River





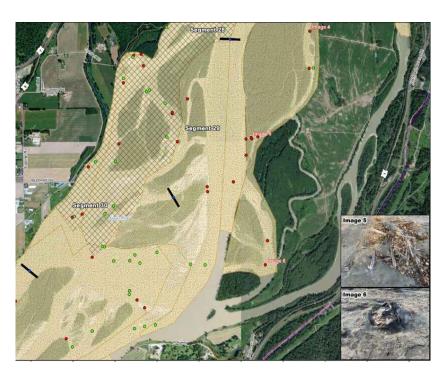
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Southwest Region Linear Debris Removal

Linear Debris Progress - Southwest Region

Work completed prior week	Upcoming work to be completed
Linear debris removal completed on Fraser River.	Work to be completed on Chilliwack and demobilized by end of week. .
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: mj.siahdashti@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Linear debris along the Frase and Chilliwack river to be completed by end of November 2022; • Linear debris removal along the Coquihalla River completed.

Linear Debris Field Progress Fraser River

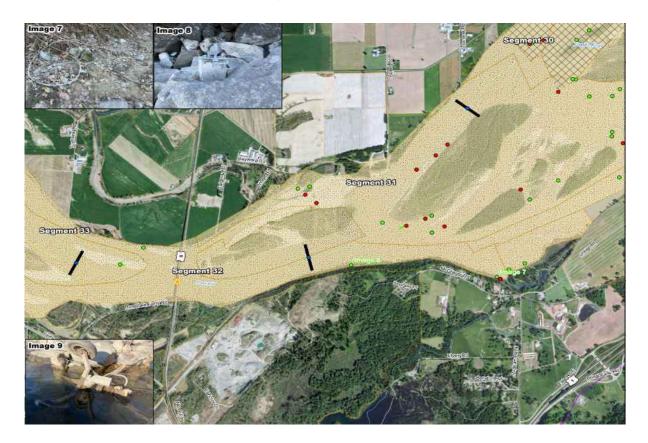




Debris remains in place

Debris Removed

Linear Debris Field Progress Fraser River



- Debris remains in place
- Debris Removed

Linear Debris Field Progress Chilliwack River





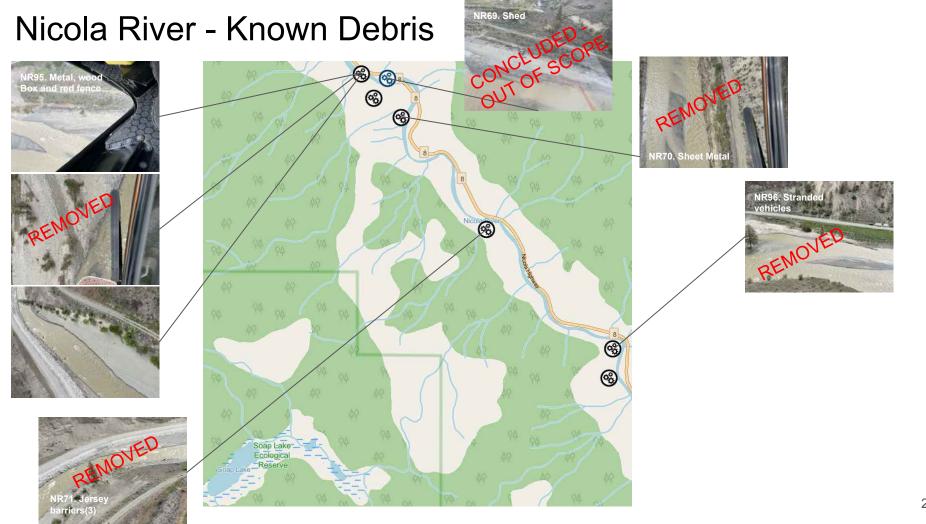


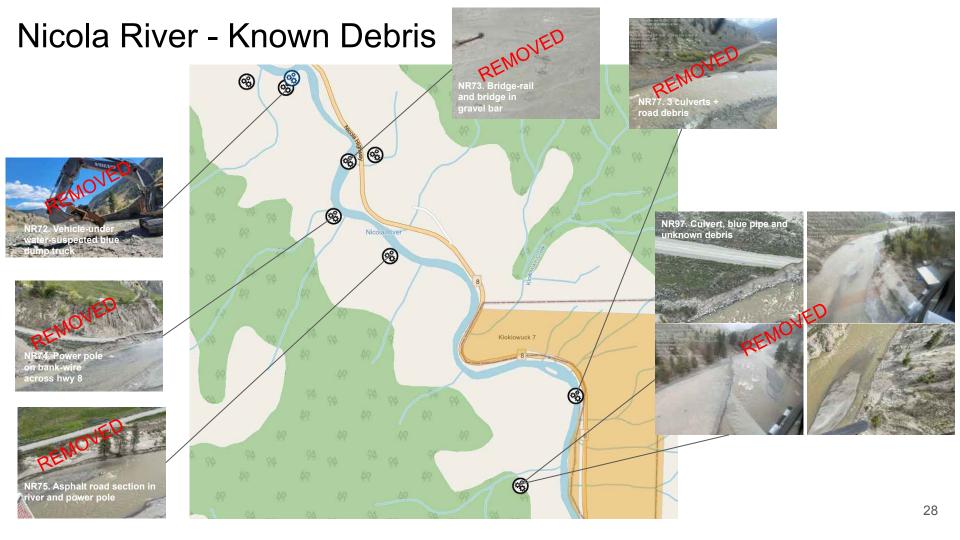
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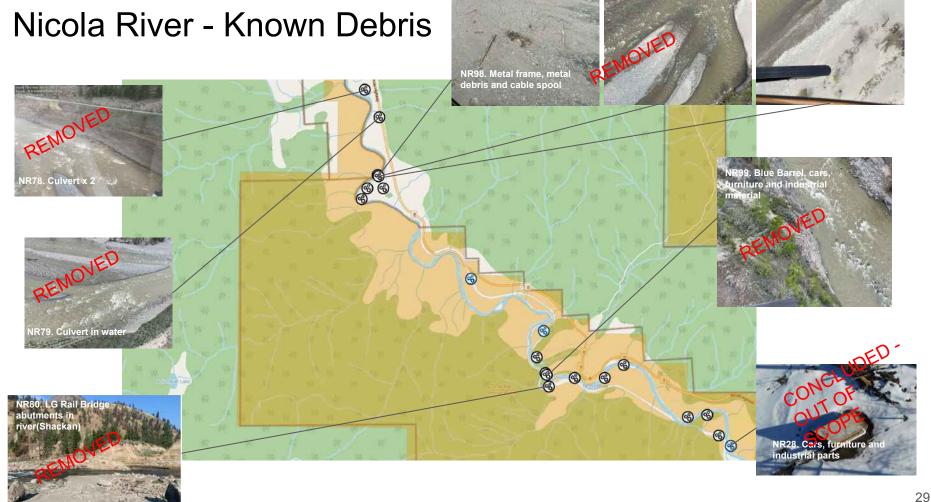
Nicola River Highway 8: Spences Bridge to Merritt

Nicola River - Highway 8 - Spences Bridge to Merritt

Work objectives	Community discussions status	Known debris	Permits status
 Remove human made debris and any natural debris causing threat to either public safety or infrastructure. Preserve cultural and historically significant areas. 	Ongoing communication with the bands and local authorities as the project planning progresses on specific operational matters. Recurring biweekly project update calls have been cancelled as of Sept. 21 as debris removal program winds down and attendance at meeting decreases. New proposed leadership table will be set up to discuss future programs related to flood recovery efforts.	Phase 1 (see Appendix D) 45 debris sites have removal completed; 7 debris sites have been assessed and concluded not to be removed; and 11 debris sites are to be completed by another ministry or others. Phase 2 38 debris sites have removal completed; 3 debris sites have been assessed and concluded not to be removed; and 11 debris sites identified. All identified debris that was assessed and could be removed has been completed. Remaining items will be removed at a later date.	Permit applications for Phase 2 work submitted to MOF and DFO on Jun 15. Phase 1 permits included: ARC Heritage Investigation Perm 2021-0453; NOI was issued Feb 28; MOF Approval A3006975 issued for Feb 14; and DFO Authorization issued Feb 14 under Approval 22-HPAC-00156 Phase 2 permits included: DFO Authorization issued Jul 18,2022.,Approval 22-HPAC-00816; MOF Approval A3006975 appended Jul 18,2022; Instream work to be completed by Aug 31, 2022; and Overall Phase 2 permit concludes Oct 15, 2022.

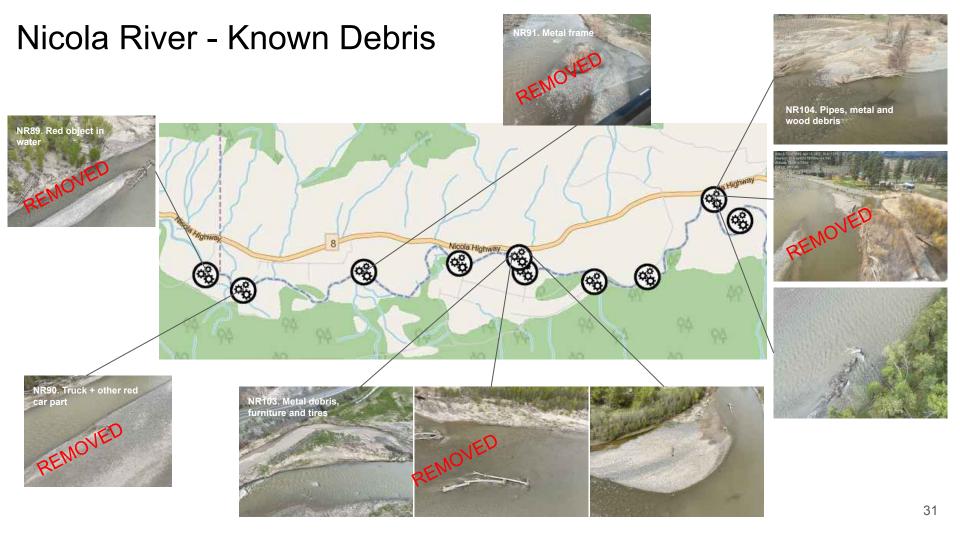


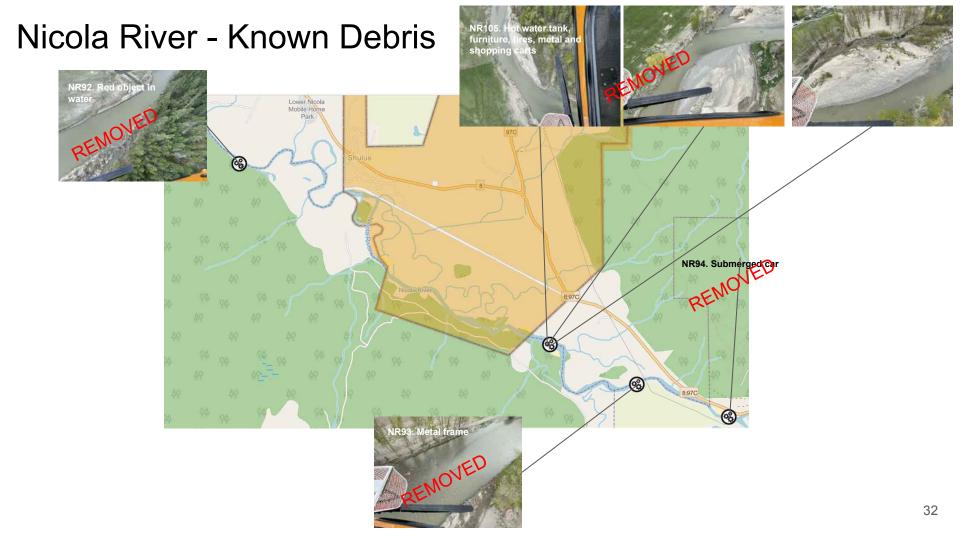




Nicola River - Known Debris







Nicola River Response Action Plan

Action plan for post-freshet work	Estimated timeline for removal
 Debris will be assessed and human made debris that poses a high risk will be prioritized Heavy equipment will include excavators, rock truck, flatbed trucks and other specialized equipment Linear debris removal crews will be utilized for small anthropogenic debris Helicopters will be utilized to support debris removal Entrance routes and staging areas for equipment and debris are being reviewed and will be communicated to stakeholders prior to mobilization Once debris has been removed from the waterway, contractors will follow waste management plans Crews will stop work if human remains are found or unanticipated archaeological sites are discovered Natural debris will be reviewed by QP, DFO and MOF to determine if it poses a threat to public safety and/or infrastructure 	Below are initial dates for removal to commence in the Nicola River and are subject to change as assessments are completed: NR-84, 85, 86, 88, 101, 105, 107, 109, 110, 118, 120: to be addressed in Summer 2023
Contractors involved	Waste management process
Debris removal: Arnett & Burgess (A&B), Quattro Constructors, Remote Helicopters, Rock Solid Industries, LNSS, Coastal Restoration Society (CRS), Ocean Legacy Foundation (OLF), TRK Helicopters Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess (A&B)	 Waste will be staged and sorted Legal owners will be notified Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Nicola River Response Action Plan

Work completed prior week	Upcoming work to be completed
• N/A	All identified debris that was assessed for removal has been completed.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Final assessments for debris in the Nicola River are complete; • Instream debris removal completed on August 31, 2022 as per DFO and MOF permits; • Close-out reports for Phase 2 to be submitted by end of November 2022.

Nicola River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
				Concluded - Out of	
NR-28	NI_28.7	Cars, furniture and industrial parts	Human-made	Scope	N/A
NR-55	N/A	Black pipe in river	Human-made	Removed	TBD
	NI_2.7	Shed		Concluded - Out of	
NR-69			Human-made	Scope	N/A
NR-70	NI_3.33	Sheet Metal	Human-made	Removed	2022-08-13
NR-71	NI_4.97	Jersey barriers(3)	Human-made	Removed	2022-08-22
NR-72	NI_7.9	Vehicle-under water-suspected blue dump truck	Human-made	Removed	2022-07-26
NR-73	NI_8.7	Bridge-rail visible in gravel bar	Human-made	Removed	TBD
NR-74	NI_9	Power pole on bank-wire across hwy 8	Human-made	Removed	TBD
NR-75	NI_9.3_9.4	Asphalt road section in river	Human-made	Removed	TBD
NR-76		Deleted and combined with NR-75			
NR-77	NI_10.9_3	3 culverts + road debris	Human-made	Removed	TBD
NR-78	NI_17.2_2	Culvert x 2	Human-made	Removed	
NR-79	NI_17.6	Culvert in water	Human-made	Removed	
NR-80	NI_25	LG Rail Bridge abutments in river (Shackan)	Human-made	Removed	2022-07-28
NR-81	NI_31	Culvert	Human-made	Removed	TBD
	NI_32.13	KVR bridge abutments(Fxranch)		Concluded - Out of	
NR-82			Human-made	Scope	TBD
NR-83	NI_33.9	Misc. wood and metal	Human-made	Removed	TBD
NR-84	NI_38.2	Culvert	Human-made	Identified	TBD
NR-85	NI_43.1_43.4	Culvert, fish ladder and green tank lid	Human-made	Identified	TBD
NR-86	NI_46.85_47	Embedded metal in gravel bar, horse trailer	Human-made	Identified	TBD
NR-87		Deleted and combined with NR-86			

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Nicola River

Map ID	Contractor ID*	Description	Type	Status	Removal date
NR-88	NI_47.5	Tire, lumber and fence posts	Human-made	Identified	TBD
NR-89	NI_51.4	Red object in water, buried car	Human-made	Removed	2022-08-03
NR-90	NI_52.0	Truck + other red car part	Human-made	Removed	2022-07-27
NR-91	NI_53.9	Metal Frame	Human-made	Removed	2022-08-22
NR-92	NI_64.24	Red object in water	Human-made	Removed	TBD
NR-93	NI_71.25	Metal frame	Human-made	Removed	TBD
NR-94	N/A	Submerged car	Human-made	Removed	2022–07-25
NR-95	NI_2.4	Metal, wood Box and red fence	Human-made	Removed	
NR-96	NI_6.95	Stranded vehicles	Human-made	Removed	TBD
NR-97	NI_11.3	Culvert, blue pipe and unknown debris	Human-made	Removed	TBD
NR-98	NI_18.7	Metal frame, metal debris and cable spool	Human-made	Removed	TBD
NR-99	NI_24.7	Blue Barrel, cars, furniture and industrial material	Human-made	Removed	TBD
NR-100	NI_31.1	Metal road sign pole and metal roof pieces	Human-made	Removed	TBD
NR-101	NI_40	Farm equipment, black fridge and sheet metal	Human-made	Identified	TBD
NR-102		Deleted and combined with NR-85			
NR-103	NI_56.6	Metal debris, furniture and tires	Human-made	Removed	TBD
NR-104	NI_60.05	Pipes, metal and wood debris	Human-made	Removed	TBD
NR-105	NI_69.88	Hot water tank, furniture, tires, metal and shopping carts	Human-made	Removed	TBD
NR-106	NI_1.5 NI_1.8	Jersey barriers	Human-made	Identified	TBD
NR-107	NI_4.88	Red fence	Human-made	Identified	TBD
NR-108	NI_7.1 NI_7.3 NI_7.7	Metal roof, telephone poles and pipe	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Nicola River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
NR-109	NI_8.1 NI_8.3 NI_8.7	Fencing, piping, pieces of asphalt on bank, metal roof	Human-made	Identified	TBD
NR-110	NI_10.2 NI_10.4 NI_10.7	Jersey barriers and pipe	Human-made	Identified	TBD
NR-111	NI_13.4 NI_13.5 NI_13.7	Misc. debris, winch, shed	Human-made	Removed	TBD
NR-112	NI_13.9	Machinery	Human-made	Removed	TBD
NR-113	NI_14.7	Culvert	Human-made	Removed	TBD
NR-114	NI_14.8	Concrete foundation	Human-made	Removed	TBD
NR-115	NI_26.8	Seacan door	Human-made	Removed	TBD
NR-116	NI_28.2	Irrigation pipe	Human-made	Removed	TBD
NR-117	NI_51.70	Metal sheets on bank	Human-made	Removed	TBD
NR-118	NI_56.6 NI_56.8 NI_57.2	Metal sheets, metal roofing	Human-made	Identified	TBD
NR-119	NI_58.15 NI_58.60 NI_58.85 NI_59.24	Metal sheeting, metal debris in channel, tires in channel	Human-made	Removed	TBD
NR-120	NI_59.3	Metal, appliance, cement pieces, black appliance	Human-made	Identified	TBD
NR-121	NI_60.3 NI_61 NI_62 NI_63.8	Blue pipe on channel bar, metal, unidentified appliance, misc. debris, wood roof, painted wood, debris pile on bank	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.



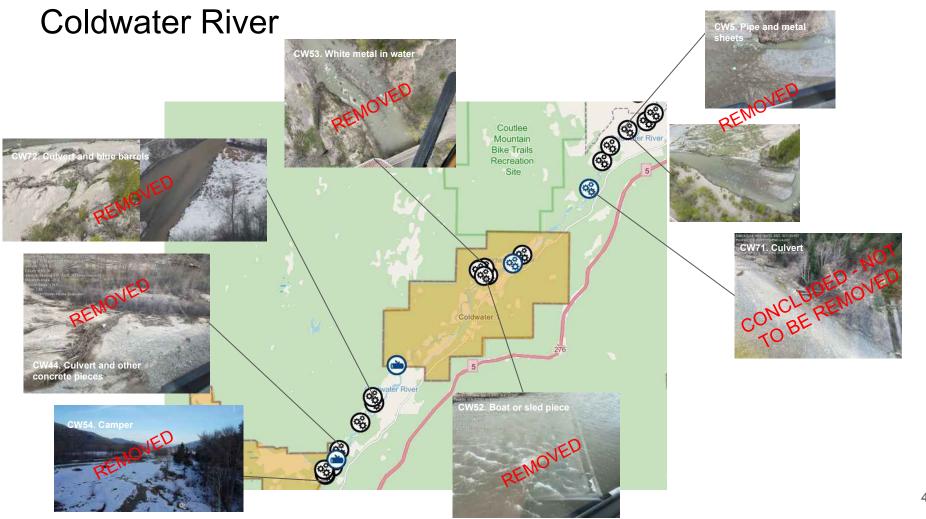
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Coldwater River: Highway 5

Coldwater River - Highway 5

OVEF	OVERVIEW							
Work	objectives	Community discussions status	Known debris	Permits status				
2.	Remove human made debris and any natural debris causing threat to either public safety or infrastructure. Preserve cultural and historically significant areas.	Ongoing communication with the bands and local authorities as the project planning progresses on specific operational matters. Recurring biweekly project update calls have been cancelled as of Sept 21 as debris removal program winds down and attendance at meeting decreases. New proposed leadership table will be set up to discuss future programs related to flood recovery efforts.	Phase 1 (see Appendix D) 29 debris sites have removal completed; 9 debris sites have been assessed and concluded not to be removed; and 5 debris sites are to be completed by another ministry or others. Phase 2 36 debris sites have removal completed; 2 debris sites has been assessed and concluded not to be removed; and 1 debris site to be completed by another ministry or others. All identified debris that was assessed for removal has been completed.	Permit applications for Phase 2 work submitted to MOF and DFO on Jun 15. Phase 1 permits included: ARC Heritage Investigation Permit 2021-0453; NOI was issued Feb 28; MOF Approval A3006975 issued for Feb 14; and DFO Authorization issued Feb 14 under Approval 22-HPAC-00156; and Juliet Creek MOF approval issued Mar 7 under Approval A3007002 Phase 2 permits include DFO Authorization issued Jul 18,2022.,Approval 22-HPAC-00816; MOF Approval A3006975 appended Jul 18 ,2022; Instream work to be completed by Aug 31, 2022; and Overall Phase 2 permit concludes Oct 15, 2022.				





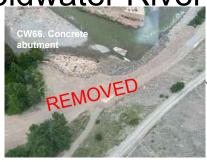


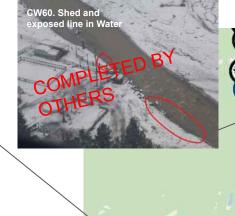






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Coldwater River Response Action Plan

Action plan for post-freshet work	Estimated timeline for removal
 Debris will be assessed and human made debris that poses a high risk will be prioritized Linear debris removal crews will be utilized for small anthropogenic debris Helicopters will be utilized to support debris removal Entrance routes and staging areas for equipment and debris is being reviewed and will be communicated for each location with stakeholders prior to mobilization into each work area Where bridge piece dismantling will specialised equipment, including cranes and cutting torches Once debris has been removed from the waterway, contractors will follow waste management plans Crews will stop work if human remains are found or unanticipated archaeological sites are discovered Natural debris will be reviewed by QP, DFO and MOF to determine if it poses a threat to public safety and/or infrastructure 	All identified debris that was assessed for removal has been completed
Contractors involved	Waste management process
Debris removal: Arnett & Burgess (A&B), Quattro Constructors, Remote Helicopters, Rock Solid Industries, Coastal Restoration Society (CRS) Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess	 Waste will be staged and sorted Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Coldwater River Response Action Plan

Work completed prior week	Upcoming work to be completed
• N/A	All identified debris that was assessed for removal has been completed.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Final debris assessment of Coldwater River are complete; • All identified debris that was assessed for removal is complete; and • Close-out reports for Phase 2 to be submitted by end of November 2022.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CW-5	CW_5.3 CW_5.8	Pipe, metal sheets, roof, green metal	Human-made	Removed	TBD
CW-39	CW_31.3_31.4	Metal objects	Human-made	Removed	TBD
CW-44	CW_25.9	Culvert and other concrete pieces	Human-made	Removed	TBD
CW-49	CW_0.7	Door mid channel	Human-made	Removed	2022-08-02
CW-50	CW_1.0 CW_1.1	Small debris jam mid-channel, submerged metal	Human-made	Removed	TBD
CW-51	CW_1.5	Concrete structure in channel	Human-made	Removed	2022-08-05
CW-52	CW_14.9	Boat or sled piece	Human-made	Removed	TBD
CW-53	CW_15.3	White metal in water	Human-made	Removed	TBD
CW-54	CW_27.0	Camper	Human-made	Removed	2022-07-18
CW-55	CW_31.1	Steel Trailer frame	Human-made	Removed	2022-08-02
CW-56	CW_31.2	Culvert on farm bank	Human-made	Removed	2022-08-02
CW-57	N/A	Deleted, was a duplicate of CW-39			
CW-58	N/A	Deleted, was a duplicate of CW-39			
CW-59	CW_31.6	Green roof piece	Human-made	Removed	TBD
CW-60	CW_37.6	Shed and exposed line in Water- Land Owner - to be reassessed after flood	Human-made	Completed by Others	TBD
CW-61	CW_39.2	Green roof piece + other metal piece	Human-made	Removed	TBD
CW-62	CW_64_64.9	Log jam	Natural	Concluded - Not to be Removed	TBD
CW-63	N/A	Deleted and combined with CW-62			
CW-64	N/A	Deleted, was a duplicate of CW-69			
CW-65	CW_32	Farm equipment in stream	Human-made	Removed	2022-08-02
CW-66	CW_51.3	Concrete abutment	Human-made	Removed	2022-08-13
CW-67	CW_62.8	Access mat in channel	Human-made	Removed	2022-07-26
CW-68	CW_63.0	Culvert on gravel bar	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CW-69	CW_0.3	Culvert on bank	Human-made	Removed	2022-07-26
CW-70		Deleted, was a duplicate of CW-5			
CW-71	CW_9.0	Culvert	Human-made	Concluded - Not to be Removed	TBD
CW-72	CW_23.0	Culvert and blue barrels	Human-made	Removed	TBD
CW-73	CW_29.8	Blue barrels, green metal and scrap tin metal	Human-made	Removed	2022-08-02
CW-74	CW_33.35	Blue barrel and metal box	Human-made	Removed	TBD
CW-75	CW_60	Yellow and blue barrels	Human-made	Removed	2022-08-30
CW-76	N/A	Concrete	Human-made	Removed	2022-08-30
CW-77	CW_0.8	Misc. debris	Human-made	Removed	TBD
CW-78	CW_1.6 CW_1.8	Concrete rings and misc. debris in long piles	Human-made	Removed	TBD
CW-79	CW_2.5	Concrete in root ball	Human-made	Removed	TBD
CW-80	CW_3.1 CW_3.2	Metal pipe in river, buried post and blue pipe	Human-made	Removed	TBD
CW-81	CW_22.8	Culvert	Human-made	Removed	TBD
CW-82	CW_24.6 CW_25.9	Blue barrel and culvert	Human-made	Removed	TBD
CW-83	CW_27 CW_27.8	Asphalt, lumber, fence post and plastic all in log jams	Human-made	Removed	TBD
CW-84	CW_29.8 to CW_30.9	Blue barrels, green metal, scrap tin	Human-made	Removed	TBD
CW-85	CW_31.3 to CW_31.4	Roof piece, metal culvert, green object, sheet metal, and green piece of metal	Human-made	Removed	TBD
CW-86	CW_34.8 to 37.6	Plywood, rail ties, concrete, power pole, plywood, lumber, barrels, dimensional lumber, roof pieces	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CW-87	CW_40	Culvert	Human-made	Removed	TBD
CW-88	CW_44	Misc. debris	Human-made	Removed	TBD
CW-89	CW_60	Various barrels (yellow and blue coloured)			
	CW_61.35		Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.



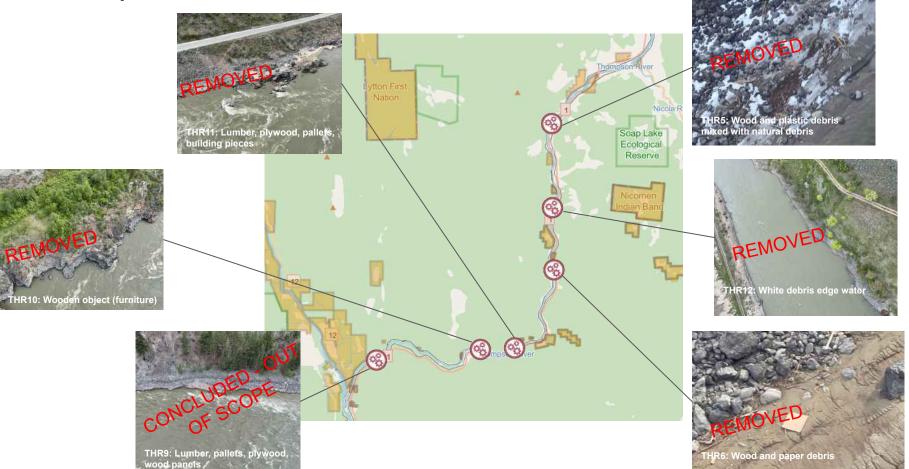
05 Thompson River

Thompson River

OVERVIEW						
Work objectives	Community discussions status	Known debris	Permits status			
Remove human made de and any natural debris causing threat to either public safety or infrastruct. Preserve cultural and historically significant are	the bands and local authorities as the project planning progresses on specific operational matters.	19 debris sites identified in total Phase 1 (see Appendix D) • 6 debris sites have removal completed. Phase 2 • 12 debris sites have removal completed; • 1 debris site to be completed by others. All identified debris that was assessed for removal has been completed.	Water levels had dropped , making large anthropogenic debris sites visible. WSP-Golder has been in communication with the regulatory bodies to determine next steps and permit requirements Phase 1 permits included:			

Thompson River REMOVED THR17: Steel banding THR15: Submerged item buried in gravel bar maybe trailer Lish-Leesh-Tum THR13: Submerged irrigation REMOVED Spences Bridge THR19: ATV, trailer, wood, THR16: Large red item, culvert, white cattle gate vehicle parts, white metal THR14: Pipe/culvert, metal, vehicle parts, steel frame REMOVED THR18: Damaged ATV Thompson Rive 51

Thompson River



Thompson Response Action Plan

Action plan for post-freshet work	Estimated timeline for removal
 Debris will be assessed and human made debris that poses a high risk will be prioritized Linear debris removal crews will be utilized for small anthropogenic debris Helicopters will be utilized to support debris removal Entrance routes and staging areas for equipment and debris is being reviewed and will be communicated asap Once debris has been removed from the waterway, contractors will follow waste management plans Crew will stop work if human remains are found or unanticipated archaeological sites are discovered Natural debris will be reviewed by QP, DFO and MOF to determine if it poses a threat to public safety and/or infrastructure 	All identified debris that was assessed for removal has been completed.
Contractors involved	Waste management process
Debris removal: Arnett & Burgess (A&B), Quattro Constructors, Remote Helicopters, Coastal Restoration Society (CRS) Qualified Environmental & Archeological Professional: WSP-Golder Field Work Management: Arnett & Burgess	 Waste will be staged and sorted Legal owners will be notified Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Thompson Response Action Plan

Work completed prior week	Upcoming work to be completed
• N/A	All identified debris that was assessed for removal has been completed.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Final debris assessments of the Thompson River are complete; • Instream debris removal completed on August 31, 2022 as per DFO and MOF permits; • Large anthropogenic debris contractors have completed demobilization; • Linear debris crews to be complete by end of October 2022; and • Close-out reports for Phase 2 to be submitted by end of November 2022.

Thompson River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
THR-5	N/A	Pieces of wood in and on the banks of the river	Natural	Removed	TBD
THR-6	N/A	Wood and paper scraps on banks.	Natural	Removed	TBD
THR-9	TR_3.15	Lumber, pallets, plywood, wood panels	Human-made	Concluded - Out of Scope	TBD
THR-10	TR_11.91	Wooden object (furniture)	Human-made	Removed	TBD
THR-11	TR_14.33	Lumber, plywood, pallets, building pieces	Human-made	Removed	TBD
THR-12	TR_25.60	White debris edge water	Human-made	Removed	TBD
THR-13	TR_37.6_Heavy1	Submerged irrigation pipe	Human-made	Removed	TBD
THR-14	TR_37.9	Submerged pipe/culvert, metal, vehicle parts and steel frame	Human-made	Removed	TBD
THR-15	TR_37.1_Trailer	Submerged item - looks like a trailer, black	Human-made	Removed	TBD
THR-16	TR_37.2	Large submerged item red in colour, vehicle parts, white metal	Human-made	Removed	TBD
THR-17	TR_35_Heavy7	Steel banding buried in gravel bar	Human-made	Removed	TBD
THR-18	TR_34.9_Spences9	Damaged ATV on gravel bar	Human-made	Removed	TBD
THR-19	TR_34.8	Submerged ATV, trailer, wood, culvert, white cattle gate	Human-made	Removed	TBD

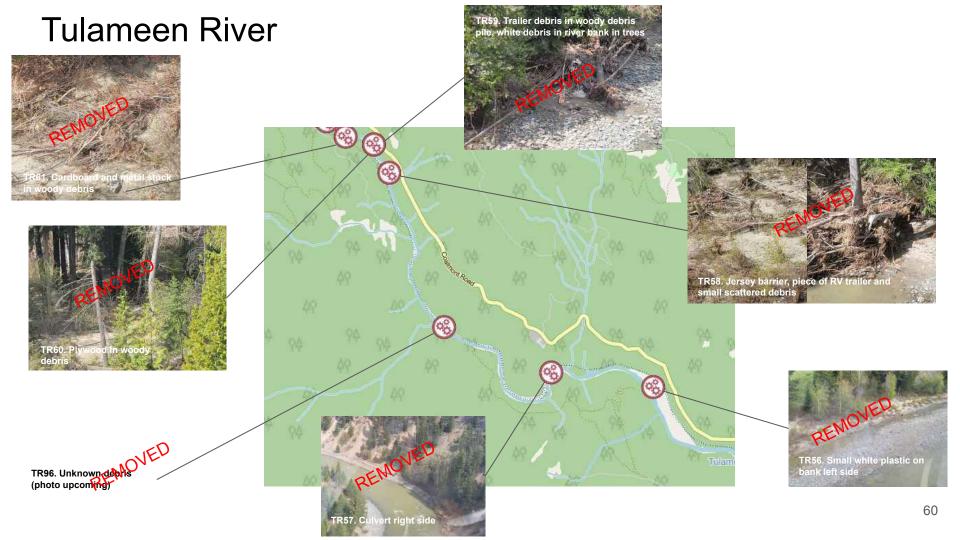
^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.



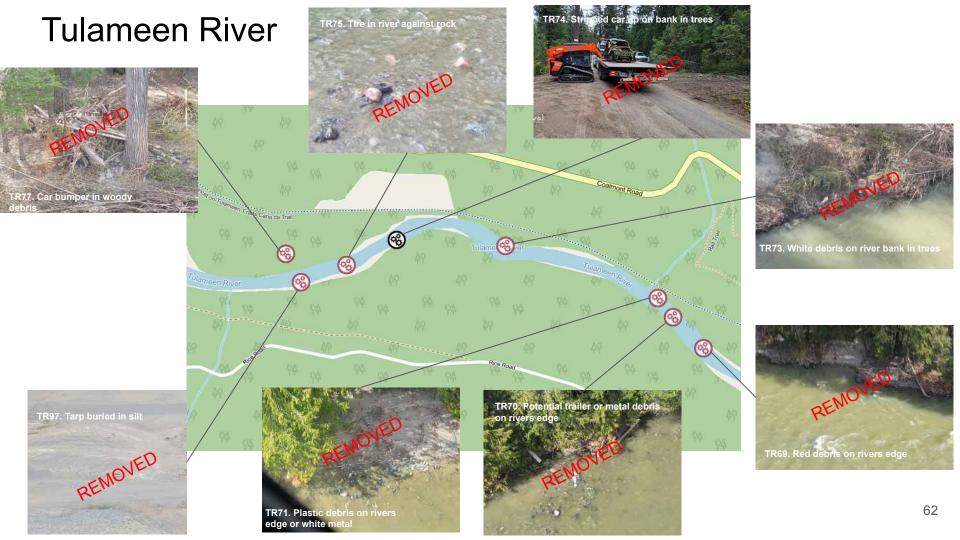
Overview							
Work	objectives	Community discussions status	Known debris	Permits status			
2.	Remove human made debris and any natural debris causing threat to either public safety or infrastructure. Preserve cultural and historically significant areas.	Ongoing communication with both Upper Similkameen IB (USIB) and Lower Similkameen IB (LSIB), Regional District of Okanagan-Similkameen,town of Princeton and Tulameen fire department. Recurring biweekly project update calls have been cancelled as of Sept 21 as debris removal program winds down and attendance at meeting decreases. New proposed leadership table will be set up to discuss future programs related to flood recovery efforts.	Phase 1 (see Appendix D) • 34 debris sites have removal completed; and • 17 debris sites have been assessed and concluded not to be removed Phase 2 • 38 debris sites has removal completed; • 5 debris sites have been assessed and concluded not be be removed or handed to 3rd party for resolution; • 1 debris sites are in progress; All identified debris that was assessed for removal has been completed.	Tetra Tech has submitted the DFO permit for Phase 2 anthropogenic debris. MOF has conditionally extended to Oct 15 for instream work outside of the fish timing window (Aug 7 - Oct 15). Phase 1 permits included:			

Tulameen River TR79. Green box, small debriculvert, yellow plastic TR80. Tarps, tire, blankets and other small debris Tulameen Nº Prince Similkameen River

















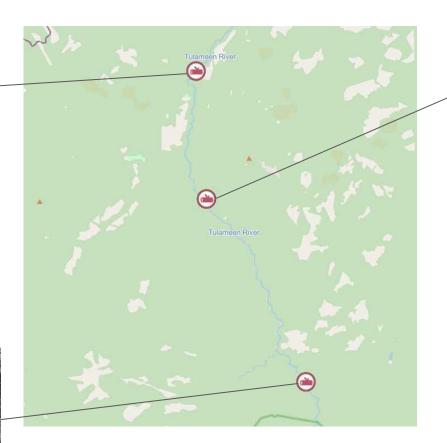






TR95. Log jam in River







Tulameen River Response Action Plan

Action plan for post-freshet work	Estimated timeline for removal			
 Develop site specific debris removal work plans and engage with LSIB and USIB to assist with sequence/scheduling of work TetraTech to review site specific plans and provide direction re access and biological mitigation measures (as per the Section 11 permit extension) TetraTech to assess natural debris to determine if it poses a threat to public safety and/or infrastructure. Identify entrance routes and staging areas for equipment and debris planning and ensure all necessary access agreements are in place Once debris has been removed from the waterway, contractors will follow waste management plans Crew will stop work if human remains are found or unanticipated archaeological sites are discovered Discussions ongoing with USIB and LSIB for subcontractors and professional resources 	Below are dates and are subject to change: TR-44 in the vicinity of Ochre Bluff, after assessment and discussions with USIB and LSIB, the small garbage around was removed but the concrete was concluded not to be removed; TR-84: Removed from waterways, but in progress pending regulatory approval			
Contractors involved	Waste management process			
Debris removal: Clearview Demolition, Tri Valley Construction Qualified Environmental & Archeological Professional: TetraTech Field Work Management: Clearview Demolition	 Waste will be staged and sorted Legal owners will be notified Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal 			

protocols

See Appendix A Waste Management Strategic Plan

Tulameen River Response Action Plan

Work completed prior week	Upcoming work to be completed
 Monitoring venting forecast for slash pile burning; Monitoring notice from Town of Princeton for road closure; and Finalizing job end report. 	 All identified and assessed for removal debris has been removed from instream as per the conclusion of the permit on October 15, 2022; Haul woody debris pending road opening; and Complete slash pile burning.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Final assessments of Tulameen River is being completed and documented; • Instream debris removal to be completed by October 15, 2022 as per DFO and MOF permits; • Large anthropogenic debris scheduled to finalize by mid-October 2022 and contractors demobilized by October 31, 2022; and • Close-out reports for Phase 2 to be submitted by mid-November 2022.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
ΓR-44	N/A	Pole like objects beside river	Human-made	Concluded - Not to be Removed	TBD
TR-53		Deleted, was a duplicate of TR-57			
R-54	TU_2.7_2.8	Metal/Plastic Debris in woody debris, white debris on rocks	Human-made	Removed	TBD
R-55		Deleted and combined with TR-54			
R-56	TU_9.2	Small white plastic on bank left side	Human-made	Removed	TBD
R-57	TU_10.8	Culvert right side	Human-made	Removed	2022-09-02
R-58	TU_15.9	Jersey barrier, piece of RV trailer, small scattered debris	Human-made	Removed	TBD
R-59	TU_16.3	Trailer debris in woody debris pile, white debris in river bank in trees	Human-made	Removed	TBD
R-60	TU_16.35	Plywood in woody debris	Human-made	Removed	TBD
R-61	TU_16.85	Woody debris, metal stuck in woody debris	Human-made	Removed	TBD
R-62	TU_17.0 TU_17.1	Debris in silt on rivers edge, metal, pipe, lumber	Human-made	Removed	TBD
TR-63		Deleted and combined with TR-62			
TR-64	TU_17.375	Metal debris in trees in riparian area	Human-made	Removed	TBD
R-65	TU_17.5 TU_17.7	Tarp, metal and other debris	Human-made	Removed	TBD
TR-66		Deleted and combined with TR-65			
R-67	TU_17.875 TU_17.95 TU_18.75	Blue tarp, metal, other debris	Human-made	Removed	TBD
TR-68		Deleted and combined with TR-67			
R-69	TU_18.5	Red debris on rivers edge, plastics, culvert	Human-made	Removed	TBD
R-70	TU_18.55	Plastics and metal debris	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
TR-71	TU_18.6	Plastic debris on rivers edge or white metal	Human-made	Removed	TBD
TR-72		Deleted and combined with TR-67			
TR-73	TU_19	White debris on river bank in trees, cloth, metal	Human-made	Removed	TBD
TR-74	TU_19.3	Stripped car up on bank in trees	Human-made	Removed	2022-08-04
TR-75	TU_17.20	Tire against rock in river	Human-made	Removed	TBD
TR-76	TU_19.5	Camper door stuck on woody debris	Human-made	Removed	TBD
TR-77	TU_19.6	Car bumper in woody debris	Human-made	Removed	TBD
TR-78	TU_19.9	Debris in wooded area, plastics, metal	Human-made	Removed	TBD
TR-79	TU_3.00 TU_3.10 TU_3.30 TU_4.00	Green box, plastics, culvert, debris in woody pile on bank, metal, bag, other small scattered debris	Human-made	Removed	TBD
TR-80	TU_4.10 TU_4.30 TU_4.40 TU_4.50 TU_4.60 TU_4.70	Tarps, tire, blankets, metal, lumber, other small scattered debris	Human-made	Removed	TBD
TR-81	TU_5.30 TU_5.60 TU_5.70 TU_6.30	Tires, culvert, barrel, metal, black debris	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

I UIAITIGGIT I XIVGI					
Map ID	Contractor ID*	Description	Type	Status	Removal date
TR-82	TU_7.00 TU_7.20 TU_7.25 TU_7.40 TU_7.50 TU_7.55 TU_7.60 TU_7.80 TU_10.1	Small culvert, plastic, propane tank, metal and woody debris	Human-made	Removed	TBD
TR-83	TU_21.60 TU_22.90 TU_23.15	Metal and woody debris	Human-made	Removed	TBD
TR-84	TU_23.20 TU_23.25 TU_23.50 TU_23.60 TU_24.00	Log stacks and woody debris, car door, plastics	Human-made	In Progress	TBD
TR-85	TU_24.10 TU_24.20 TU_25.50 TU_26.00 TU_26.10 TU_26.20	White object, plastic, metal, woody debris	Human-made	Removed	TBD
TR-86	TU_27.00 TU_27.20 TU_27.25 TU_27.30 TU_27.60 TU_27.85	Metal debris, cardboard box, metal, plastic tank, fiberglass door, plywood, chair, white debris, other debris items	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

	IGGII LIVIV				
Map ID	Contractor ID*	Description	Туре	Status	Removal date
TR-87	TU_28.65 TU_28.67 TU_29.20	Several pieces of debris in woody debris, umbrella, metal, plastics, other debris items	Human-made	Removed	TBD
ΓR-88	TU_29.75	Black debris, metal and plastics	Human-made	Removed	TBD
TR-89	TU_30.20 TU_30.35 TU_30.40 TU_30.55 TU_30.60 TU_30.75	Log stack, metal, plastics, large amounts of debris from trailer, other small debris	Human-made	Removed	TBD
TR-90	TU_31.00 TU_31.25 TU_31.30 TU_31.40 TU_31.70 TU_31.80 TU_31.90	Woody debris, log piles, white PVC pipe, plastics, metal pipe, wires, styrofoam, green pipe, pallets, other debris items	Human-made	Removed	TBD
TR-91	TU_33.20 TU_33.25 TU_33.30	Concrete lego blocks, plastics, metal, ball	Human-made	Removed	TBD
TR-92	TU_35.30	Barrel, metal, plastics	Human-made	Removed	TBD
TR-93	TU_52.07 TU_52.40	Log jam in River	Natural	Concluded - Not to be Removed	TBD
TR-94	TU_58.10 TU_58.20	Log jam in River	Natural	Concluded - Not to be Removed	TBD
TR-95	TU_67.00	Log jam in River	Natural	Concluded - Not to be Removed	TBD
TR-96	TU_13.31	Unknown debris	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Tulameen River

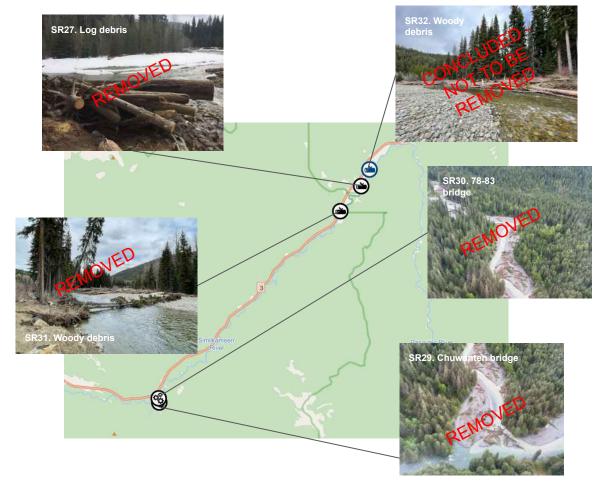
Map ID	Contractor ID*	Description	Туре	Status	Removal date
TR-97	TU_20.00	Tarp buried in silt, cloth, lumber, debris in wooded area	Human-made	Removed	TBD
TR-98	TU_21.10	Propane tank and other debris in woody area	Human-made	Removed	TBD
TR-99	TU_21.40	Tire on river bank, woody debris	Human-made	Removed	TBD
TR-100	TU_4.1	Concrete water intake	Human-made	Removed	TBD

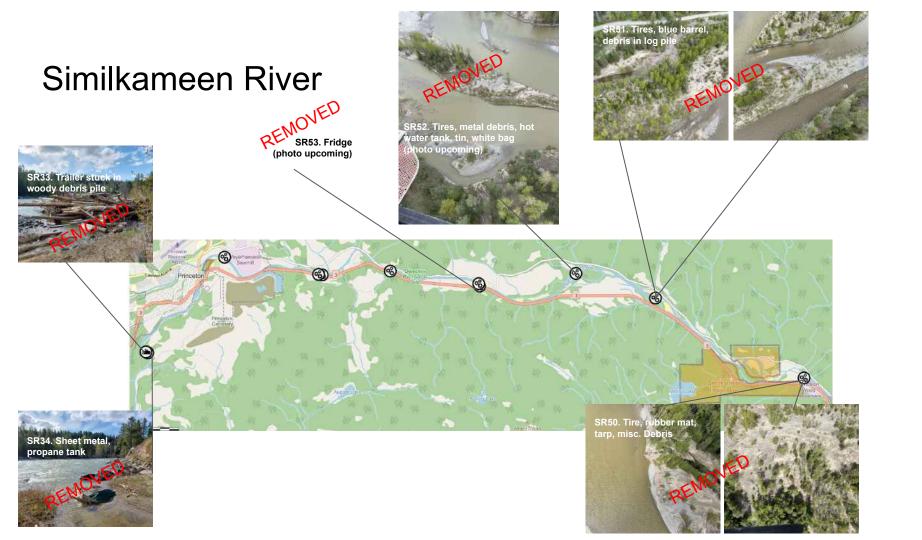
^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

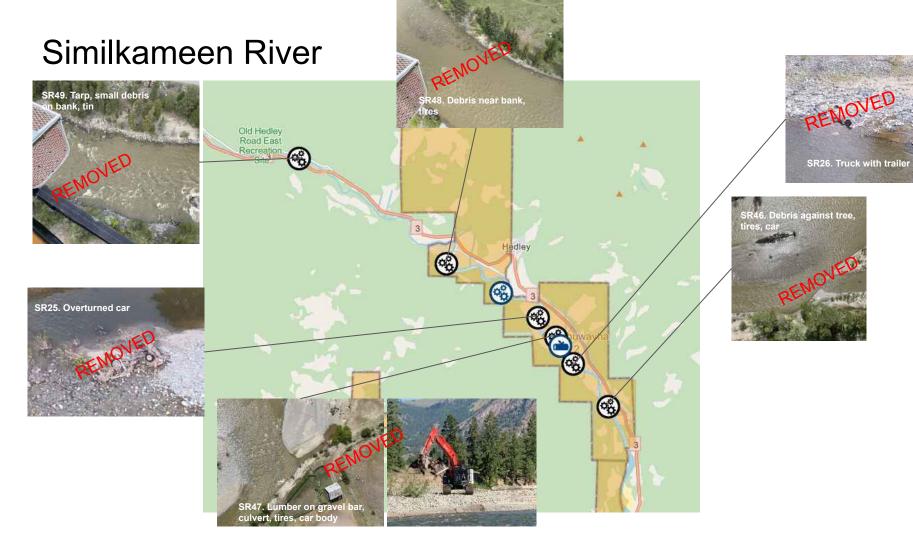


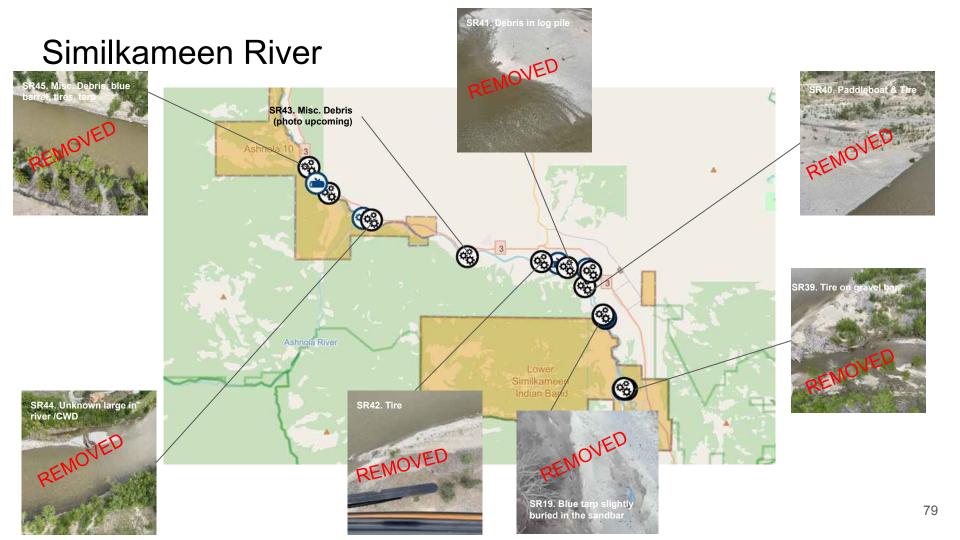
OVERVIE	W			
Work obj	ectives	Community discussions status	Known debris	Permits status
ar th in 2. Pi	emove human made debris and any natural debris causing areat to either public safety or frastructure. reserve cultural and storically significant areas	Ongoing communication with both Upper Similkameen IB (USIB) and Lower Similkameen IB (LSIB) as the planning of the project moves forward. Also communicating with Regional District of Okanagan-Similkameen and town of Princeton. Recurring biweekly project update calls have been cancelled as of Sept 21 as debris removal program winds down and attendance at meeting decreases. New proposed leadership table will be set up to discuss future programs related to flood recovery efforts.	Phase 1 (see Appendix D) 9 debris sites have removal completed; and 9 debris sites have been assessed and concluded not to be removed; and 3 debris site to be completed by another ministry or others. Phase 2 30 debris sites have removal completed; and 2 debris site have been assessed and concluded not to be removed; All identified debris that was assessed for removal has been completed.	Tetra Tech has submitted the DFO permit for Phase 2 anthropogenic debris, permit received week of Jul 18. MOF has conditionally extended to Oct 15 for instream work outside of the fish timing window (Aug 7 - Sep 30). Phase 1 permits included: ARC Heritage Investigation Permit 2021-0453; NOI was issued Feb 28; MOF Approval A8006162 issued for Feb 11 and permit extension issued Apr 14; and DFO Authorization issued Feb 7 under Approval 22-HPAC-00125. Phase 2 permits included DFO Authorization issued July 18, 2022 22-HPAC-00766. In stream Permit ends Sep 30.



























Similkameen River Response Action Plan

Action plan	Estimated timeline for removal
 Identify newly exposed human made debris and large woody debris deposits during/after freshet. Develop site specific debris removal work plans and engage with LSIB and USIB to assist with sequence/scheduling of work. TetraTech to review site specific plans and provide direction re access and biological mitigation measures (as per the Section 11 permit extension) TetraTech to assess natural debris to determine if it poses a threat to public safety and/or infrastructure. Identify entrance routes and staging areas for equipment and debris planning and ensure all necessary access agreements are in place Once debris has been removed from the waterway, contractors will follow waste management plans Crew will stop work if human remains are found or unanticipated archaeological sites are discovered Discussions ongoing with USIB and LSIB for subcontractors and professional resources 	All identified debris that was assessed for removal has been completed.
Contractors involved	Waste management process
Debris removal: Clearview Demolition, Tri Valley Construction Qualified Environmental & Archeological Professional: TetraTech Field Work Management: Clearview Demolition	 Waste will be staged and sorted Legal owners will be notified Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Similkameen River Response Action Plan

Work completed prior week	Upcoming work to be completed		
• N/A	All identified debris that was assessed for removal has been completed.		
Relevant contacts	Debris removal close-out timeline:		
Contact for Contractors questions: kirandeep.dhillon@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Close-out timeline is subject to change due to delays caused by heat, wildfires, and/or other external factors: • Final debris assessment of Similkameen River is completed; • Instream debris removal is completed; • Large anthropogenic debris removal is complete and contractors will be demobilized by end of October 2022; and • Close-out reports for Phase 2 to be submitted by mid-November 2022.		

Map ID	Contractor ID*	Description	Type	Status	Removal date
SR-19	N/A	Blue tarp slightly buried in the sandbar	Human-made	Removed	TBD
SR-23	N/A	Tarp slightly buried in the sandbar	Human-made	Removed	TBD
SR-24	N/A	Blue barrels entangled in woody debris	Human-made	Removed	TBD
SR-25	N/A	Overturned car	Human-made	Removed	2022-07-27
SR-26	N/A	Truck with trailer	Human-made	Removed	TBD
SR-27	N/A	Log debris	Natural	Removed	TBD
SR-28	N/A	Sumallo bridge	Human-made	Concluded - Out of Scope	N/A
SR-29	N/A	Chuwanten bridge	Human-made	Removed	TBD
SR-30	N/A	78-83 bridge	Human-made	Removed	TBD
SR-31	N/A	Woody debris	Natural	Removed	TBD
SR-32	N/A	Woody debris	Natural	Concluded - Out of Scope	TBD
SR-33	N/A	Trailer stuck in woody debris pile	Human-made	Removed	TBD
SR-34	N/A	Sheet metal, propane tank	Human-made	Removed	TBD
SR-35	SR_0.20 SR_1.50 SR_1.79 SR_1.81 SR_2.11 SR_2.80	Fruit, boxes, lumber, debris in log pile, tires, plastics, tube, rubber, metal	Human-made	Removed	2022-09-16
SR-36	SR_4.50 SR_4.72 SR_5.00 SR_5.10 SR_5.25 SR_5.50 SR_5.70	Blue barrels, tires, lumber in log pile, fruit box, tin, metal, plastics, cloth, other debris	Human-made	Removed	2022-09-17

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
SR-37	SR_6.10 SR_6.90 SR_7.20 SR_7.60 SR_7.90 SR_8.00 SR_8.20 SR_9.10 SR_9.10 SR_9.60 SR_9.70 SR_10.20 SR_10.60	Apple crates, plastics, parachute, tires, green cap, pallets, silver objects, pipes, metals, other debris	Human-made	Removed	TBD
SR-38	SR_10.95 SR_11.60 SR_11.70 SR_11.90 SR_12.50 SR_13.00 SR_13.10 SR_13.20 SR_14.50 SR_14.50 SR_14.90 SR_15.70 SR_15.80 SR_15.80 SR_16.50 SR_18.60 SR_18.68	Truck cab, barrels, tires, metal, plastics, wooden pallet, pipe, concrete, jersey barriers	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
SR-39	SR_19.09 SR_20.80 SR_20.30 SR_20.35 SR_21.90 SR_23.40 SR_25.65 SR_25.75 SR_25.90 SR_25.95 SR_25.99	Tires, tarp, lumber, steel, metal, ball, plastic chair, suitcase, barrel, boot, other debris	Human-made	Removed	2022-09-17
SR-40	SR_28.08 SR_28.10 SR_28.40 SR_28.60 SR_29.00 SR_30.37 SR_30.68	Paddleboat, tires, plastics, rubber, fence post, lumber, metal, misc. debris	Human-made	Removed	TBD
SR-41	SR_30.74 SR_31.00 SR_31.13 SR_32.05 SR_32.10	Debris in log pile, filter cloth, metal, black pipe, tires, plastics, rubber, misc. debris	Human-made	Removed	TBD
SR-42	SR_32.73 SR_33.30 SR_33.80 SR_34.62	Tires, styrofoam, plastics, pallet, barrel, white debris	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
SR-43	SR_35.00 SR_35.10 SR_36.90 SR_37.58 SR_39.00 SR_41.80 SR_41.85	Pallet, plastics, tire, cloth, metal, pipe, blanket, bottle, fencing, lumber, rim, misc. debris	Human-made	Removed	TBD
SR-44	SR_44.20 SR_45.20 SR_47.30 SR_47.68 SR_48.18	Tires, carpet, lumber, plywood, paddle, metal, sink, plastics, other large debris	Human-made	Removed	2022-09-19
SR-45	SR_49.88 SR_51.30 SR_52.00 SR_54.80 SR_55.40	Metal, blue barrel, tires, tarp, yellow beach ball, lumber, rubber, bar, misc. debris	Human-made	Removed	TBD
SR-46	SR_58.45 SR_59.95 SR_60.25 SR_60.35 SR_61.15	Debris against tree, tires, metal, rubber, plastics, pipe, pole, car, other large debris	Human-made	Removed	TBD
SR-47	SR_61.40 SR_61.45 SR_61.93 SR_62.50 SR_63.40	Lumber on gravel bar, metal, plastics, pole, chair, rim, tires, car body	Human-made	Removed	2022-08-02
SR-48	SR_66.30 SR_66.50	Debris near bank, metal, bag, wire, garbage can, plastics, helmet, shovel, tires, other debris	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
SR-49	SR_72.96 SR_73.50 SR_74.63	Tarp, small debris on bank, tin, metal, cloth, shoe, foam, tube, pipe	Human-made	Removed	TBD
SR-50	SR_85.70 SR_86.65 SR_86.75 SR_86.95 SR_87.30 SR_87.50 SR_87.70 SR_87.85 SR_88.00 SR_88.10 SR_88.20	Tire, rubber mat, plastics, metal, lumber, cloth, bike, pallet, misc. debris	Human-made	Removed	2022-09-17
SR-51	SR_91.00 SR_91.02 SR_91.30 SR_92.20 SR_92.40 SR_93.10	Tires, blue barrel, debris in log pile, plastics, rubber, lumber, pipe, metal, cardboard, other small debris	Human-made	Removed	2022-09-15
SR-52	SR_93.45 SR_93.60 SR_93.65 SR_93.70 SR_93.85 SR_94.20 SR_94.48 SR_95.10	Tires, metal, plastics, rubber, hot water tank, tin, white bag	Human-made	Removed	2022-09-15

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Contractor ID*	Description	Туре	Status	Removal date
SR-53	SR_96.40 SR_96.60 SR_98.80	Fridge, tire tube, metal, blue shed	Human-made	Removed	TBD
SR-54	SR_4.00 SR_4.20 SR_4.30	Plastics, metal, rubber, tires	Human-made	Removed	TBD

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

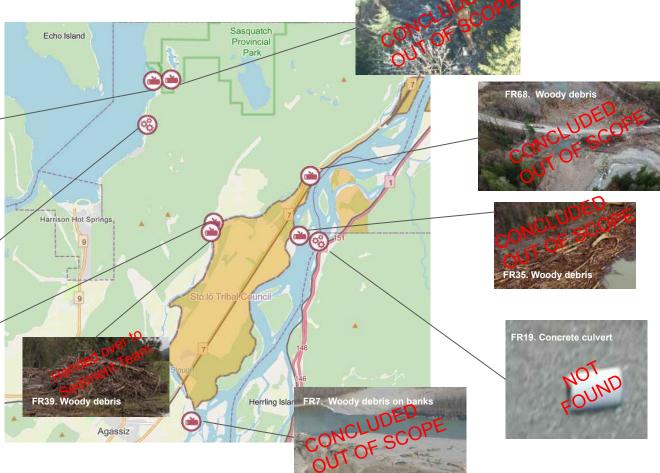


OVERVIEW			
Work objectives	Community discussions status	Known debris	Permits status
 Remove human made debris and any natural debris causing threat to either public safety or infrastructure Preserve cultural and historically significant areas. 	Continuing to schedule calls and visits with the remaining communities based on their availability. Recurring biweekly project update call with all local authorities and First Nations groups in the area have been cancelled as of Sept 21, 2022 as work winds down and attendance has decreased.	79 debris sites identified in total Phase 1 • 38 debris sites has removal completed; and • 5 has been assessed and concluded not to be removed Phase 2 • 28 sites removed • 1 site passed to Sediment team • 7 sites concluded out of scope	ARC Heritage Investigation Permit 2021-0453 Issued under Section 12.2 of the Heritage Conservation Act. MOF approval under Section 11 of the Water Sustainability Act; Permit issued Mar 29, 2022. Extension to Change Approval 2009413 until Nov 30,2022 issued Oct 3, 2022. DFO Authorization under Paragraphs 34.4(2) (b) and 35(2)(b) of the Fisheries Act (Emergency Situations); Authorization issued (Approval 22-HPAC-00204) Mar 3, 2022. *Permits extended until September 30, 2022 have expired.



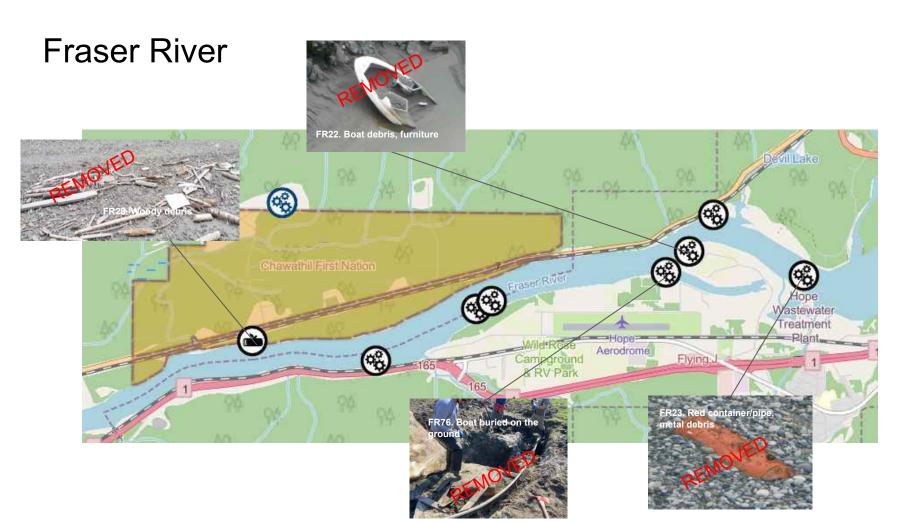


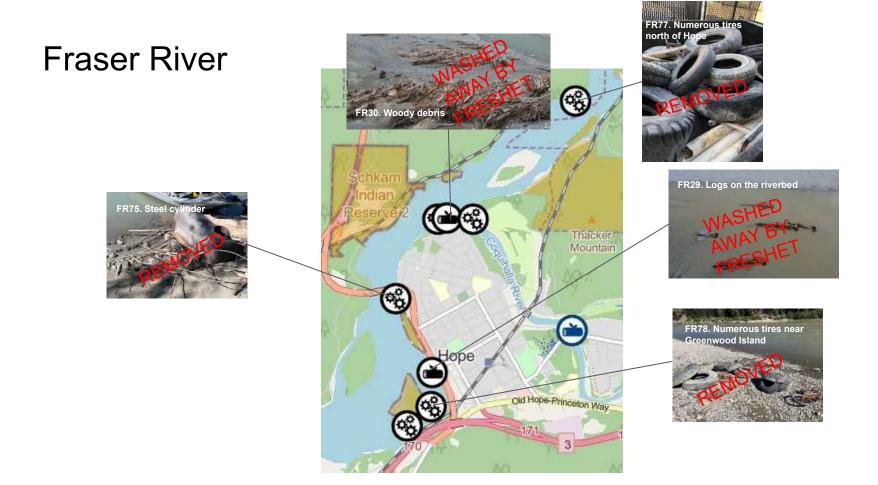


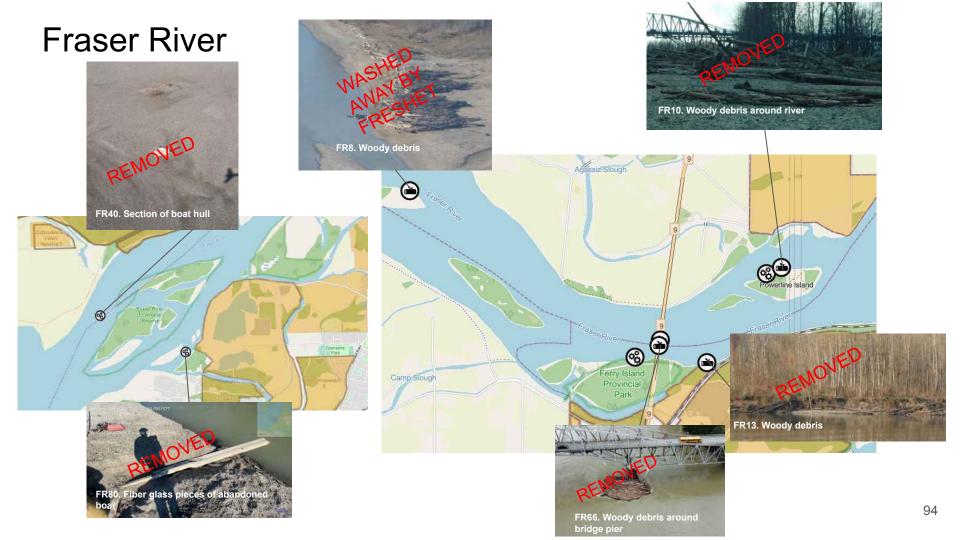


FR6. Wooden debris and logs in

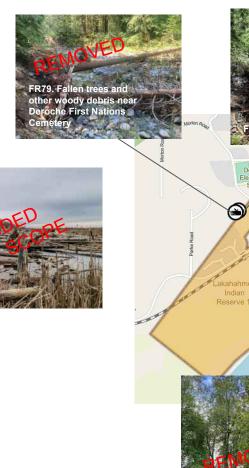
Trout Creek











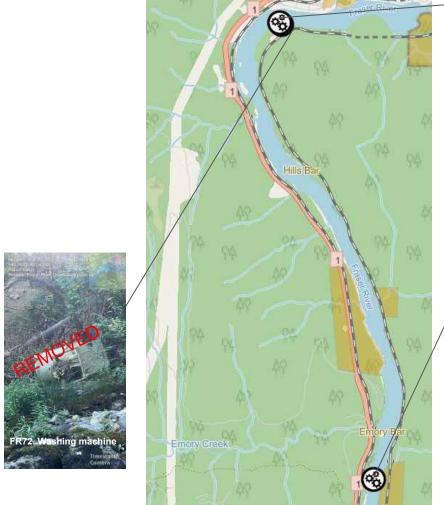
Deroche Elementary

FR59. Woody debris











Mount

Yale_



Fraser River Lake Errock Network:Sep 21, 2022 at 10:33:36 AM PDT +49.2194,-121.9466 Remark. Fraser Biver hoat debris crew Minto Landing Island 2 Regiona FR81. Large tires, fuel tank and Camera

Fraser River Response Action Plan

Action plan	Estimated timeline for removal
 Crews prioritised human made debris that posed a high risk first, but otherwise removed all human made debris. Heavy equipment involved includes excavators, rock truck and flatbed trucks; Once debris was removed from the waterway, contractors followed waste management plans; Crew stopped work if human remains were found or unanticipated archaeological sites were discovered; and Natural debris was reviewed by QP, DFO and MOF to determine if it posed a threat to public safety and/or infrastructure. 	Linear debris is complete along the Fraser River
Contractors involved	Waste management process
Debris removal: Stqó:ya Construction Qualified Environmental: Stantec Archeological Professional: Stolo Nation Field Work Management: RAM Consulting FN Monitors: IAMC Linear Debris Removal: SWAT Consulting	 Waste was staged and sorted Legal owners were notified Metals were salvaged or recycled Unsalvageable waste was sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Fraser River Response Action Plan

Work completed prior week	Upcoming work to be completed
Linear debris removal is complete	
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: mj.siahdashti@pwc.com and yogan.r.reddy@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	 Large debris removal of identified sites completed by September 30th. Linear debris work to be completed by end of October.

Map ID	Description	Туре	Status	Removal date
FR-2	Natural debris with human made debris	Natural	Removed	2022-08-29
FR-6	Woody debris in Trout Creek	Natural	Out of scope	2022-08-29
FR-7	Woody debris on banks	Natural	Out of scope	2022-09-24
FR-8	Woody debris	Natural	Washed away by freshet (removed)	TBD
FR-9	Fallen over trees	Natural	Out of scope, no debris present	2022-08-29
FR-10	Woody debris	Natural	Removed	2022-08-29
FR-13	Woody debris	Natural	Removed	2022-09-17
FR-19	Concrete culvert	Human-made	Removed (debris not found)	2022-08-18
FR-22	Boat debris, furniture	Human-made	Removed	2022-09-24
FR-23	Red container/pipe, metal debris	Human-made	Removed	2022-06-11
FR-28	Woody debris	Natural	Removed	2022-09-16
FR-29	Logs on river bed	Natural	Washed away by freshet (removed)	TBD
FR-30	Woody debris	Natural	Washed away during freshet (removed)	TBD
FR-31	Woody debris (Squamish)	Natural	Removed	2022-09-24
FR-32	Woody debris (Squamish)	Natural	Removed	2022-09-23
FR-33	Woody debris (Squamish)	Natural	Removed	2022-09-21
FR-35	Woody debris	Natural	Out of scope	TBD
FR-39	Woody debris	Natural	Site handed over to Sediment Team	TBD
FR-40	Section of boat hull on Fraser River	Human-made	Removed	2022-09-09
FR-55	Woody debris	Natural	Removed	2022-09-23
FR-59	Woody debris	Natural	Removed	2022-09-28

Map ID	Description	Туре	Status	Removal date
FR-60	Woody debris	Natural	Removed	2022-09-27
FR-66	Woody debris around pier cap	Natural	Removed	2022-08-15
FR-67	Woody debris	Natural	Out of scope	TBD
FR-68	Woody debris	Natural	Out of scope	TBD
FR-69	Misc. debris	Human-made	Out of scope	TBD
FR-70	Silver car and woody debris	Human-made	Removed	2022-08-13
FR-71	Woody Accumulation on Bridge Pier - Landing drive	Natural	Removed	2022-09-15
FR-72	Washing machine	Human-made	Removed	2022-08-30
FR-73	Rusty laundry sink	Human-made	Removed	2022-08-30
FR-74	Culvert	Human-made	Removed	2022-08-31
FR-75	Steel cylinder	Human-made	Removed	2022-09-07
FR-76	Boat buried on the ground	Human-made	Removed	2022-09-08
FR-77	Numerous tires north of Hope	Human-made	Removed	2022-09-01
FR-78	Numerous tires near Greenwood Island	Human-made	Removed	2022-09-08
FR-79	Fallen trees and other woody debris near Deroche First			
	Nations Cemetery	Natural	Removed	2022-09-27
FR-80	Fiber glass pieces of abandoned boat	Human-made	Removed	2022-09-14
FR-81	Large tires, fuel tank and truck axel	Human-made	Removed	2022-09-27

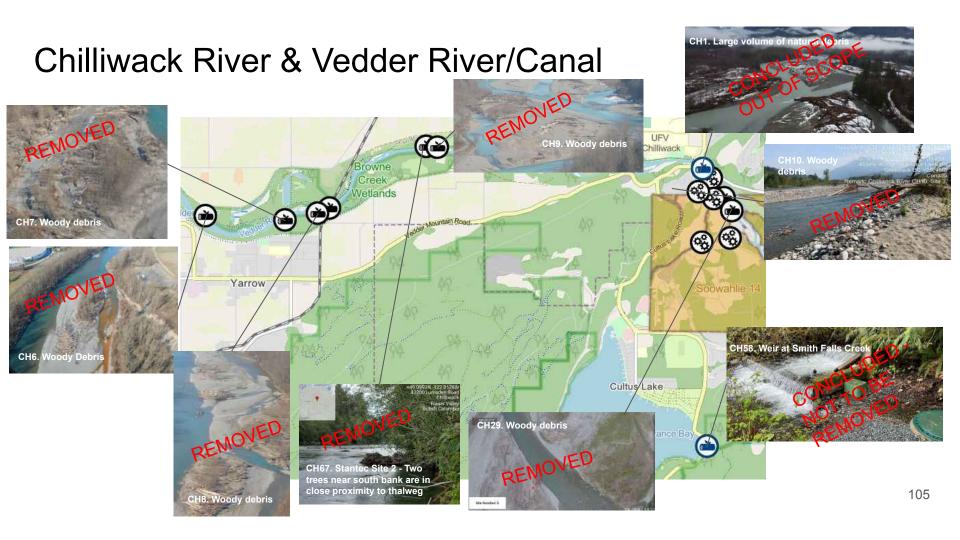


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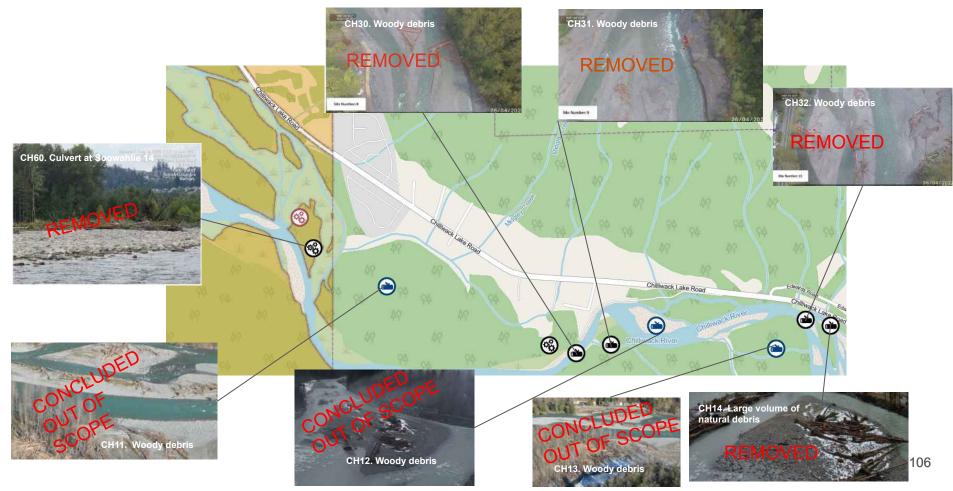
Chilliwack
River &
Vedder
River/Canal

Chilliwack River & Vedder River/Canal

Work objectives	Community discussions status	Known debris	Permits status	
 Remove human made debris and any natural debris causing threat to either public safety or infrastructure Preserve cultural and historically significant areas. 	Continuing to schedule calls and visits with the remaining communities based on their availability. Recurring biweekly project update call with all local authorities and First Nations groups in the area have been cancelled as of Sept 21, 2022 as work winds down and attendance has decreased.	Phase 1 16 debris site have removal completed; and 1 have been assessed and concluded not to be removed Phase 2 43 sites removed 2 sites remaining as work identified. 7 sites concluded out of scope	ARC Heritage Investigation Permit 2021-0453 Issued under Section 12.2 of the Heritage Conservation Act MOF approval under Section 11 of the Water Sustainability Act; Permit issued of March 29, 2022. Extension to Change Approval 2009413 until Nov 30,2022 issued Oct 3, 2022. DFO Authorization under Paragraphs 34.4(2) (b) and 35(2)(b) of the Fisheries Act (Emergency Situations); Authorization issued (Approval 22-HPAC-00204) Mar 32022 *Permits extended until September 30, 2022 have expired.	

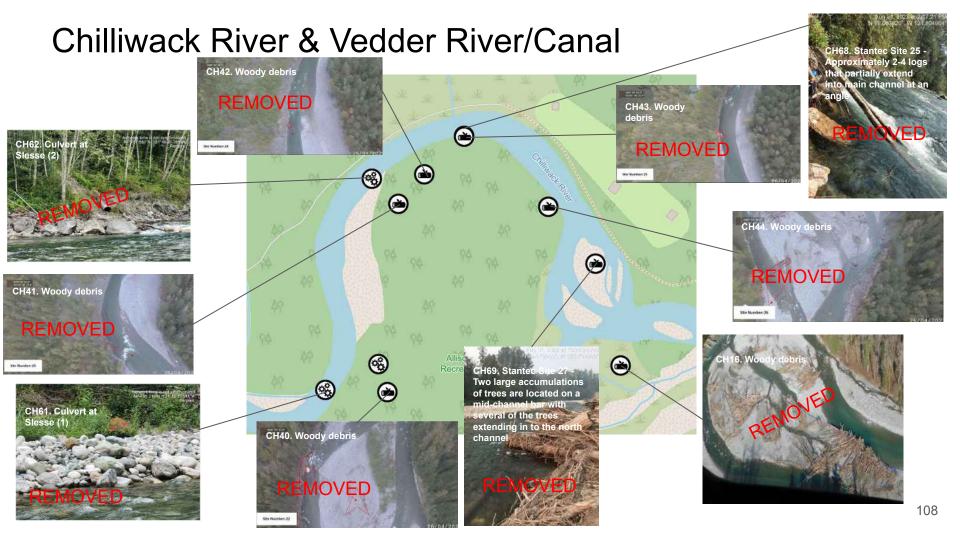


Chilliwack River & Vedder River/Canal

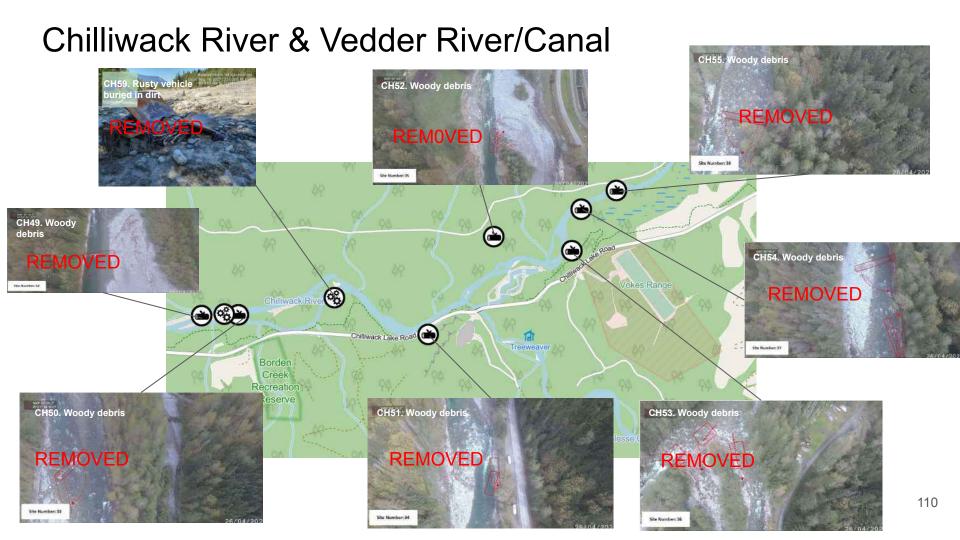


Chilliwack River & Vedder River/Canal









Chilliwack River & Vedder River/Canal Action Plan

Action plan	Estimated timeline for removal
 Crews prioritised human made debris that poses a high risk first, but otherwise removes all human made debris. Heavy equipment involved included excavators, rock truck and flatbed Once debris was removed from the waterway, contractors followed waste management plans Crew stopped work if human remains were found or unanticipated archaeological sites discovered Natural debris was reviewed by QP, DFO and MOF to determine if it posed a threat to public safety and/or infrastructure Additional debris was logged as information was obtained from aerial video, drone footage site visits and local communities. 	 Linear debris work to be complete end of November, 2022 CH 56 and CH65 will be addressed spring\summer 2023.
Contractors involved	Waste management process
Debris removal: Stqó:ya Construction Qualified Environmental: Stantec Archeological Professional: Stolo Nation Field Work Management: RAM Consulting FN Monitors: IAMC Linear Debris Removal: SWAT Consulting	 Waste was staged and sorted Legal owners notified Metals were salvaged or recycled Unsalvageable waste was sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Chilliwack River & Vedder River/Canal Response Action Plan

Work completed prior week	Upcoming work to be completed
Linear debris removal continued.	Linear debris removal to be completed and demobilized.
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: mj.siahdashti@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	 Large debris of currently identified sites was completed September 30th Linear debris work anticipated to finish late November.

Map ID	Description	Туре	Status	Removal date
CH-1	Large volumes of natural debris	Natural	Out of scope	TBD
CH-6	Woody debris	Natural	Removed	2022-09-08
CH-7	Woody debris	Natural	Removed	2022-09-08
CH-8	Woody debris	Natural	Removed	2022-09-08
CH-9	Woody debris	Natural	Removed	2022-09-14
CH-10	Woody debris	Natural	Removed	2022-09-01
CH-11	Woody debris	Natural	Out of scope	2022-08-24
CH-12	Woody debris	Natural	Out of scope	2022-08-24
CH-13	Woody debris	Natural	Out of scope	2022-08-24
CH-14	Large volumes of natural debris	Natural	Removed	2022-09-08
CH-16	Woody debris	Natural	Removed	2022-08-31
CH-29	Woody debris	Natural	Removed	2022-09-14
CH-30	Woody debris	Natural	Removed	2022-09-13
CH-31	Woody debris	Natural	Removed	2022-09-13
CH-32	Woody debris	Natural	Removed	2022-09-09
CH-33	Woody debris	Natural	Removed	2022-09-08
CH-34	Woody debris	Natural	Removal no longer required (out of scope)	2022-09-28
CH-35	Woody debris	Natural	Removal no longer required (out of scope)	2022-09-28
CH-36	Woody debris	Natural	Removed	2022-08-24
CH-37	Woody debris	Natural	Removed	2022-08-24
CH-38	Woody debris	Natural	Removed	2022-09-08
CH-39	Woody debris	Natural	Removed	2022-08-23
CH-40	Woody debris	Natural	Removed	2022-09-15
CH-41	Woody debris	Natural	Removed	2022-09-07

Map ID	Description	Туре	Status	Removal date
CH-42	Woody debris	Natural	Removed	2022-09-01
CH-43	Woody debris	Natural	Debris no longer on site (removed)	2022-08-31
CH-44	Woody debris	Natural	Removed	2022-09-08
CH-45	Woody debris	Natural	Removed	2022-08-30
CH-46	Woody debris	Natural	Removed	2022-08-30
CH-47	Woody debris	Natural	Removed	2022-09-08
CH-48	Woody debris	Natural	Removed	2022-08-31
CH-49	Woody debris	Natural	Removed	2022-08-17
CH-50	Woody debris	Natural	Removed	2022-08-17
CH-51	Woody debris	Natural	Removed	2022-08-17
CH-52	Woody debris	Natural	Removed	2022-08-26
CH-53	Woody debris	Natural	Removed	2022-08-30
CH-54	Woody debris	Natural	Removed	2022-08-24
CH-55	Woody debris	Natural	Removed	2022-08-30
CH-56	Woody debris	Natural	Identified - will be addressed spring 2023	2022-09-01
CH-57	Woody debris	Natural	Removed	2022-08-24
CH-58	Weir at Smith Falls Creek	Natural	Concluded - Out of Scope	TBD
CH-59	Rusty vehicle buried in dirt	Human-made	Removed	2022-08-31
CH-60	Culvert at Soowahlie 14	Human-made	Removed	2022-09-13
CH-61	Culvert at Slesse (1)	Human-made	Removed	2022-09-13
CH-62	Culvert at Slesse (2)	Human-made	Removed	2022-09-08
CH-63	Culvert near 49322 Neville Rd	Human-made	Removed	2022-09-13
CH-64	Culvert near 49192 Bell Acres Rd	Human-made	Removed	2022-09-15
CH-65	Trailer frame	Human-made	Identified - will be address spring 2023	2022-09-30

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

Map ID	Description	Туре	Status	Removal date
CH-66	Steel grating on the bank of the river	Human-made	Removed	2022-09-20
CH-67	Stantec Site 2 - Two trees near south bank are in close			
	proximity to thalweg	Natural	Removed	2022-09-08
CH-68	Stantec Site 25 - Approximately 2-4 logs that partially			
	extend into main channel at an angle	Natural	Removed	2022-08-31
CH-69	Stantec Site 27 - Two large accumulations of trees are			
	located on a mid-channel bar with several of the trees			
	extending in to the north channel	Natural	Removed	2022-08-31

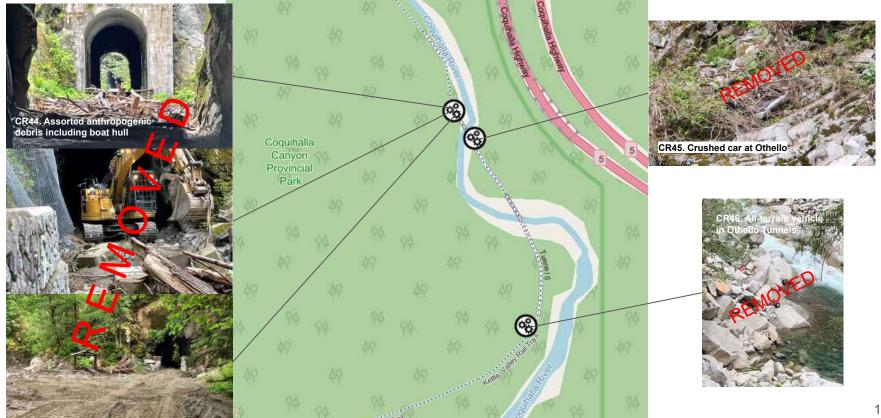


10 Coquihalla River

Coquihalla River

OVERVIEW			
Work objectives	Community discussions status	Known debris	Permits status
Remove human made debris and any natural debris causing threat to either public safety or infrastructure Preserve cultural and historically significant areas.	Continuing to schedule calls and visits with the remaining communities based on their availability. Recurring biweekly project update call with all local authorities and First Nations groups in the area have been cancelled as of Sept 21, 2022 as work winds down and attendance has decreased.	 51 debris sites identified in total Phase 1 (see Appendix D) 36 debris sites have removal completed; and 6 have been assessed and concluded not to be removed 5 handed over for third party resolution. Phase 2 4 debris site have removal completed; 	ARC Heritage Investigation Permit 2021-0453 Issued under Section 12.2 of the Heritage Conservation Act. MOF approval under Section 11 of the Water Sustainability Act; Permit issued on March 29, 2022. Extension to Change Approval 2009413 until Nov 30,2022 issued Oct 3, 2022. DFO Authorization under Paragraphs 34.4(2) (b) and 35(2)(b) of the Fisheries Act (Emergency Situations); Authorization issued ((Approval 22-HPAC-00204) Mar 3 *Permits extended until September 30, 2022 have expired.

Coquihalla River





Coquihalla River Response Action Plan

Action plan	Estimated timeline for removal
 Crews were deployed to the river in phases. Crews will prioritise human made debris that poses a high risk first, but otherwise remove all human made debris. Heavy equipment involved included excavators, rock truck and flatbed trucks Once debris has been removed from the waterway, contractors will follow waste management plans Crews stop work if human remains were found or unanticipated archaeological sites discovered Natural debris was reviewed by QP, DFO and MOF to determine if it posed a threat to public safety and/or infrastructure 	Linear debris removal complete.
Contractors involved	Waste management process
Debris removal: Stqó:ya Construction Qualified Environmental: Stantec Archeological Professional: Stolo Nation FN Monitors: IAMC-TMX Linear Debris Removal: SWAT Consulting	 Waste will be staged and sorted Legal owners will be notified Metals will be salvaged or recycled Unsalvageable waste will be sent to landfills under proper disposal protocols See Appendix A Waste Management Strategic Plan

Coquihalla River Response Action Plan

Work completed prior week	Upcoming work to be completed
Work is complete.	
Relevant contacts	Debris removal close-out timeline:
Contact for Contractors questions: mj.siahdashti@pwc.com Contact for Ministry of Environment: doc.ops.eep@gov.bc.ca	Large debris removal of currently identified site completed September 30th.

Coquihalla River

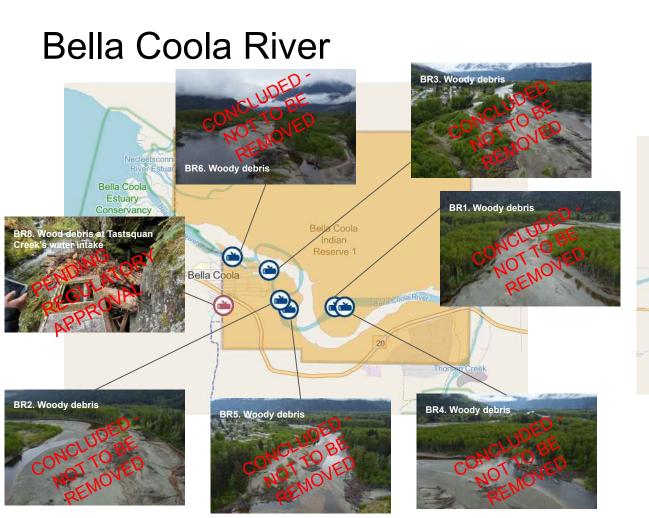
Map ID	Contract	Description	Type	Status	Removal date
	or ID*				
CR-44	CR-11	Assorted anthropogenic debris including boat hull	Human-made	Removed	2022-06-07
CR-45		Crushed car at Othello	Human-made	Removed	2022-08-08
CR-46		All-terrain vehicle in Othello Tunnels	Human-made	Removed	2022-09-27
CR-47		Pieces of boat	Human-made	Removed	2022-09-19

¹²²



11

Other sites (Bella Coola & Kingcome)









Chehalis River



Bella Coola, Kingcome, Nahatlatch, Chehalis Rivers

Map ID	Description	Туре	Status	Removal date
BR-1	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-2	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-3	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-4	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-5	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-6	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-7	Woody debris	Natural	Concluded - Out of Scope	N/A
BR-8	Wood debris at Tastsquan Creek's water intake	Natural	Identified (planning work)	TBD
KR-1	Woody debris	Natural	Concluded - Out of Scope	N/A
KR-2	Woody debris	Natural	Identified (planning work)	N/A
KR-3	Woody debris	Natural	Concluded - Out of Scope	N/A
KR-4	Woody debris	Natural	Concluded - Out of Scope	N/A
NAH-1	Road washout - salmon fry rear pond affected - debris collected	Natural	Concluded out of scope	N/A
CHE-1	Woody debris	Natural	Concluded out of scope (permit expired)	N/A



12 Appendices

Appendix A - Waste Management strategic plan

For each piece of debris taken from a river system the following assessment will be conducted

- Identify owner. Where relevant if an owner is identified they will be contacted to recover the debris from a specific location within a
 relevant timeframe. If not collected within the agreed timeframe, a decision will be made on a specific item basis on next steps.
 This may include
 - a. Moving the item to a holding location or transporting to the owner
 - b. Having owner approval that the item can be disposed of directly
- 2. For all debris not matched to an owner this be sorted at an agreed staging area on the banks of the water system.
 - a. The staging area will be clearly marked and have layout zones on site for material types so that debris can be collected into appropriate areas. The types are:
 - i. Green Waste/Vegetative Debris
 - ii. Wood
 - iii. Construction/Demolition Debris
 - iv. Bulky Solid Waste
 - v. White Goods
 - vi. Metals includes vehicles
 - vii. Household Hazardous Waste (HHW)
 - viii. Non-Putrescent Municipal Solid Waste
 - ix. E-waste includes computers, tablets, phones, etc.
 - b. If waste has any risk of leakage, the area will be appropriately tarped and covered before debris is moved to the staging area.

Appendix A - Waste Management strategic plan

- 3. There are four primary methods for addressing debris. 1. Reuse 2. Recycle 3. Energy recovery; and 4. Dispose. At the staging area the debris will be sorted into the following categories:
 - a. Green Waste/Vegetative Debris includes organic materials such as small tree branches (<30cm diameter) and animal feed destined for composting
 - b. Wood Stockpile includes untreated wood such as tree trunks, lumber, pallets etc. destined for chipping and composting or incineration for energy. (if local landowners cannot use for personal purposes)
 - Construction/Demolition Debris includes treated wood, drywall, insulations, etc. (do not include asbestos containing material) - destined for landfill
 - d. Bulky Solid Waste includes objects that do not fit the other categories, such as mattresses, etc. destined for reuse, recycling or refuse depending on object.
 - e. White Goods include appliances such as fridges and freezers destined for reuse if still in good working order or recycling after ozone depleting substances have been removed
 - f. Metals includes vehicles, miscellaneous metals destined for recycling
 - g. Household Hazardous Waste (HHW) is hazardous waste that originates from residences and will require special disposal. Examples of HHW include flammable liquids, pool chemicals, paint, propane cylinders, and other material banned from disposal in municipal landfills. This waste will be destined for a HW management company, local Return Collection Facility, and/or temporary HHW transfer station.
 - h. Non-Putrescent Municipal Solid Waste is all other small non-organic waste that does not fall into these other categories. e.g. old toys, spoiled clothing, etc. destined for reuse, recycling or refuse depending on object.
 - i. E-waste includes computers, tablets, phones, etc. destined for recycling.

Appendix B - Contaminant Sampling Plan at debris removal sites

Sites with large debris items - what sites are being tested?

- Qualified Environmental Professionals have assessed and confirmed that surface water is not expected to have detectable levels of contamination at the known debris sites. Basic water quality parameter sampling at sites in stream will include turbidity as needed.
- Soil/sediment sampling may occur in the vicinity around a debris item and will be determined on a site by site basis. Requirement to sample is highly dependant on the type of debris and potential for contamination
- It is expected that contamination, if present, will be primarily within soil/sediment due to leaks, spills or within debris remnants.
- Detectable observations of hydrocarbons within soil/sediment via visual or odor will automatically be tested and soil will be removed and delineated from other material that is removed from a site.
- General mixed construction and demo waste and building materials will be evaluated for potential sources of hazardous wastes by onsite staff and Contractor.
- If a vehicle or debris item is removed with soil/sediment in it, the soil/sediment will be collected and stored at a staging area and tested for potential contaminants prior to disposal.

Sites with large debris items - what contaminants are being tested?

Testing will primarily focus on potential hydrocarbon contamination and identification of hazardous construction waste with a focus on the following potential contaminants of concern:

- Benzene, Toluene, Ethylbenzene and Xylene / Volatile Petroleum Hydrocarbons (BTEX/VPH),
- Light Extractable Petroleum Hydrocarbons / Heavy Extractable Petroleum Hydrocarbons / Polycyclic Aromatic Hydrocarbons (LEPH/HEPH/ PAHs),
- Metals, which will include lead paints, mercury etc. from construction and demo debris fluorescent lighting,
- Volatile Organic Compounds (VOCs),
- Glycols and Polychlorinated Biphenyls (PCBs).

Appendix B - Contaminant Sampling Plan at debris removal sites

Sites with small debris items

- The hand picking small debris teams are testing for health and safety requirements
- This is focused on testing soil samples in areas of their work for E.coli and Fecal Coliform prior to working in the area
- The team has a Qualified Biologist on site at all times.

Sampling safety across all sites

- All samples will be taken with the appropriate Personal Protective Equipment (PPE) being worn at all times, by trained and qualified professionals and in accordance with standard sampling procedures.
- Where there is a potential risk to health and safety, alternate forms of clean up and disposal may have to be considered (i.e. hazmat assessment).
- Sources may include (but not be limited to): Building materials containing asbestos (potentially a health and safety concern alternate arrangements and sampling required by others), lead paint, paints and thinners, fluorescent lamps/lights and ballasts, thermostats, electrical equipment, batteries, glues and solvents, and cooling systems.

Sampling results

Depending on location and team, samples will be submitted to an accredited Canadian laboratory for analysis and results will be shared.

Appendix B - Environmental Sampling Program

The objectives of the sampling program performed by the Contractor on behalf of the Province are as follows:

- 1. Assist the Province in development of a sampling strategy and plan for assessing the safety of waterways (scope to be defined, including the parameters of concern).
- 2. Complete a comprehensive sampling program that is consistent with the sampling plan developed and approved to address potential contamination concerns related to residual flood effects along the waterways. This sampling program will consist of a single sampling campaign in all waterways subject to this assessment.
- 3. Perform confirmatory sampling following removal of debris material that has been determined by others to be contaminated or that potential residual contamination risks have been identified by the debris removal teams.
- 4. Present all sampling results in factual memorandum to document findings and recommendations (if needed).
- 5. Compile and manage analytical results obtained by the Province's various contractors and integration into a common web map application and database to be made available to the public.

The waterways of concern identified for this assessment:

- 1. **Area 1** in the Merritt Study Area (Nicola River from Spences Bridge to Merritt and Coldwater River from Merritt to Juliet Drive Junction)
- 2. Area 2 in the Princeton Study Area (Tulameen River from Tulameen to Princeton and Similkameen River from Princeton to Eastgate)
- 3. Area 3 in the Sumas Prairie Study Area (Lower Fraser Valley Waterways from Hope to Abbotsford)

Media of concern:

1. The media of concern are surface water, submerged river sediments and soil (including seasonally exposed river sediments).

Technical working group:

1. A team of key individuals form ENV will be assigned to assist / review / validate the sampling work being performed on behalf of the Province. This team has not been assigned at this point.

Community engagement:

- 1. The Province (with support from the Contractor) should engage with the communities that use these waterways, to obtain their knowledge and input on how the waterways are used. Once this is established, the Contractor will work with the Province to establish the sampling framework.
- 2. In the event that specific environmental issues are identified to the Province by the local communities, the Contractor may assist the Province to address these issues. However, these interventions are out of scope at this point.

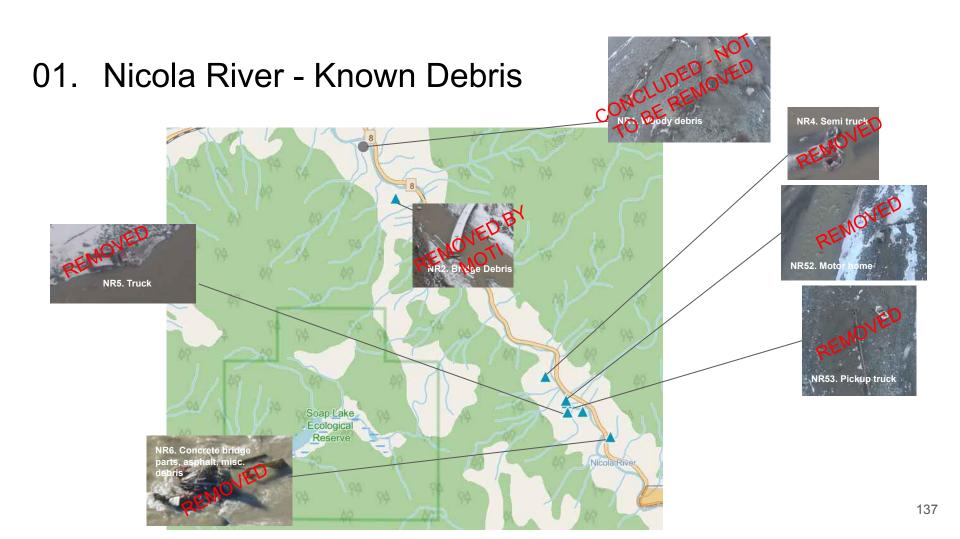
Appendix C - Glossary

Acronym	Description
ARC	British Columbia Archaeology Branch
BR	Bella Coola River
СН	Chilliwack River
CR	Coquihalla River
CRS	Coastal Restoration Society
CW	Coldwater River
DFO	Department of Fisheries and Oceans Canada
FLNRO / MOF	The Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FN	First Nation
FR	Fraser River
KR	Kingcome River

Acronym	Description
LNIB	Lower Nicola IB
LSIB	Lower Similkameen IB
NOI	Notice of Intent
NR	Nicola River
OLF	Ocean Legacy Foundation
QP	Qualified Professional
SR	Similkameen River
THR	Thompson River
TR	Tulameen River
TNRD	Thompson-Nicola Regional District
USIB	Upper Similkameen IB

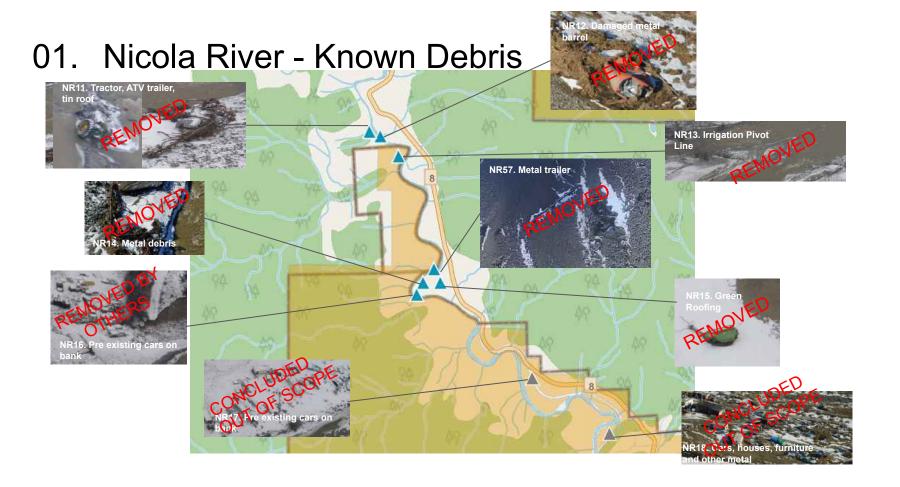
Appendix D - Phase 1 Debris Removal

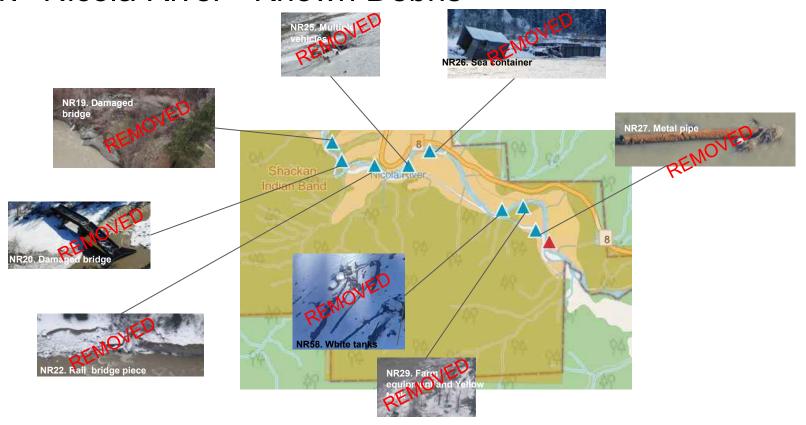
	Watercourses	Page
1	Nicola River (Highway 8; Spences Bridge to Merritt)	116 - 128
2	Coldwater River (Highway 5)	129 - 137
3	Thompson River	138 - 140
4	Tulameen River	141 - 150
5	Similkameen River	151 - 155
6	Fraser River	156 - 165
7	Chilliwack River	166 - 171
8	Coquihalla River	172 - 181

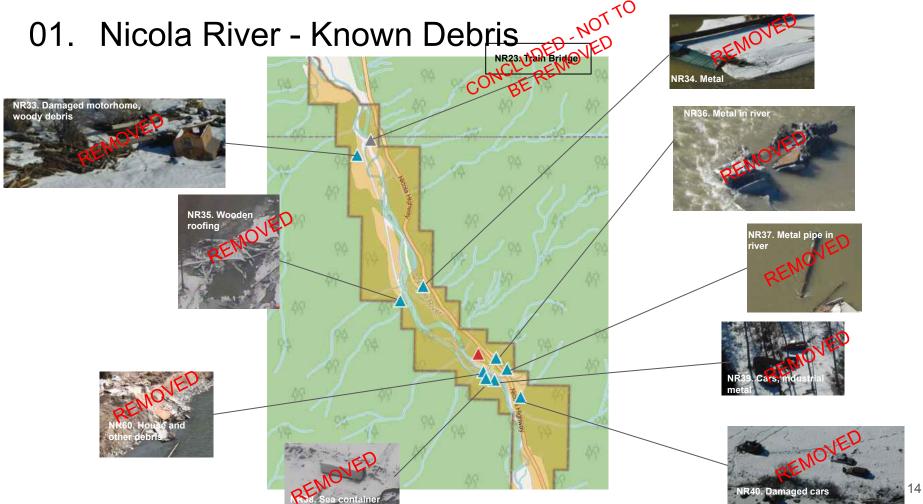




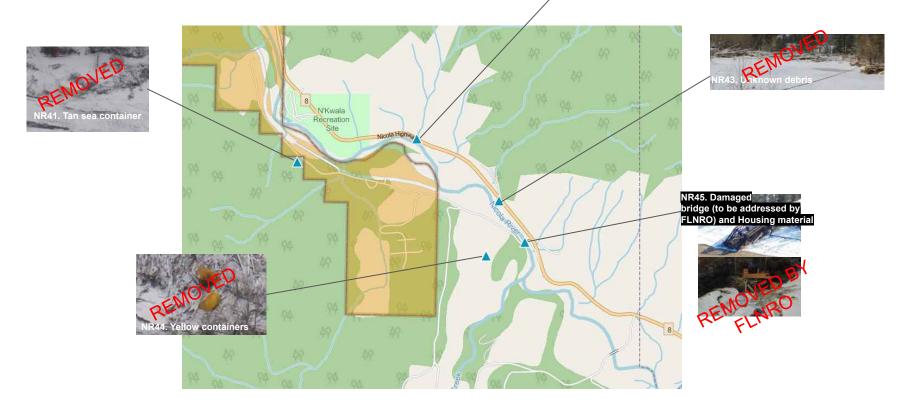




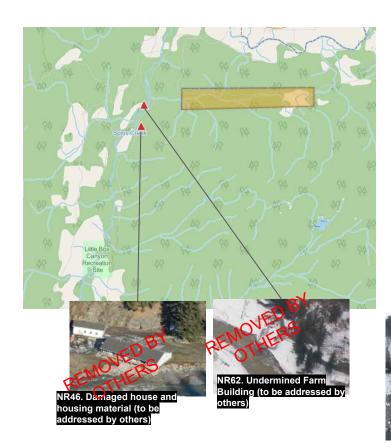




NR42. Submerged roads and infrastructure (no picture available)

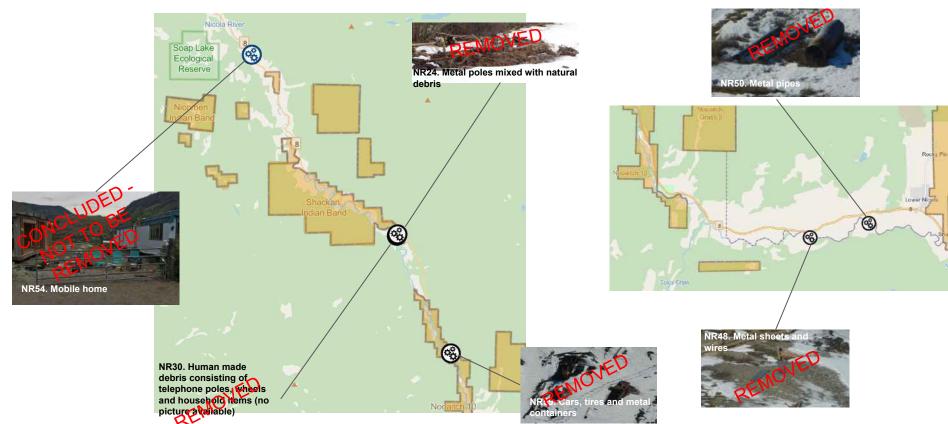








01. Nicola River - Known Debris



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01. Nicola River

Map ID	Contracto r ID*	Description	Туре	Status	Removal date
NR-3	N/A	Placeholder	Placeholder	Placeholder	
NR-4	NI_07.3	Semi truck in river	Human-made	Removed	2022-04-13
NR-5	NI_07.9	Truck	Human-made	Removed	2022-04-13
NR-6	NI_12.2	Concrete bridge parts, asphalt, misc. debris	Human-made	Removed	2022-04-20
NR-7	NI_12.6	Concrete and pipes	Human-made	Removed	2022-04-20
NR-9	N/A	Concrete	Human-made	Removed	2022-04-06
NR-10	N/A	Wooden furniture	Human-made	Removed	2022-04-27
NR-11	NI_16.1	Tractor, ATV, trailer and tin roof	Human-made	Removed	2022-04-20
NR-12	NI_16.1	Damaged metal barrel	Human-made	Removed	2022-04-20
NR-13	NI_16.8	Irrigation pivot line	Human-made	Removed	2022-04-20
NR-14	N/A	Metal debris	Human-made	Removed	2022-05-04
NR-15	NI_39.9	Green roofing	Human-made	Removed	2022-04-27
NR-19	NI_24.8b	Damaged bridge	Human-made	Removed	2022-04-06
NR-20	NI_25.6	Damaged bridge	Human-made	Removed	2022-04-20
NR-21	N/A	Placeholder	Placeholder	Placeholder	
NR-22	NI_12.6b_	Rail bridge piece	Human-made	Removed	2022-04-06
NR-25	NI_25.7	Multiple vehicles	Human-made	Removed	2022-03-30
NR-26	NI_26.2	Sea container	Human-made	Removed	2022-03-30
NR-27	N/A	Metal pipe	Human-made	Removed	2022-04-06
NR-29	NI_28.0	Farm equipment and yellow tank	Human-made	Removed	2022-03-30
NR-32	N/A	Placeholder	Placeholder	Placeholder	
NR-33	NI_37.8	Damaged motorhome, woody debris	Human-made	Removed	2022-04-27
NR-34	NI_39.9	Metal	Human-made	Removed	2022-04-27

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

01. Nicola River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
NR-35	NI_39.9	Wooden roofing	Human-made	Removed	2022-04-27
NR-36	NI_41.5	Metal in river	Human-made	Removed	2022-04-06
NR-37	NI_41.9	Metal pipe in river	Human-made	Removed	2022-04-06
NR-38	NI_46.0	Sea container	Human-made	Removed	2022-02-22
NR-39	NI_41.9	Cars, industrial metal	Human-made	Removed	2022-04-27
NR-40	N/A	Damaged cars	Human-made	Removed	2022-04-27
NR-41	N/A	Tan sea container	Human-made	Removed	2022-04-27
NR-42	N/A	Submerged infrastructure	Human-made	Removed	2022-04-27
NR-43	NI_50.0	Unknown debris	Human-made	Removed	2022-04-27
NR-44	N/A	Yellow container	Human-made	Removed	2022-03-23
NR-47	NI_56.5	Industrial material	Human-made	Removed	2022-04-27
NR-49	NI_58.0	Tires, farm equipment and pickup truck	Human-made	Removed	2022-03-23
NR-52	NI_07.9	Motor home	Human-made	Removed	2022-04-13
NR-53	NI_07.9	Pickup truck	Human-made	Removed	2022-04-13
NR-57	N/A	Metal trailer	Human-made	Removed	2022-04-20
NR-58	N/A	White tanks	Human-made	Removed	2022-04-13
NR-60	N/A	House on banks and other house debris	Human-made	Removed	TBC
NR-61	NI 69.2	Two vehicles	Human-made	Removed	2022-04-20
NR-67	N/A	Woody debris	Natural	Removed	TBC
NR-68	N/A	Woody debris	Natural	Removed	TBC
NR-24	NI_31.1	Metal pile mixed with natural debris	Human-made	Removed	2022-05-18
NR-30	NI_06.8Tele	Telephone poles, wheels and household items	Human-made	Removed	2022-05-18
NR-48	NI_57.2	Metal sheets and wires	Human-made	Removed	2022-06-01

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

01. Nicola River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
NR-50	NI_61.0	Metal pipes	Human-made	Removed	2022-05-24
NR-59	NI_41.5	Cars, tires and metal containers	Human-made	Removed	TBD
NR-2	MOTI	Damaged bridge	Human-made	Removed by MOTI	2022-04-13
NR-16	NI_19.0	Pre-existing cars on bank	Human-made	Removed by Local Community	2022-04-20
NR-31	FLNRO	Bridge piece (FLNRO)	Human-made	Removed by FLNRO	2022-04-20
NR-45	FLNRO	Damaged bridge (FLNRO) and housing material	Human-made	Removed by FLNRO	2022-04-06
NR-46	SP 3	Damaged house and housing material by river	Human-made	To be Removed by Others	TBC
NR-51	FLNRO	Bridge (FLNRO)	Human-made	Removed by FLNRO	2022-04-20
NR-62	N/A	Undermined farm building	Human-made	To be Removed by Others	TBC
NR-63	FLNRO	Washed out bridge deck	Human-made	To be Removed by FLNRO	TBC
NR-64	FLNRO	Undermined bridge	Human-made	To be Removed by FLNRO	TBC
NR-65	FLNRO	Small bridge partially washed out	Human-made	To be Removed by FLNRO	TBC
NR-66	FLNRO	Bridge washed out over Spius Creek	Human-made	To be Removed by FLNRO	TBC
NR-1	N/A	Woody deris	Natural	Concluded - Out of Scope	N/A
NR-8	N/A	Sediment and concrete	Human-made	Concluded - Out of Scope	N/A
NR-17	N/A	Cars on bank	Human-made	Concluded - Out of Scope	N/A
NR-18	N/A	Cars, houses, furniture and other metal	Human-made	Concluded - Out of Scope	N/A
NR-23	N/A	Train bridge	Human-made	Concluded - Out of Scope	N/A
NR-54	NI_07.9	Mobile home	Human-made	Concluded - Out of Scope	N/A
NR-56	N/A	Woody debris	Natural	Concluded - Out of Scope	N/A

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

01. Nicola River - vehicles removed

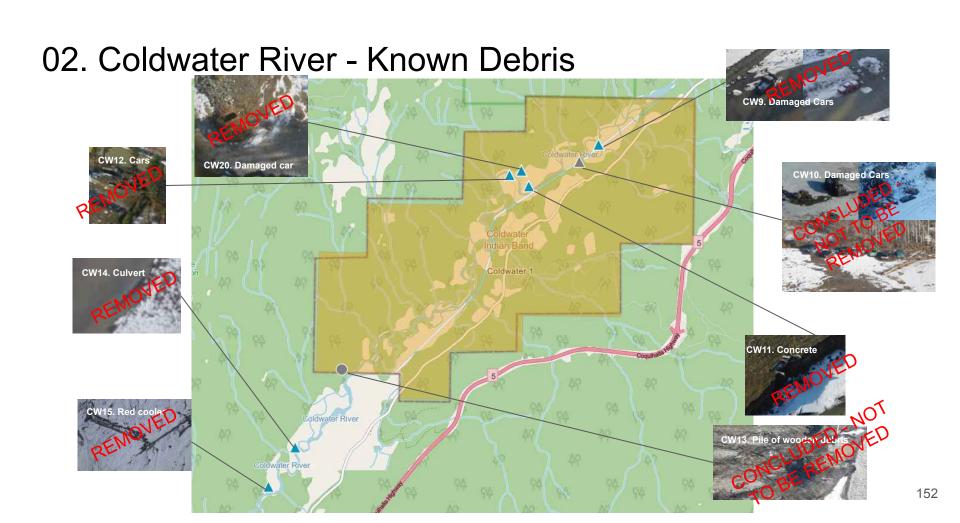
Location	Make	Model	Removal date
NI101.1	Unknown	Quad 2008	2022-04-23
NI101.1	Unknown	Quad Loncin	2022-04-23
NI101.1	Unknown	Snow mobile	2022-04-23
NR-16	Ford	Focus	Landowner
NR-16	Ford	Focus	Landowner
NR-16	Dodge	Caravan	Landowner
NR-16	Chevy	Truck	Landowner
NI23.3	Chevy	Truck	2022-04-23
NR-25	Chevy	Cavalier	2022-03-31
NR-25	Suzuki	Grand Vitara	2022-04-05
NR-29	Toyota	Truck	2022-04-20
NR-26	Chevy	TBC	2022-04-25
NR-26	Ranger	Truck 1977	2022-04-25
NR-26	Swather	TBC	2022-04-26
NI4.2	Ford	E-450 2004	2022-04-08
NR-36	Ford	Cab	2022-04-08
NR-36	Ford	F150 Truck	2022-03-22
NR-36	Ford	F150	2022-04-08
NR-47	Ford	F150 1997	2022-03-22
NR-61	Ford	F350 2000	2022-04-23
NR-61	Ford	Econoline E350	2022-04-23
NR-61	Unknown	Trailer 2021	2022-04-23
NR-61	Suzuki	Quad	2022-04-23
NR-61	Unknown	Car 200	2022-04-23
NR-4	Truck	Unknown Vehicle	2022-04-23
NR-52	Semi Truck	Unknown Vehicle	2022-04-13
NR-53	Semi Truck	Unknown Vehicle	2022-04-13

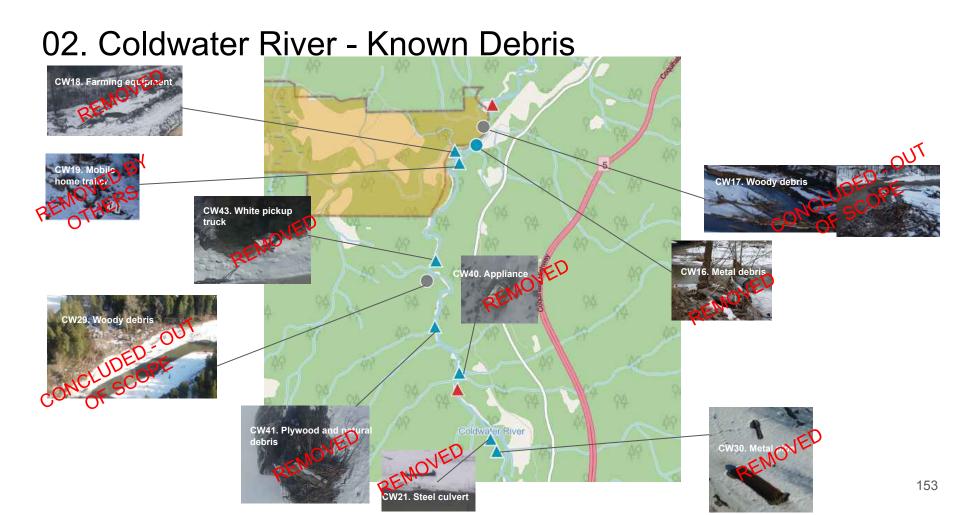
02. Coldwater River - Known Debris

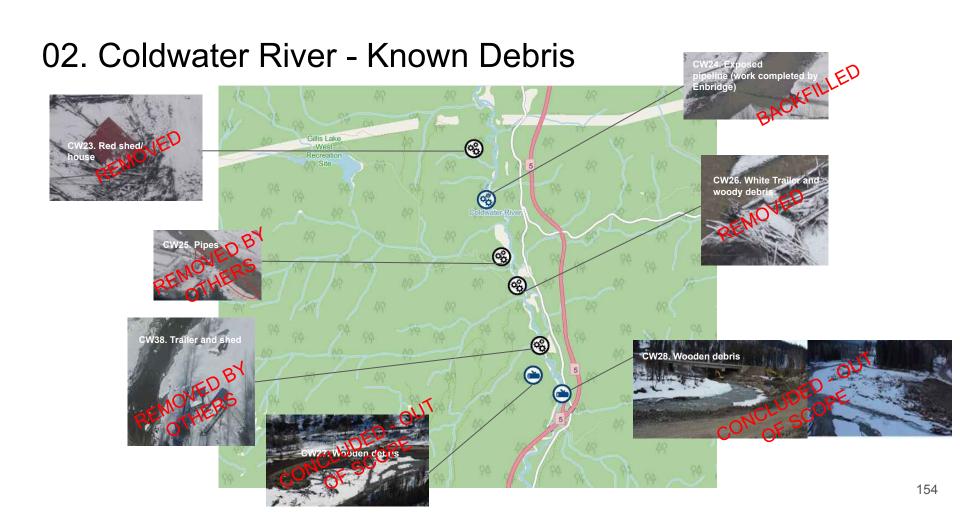


02. Coldwater River - Known Debris

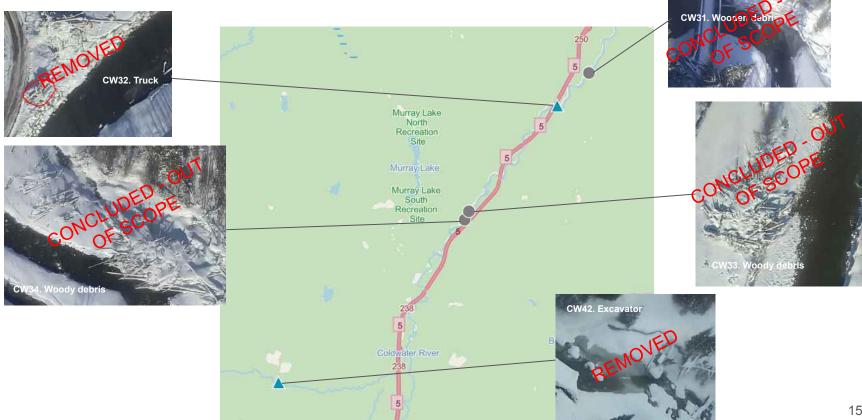








02. Coldwater River - Known Debris



02. Coldwater River

Map ID	Contract or ID*	Description	Туре	Status	Removal date
CW-1		Pile of sediment	Natural	Identified in assessment with other sediment sites	
CW-2	CW_01.9	Damaged Middlesborough bridge	Human-made	Removed - pending direction from City of Merritt on standing section	2022-03-10
CW-3	CW_02.0	Red damaged car	Human-made	Removed	2022-03-09
CW-4	CW_15.5	Wooden track	Human-made	Removed	2022-03-30
CW-6	CW_05.0	Damaged house/shed	Human-made	Removed	2022-04-12
CW-7	N/A	Various debris within river bed	Human-made	Removed	2022-04-27
CW-8		Sediment collapse from erosion	Natural	Identified in assessment with other sediment sites	
CW-9	N/A	Damaged cars	Human-made	Removed	2022-04-06
CW-11	CW_15.0	Concrete structure	Human-made	Removed	2022-04-06
CW-12	CW_15.5	Cars	Human-made	Removed	2022-04-27
CW-14	CW_23.0	Culvert	Human-made	Removed	2022-04-27
CW-15	CW_25.0	Red cooler	Human-made	Removed	2022-04-06
CW-16	N/A	Metal debris	Human-made	Removed	2022-04-27
CW-18	N/A	Farming equipment	Human-made	Removed	2022-04-06
CW-20	N/A	Damaged car	Human-made	Removed	2022-04-06
CW-21	CW_32.4	Steel culvert	Human-made	Removed	2022-04-27
CW-22	N/A	Vehicles and various other debris	Human-made	Removed	2022-05-04
CW-26	CW_38.2	White trailer, woody debris	Human-made	Removed	2022-04-12
CW-30	N/A	Metal pipe	Human-made	Removed	2022-04-27
CW-32	N/A	Truck	Human-made	Removed	2022-04-13
CW-35	N/A	Plywood along river bank	Human-made	Removed	2022-04-27
CW-36	N/A	Red barrel	Human-made	Removed	2022-04-13
CW-40	N/A	Appliance	Human-made	Removed	2022-04-27

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

02. Coldwater River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CW-41	N/A	Plywood entangled in woody debris	Human-made	Removed	2022-04-27
CW-42	JC_4.8	Excavator	Human-made	Removed	2022-03-23
CW-43	CW_28.9	White pickup truck	Human-made	Removed	2022-05-04
CW-45	N/A	Number of barrels/drums	Human-made	Removed	2022-04-06
CW-46	N/A	Plastic waste with natural debris	Human-made	Removed	2022-05-04
CW-47	N/A	Blue pipe	Human-made	Removed	2022-04-27
CW-48	N/A	Car	Human-made	Removed	2022-03-09
CW-23	CW_35.0	Red shed/house	Human-made	Removed	2022-05-11
CW-19	CW_27.0	Mobile home trailer	Human-made	Removed by Local Community	2022-04-06
CW-24	CW_36.5	Exposed pipeline	Human-made	Backfilled/Work completed by Enbridge	N/A
CW-25	CW_37.6	Pipes	Human-made	Removed by Others	2022-04-20
CW-37	N/A	White pickup, trailer and cars	Human-made	Removed by Local Community	2022-04-06
CW-38	N/A	Trailer, shed and other items along river	Human-made	Removed by Local Community	2022-04-13
CW-10	CW_13.0	Damaged cars	Human-made	Concluded - Out of Scope	N/A
CW-13	N/A	Pile of wooden debris	Natural	Concluded - Not to be Removed	N/A
CW-17	N/A	Woody debris	Natural	Concluded - Not to be Removed	N/A
CW-27	N/A	Wooden debris	Natural	Concluded - Not to be Removed	N/A
CW-28	N/A	Wooden debris	Natural	Concluded - Not to be Removed	N/A
CW-29	N/A	Woody debris	Natural	Concluded - Not to be Removed	N/A
CW-31	N/A	Wooden debris	Natural	Concluded - Not to be Removed	N/A
CW-33	N/A	Woody debris	Natural	Concluded - Not to be Removed	N/A
CW-34	N/A	Woody debris	Natural	Concluded - Not to be Removed	N/A

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

02. Coldwater River - vehicles removed

Location	Make	Model	Removal date
CW-3	Chevy	Nova	2022-03-01
CW-10	Ford	Exploerer Sport 2001	2022-04-02
CW-10	Chrysler	Intrepid	2022-04-04
CW12	Ford	Explorer	2022-04-04
CW-10	Unknown	Snow mobile 550 EFI	2022-04-04
CW-43	Ford	F250	2022-04-01
CW-37	Unknown	TBC	2022-04-06
CW-26	Unknown	Camper Trailer	2022-04-12
CW52.5	Dodge	RAM 3500	2022-04-25
CW52.5	GMC	Pontiac Montana 2022	2022-04-27
CW52.5	Ford	Windstar Van 1999	2022-04-27

03. Thompson River - known debris



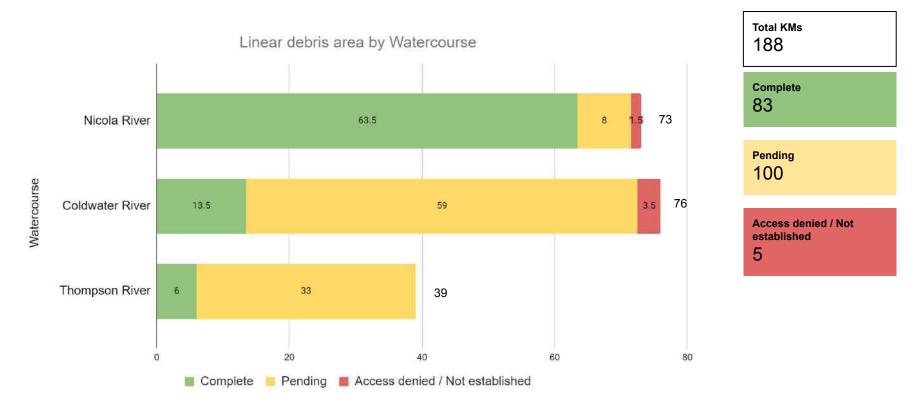
03. Thompson River - known debris



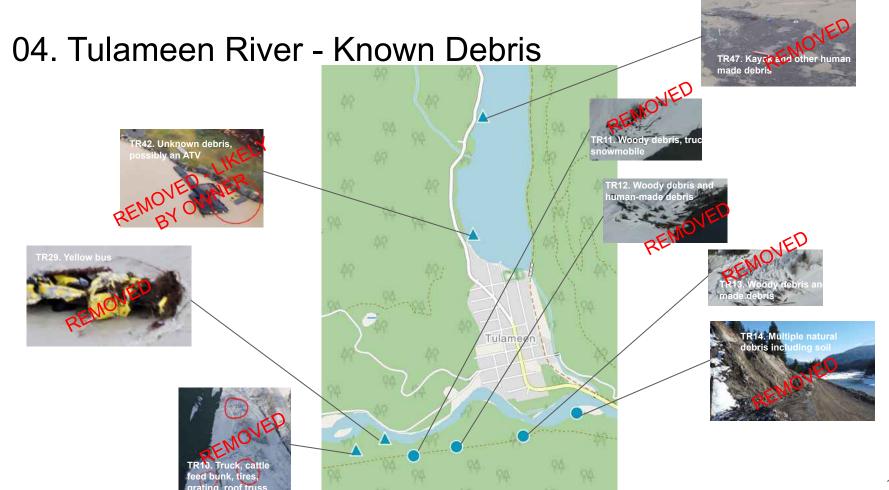
03. Thompson River

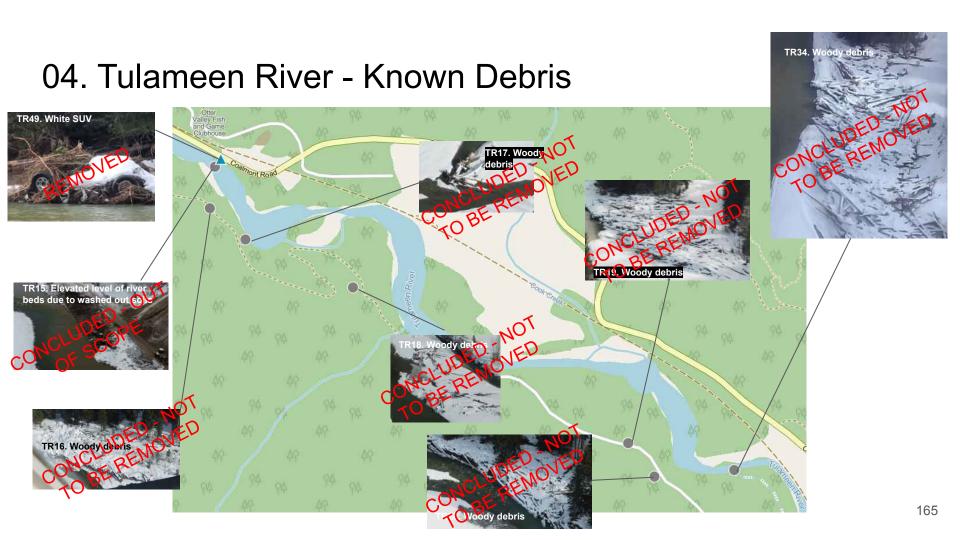
Map ID	Description	Туре	Status	Removal date
THR-1	Red object	Human-made	Removed	2022-04-20
THR-2	Wood pieces and plastic mixed with natural debris	Human-made	Removed	2022-04-27
THR-3	ATV in water, wood pieces and scraps mixed with natural debris	Human-made	Removed	2022-04-27
THR-4	Plastic container, wood mixed with natural debris	Human-made	Removed	TBC
THR-7	Telephone pole and transformer on shoreline	Human-made	Removed	2022-04-20
THR-8	Trailer and wood pieces along the river banks	Human-made	Removed	2022-04-20

Linear Debris Progress in KMs - Merritt Region Phase 1



04. Tulameen River - Known Debris TR33. Woody debris





04. Tulameen River - Known Debris TR35. Concrete TR21. Unknown object culverts by river possibly barrel or water heater TR36. Concre culvert piece TR38. Small traile TR37. Misc. human-made debris under trees TR22. Woody debris Th23. Trailer and building TR39. Metal 166

04. Tulameen River - Known Debris









04. Tulameen River - Known Debris



04. Tulameen River - Known Debris



04. Tulameen River

Map ID	Description	Type	Status	Removal date
TR-1	Woody debris	Natural	Removed	2022-04-27
TR-2	Woody debris	Natural	Removed	2022-04-27
TR-3	Woody debris	Natural	Removed	2022-04-27
TR-4	Woody debris	Natural	Removed	2022-04-27
TR-5	Mobile home, trailer	Human-made	Removed	2022-04-27
TR-6	Mobile home and other camping material	Human-made	Removed	2022-04-27
TR-7	Woody debris	Natural	Removed	2022-04-27
TR-8	Quad and cube van	Human-made	Removed	2022-04-06
TR-9	Mobile home	Human-made	Removed	2022-04-27
TR-10	Truck, cattle feed bunk, tires, grating, roof truss	Human-made	Removed	2022-04-13
TR-11	Woody debris mixed with truck and snowmobile	Human-made	Removed	2022-04-13
TR-12	Woody debris and human-made debris	Human-made	Removed	2022-04-13
TR-13	Woody debris and human-made debris	Human-made	Removed	2022-04-13
TR-14	Multiple natural debris including soil	Natural	Removed	2022-04-13
TR-21	Unknown object	Human-made	Removed	2022-04-13
TR-26	Motorhome	Human-made	Removed	2022-04-20
TR-27	Travel trailer	Human-made	Removed	2022-04-27
TR-29	Yellow bus	Human-made	Removed	2022-04-06
TR-30	Culvert	Human-made	Removed	2022-04-20
TR-33	Woody debris	Natural	Removed	2022-04-27
TR-35	Concrete culverts by river	Human-made	Removed	2022-04-20

04. Tulameen River

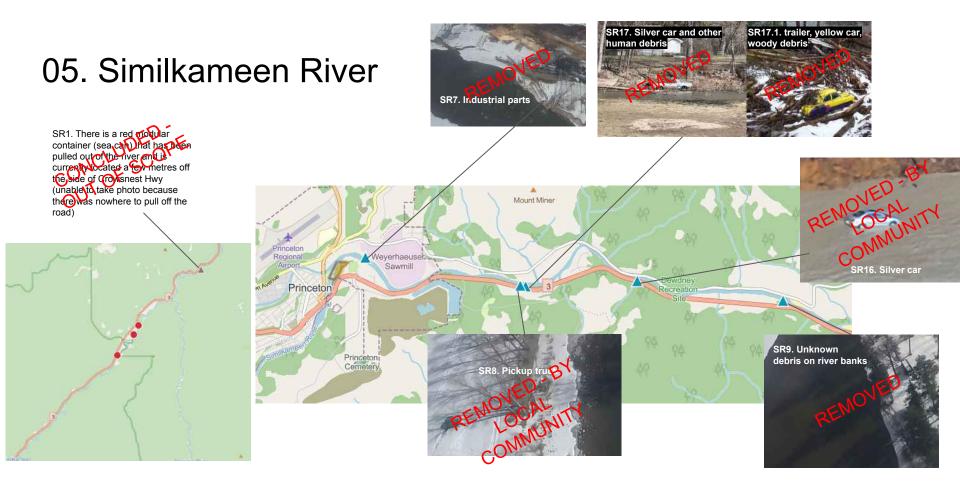
Map ID	Description	Type	Status	Removal date
TR-36	Concrete culvert piece	Human-made	Removed	2022-04-20
TR-37	Misc. human-made debris under trees	Human-made	Removed	2022-04-27
TR-38	Small trailer	Human-made	Removed	2022-04-27
TR-39	Metal in river	Human-made	Removed	2022-04-20
TR-47	Kayak and other debris	Human-made	Removed	2022-04-20
TR-49	White SUV	Human-made	Removed	TBC
TR-50	Buried backhoe	Human-made	Removed	2022-04-13
TR-51	Truck	Human-made	Removed	2022-04-13
TR-52	Two quads and cube van deck	Human-made	Removed	2022-04-06
TR-25	Red sea can	Human-made	Removed by Local Community	N/A
TR-31	Destroyed train bridge (FLNRO)	Human-made	Removed by FLNRO, debris beside the bridge removed by PwC	N/A
TR-40	Piece of rail from rail bridge	Human-made	Removed by Local Community	N/A
TR-42	Unknown debris - possibly ATC	Human-made	Removed by Local Community	N/A
TR-15	Elevated level of river beds due to washed out soils	Natural	Concluded - Not to be Removed	N/A
TR-16	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-17	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-18	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-19	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-20	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-22	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-23	Travel trailer and structure	Human-made	Concluded - Not to be Removed	N/A
TR-24	Woody debris	Natural	Concluded - Not to be Removed	N/A

04. Tulameen River

Map ID	Description	Туре	Status	Removal date
TR-28	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-32	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-34	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-41	Woody debris	Natural	Concluded - Not to be Removed	N/A
TR-43	Pile of tires	Human-made	Concluded - Not to be Removed	N/A
TR-45	Small shed and pile of tires	Human-made	Concluded - Not to be Removed	N/A
TR-46	Row of tires	Human-made	Concluded - Not to be Removed	N/A
TR-48	Woody debris around bridge	Natural	Concluded - Not to be Removed	N/A

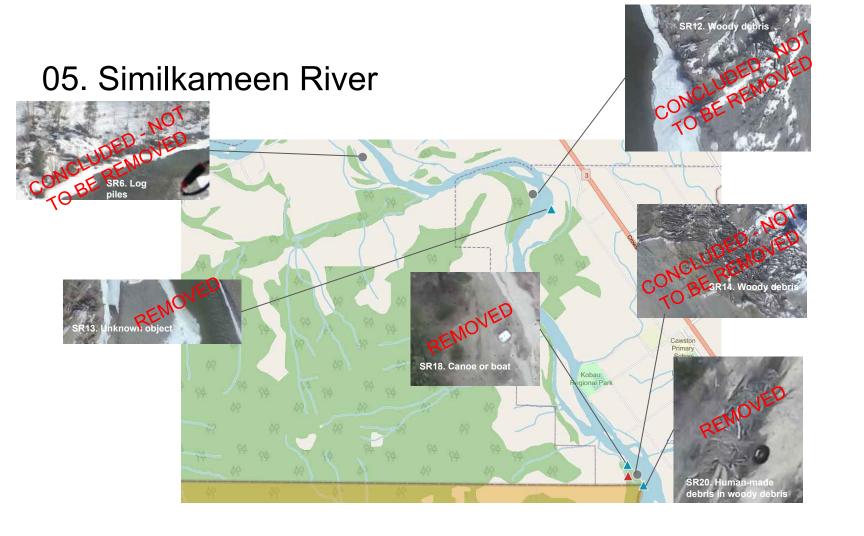
04. Tulameen River - vehicles removed

Location	Make	Model	Removal date
TR-8	Hino	Cube Truck	2022-04-05
TR-8	John Deere	310SE Backhoe Loader	2022-04-06
TR-10	Chevrolet	1964 Truck	2022-04-01
TR-16	Chevrolet	Tracker	2022-04-01
TR-26	Keystone	Cougar	2022-04



05. Similkameen River





05. Similkameen River Tire entangled Similkameen Indian Band SR5. Ketal containers and other human made debris SR22. Canopy beside the river

05. Similkameen River

Map ID	Description	Туре	Status	Removal date
SR-7	Industrial parts	Human-made	Removed	2022-04-20
SR-9	Various human-made debris on river banks	Human-made	Removed	2022-04-20
SR-11	Tire on banks	Natural	Removed	2022-04-27
SR-13	Unknown object	Human-made	Removed	2022-05-04
SR-17	Larger silver vehicle, trailer, yellow car and woody debris	Human-made	Removed	06-avr-22
SR-18	Canoe or boat beside the river	Human-made	Removed	2022-05-04
SR-20	Human-made debris in woody debris	Human-made	Removed	2022-04-27
SR-21	Tire entangled among wooden debris	Human-made	Removed	2022-04-27
SR-22	Canopy beside the river	Human-made	Removed	2022-05-04
SR-5	Metal containers, pallets and other human made debris	Human-made	Removed by Local Community	2022-04-16
SR-8	Pickup truck	Human-made	Removed by Local Community	2022-03-23
SR-16	Silver car	Human-made	Removed by Local Community	2022-03-23
SR-1	Red modular sea can	Human-made	Concluded - Not to be Removed	N/A
SR-2	Damaged structure	Human-made	Concluded - Not to be Removed	N/A
SR-3	Woody debris	Natural	Concluded - Not to be Removed	N/A
SR-4	Wooden structure	Human-made	Concluded - Not to be Removed	N/A
SR-6	Log piles	Natural	Concluded - Not to be Removed	N/A
SR-10	Woody debris	Natural	Concluded - Not to be Removed	N/A
SR-12	Woody debris	Natural	Concluded - Not to be Removed	N/A
SR-14	Woody debris	Natural	Concluded - Not to be Removed	N/A
SR-15	Woody debris	Natural	Concluded - Not to be Removed	N/A

05. Similkameen River - vehicles removed

Location	Make	Model	Removal date
SR-17	Ford	Unknown	2022-04-12

06. Fraser River

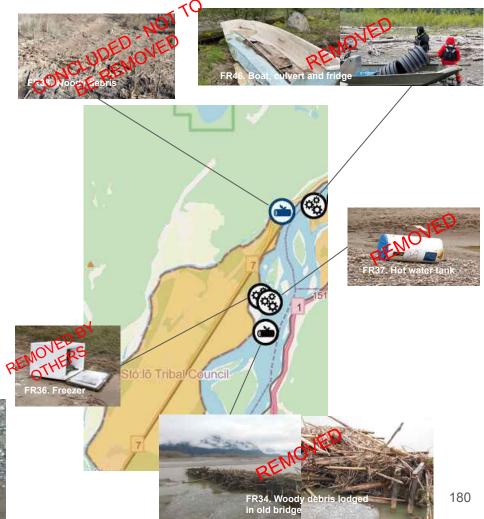


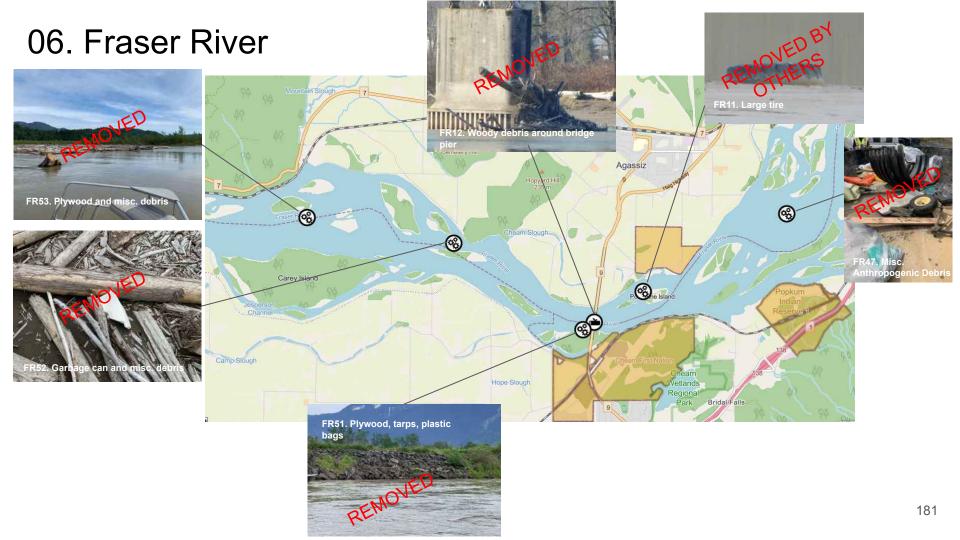


06. Fraser River FR27. Shanty houses beside FR20. Human-made box like object FR21. Boat debris, other smaller human-made debris in vicinity FR45. Two cars on the side of the river FR1. Large volumes of natural debris FR42. Tire located on left bank on Fraser River FR3. Natural debris and fine sand/rocks accumulated under base of culvert under CN FR18. Fridge and other human made debris

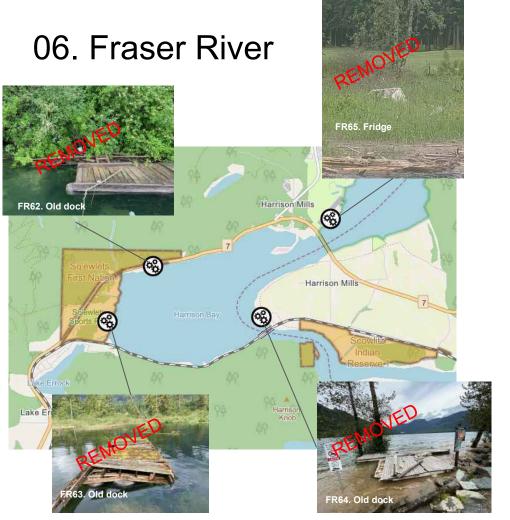
FR41. Appliances





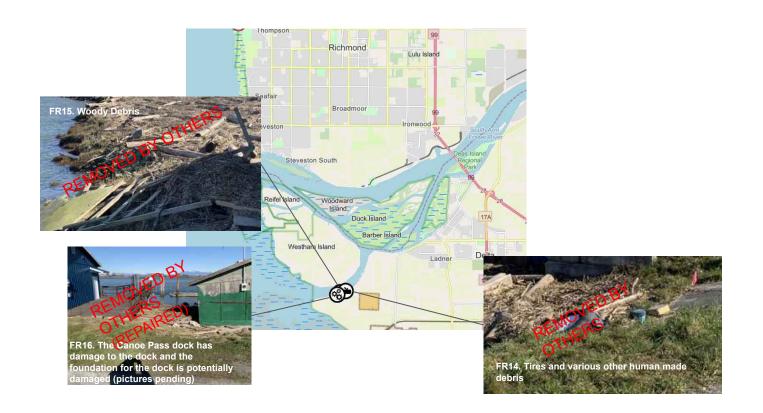






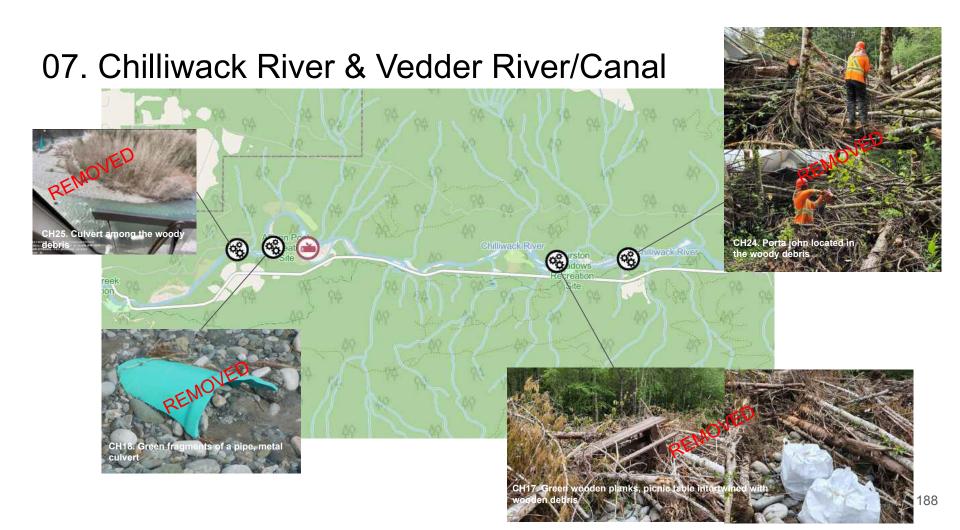




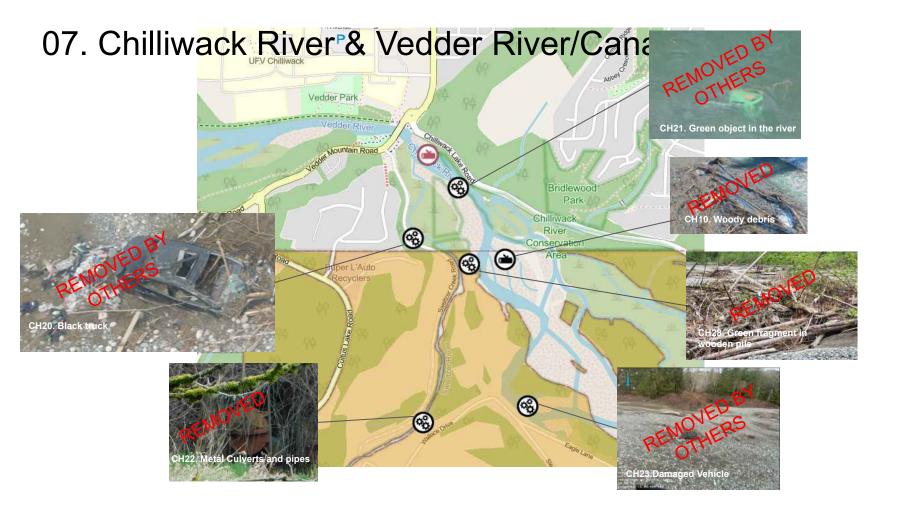


Map ID	Description	Туре	Status	Removal date
FR-3	Natural debris and sand/rocks at base of culvert	Human-made	Removed	2022-05-11
FR-14	Tire and other human made debris	Human-made	Removed by Others	2022-06-30
FR-15	Woody debris on river banks	Natural	Removed by Others	2022-06-30
FR-16	Canoe Pass dock damage	Human-made	Removed by Others (repaired)	2022-06-30
FR-18	Fridge and other human made debris	Human-made	Removed	2022-05-20
FR-20	Human-made box like object	Human-made	Removed	2022-05-11
FR-21	Boat debris, other smaller human-made debris in vicinity	Human-made	Removed	2022-05-20
FR-24	Box object, white metal sheet, green metal sheet	Human-made	Removed	2022-05-12
FR-12	Woody debris around pier cap	Natural	Removed	2022-05-18
FR-25	White metal sheet, multiple tires	Human-made	Removed	2022-04-20
FR-26	Accumulation of tires beside the river, red metal sheet	Human-made	Removed	2022-05-11
FR-34	Woody debris lodged in old bridge	Natural	Removed	2022-05-20
FR-37	Hot water tank	Human-made	Removed	2022-05-11
FR-41	Appliances	Human-made	Removed	2022-05-20
FR-42	Tire located on left bank	Human-made	Removed	2022-05-20
FR-43	Appliance on right bank	Human-made	Removed	2022-05-20
FR-44	Wood Accumulation on Bridge Pier	Human-made	Removed	2022-05-26
FR-45	Two cars on the side of the river	Human-made	Removed	2022-05-24
FR-46	Boat, culvert and fridge	Human-made	Removed	2022-05-20
FR-47	Misc. human-made debris	Human-made	Removed	2022-05-18
FR-48	Irrigation drums	Human-made	Removed	2022-06-06
FR-49	Irrigation drums	Human-made	Removed	2022-06-06
FR-50	Irrigation drums	Human-made	Removed	2022-06-06
FR-51	Plywood, tarps, plastic bags	Human-made	Removed	2022-05-26

Map ID	Description	Туре	Status	Removal date
FR-52	Garbage can and misc. debris	Human-made	Removed	2022-05-26
FR-53	Plywood and misc. debris	Human-made	Removed	2022-05-26
FR-54	Oil tank	Human-made	Removed	2022-06-04
FR-55	Woody debris	Natural	Removed	2022-09-27
FR-56	Tire	Human-made	Removed	2022-05-30
FR-57	Woody debris	Natural	Removed	2022-06-10
FR-58	Oil boom, propane tank, and misc. debris	Human-made	Removed	2022-06-03
FR-62	Old dock	Human-made	Removed	2022-06-09
FR-63	Old dock	Human-made	Removed	2022-06-09
FR-64	Old dock	Human-made	Removed	2022-06-09
FR-65	Fridge	Human-made	Removed	2022-06-09
FR-1	Large volume of natural debris	Natural	Removed by Others	2022-06-24
FR-11	Large tire	Human-made	Removed by Others	2022-06-22
FR-36	Freezer	Human-made	Removed by Others	2022-05-24
FR-61	Woody debris	Natural	Removed by Others	2022-06-17
FR-4	Woody debris	Natural	Concluded - Out of Scope	N/A
FR-5	Woody debris on the banks	Natural	Concluded - Out of Scope	N/A
FR-17	Woody debris by culvert	Natural	Concluded - Out of Scope	N/A
FR-27	Shanty houses beside a creek	Human-made	Concluded - Out of Scope	N/A
FR-38	Woody debris	Natural	Concluded - Out of Scope	N/A





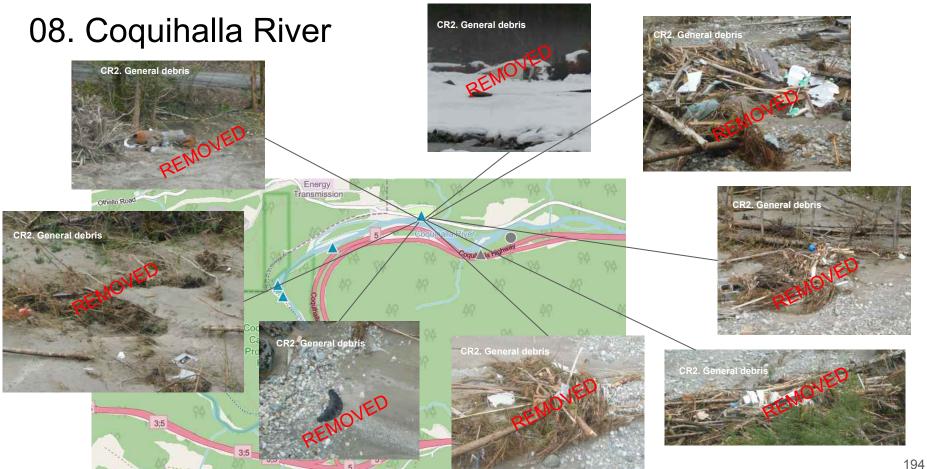


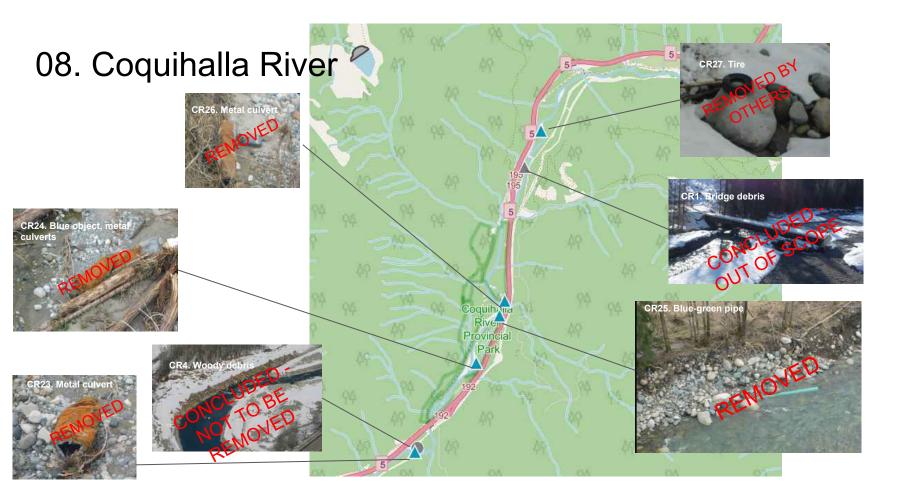






Map ID	Contract or ID*	Description	Туре	Status	Removal date
CH-2	-	Two bridges with natural debris dams	Natural	Removed	2022-05-20
CH-4		Woody debris	Natural	Removed	2022-05-18
CH-5		Woody debris at piers	Natural	Removed	2022-05-24
CH-10		Woody debris	Natural	Removed	TBD
CH-17		Green wooden planks, picnic table intertwined with wooden debris	Human-made	Removed	2022-05-28
CH-18		Green fragments of a pipe, metal culvert	Human-made	Removed	2022-05-28
CH-19		Abandoned cars, ladders, pipes, freight containers, trailer	Human-made	Removed	2022-05-28
CH-22		Metal pipes/culverts	Human-made	Removed	2022-05-26
CH-24		Porta john located in the woody debris	Human-made	Removed	2022-05-28
CH-25		Culvert among the woody debris	Human-made	Removed	2022-05-28
CH-26		Two boom lifts	Human-made	Removed	2022-05-18
CH-27	CH-9	Southern rail woody debris	Natural	Removed	2022-05-30
CH-28		Green fragment in wooden pile	Human-made	Removed	2022-05-26
CH-20		Black Truck	Human-made	Removed by Others	2022-05-19
CH-21		Green object in the river	Human-made	Removed by Others	TBD
CH-23		Damaged vehicle buried in sediment east of Sweltzer Creek campground	Human-made	Removed by Others	2022-05-19
CH-3		Damage near house due to creek being destroyed, mobile home and car	Human-made	Concluded - Out of Scope	N/A
CH-15		Excess sediment	Natural	Identified in assessment with other sediment sites	





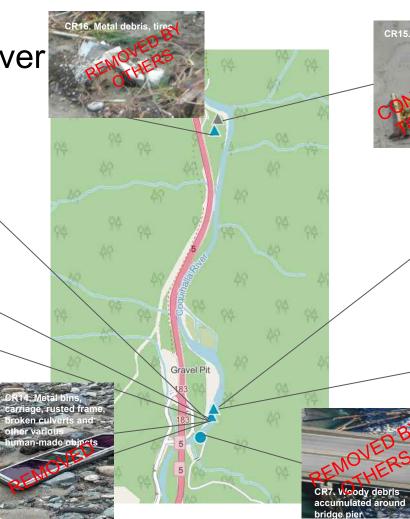
08. Coquihalla River







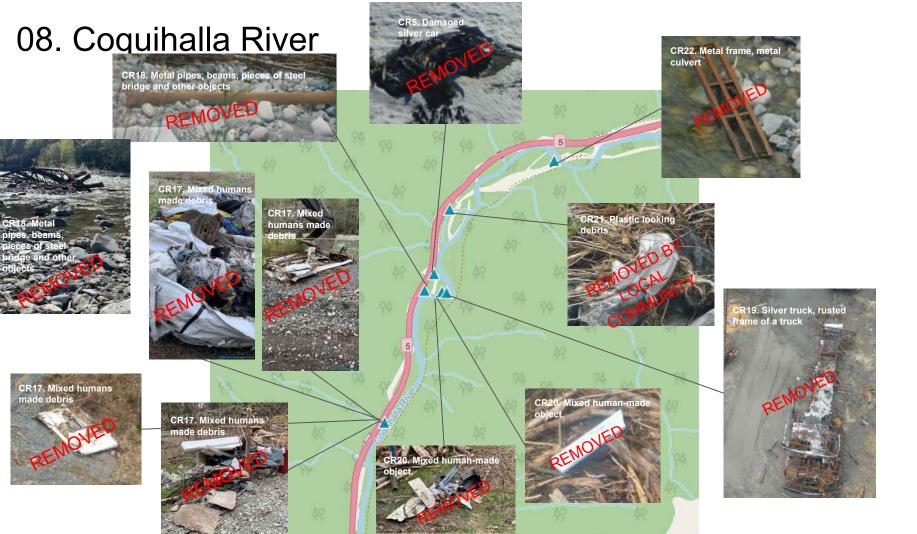


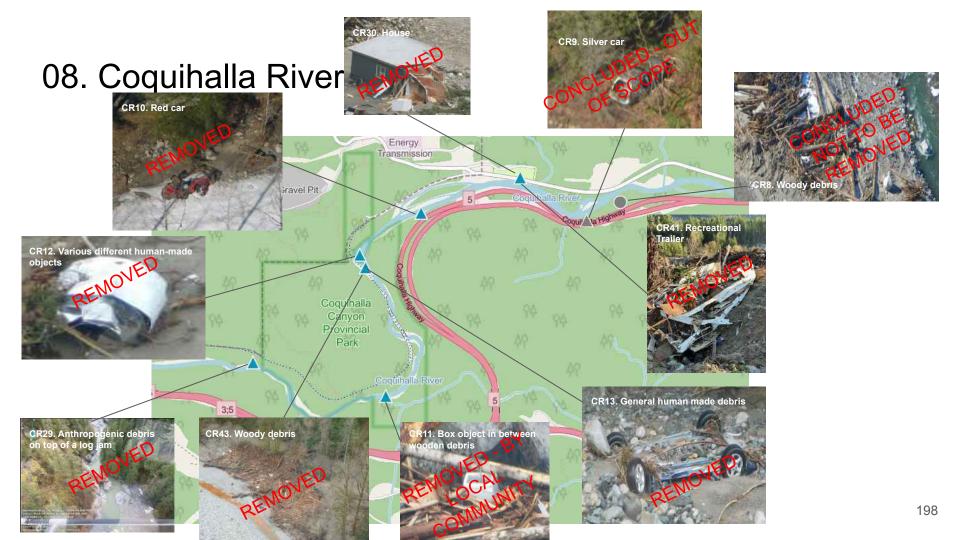


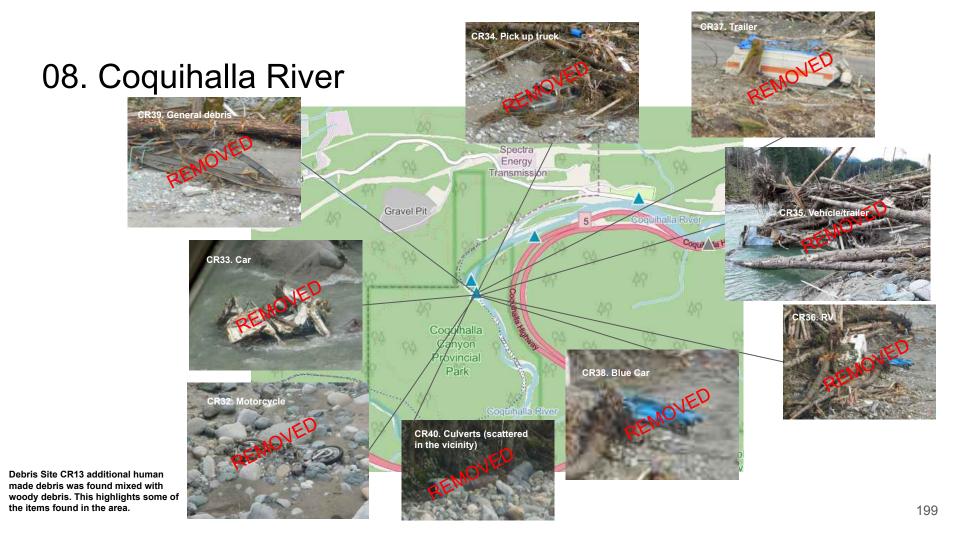


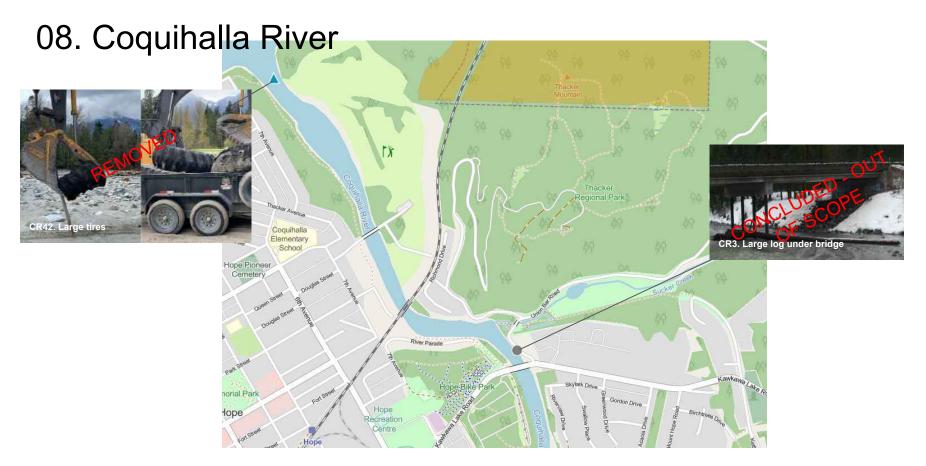












08. Coquihalla River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CR-2	CR2	General debris	Human-made	Removed	2022-04-13
CR-5	CR5	Damaged silver car	Human-made	Removed	2022-05-04
CR-6	CR6	Silver car	Human-made	Removed	2022-04-13
CR-10	CR2	Red car	Human-made	Removed	2022-04-06
CR-12	CR12	Various different human-made objects	Human-made	Removed	2022-04-13
CR-13	CR13	General human made debris	Human-made	Removed	2022-04-13
CR-14	CR14	Metal bins, carriage, rusted frame, broken culverts and other various human-made objects	Human-made	Removed	2022-04-27
CR-17	CR17	Mixed human made debris	Human-made	Removed	2022-04-20
CR-18	CR18	Metal pipes, beams, pieces of steel bridge and other objects	Human-made	Removed	2022-05-04
CR-19	CR19	Silver truck, rusted frame of a truck	Human-made	Removed	2022-04-27
CR-20	CR20	Mixed human-made object	Human-made	Removed	2022-04-27
CR-22	CR22	Metal frame, metal culvert	Human-made	Removed	2022-04-27
CR-23	CR23	Metal culvert	Human-made	Removed	2022-04-27
CR-24	CR24	Blue object, metal culverts,	Human-made	Removed	2022-05-04
CR-25	CR25	Blue-green pipe	Human-made	Removed	2022-04-27
CR-26	CR26	Metal culvert	Human-made	Removed	2022-04-27
CR-29	CR29	Anthropogenic debris on top of log jam	Human-made	Removed - Accessible debris has been removed, due to safety some debris remains	2022-05-04
CR-30	CR2	House	Human-made	Removed	2022-04-13
CR-31	CR6	Red pickup	Human-made	Removed	2022-04-13
CR-32	CR13	Motorcycle	Human-made	Removed	2022-04-13
CR-33	CR13	Motor home	Human-made	Removed	2022-04-13

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

08. Coquihalla River

Map ID	Contractor ID*	Description	Туре	Status	Removal date
CR-34	CR13	Pick up truck	Human-made	Removed	2022-04-13
CR-35	CR13	Vehicle/trailer	Human-made	Removed	2022-04-13
CR-36	CR13	Recreational trailer	Human-made	Removed	2022-04-13
CR-37	CR13	Tent Trailer	Human-made	Removed	2022-04-13
CR-38	CR13	Car (blue)	Human-made	Removed	2022-04-13
CR-39	CR13	General debris	Human-made	Removed	2022-04-13
CR-40	CR13	Culverts (scattered in the vicinity)	Human-made	Removed	2022-04-13
CR-41	CR2	Recreational Trailer	Human-made	Removed	2022-04-27
CR-42		Large tires	Human-made	Removed	2022-04-27
CR-43	CR13	Large mix of woody debris	Natural	Removed	2022-05-11
CR-7	CR7	Debris around bridge pier	Natural	Removed by Others	2022-04-27
CR-11	CR11	Box object in between wooden debris	Human-made	Removed by Local Community	2022-04-27
CR-16	CR16	Metal debris, tires	Human-made	Removed by Others	2022-04-27
CR-21	CR21	Plastic looking debris	Human-made	Removed by Local Community	2022-04-27
CR-1	CR1	Bridge debris	Human-made	Concluded - Not to be Removed	N/A
CR-3	CR3	Large log under bridge	Natural	Concluded - Not to be Removed	N/A
CR-4	CR4	Woody debris on the river banks.	Natural	Concluded - Not to be Removed	N/A
CR-8	CR8	Woody debris	Natural	Concluded - Not to be Removed	N/A
CR-9	CR9	Silver car	Human-made	Concluded - Not to be Removed	N/A
CR-15	CR15	Bulldozer	Human-made	Concluded - Not to be Removed	N/A
CR-28	CR9	Abandoned car in overbank zone	Human-made	Duplicate item for CR-9	

^{*} Where applicable, Contractor IDs are added, alignment is ongoing and will be updated as needed.

08. Coquihalla River - vehicles removed

Location	Make	Model	Removal date
CR2	Chevrolet	Silverado	2022-04-05
CR2	Geo	Metro	2022-04-05
CR2	Chevrolet	Cavalier	2022-04-05
CR2	Unknown	Unknown	2022-04-12
CR5	Chevrolet	Cavalier	2022-05-04
CR6	Toyota	Tercel	2022-04-04
CR6	Chevrolet	S10	2022-04-04
CR13	Pontiac	Firebird	2022-04-08
CR13	Yamaha	Motorcycle	2022-04-08
CR13	Unknown	Travelair	2022-04-08
CR19	Dodge	RAM1500	2022-04-20