

## VEDDER RIVER MANAGEMENT AREA COMMITTEE MEETING

PLACE: City of Chilliwack City Hall  
Dogwood Room

TIME: Thursday, April 14, 2016 (2:30 p.m. to 4:30 p.m.)

### Minutes of Meeting - **Draft**

<u>Present:</u>	<u>Organization</u>	<u>Tel.No.</u>	<u>Email</u>
David Blain (Chair)	City of Chilliwack	604 793-2841	<a href="mailto:blain@chilliwack.com">blain@chilliwack.com</a>
Tara Friesen	City of Chilliwack	604 793-2701	<a href="mailto:tfriesen@chilliwack.com">tfriesen@chilliwack.com</a>
Frank Van Nynatten	City of Chilliwack	604 793-2720	<a href="mailto:vanny@chilliwack.com">vanny@chilliwack.com</a>
Lotte Flint-Petersen	FLNRO	604 586-3721	<a href="mailto:lotte.flint-petersen@gov.bc.ca">lotte.flint-petersen@gov.bc.ca</a>
Hamid Tarig	FLNRO	604 586-4438	<a href="mailto:hamid.tarig@gov.bc.ca">hamid.tarig@gov.bc.ca</a>
Sandra Jensen	FLNRO	604 586-5826	<a href="mailto:sandra.jensen@gov.bc.ca">sandra.jensen@gov.bc.ca</a>
Stella Chiu	City of Abbotsford	604 864-5515	<a href="mailto:schiu@abbotsford.ca">schiu@abbotsford.ca</a>
Rob Isaac	City of Abbotsford	604 864-5685	<a href="mailto:risaac@abbotsford.ca">risaac@abbotsford.ca</a>
Adrian Chantler	Kerr Wood Leidal (KWL)	604 377-9864	<a href="mailto:achantler@kwl.ca">achantler@kwl.ca</a>
Eva Li	Kerr Wood Leidal (KWL)	778-999-1707	<a href="mailto:eli@kwl.ca">eli@kwl.ca</a>
Bruce Wright	Nova Pacific Environmental	604 251-5216	<a href="mailto:bfw@novapacific.net">bfw@novapacific.net</a>
Tatiana Kozlova	Nova Pacific Environmental	604 251-5216	<a href="mailto:tkozlova@novapacific.net">tkozlova@novapacific.net</a>
Barry Schmitz	PRRO	604 799-4612	<a href="mailto:BSchmitz@peopleoftheriver.com">BSchmitz@peopleoftheriver.com</a>
Natashia Cox	FVWC (Watershed Coalition)	604 855-8274	<a href="mailto:natashia@fvwc.ca">natashia@fvwc.ca</a>
Al Jonsson	DFO		<a href="mailto:Alan.Jonsson@dfo-mpo.gc.ca">Alan.Jonsson@dfo-mpo.gc.ca</a>
Jeremy Mothus	DFO (Chwk Hatchery)	604 858-7227	<a href="mailto:jeremy.mothus@dfo-mpo.gc.ca">jeremy.mothus@dfo-mpo.gc.ca</a>
<u>Regrets:</u>			
Damodar Khadka	Ts'elxwéyeqw Tribe Mngt Ltd.	824-2694	<a href="mailto:damodar.khadka@shawcable.com">damodar.khadka@shawcable.com</a>
Dave Nanson	DFO		<a href="mailto:Dave.Nanson@dfo-mpo.gc.ca">Dave.Nanson@dfo-mpo.gc.ca</a>
Jeff Guerin	DFO	250 851-4944	<a href="mailto:jeff.guerin@dfo-mpo.gc.ca">jeff.guerin@dfo-mpo.gc.ca</a>
Robert Stanton	DFO, Chilliwack Hatchery	604 858-7227	<a href="mailto:StantonR@pac.dfo-mpo.gc.ca">StantonR@pac.dfo-mpo.gc.ca</a>
Remko Rosenboom	FLNRO		<a href="mailto:Remko.Rosenboom@gov.bc.ca">Remko.Rosenboom@gov.bc.ca</a>
Scott Babakaiff	FLNRO	604 586-5648	<a href="mailto:Scott.Babakaiff@gov.bc.ca">Scott.Babakaiff@gov.bc.ca</a>
James Storey	FVRD	604 702-5000	<a href="mailto:jstorey@fvrd.bc.ca">jstorey@fvrd.bc.ca</a>
Murray Ned	Lower Fraser Fisheries Alliance	604 852-4040	<a href="mailto:Murray.Ned@sumasfirstnation.com">Murray.Ned@sumasfirstnation.com</a>
Mike Goold	People of the River Referrals	604 824-2421	<a href="mailto:mgoold@peopleoftheriver.com">mgoold@peopleoftheriver.com</a>

The meeting was chaired by David Blain.

- 1. Call to Order** – 2:30 p.m. – Committee Chairman David Blain opened the meeting.
- 2. Additions to or deletions from the agenda**  
No additions or deletions were noted. .
- 3. Minutes from the December 8, 2014 meeting**  
Attached to meeting agenda - adopted as presented.
- 4. Topics for Discussion**

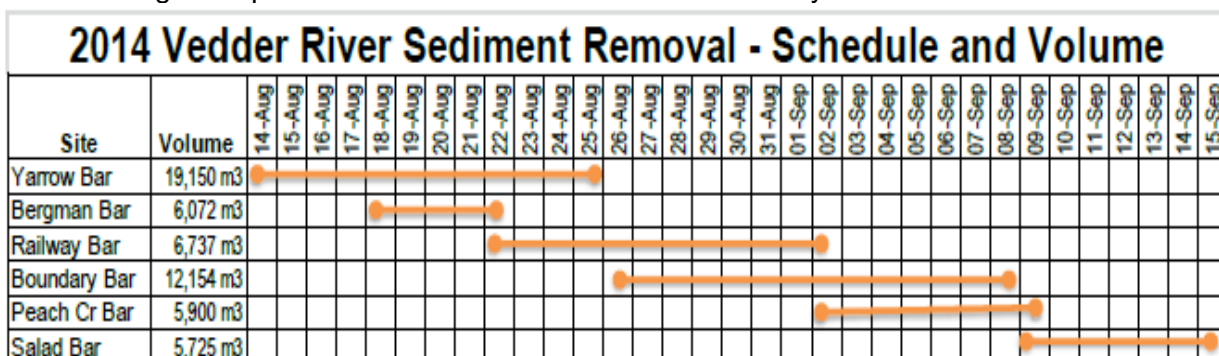
#### 4.1. 2014 Vedder River Gravel Extraction

Environmental Monitors Report (Nova Pacific Dec 2014). Tatiana presented an overview of the 2014 excavations as follows:

- Total volume proposed from 6 sites was 63,500m3
- Actual volume removed from 6 sites was 55,700m3 (88% of intended)

All six of the 2014 excavations were awarded to Jakes Construction Ltd. The sediment removal work began on August 14, 2014 and was completed on September 15, 2014.

The following table provides the schedule and volume summary.



The report describes each site and provides a rationale for its excavation, a description of the implementation issues and any problems encountered. It also describes any required mitigation measures and any habitat improvements associated with each bar.

Habitat Changes and Environmental Impacts Report (Nova Pacific March 11, 2016) provides overview of habitat changes and other impacts to determine river morphology during and after excavation. Aerial photography forms the basis for habitat mapping, which allows comparison of low flow habitat conditions immediately prior to the excavation with similar flow conditions approximately one year after the excavations. The maps were divided into polygons which were assigned to 14 different habitat types. Habitat polygons were broken at every cross section allowing aggregation of habitat value in the vicinity of each excavation site. Individual polygons were rated and summarized at the excavation site level and at the reach level .Habitat ratings for the individual bars changed as follows: +30% for Railway, +29% for Yarrow +27% for Boundary, -6% for Salad, -1% for Peach Creek and -20% for Bergman. An overall score is also included for each excavation site to allow inclusion of habitat effects not captured by the mapping. The overall scores for 2014 excavations was strongly positive for Railway and Yarrow Bars, positive for Boundary Bar, neutral for Salad Bar, and negative for Peach Creek and Bergman bars.

#### 4.2. 2016 Gravel Removal Planning

##### 4.2.1 Surveys (CRA Surveys)

2016 survey was awarded to CRA Surveys in Dec 2015

Survey was completed in January and Feb 2016

All data files provided to KWL by March 15, 2016

3 additional sections were added from previous work (TCH bridge downstream to Sumas River confluence).

#### 4.2.2 Hydraulic Model (KWL)

- Eva Li presented results from HEC-RAS modeling, describing the calculated volumes of gravel accumulation (or loss) using the 2016, 2014 1996/1991 surveys, compared the 2014 and 2016 thalweg profiles and identified areas where the desired dike freeboard of 0.75m is not met.
- Eva presented the hydraulic effect on the proposed 2016 candidate sediment removal sites for Option 1 and 2 as follows (excerpt from KWL presentation):
- A total of 7 sites were selected for consideration for a total volume of 105,350m<sup>3</sup>. Options 1 and 2 above show potential removal volumes 92,650m<sup>3</sup> and 73,300m<sup>3</sup> respectively. Actual sites selected for sediment removal will depend on site access conditions at time of removal.
- Dike Freeboard is shown to be slightly improved at the critical freeboard (cross-sections 8-13) based on the post-excavation of the proposed sites.
- The table below shows the potential volume for the 2 options under consideration:

## Summary of Proposed Excavation Volumes <sup>16</sup>

	Site #	Bar Name	Volume (m <sup>3</sup> )	Subtotal (m <sup>3</sup> )
Option 1	1	Keith Wilson	17,200	Canal 17,200
	2	Yarrow	14,300	Lower Reach 41,150
	3	Railway D/S Bridge	26,850	
	4	Railway	3,200	Middle Reach 12,800
	5	Bergman	9,600	
	6	Lickman	21,500	Upper Reach 21,500
	Total			92,650

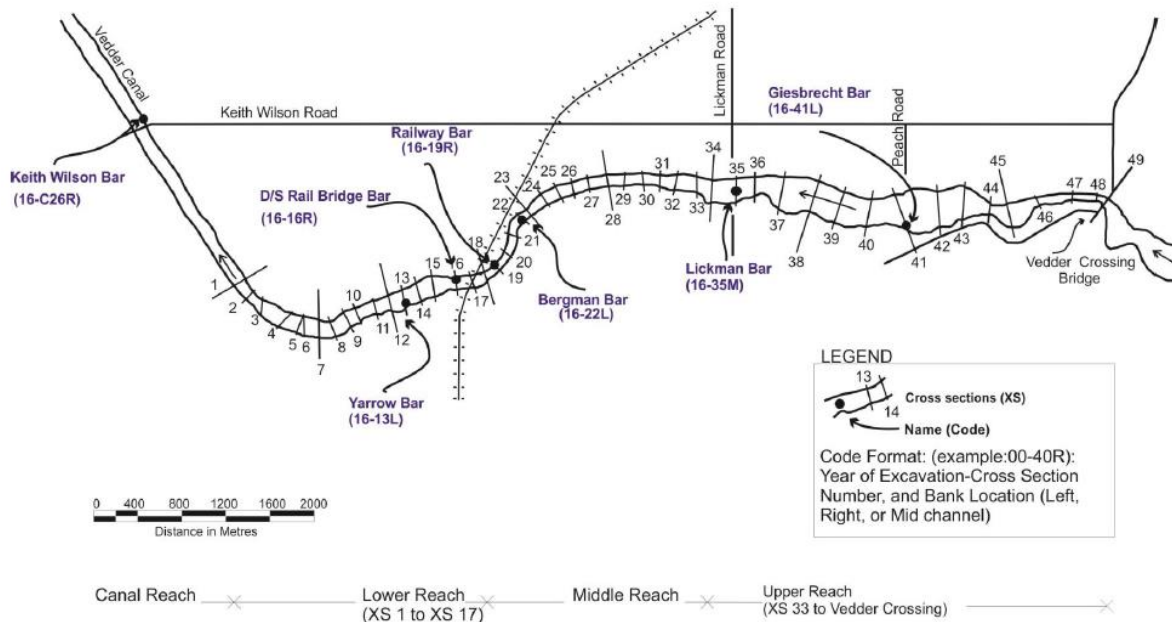
	Site #	Bar Name	Volume (m <sup>3</sup> )	Subtotal (m <sup>3</sup> )
Option 2	1	Keith Wilson	17,200	Canal 17,200
	2	Yarrow	14,300	Lower Reach 14,300
	3	Bergman	9,600	Middle Reach 9,600
	4	Lickman	21,500	Upper Reach 34,200
	5	Giesbrecht	12,700	
	Total			75,300

#### 4.2.3 Environmental Planning (Nova Pacific)

- Bruce Wright reviewed the proposed 2016 sediment removal sites. 14 sites were considered and 7 sites were developed for anticipated sediment yield as follows:

#	Bar Name	Plan Developed	VRTC 1 comments	Yield (m <sup>3</sup> )	Comment
1	Giesbrecht	Y	Proceed with site as back up	12,700	Long road to reopen plus tricky bridge access
2	Lickman -formerly Campground but now is on north side	Y	Look at volume increase (17,000m <sup>3</sup> ) by directing more flow to right	21,500	To offset hard erosion on left bank. Stockpile and access affect recreational users.
3	Bergman	Y	Try to increase volume (7,000m <sup>3</sup> )	9,600	Large, easy access. Offers good habitat channel prospect.
4	Railway	Y	Link to Rail bridge site	3,200	Usual refill pattern
5	D/S Rail Bridge	Y	Expand volume (14,250m <sup>3</sup> ) significantly	26,850	Good opportunity but access is an issue
6	Yarrow	Y	Y	14,300	More upstream – direct flow across to left bank
7	Keith Wilson	Y	Y	17,200	Good candidate but need to coordinate with pump station discharge
<b>Total</b>				<b>105,350</b>	

#### Vedder River - 2016 Proposed Gravel Excavations



(Table and map above from Nova Pacific April 7, 2016 'draft' report)

The following is a brief description of the sites under consideration:

**Site Name: Giesbrecht Site Number: 1**

**Location:** 200 m downstream from Peach Road. **Ownership:** Provincial Crown

**Previous Excavations:** 1996, 2006, 2008, & 2010 (approximate location by XS identifier)

**Stockpile:** Giesbrecht Stockpile

**Length: 150 m Width: 50 m Depth: 3.5 m**

**Expected Gravel Yield:** 12,700 m<sup>3</sup> May be small increase from scalping downstream tip of bar.

**Bar Access:** Access from Giesbrecht Road via setback dyke to stockpile site and then along existing access road adjacent to recently cleared spurs. Site to stockpile is approximately 500 m. Will likely require crossing for backwater habitat.

**Site Name: Lickman Bar Site Number: 2**

**Location:** Fronting campground downstream of Giesbrecht Road

**Ownership:** Provincial Crown

**Previous Excavations:** Campground Bar was at this same approximate location but located on the left bank and was excavated in 2006 and 2008.

**Stockpile:** Lickman Road stockpile site is now subject to heavy recreational use so it is anticipated that this material will be hauled to the Hooge Stockpile or offsite.

**Length: 105 m Width: 70 m Depth: 3.5 m**

**Expected Gravel Yield:** 21,500 m<sup>3</sup>

**Bar Access:** South end of Lickman Road to Rotary Trail. A culvert crossing will likely be needed to avoid awkward turn and travel on Rotary Trail.

**Site Name: Bergman Bar Site Number: 3**

**Location:** Adjacent to Bergman Bar Stockpile **Ownership:** Provincial Crown

**Previous Excavations:** 1994, 1998, 2000, 2002, 2006, 2010, 2014.

**Stockpile:** Bergman **Length: 135 m Width: 25 m Depth: 4 m**

**Expected Gravel Yield:** 9,600 m<sup>3</sup>

**Bar Access:** North on Bergman Road, past setback dyke to Bergman Stockpile. Upstream end of bar can be accessed with a constructed ramp from top of armoured bank.

**Site Name: Railway Bar Site Number: 4**

**Location:** Approximately 180m upstream from the railway bridge

**Ownership:** Provincial Crown

**Previous Excavations:** 1994, 1998, 2004, 2006, 2008, 2010, 2014.

**Stockpile:** Hooge stockpile

**Length: 90 m Width: 20 m Depth: 3 m Expected Gravel Yield: 3,200 m<sup>3</sup>**

**Bar Access:** From Keith Wilson, South on Sinclair Rd. then east along the setback dyke to parking area. Proceed west along the trail atop the bank protection works. (Trail bypass remains but vehicle access has been closed off and the old haul route has been redeveloped as a trail).

**Site Name: D/S Rail Bridge Bar Site Number: 5**

**Location:** Approximately 200 m downstream from the railway bridge

**Ownership:** City of Chilliwack

**Previous Excavations:** Previous excavations in this vicinity tended to be slightly further downstream and were associated with Yarrow Bar.

**Stockpile:** Hooge stockpile (shared with Railway Bar)

**Length: 190 m Width: 34 m Depth: 3.75 m Expected Gravel Yield: 26,850 m<sup>3</sup>**

**Bar Access:** Access to this bar is a significant challenge. Option one requires access through the Great Blue Heron Reserve. The previous access is now somewhat overgrown, primarily by Himalayan Blackberry. Option two would require disturbing a small section of native riparian vegetation and constructing two ramps on either side of the BC Southern Rail Bridge. This would likely require approval by BC Southern Rail which may not be attainable. The third option, would require crossing the thalweg on a bridge. This has been done previously using a pair of flat deck railway cars but it is a challenging crossing that would likely require temporary bulkheads and incursion of ramps into the flowing channel. Determination of the best option for access is still in progress.

**Site Name: Yarrow Bar Site Number: 6**

**Location:** North foot of Wilson Road **Ownership:** City of Chilliwack

**Previous Excavations:** 1994, 1995, 1996, 1998, 2000, 2004, 2006, 2008, 2010, 2012, 2014.

**Stockpile:** Wilson Road Stockpile or the recently restored stockpile along setback dyke near railway. Wilson Road stockpile is limited by presence of Yarrow Water Works wells. In 2014, Wilson Road stockpile was used and this was problematic. With the smaller volume proposed in 2016, the remaining usable area of the Wilson Road stockpile should be sufficient.

**Length: 85 m Width: 60 m Depth: 3 m Expected Gravel Yield: 14,300 m<sup>3</sup>**

**Bar Access:** From Wilson Road through stockpile site

**Site Name:** Keith Wilson Bar **Site Number:** 7

**Location:** 150 meters downstream of Keith Wilson Bridge

**Ownership:** City of Chilliwack

**Previous Excavations:** 2002, 2006. **Stockpile:** Greendale

**Length:** 190 m **Width:** 35 m **Depth:** 3 m **Expected Gravel Yield:** 17,200 m<sup>3</sup>

**Bar Access:** From east end of Keith Wilson Bridge. Secondary channel near the left bank may need to be crossed to access this bar. Small culverts should be sufficient.

4.2.4 Hydraulic Model Results for Proposed Removal Sites (Eva Li). Dike Freeboard is shown to be slightly improved at the critical freeboard (cross-sections 8-13) based on the post-excavation of the proposed sites.

#### 4.2.5 Gravel Removal sites discussion

A discussion was held to establish the consensus of the Committee regarding the status of the proposed sediment removal sites. The Committee agreed that we would target removal of the long-term biennial deposition rate of 90,800m<sup>3</sup> (based on KWL 2016 calculation).

The Railway D/S Bridge site (potential yield 14,250m<sup>3</sup>) may be a challenge to access due to the required route through Blue Heron Reserve and bridge capacity or requirement to obtain permission from the railway company for an at-grade crossing. The Committee agreed that the City would develop a tender to remove sediment at all 7 sites and the Giesbrecht site would be deleted if the other 6 sites are attainable.

Option 1 – without Giesbrecht has a potential volume of 92,650m<sup>3</sup>.

Option 2 – includes Giesbrecht and would delete the Railway d/s Bridge site and Railway site for a potential volume of 75,300m<sup>3</sup>.

Alan Jonsson (DFO) noted that he would like to consider increasing the volume and size of the Lickman excavation to reduce erosion and help protect the DFO intake just downstream. The City, in cooperation with the environmental monitor and input from DFO will consider this request and incorporate as appropriate.

#### 4.2.6 Agency Approvals:

- Water Act – An application has been submitted to Front Counter BC to establish multi-year permitting process;
- FLNRO - Nova Pacific to prepare and arrange for application to be submittal by early May 2016;
- Fisheries Act - Nova Pacific to prepare and arrange for application to be submittal by early May 2016;
- Navigable Waters Protection Act – Vedder River/Canal has been removed from the list of BC Navigable Waters;
- Canadian Environmental Assessment Act – only required on new sites.

- 4.2. Tendering process – The Committee recommends that the City of Chilliwack prepare tender the document on behalf of FLNRO and Chilliwack areas for the sites as noted above.
- 4.3. Rock armouring of river right, just downstream of Lickman Road – Frank provided a brief presentation on the recent erosion issue:

In early Jan 2016, City Staff noted significant bank erosion occurring immediately adjacent to a section of the Vedder River Rotary Trail, west of the Lickman Road parking lot. Significant erosion occurred immediately adjacent to the trail. The City submitted the appropriate works proposals to the DFO and FLNRO. Both of these regulatory agencies approved of the projected work. Works commenced Jan 7th and were completed Jan 20<sup>th</sup> Ultimately, 180 linear metres of river bank were armoured (indicated in red) at a cost of \$125,000.



*(photo of erosion area prior to repair)*

- 4.4. Habitat Enhancement Projects by DFO, Natasha Cox BA.,EP.,RB Tech, Fraser Valley Watersheds Coalition.

The Fraser Valley Watersheds Coalition (FWWC) is a registered charity working towards healthy watersheds, and is planning salmon habitat restoration works in the City of Chilliwack along the Chilliwack and Vedder River systems. Natasha presented the following and advised that currently all identified projects are pending the successful funding from grants.



### Chilliwack River

In partnership with DFO, City of Chilliwack, VRMAC and the community, and pending successful funding gravel augmentation of 1000 m<sup>3</sup> of spawning gravel will be added to the Chilliwack lake outlet. It is anticipated that this will result in the creation/enhancement of 1000 m<sup>2</sup> of steelhead and salmonid spawning habitat. VRMAC will be donating the 1000 m<sup>3</sup> of spawning gravels as part of their biennial sediment management program. All works will occur under direct supervision from DFO's resource restoration unit.

### Trestle Channel

In partnership with DFO, City of Chilliwack, VRMAC and the community, and pending successful funding the Trestle channel, which was started in 2015 and is a newly created controlled off-channel habitat, will have final enhancements added to the site. These include securing existing large wood, some replanting and bioengineering along the riparian habitat, upgrading a box culvert and adding a slotted culvert. All works will occur within the off-channel habitats under direct supervision from DFO resource restoration unit.

### Other Off-channel habitats

FVWC will be working with the community to restore and enhance other salmon creeks in partnership with DFO, City of Chilliwack, FVRD, pending successful funding. Targeted sites include Stewart Creek and Salwein Creek. The anticipated outcomes will be restoration of an estimated 700 m<sup>2</sup> of instream salmon habitat and 700 m<sup>2</sup> of riparian habitat. All works will occur under direct supervision from DFO resource restoration unit.

### Peach Creek, North Side of Vedder River - Future Project

FVWC are interested in looking to extend and enhance the Peach Creek spawning channels and add complexity to this area for 2017 in partnership with DFO, City of Chilliwack, Engineering and Parks department, VRMAC and the community to benefit salmonids and the community, support the VRMAC priorities, and align with the Vedder River Greenway Initiative.

- 4.5. Gravel allotted from 2016 removals for DFO future projects. 1,000m<sup>3</sup> of gravel will be allocated from the FLNRO portion of river to be stockpiled and made available at no cost to DFO for their future project use.
- 4.6. Vedder River Management Area Plan Update. The Area Plan dated December 11, 2015 was provided as an attachment to all VRMAC invitees and is now considered to be final.

## 5. Next Meeting – Fall 2016

Notes prepared by Frank Van Nynatten.

Please contact Frank at the City of Chilliwack with any errors or omissions to these 'draft' minutes.