

Approval Application or Notification for Changes In and About a Stream

Under Section 9 of the Water Act and Part 7 of the Water Act Regulations

Incomplete or inaccurate forms do not constitute Notification & will not be accepted.

Proceeding with works after submission of an incomplete or inaccurate form would be a violation of the Water Regulation

☐ APPROVAL APPLICATION

☒ NOTIFICATION¹ (see USERS' GUIDE)

1. Applicant Information

Name: <u>Tony James, Facilities Management</u>		
Address: <u>University of Victoria, PO Box 1700</u>		
City: <u>Victoria</u>	Province: <u>BC</u>	Postal code: <u>V8W 2Y2</u>
Phone: <u>250-721-7606</u>	e-mail: <u>tjames@fmgt.uvic.ca</u>	

2. Location of Works

Street Address of Works (or nearest town): <u>Mystic Vale, University of Victoria</u>		
Stream Name: <u>Hobbs Creek</u>	Flows Into: <u>Cadboro' Bay</u>	
Location on Stream: <u>Along creek length of 800 m from Cedar Hill X Rd to Galimberti Pond on UVic property</u>		
Reference Landmarks: <u>Hobbs Creek watershed & Mystic Vale</u>	Amount of disturbance in m ² : <u>20</u>	
Multiple Sites: <u>YES</u>	Number of sites: <u>15</u>	
Latitude: <u>48d 27m 38s</u>	Longitude: <u>-123d 18m 13s</u>	Elevation: <u>23m</u>
Legal description of property where work is proposed: <u>Lot 6, Section 44, Victoria District, Plan 11376 & part of lot 1 Plan 7682</u>		

3. Drawing, Plan and Site Map

1. Attach drawing showing lot boundaries, location of buildings and of proposed works, stream direction and flow.
2. Attach a key map at an appropriate scale showing the location of the site.
3. Attach engineering drawings (may be required for works identified with ^E under Requires Approval section below).

4. Proposed Timing for Work

Start (day/month/year): <u>1/05/06</u>	Finish (day/month/year): <u>31/10/06</u>
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FOR OFFICE USE ONLY

Date Received:	Water File Number: <u>N1-2090</u>
	Client Number:
	Application Number:
	Amount Received:
	Receipt Number:

5. Type of Works

Requires Approval:

- ☐ Bank Erosion Protection ^E
- ☐ Bridge Installation/maintenance/removal (other than clear span) ^E
- ☐ Stream Diversion ^{QP} Diversion berm structure plan required
- ☐ Large Debris Removal – by machine ^{QP} plan required
- ☐ Gravel Removal ^{QP}
- ☐ Other: Provide details in space below

*Provide culvert dimensions:

Length:

Width:

Diameter:

^E Professional Engineer may be required

^{QP} Qualified Professional may be required

Requires Notification:

- ☐ Installation*/maintenance/removal of road crossing culvert (*follow Forest Practices Code Stream Crossing Guidebook)
- ☐ Construction/maintenance/removal of a clear span bridge
- ☐ Construction/maintenance of a pipeline crossing
- ☐ Construction/maintenance/removal of a pier or wharf
- ☐ Cutting of annual vegetation in a stream channel
- ☒ Repair/maintenance of existing dike or erosion protection works
- ☒ Construction/maintenance of storm water outfalls
- ☐ Control of Eurasian Watermilfoil or other aquatic vegetation
- ☐ Construction/maintenance of ice bridge, winter ford or snowfall
- ☐ Maintenance of minor and routine nature by a public utility
- ☐ Removal of a beaver dam (As authorized under the Wildlife Act)
- ☒ Small debris removal – by hand
- ☐ Construction of a temporary ford
- ☐ Construction of a temporary diversion around a worksite

The following require Notification and may only be undertaken by the Crown in right of either Canada or British Columbia, or their Agents:

Federal/Provincial

- ☐ Construction/maintenance/removal of a flow or water level measuring device
- ☐ Construction/removal of a fish fence or screen, fish or game guard
- ☐ Restoration/maintenance of fish habitat

The following require Notification and may only be undertaken by the Crown in right of either British Columbia, or a Municipality, or their Agents:

Provincial/Municipal

- ☐ Restoration/maintenance of a stream channel
- ☐ Clearing of an obstruction from a bridge or culvert during a flood emergency¹
- ☐ Construction or placement of erosion protection works or flood protection works during a flood emergency²

¹ Some activities fitting the description for Notification may be reviewed by Ministry/Agency staff, who may decide that an Approval is required

² Must be completed under direction of the Crown. No notification is required prior to undertaking works, but a description of changes must be submitted to a habitat officer within 72 hours of the change

^{QP} QP means a professional who through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within their area of expertise.

Detailed Description of Work to be Performed (continue on next page):

Total area disturbed by proposed works (all sites): 300 m²

The proposed work includes repair & maintenance of existing log weirs, addition of new weirs to supplement these & to further control siltation, formation of flood plains to control stream flow, relocation of main trail away from the stream side, revegetation of stream banks & riparian area for erosion control, removal of invasive plant species.

The intent is to control erosion of stream bed & banks from storm water surges caused by off site run off. The work will take place on a number of sites throughout the stream during the course of the time schedule shown when the watercourse is at its lowest.

A typical weir would consist of 2/3 natural wood logs or local rock debris each about 2m long x 0.5m high.

The last remaining part of the main trail running close to the stream bank will be reconstructed further away & the old one decommissioned by planting.

Detailed Description of Work to be Performed, continued (attach a separate document if more space is required):

6. Land Ownership

Please check one of the following:

☒ The applicant is the owner of the property.

☐ The property is Crown land. Tenure/licence number:

☐ The property is owned by the following Landowner (i.e. Landowner is different from applicant):

Landowner's Name:		
Address:		
City:	Province:	Postal code:
Phone:	e-mail:	

Do you have the Landowner's written approval to enter the land(s) to complete the works? ☐ Yes ☐ No

Note: a) Ownership of all parcels of land on which the proposed works will occur must be identified, b) do not attach the written approval with the application, but keep it for your files as you may be asked to produce it during an inspection or audit.

7. Who is doing the Work?

Contact information for company designing and supervising construction of the work (if different from applicant):

Company Name: applicant		
Contact Name:	Professional Affiliation:	
Address:		
City:	Province:	Postal Code:
Phone:	e-mail:	


Contact information for company undertaking the construction (if different from applicant):

Company Name:		
Contact Name:		
Address:		
City:	Province:	Postal Code:
Phone:	e-mail:	

8. Statement of Intent

By submitting this application form, I declare that the information contained on this form is complete and accurate information. I have read, understood and will meet the requirements to construct works and changes in and about a stream in accordance with Section 9 of the *Water Act* and Part 7 Water Act Regulations including, for Notifications, **Terms and Conditions** as specified by a Habitat Officer of the Ministry of Environment.

Signed: _____



Application Date: _____

May 1/06
day/month/year

9. Submission Instructions

Send the completed form along with the following attachments to the local office in which the proposed works are located. Addresses for local offices are listed on the instruction sheet. **Please note that the Approval application fee of \$130 is non-refundable.** If the proposed works require an Approval, prior to proceeding further with this application please ensure that this project will be able to proceed under the *Federal Fisheries Act*.

- | | |
|---|---|
| <input type="checkbox"/> Sketch plan (mandatory) | <input type="checkbox"/> Engineering drawing (mandatory for works requiring approval noted with ^E) |
| <input type="checkbox"/> Key location map (mandatory) | <input type="checkbox"/> For works requiring an Approval, a cheque or money order for \$130 payable to: Minister of Finance. The fee is non-refundable. |

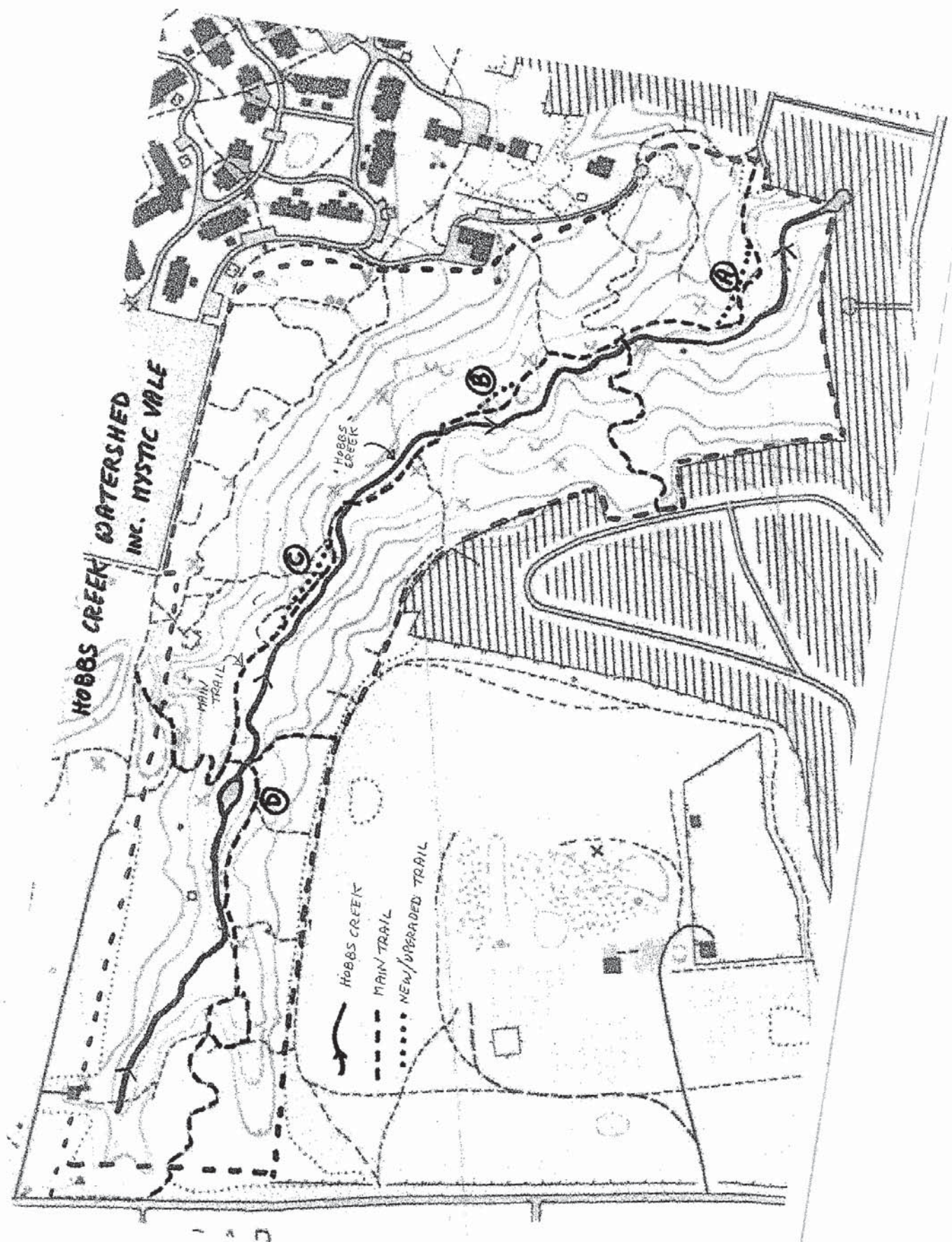
10. Responsibilities

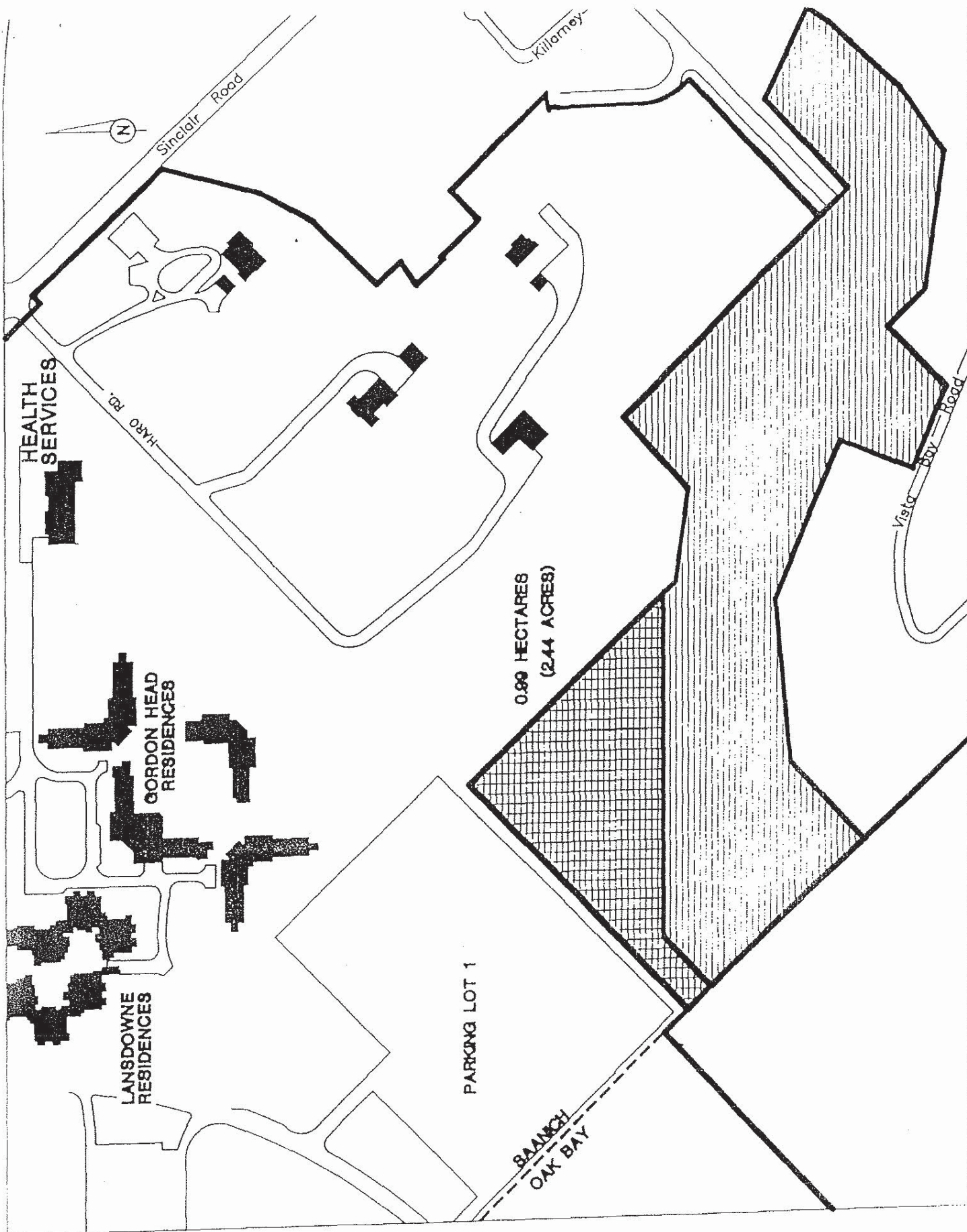
You are required to comply with all applicable federal, provincial and municipal laws and regulations. If you anticipate that the planned work may result in harmful alteration, disruption or destruction of fish habitat you should send a copy of your completed Notification/Approval Application directly to the nearest office of Fisheries and Oceans Canada. Review and comment by DFO may necessitate changes to the proposed works.

Has a copy of this notification/approval application been sent to Fisheries and Oceans Canada (check one)?

YES ☐ NO ☒

If YES, indicate the DFO office that the notification/approval application has been sent (for DFO offices, see Users' Guide):







HOBBS CREEK DRAINAGE AREA

MINISTRY OF ENVIRONMENT – SECTION 9 NOTIFICATION

CHECK LIST

File Number: N1-2290 CLIFF/ERS: 89575 Date Received: Apr 16/09

Notification Clerk:

- ☒ Check Application is Complete & Date Stamped
- ☒ Applied in Past (Previous Applications for Same Works/Location) 2006
- ☒ Enter Application in CLIFF/ERS & Tracking Spreadsheet
- ☒ Enter in CRMS & Create File
- ☐ Reports or Plans Attached
- ☐ Check iMAP Map Attached ☐ Yes ☐ No Other/Notes: _____
- ☐ Sent Email to Applicant Acknowledging Receipt of Application..... Date: _____
- ☒ Sent Acknowledgement Email to Applicant with Requests..... Date: Apr 17/09
- ☐ Received Requested Information from Applicant..... Date: _____
- ☒ Sent File to Ecosystems/Habitat Officer for 10 Working Days Review... Date: Apr 17/09

- PENDING:**
- ☒ Sent Email To Applicant Requesting Info Requested by Habitat Officer. Date: May 5/09
- ☐ Received Information from Applicant/Forwarded to Habitat Officer..... Date: _____

- ☐ Application is an Approval – Sent to FCBC/WSD- Notified Applicant... Date: _____
- ☒ Sent Confirmation/Acceptance Email to Applicant..... Date: July 23
- ☒ Close Referral/Log in CLIFF/ERS & Tracking Sheet..... Date: July 23

Information & Comments

Date	Applicant Sig

Ecosystems/Habitat Officer:

Review & Comments Due Date: _____

- ☒ Reviewed & No Concerns / Applicant May Proceed
- ☐ Reviewed & Proceed with Conditions (See Comments)
- ☒ Hold / Send Email to Applicant Requesting Information (See Comments)
- ☐ No Further Requirements, Applicant May Proceed

Information & Comments:

Date	
<u>May 1/09</u>	<i>In reviewing this application I ^{would like to know} am confused by the how many sites will actually be worked on in this area. Figures 11 to 16 seem to reference different sites on Hobbs Creek, and I would like to know which sites will be rehabilitated using which technique (or fig #). Thanks.</i>
<u>July 23/09</u>	<i>- OK.</i>

CHECK LIST

[illegible]

Barr, Brenda M ENV:EX

From: Law, Peter ENV:EX
Sent: Thursday, April 16, 2009 1:42 PM
To: Barr, Brenda M ENV:EX
Subject: FW: Sect 9 Notification- Hobbs Creek
Attachments: Hobbs Sect 9 09-04-15.pdf; ATT675558.txt

A Section 9 submission.

-----Original Message-----

From: Aqua-Tex Scientific [mailto:aqua-tex@islandnet.com]
Sent: Thursday, April 16, 2009 12:51 PM
To: Law, Peter ENV:EX
Cc: Rushton, Brad
Subject: Sect 9 Notification- Hobbs Creek

Peter and Brad,

On behalf of UVic, we are submitting this Section 9 notification for some clean up and repair in Hobbs Creek this summer. The channel will likely be dry, if past years are anything to judge by. The purpose of this work is to target the invasive ivy and arrest the erosion into Mystic Pond downstream. it is a continuation of work that was done several years ago. We will be supervising the work and working closely with UVic Facilities Management staff.

Please call with any questions.

Thanks,

Cori

Ministry of Environment

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Proceeding with works after submission of an incomplete or inaccurate form would be a violation of the Water Regulation

☐ APPROVAL APPLICATION

☒ NOTIFICATION¹ (see USERS' GUIDE)

1. Applicant Information

Name: Bentley Sly-Manager of Grounds, University of Victoria		
Address: Facilities Management PO Box 1700 STN CSC		
City: Victoria	Province: BC	Postal code: V8W 2Y2
Phone: (250) 721-7606	e-mail: bsly@uvic.ca	

2. Location of Works

Street Address of Works (or nearest town): University of Victoria 1800 Finnerty Road		
Stream Name: Hobbs Creek	Flows Into: Cadboro Bay; District of Saanich	
Location on Stream: Within Mystic Vale; majority of catchment lies within the Municipality of Oak Bay		
Reference Landmarks: Mystic Vale adjacent to Lot 1 at the University of Victoria; Cedar Hill Cross Road to Cadboro Bay Road	Amount of disturbance in m ² : 2m ² X 30	
Multiple Sites: YES /NO: Yes	Number of sites: 30	
Latitude: 48° 27' 36" N	Longitude: 123° 18' 21" W	Elevation: 0-100m
Legal description of property where work is proposed: Lot 1, Sections 31, 44, 71, and 72, Victoria District, Registered Plan Number: VIP 57957		

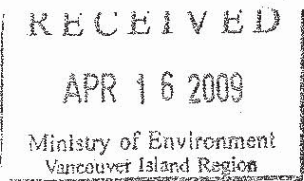
3. Drawing, Plan and Site Map

1. Attach drawing showing lot boundaries, location of buildings and of proposed works, stream direction and flow.
2. Attach a key map at an appropriate scale showing the location of the site.
3. Attach engineering drawings (may be required for works identified with ^E under **Requires Approval** section below).

4. Proposed Timing for Work

Start (day/month/year): May 1, 2009	Finish (day/month/year): September 15, 2009
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FOR OFFICE USE ONLY

Date Received: 	Water File Number: NI-2090 CHA-EIS 89575
	Client Number:
	Application Number:
	Amount Received:
	Receipt Number:

5. Type of Works

Requires Approval:

- ☐ Bank Erosion Protection ^E
- ☐ Bridge Installation/maintenance/removal (other than clear span) ^E
- ☐ Stream Diversion ^{QP} Diversion berm structure plan required
- ☐ Large Debris Removal – by machine ^{QP} plan required
- ☐ Gravel Removal ^{QP}
- ☐ Other: Provide details in space below

*Provide culvert dimensions:

Length: 20 metres

Width:

Diameter: 1.5 metres

^E Professional Engineer may be required

^{QP} Qualified Professional may be required

Requires Notification:

- ☐ Installation*/maintenance/removal of road crossing **culvert** (*follow Forest Practices Code Stream Crossing Guidebook)
- ☐ Construction/maintenance/removal of a **clear span bridge**
- ☐ Construction/maintenance of a **pipeline crossing**
- ☐ Construction/maintenance/removal of a **pier or wharf**
- ☐ Cutting of **annual vegetation** in a stream channel
- ☐ Repair/maintenance of existing **dike or erosion protection works**
- ☐ Construction/maintenance of **storm water outfalls**
- ☐ Control of **Eurasian Watermilfoil** or other **aquatic vegetation**
- ☐ Construction/maintenance of **ice bridge, winter ford or snowfall**
- ☐ Maintenance of minor and routine nature by a public utility
- ☐ Removal of a **beaver dam** (As authorized under the Wildlife Act)
- ☒ Small debris removal – by hand
- ☐ Construction of a **temporary ford**
- ☐ Construction of a **temporary diversion** around a worksite

The following require Notification and may only be undertaken by the Crown in right of either Canada or British Columbia, or their Agents:

Federal/Provincial

- ☐ Construction/maintenance/removal of a flow or water level **measuring device**
- ☐ Construction/removal of a **fish fence or screen, fish or game guard**
- ☐ Restoration/maintenance of **fish habitat**

The following require Notification and may only be undertaken by the Crown in right of either British Columbia, or a Municipality, or their Agents:

Provincial/Municipal

- ☒ Restoration/maintenance of a **stream channel**
- ☐ Clearing of an obstruction from a bridge or culvert during a flood emergency¹
- ☐ Construction or placement of **erosion protection works or flood protection works** during a flood emergency²

¹ Some activities fitting the description for Notification may be reviewed by Ministry/Agency staff, who may decide that an Approval is required

² Must be completed under direction of the Crown. No notification is required prior to undertaking works, but a description of changes must be submitted to a habitat officer within 72 hours of the change

^{QP} QP means a professional who through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within their area of expertise.

Detailed Description of Work to be Performed (continue on next page):

Total area disturbed by proposed works (all sites): 2m² X 30.

The Hobbs Creek Watershed, a small urban watershed on Southern Vancouver Island, is approximately 150 hectares in size. The principle stream associated with this watershed is Hobbs Creek that runs about 1.5 km from its headwaters in the Municipality of Oak Bay to Cadboro Bay in the District of Saanich. The mid-section of this stream, located in Mystic Vale (a steep gully) on University of Victoria lands, is the focus of this Section 9 application.

During 2008 and 2009, a Proper Functioning Condition Assessment (Pritchard *et al.*, 1998, 1999) of Hobbs Creek was conducted by Aqua-Tex Scientific Consulting Ltd. This assessment provides an updated health status of this system based on a previous Proper Functioning Condition Assessment completed in 2002. The PFC Assessment resulted in recommendations intended to rehabilitate and protect the health of this stream. Beginning in 2002, a series of in-stream rehabilitation measures have been implemented by University staff under the supervision of Aqua-Tex Scientific staff, and Brian LaCas, P.Eng. The works proposed for the summer of 2009 are a continuation of a long-term management strategy, implemented by the University, to reestablish the highest degree of functional condition within this creek. These works will need to be integrated with similar stream enhancement projects in the lower most reaches of this system that have been undertaken and/or promoted by the District of Saanich over the past five years. This small urban catchment has headwaters dominated by extensive single-family residential development (in Oak Bay) that result in a typical flashy hydrological profile. The stream channel, which receives high volume, short duration, stormwater runoff flows, has been subject to extensive erosion and downcutting. The proposed works, part of a long-term management program implemented by the University, is designed to minimize erosion and resulting sediment loading that have adversely affected the functional condition of two downstream ponds (Galimberti Pond and Mystic Pond).

The proposed work on Hobbs Creek within Mystic Vale includes a reconnaissance of the functional status of weirs presently within the channel, replacement of weirs that are failing, and the addition of new weir structures to continue the stream restoration started in 2002. Of key concern for this area are the results of a small slope failure that have resulted in some sediment loading into Hobbs Creek; this sediment is currently blocking portions of the channel downstream of Parking Lot 1 at the University of Victoria. While water is still moving downstream by percolating through the sandy sediment, there is concern that as the sand compacts this will no longer be an efficient means of water transport. Additionally, the sediment has reduced the functional condition of those reaches below the sediment source input. The structure of these weirs will be based upon Rosgen weir designs (see Figures 11-16) and altered where necessary to meet the particular needs of specific reaches within the channel. During this rehabilitation effort, invasive species removal will also occur along with replanting of bare areas. Additionally, as trampling is a large issue in this publicly accessible area, fencing will be installed where required. The aim of the fencing is to restrict access to the riparian zone to enable young riparian vegetation to grow thereby providing increased stability to the stream banks. In a few areas, small debris is blocking the channel. This material will be removed and, where appropriate, i.e. if the pieces are large enough, will be utilized within other designed structures. Note the works proposed will be monitored using Photopoint Monitoring (Hall, 2001).

The request for this Section 9 Notification is as a result of a Proper Functioning Condition assessment conducted by Aqua-Tex Scientific Consulting Ltd. to determine the functional status of Hobbs Creek. This assessment was a follow-up to one conducted in 2002 also commissioned by the University of Victoria. The 2002 assessment recommended the implementation of multiple weirs to begin the process of rebuilding the downcut channel. Since then, Hobbs Creek has improved in function overall (see Figure 3). However, in order to maintain this positive trend, rehabilitation work must be continued especially to overcome the degrading action of the sediment input from the slope failure in Mystic Vale.

References

- Cowley, E.R., and T.A. Burton. 2005. Monitoring Streambanks and Riparian Vegetation- Multiple Indicators. Technical Bulletin No. 2005-2, March, 2005. U.S. Department of the Interior, Bureau of Land Management. Boise, ID.
- Hall, F.C., 2001. Ground-based photographic monitoring. Gen. Tech. Rep. PNW-GTR-503. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 340 p. <http://www.fs.fed.us/pnw/pubs/gtr503/>
- Lewis, L., L. Clark, R. Krapf, M. Manning, J. Staats, T. Subirge, L. Townsend and B. Ypsilantis. 2003. Riparian area management: riparian-wetland soils. TR 1737-19. US Department of the Interior. Bureau of Land Management, BLM/ST/ST-03/001+1737, National Science and Technology Center, Denver, CO. 124 pp.
- Meidinger, D., and J. Pojar. 1999. The ecology of the Coastal Douglas Fir zone. In: Ecosystems of British Columbia Special Report Series #6. Prepared for: B.C. Ministry of Forests, Research Branch. Victoria, B.C. 6pp.

Natural Resources Conservation Service (NRCS), 2007. Stream Restoration Design. National Engineering Handbook. Part 654. Chapter 11 Rosgen Geomorphic Channel Design. USDA.

Pojar, J. and A. MacKinnon. 1994. Plants of Coastal British Columbia, including Washington, Oregon and Alaska. BC Ministry of Forests and Lone Pine Publishing. Vancouver BC. 527 pp.

Prichard, D., F. Berg, W. Hagenbuck, R. Krapf, R. Leinard, S. Leonard, M. Manning, C. Noble, and J. Staats. 1999. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lentic areas. TR 1737-16. Bureau of Land Management, BLM/RS/ST-99/001+1737, National Applied Resource Sciences Center, Denver, CO. 109 pp.

Prichard, D., J. Anderson, C. Correll, J. Fogg, K. Gebhardt, R. Krapf, S. Leonard, B. Mitchell, and J. Staats. 1998. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lotic areas. TR 1737-15. Bureau of Land Management, BLM/RS/ST-98/001+1737, National Applied Resource Sciences Center, Denver, CO. 126 pp.

RCL Consulting Ltd. 2004. Integrated Stormwater Management Plan. University of Victoria Project No. 02-4367. Prepared for the University of Victoria. Victoria, B.C. 192 pp.

Rosgen, D. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, CO. 352 pp.

Rosgen, D. and L. Silvey. 1998. Field guide for stream classification. Wildland Hydrology, Pagosa Springs, CO. 193 pp.

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6. Land Ownership

Please check one of the following:

☒ The applicant is the owner of the property.

☐ The property is Crown land. Tenure/licence number:

--

☐ The property is owned by the following Landowner (i.e. Landowner is different from applicant):

Landowner's Name:		
Address:		
City:	Province:	Postal code:
Phone:	e-mail:	

Do you have the Landowner's written approval to enter the land(s) to complete the works? ☒ Yes ☐ No

Note: a) Ownership of all parcels of land on which the proposed works will occur must be identified, b) do not attach the written approval with the application, but keep it for your files as you may be asked to produce it during an inspection or audit.

7. Who is doing the Work?

Contact information for company designing and supervising construction of the work (if different from applicant):

Company Name: Aqua-Tex Scientific Consulting Ltd.		
Contact Name: Wm. Patrick Lucey	Professional Affiliation: R.P. Bio.	
Address: 201-3690 Shelbourne St.		
City: Victoria	Province: B.C.	Postal Code: V8P 4H2
Phone: (250) 598-0266 / (250) 427-5906	e-mail: aqua-tex@islandnet.com	

Contact information for company undertaking the construction (if different from applicant):

Company Name:		
Contact Name:		
Address:		
City:	Province:	Postal Code:
Phone:	e-mail:	

8. Statement of Intent

By submitting this application form, I declare that the information contained on this form is complete and accurate information. I have read, understood and will meet the requirements to construct works and changes in and about a stream in accordance with Section 9 of the *Water Act* and Part 7 Water Act Regulations including, for Notifications, **Terms and Conditions** as specified by a Habitat Officer of the Ministry of Environment.

Signed:



Application Date: 15/04/2009
day/month/year

9. Submission Instructions

Send the completed form along with the following attachments to the local office in which the proposed works are located. Addresses for local offices are listed on the instruction sheet. **Please note that the Approval application fee of \$130 is non-refundable.** If the proposed works require an Approval, prior to proceeding further with this application please ensure that this project will be able to proceed under the *Federal Fisheries Act*.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Sketch plan (mandatory) | <input type="checkbox"/> Engineering drawing (mandatory for works requiring approval noted with ^E) |
| <input checked="" type="checkbox"/> Key location map (mandatory) | <input type="checkbox"/> For works requiring an Approval, a cheque or money order for \$130 payable to: Minister of Finance. The fee is non-refundable. |

10. Responsibilities

You are required to comply with all applicable federal, provincial and municipal laws and regulations. If you anticipate that the planned work may result in harmful alteration, disruption or destruction of fish habitat you should send a copy of your completed Notification/Approval Application directly to the nearest office of Fisheries and Oceans Canada. Review and comment by DFO may necessitate changes to the proposed works.

Has a copy of this notification/approval application been sent to Fisheries and Oceans Canada (check one)?
YES ☒ NO ☐

If YES, indicate the DFO office that the notification/approval application has been sent (for DFO offices, see Users' Guide):

Mr. Brad Rushton. **CCEP** [Fish & Wildlife Biologist] Habitat Management Technologist
Fisheries and Oceans Government of Canada Tel: 250.746.9717 Fax 250.746.8397
Email: rushtonb@pac.dfo-mpo.gc.ca
PO Box 241, 5653 Club Road
Duncan, BC V9L 3X3

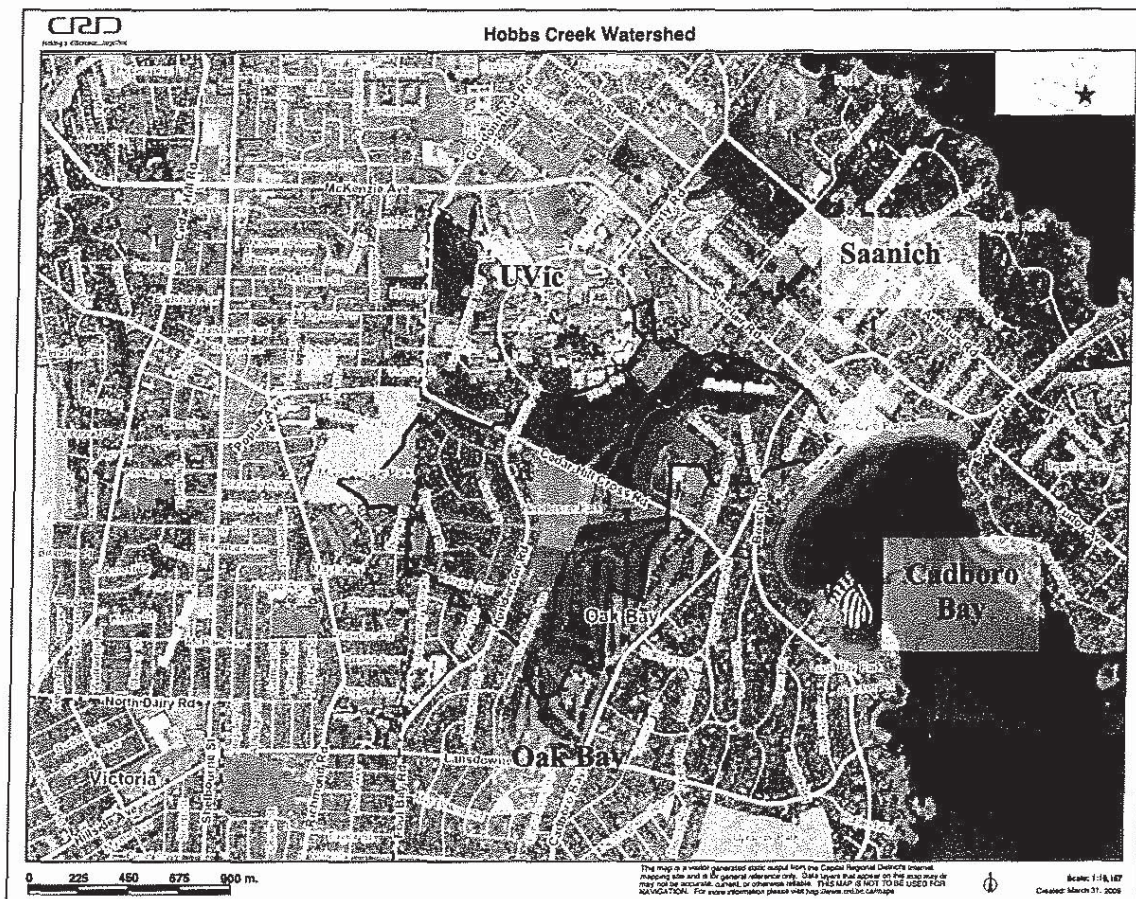


Figure 1. The Hobbs Creek Watershed (outlined in blue, filled in red), is a small urban watershed with a catchment area including parts of the Municipality of Oak Bay, the District of Saanich, and the University of Victoria. The stream discharges into Cadboro Bay. (Image Source: CRD Natural Areas Atlas).

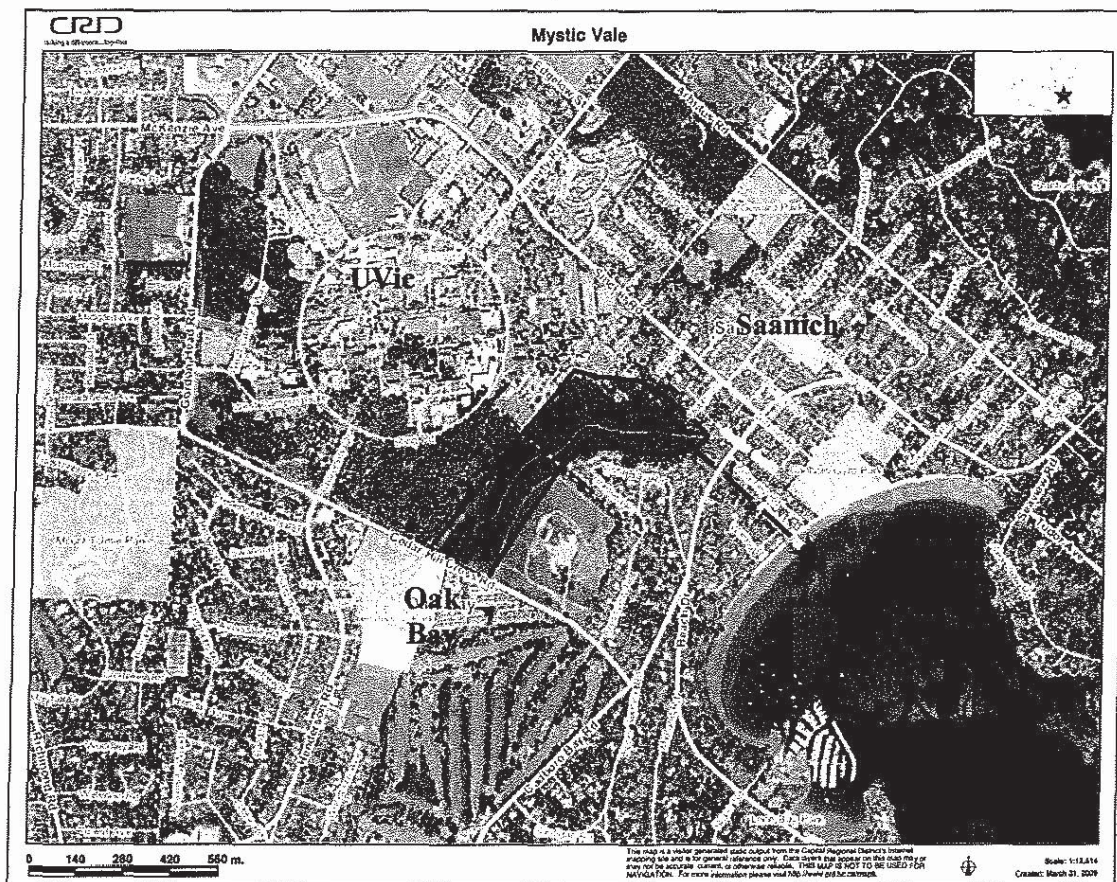


Figure 2. Location of Mystic Vale (outlined in black) where the proposed in-stream works for Hobbs Creek are to be conducted. Direction of flow is indicated by the dotted blue line. Note, the Mystic Vale space (middle reaches) has a headwater catchment dominated by residential development and typical high impermeable surface areas; the lower most reaches are similarly dominated by residential development, stream channel channelization, and a high percentage of impermeable surface area. (Image Source: CRD Natural Areas Atlas).

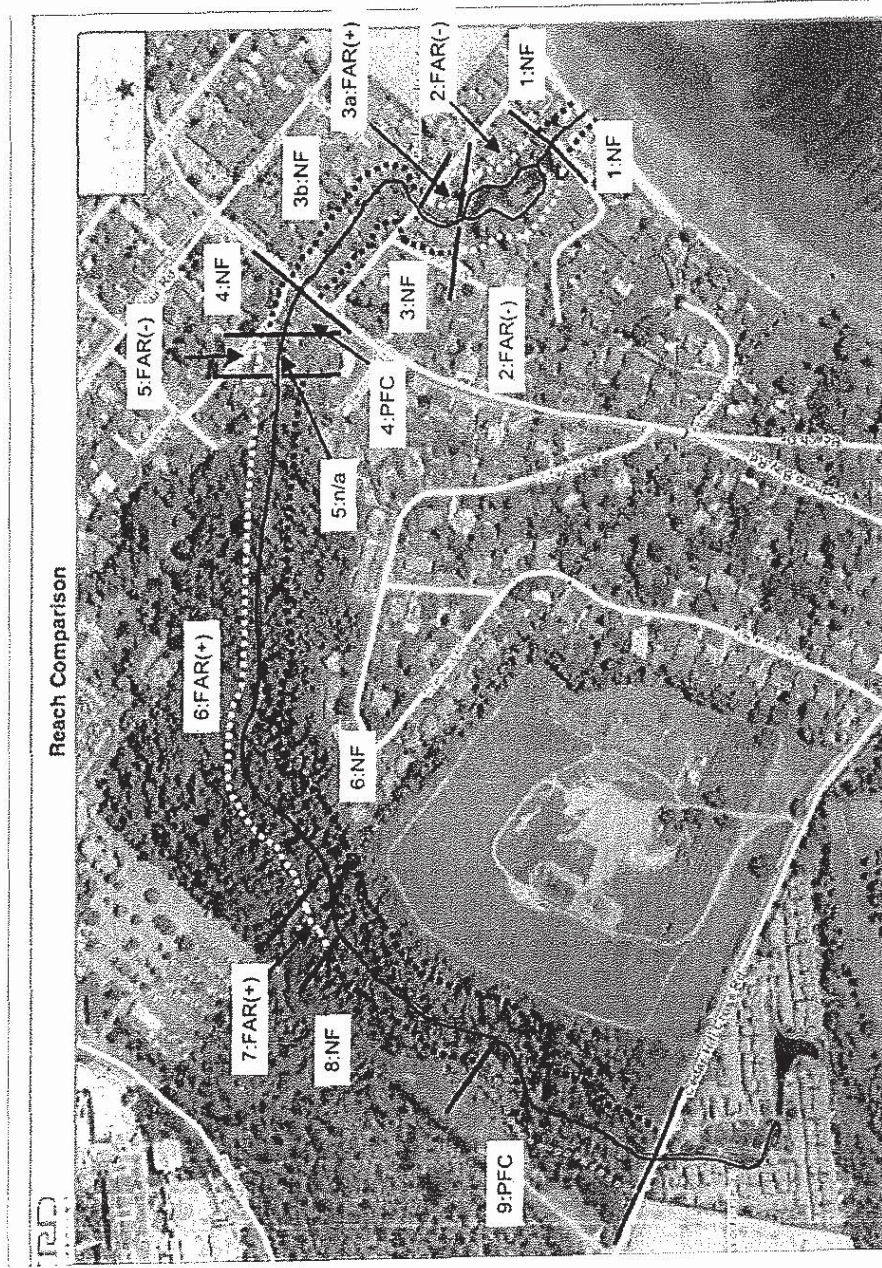


Figure 3. Proper Functioning Condition comparison between 2002 and 2008 assessments. The blue line represents Hobbs Creek and Mystic Pond. The 2002 PFC assessment is presented by the line underneath the blue line of Hobbs Creek, while the 2008 assessment is shown above the blue line (Purple writing is indicative of the 2002 assessment for each reach [1-6]; black writing represents the 2008 assessment for each reach [1-9]). Proper Functioning Condition = Green, Functional-At-Risk= Yellow, Non Functional = Red. (Image Source: CRD Natural Areas Atlas, 2009).

Photographs:



Figure 4. Location of the slope failure near the second footbridge in Mystic Vale. The slope failure occurred in the Winter of 2007/2008. Note, the sandy sediment that has partially filled the stream channel (foreground) (yellow arrow). The small slope failure has not resulted in any damage to that vegetation immediately upslope of the stream channel. The trail location, established a decade ago, has resulted in trampling of the riparian and upslope vegetation leading to a reduction in channel bank stability.



Figure 5. Point of entry for sediment from the slope failure into Hobbs Creek. Note the sediment build-up just inside the channel in the middle of the photograph (yellow arrow).

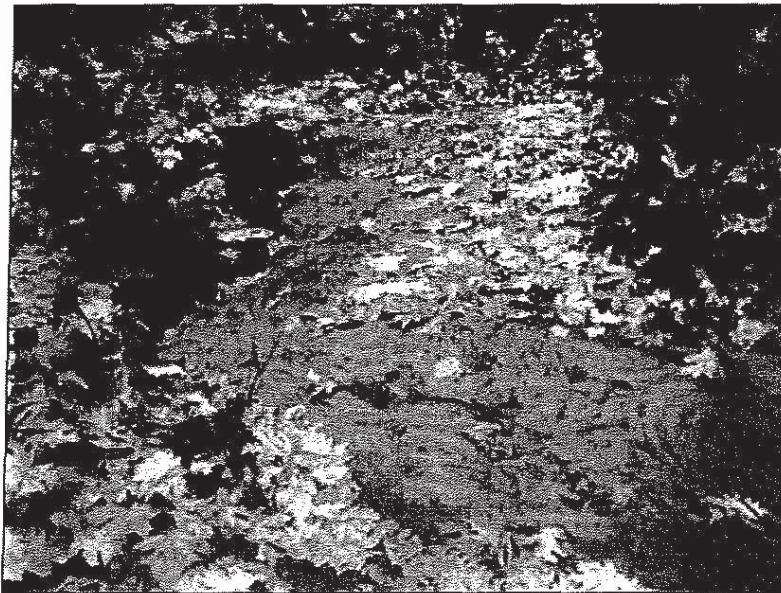


Figure 6. Downstream of the slope failure the sediment is building up the channel bottom to the same height as the banks. While water is still able to percolate through the sandy material, there is concern that this will not be possible as the sands begin to compact. Another concern is the absence of any woody material or roots within this sandy layer to provide a cellulose armature to stabilize the sediment and, ultimately, to raise the channel's benthic elevation to enable the stream to re-access its historical floodplain.



Figure 7. An example of a weir structure previously installed to minimize downstream sediment loading and to increase channel complexity. A review of existing structures for function, efficacy, and stability will enable the team to determine what needs to be replaced. Note the bare bank on the right of the photo caused by excessive trampling.



Figure 8. Upstream of the slope failure, evidence of downcutting is present. Also note the presence of English ivy, an invasive species abundant throughout Mystic Vale but especially concentrated in the lower reaches of Hobbs Creek.



Figure 9. Hobbs Creek just downstream of Cedar Hill Road (Reach 9 of the 2008 assessment). This portion of the creek is the only section in Proper Functioning Condition despite having some localized trampling issues. Note this reach evidences sinuosity, stable banks, in-stream complexity and some natural weir structures.

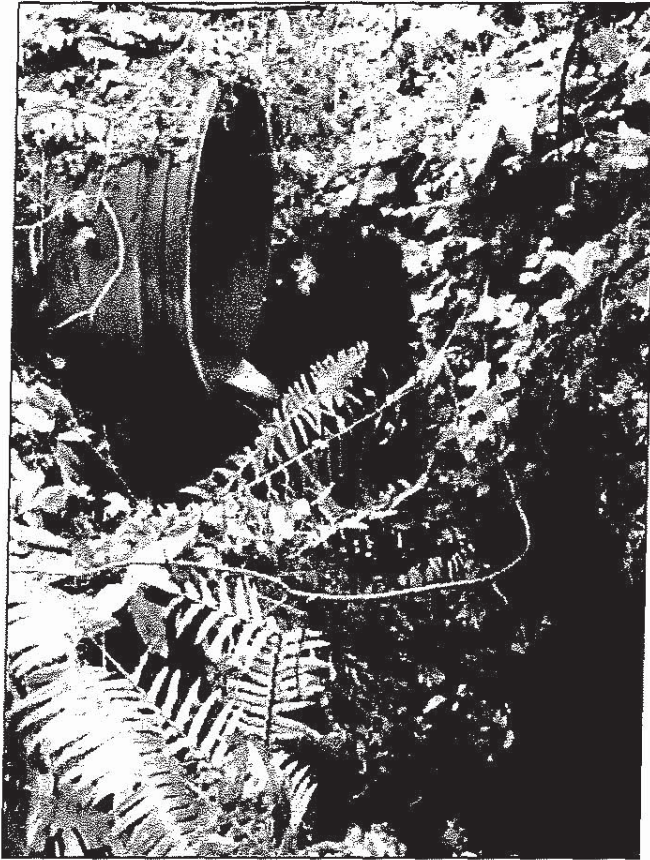


Figure 10. This culvert coming from Cedar Hill Road discharges water into a large, energy dissipating pool. This pool acts as an energy absorbing structure thereby reducing the erosional effect downstream of the water being ejected out of the mouth of the culvert. This point of discharge receives high volume, flashy, stormwater runoff from the headwater residential development in Oak Bay.

Examples of In-Stream Structures: Rosgen Geomorphic Channel Design

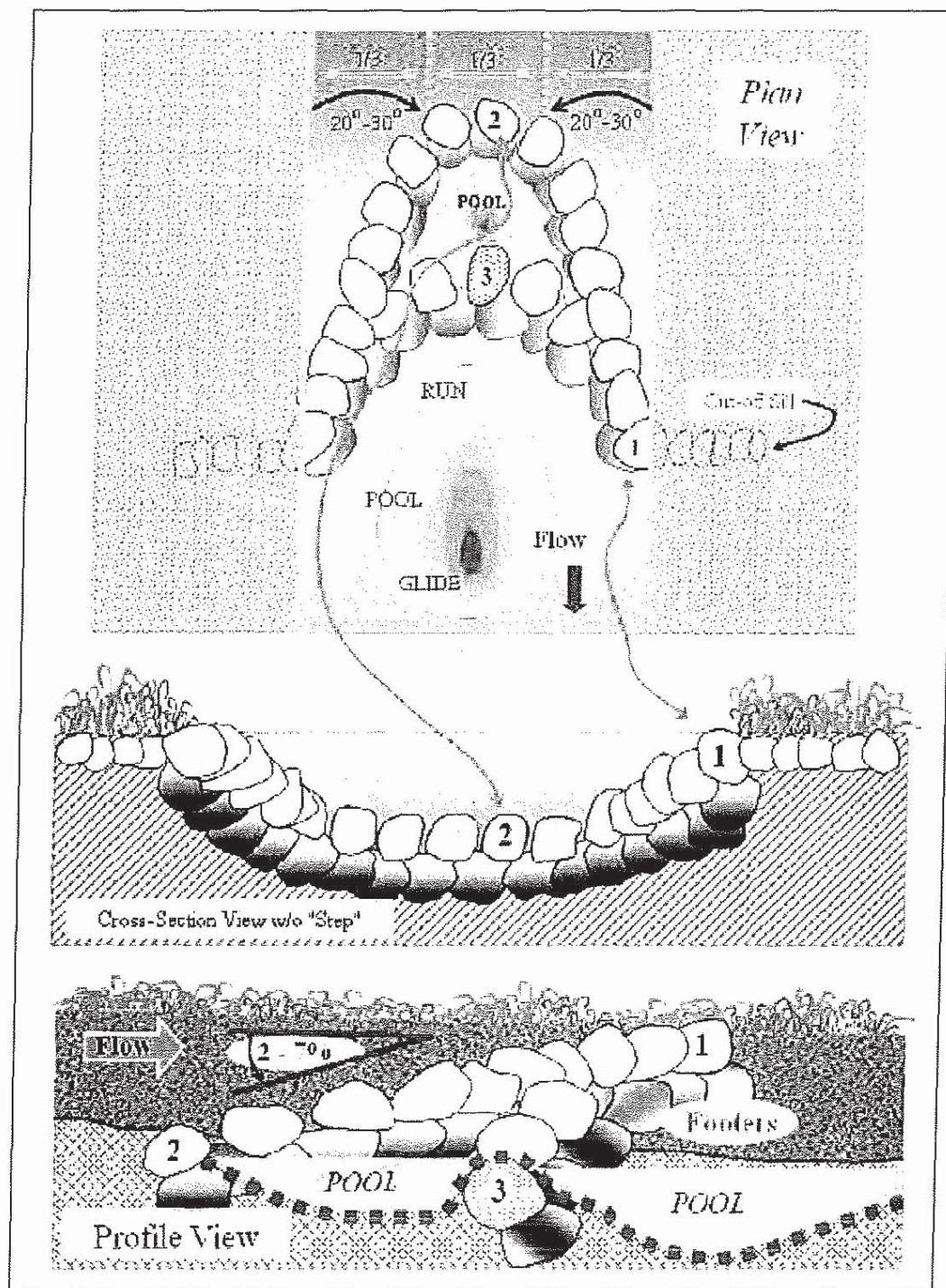


Figure 11. Cross section, profile and plan view of a cross vane (NRCS, 2007).

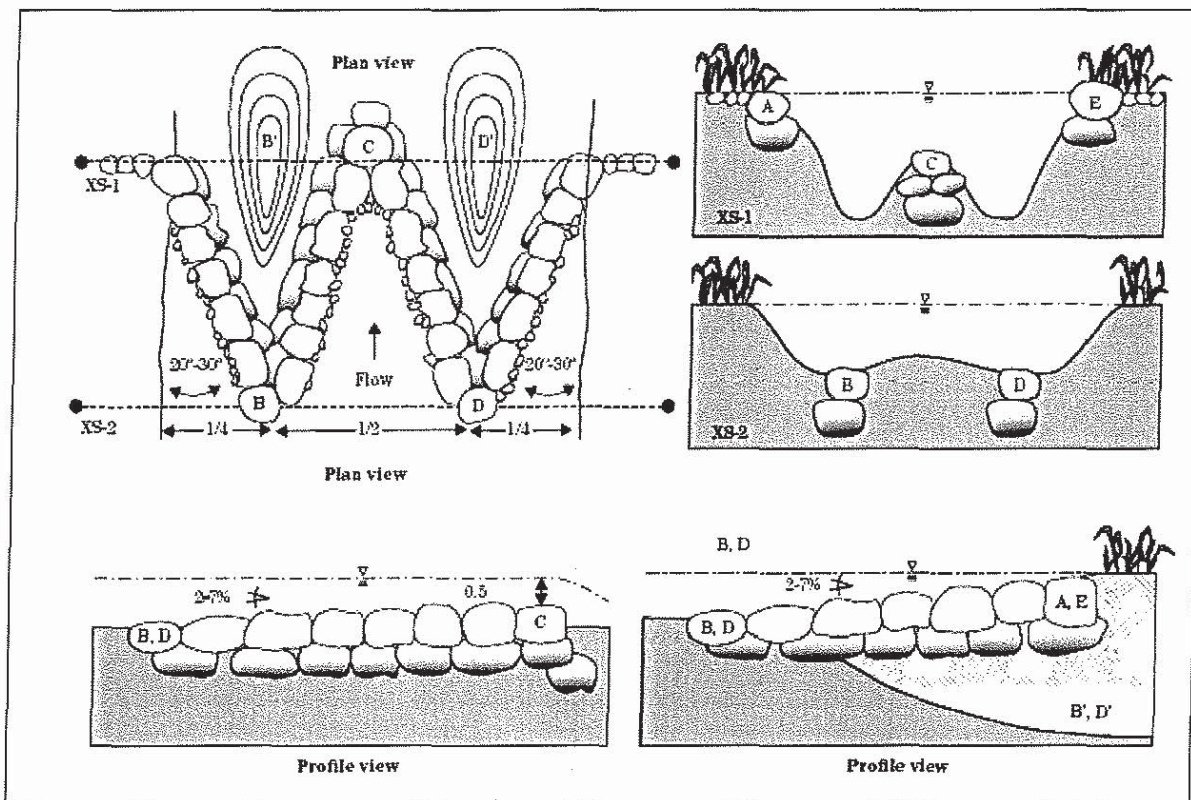


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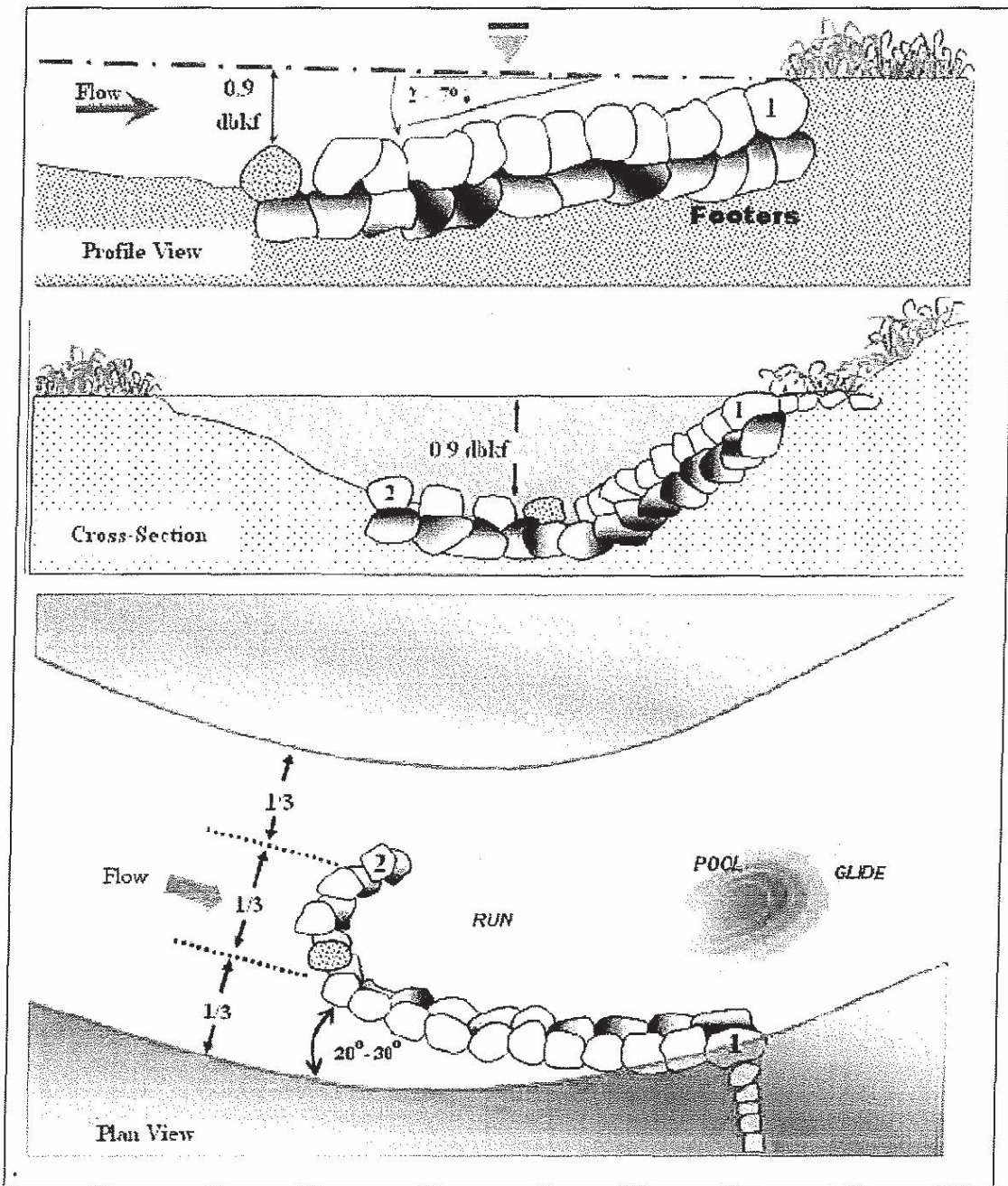


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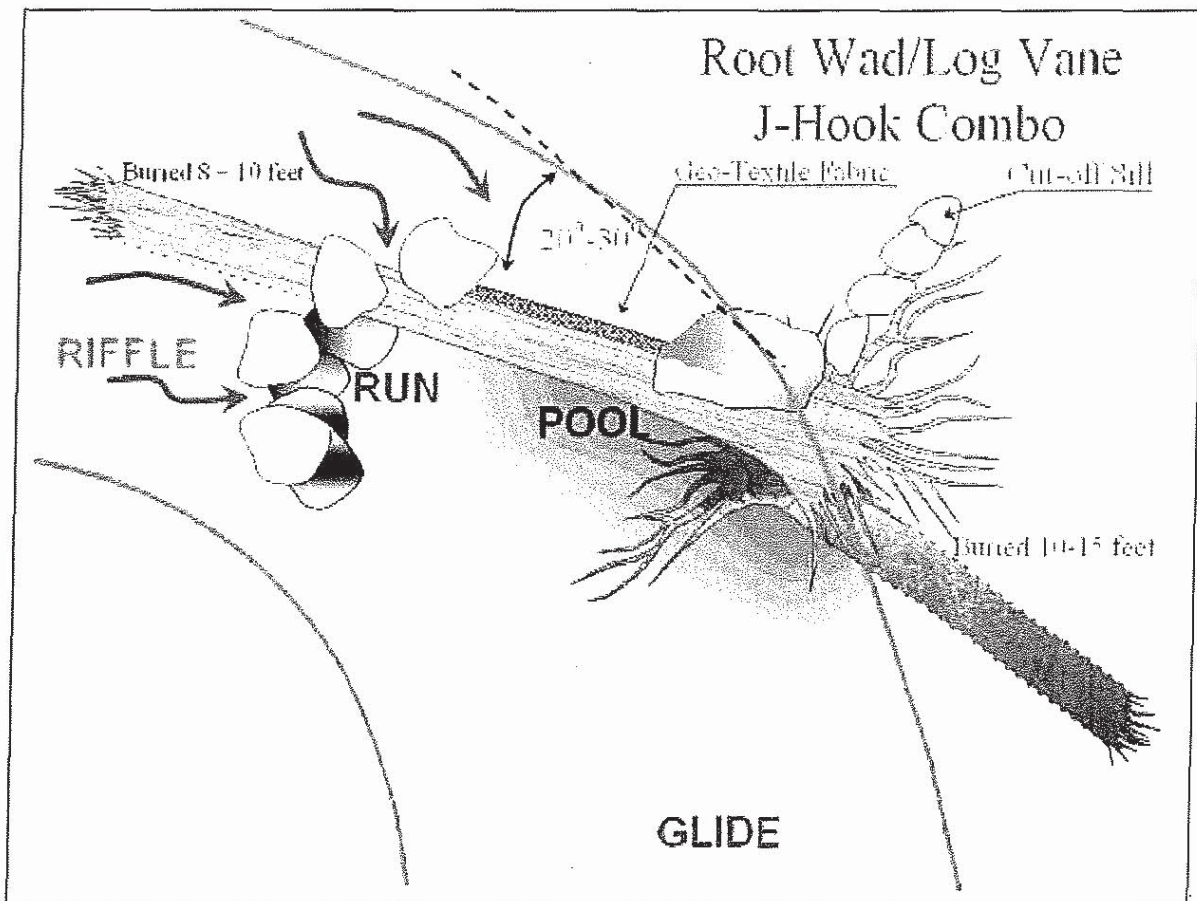


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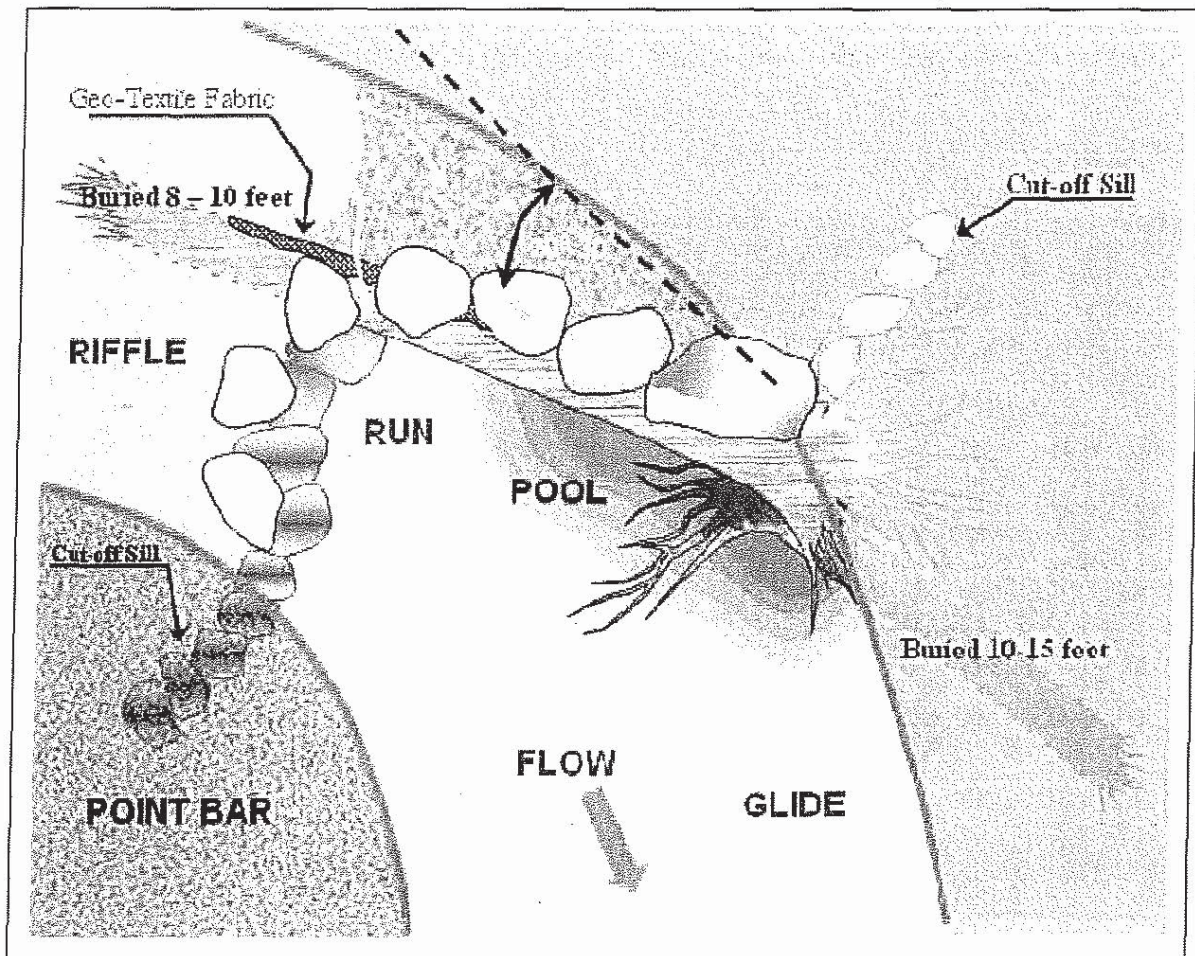


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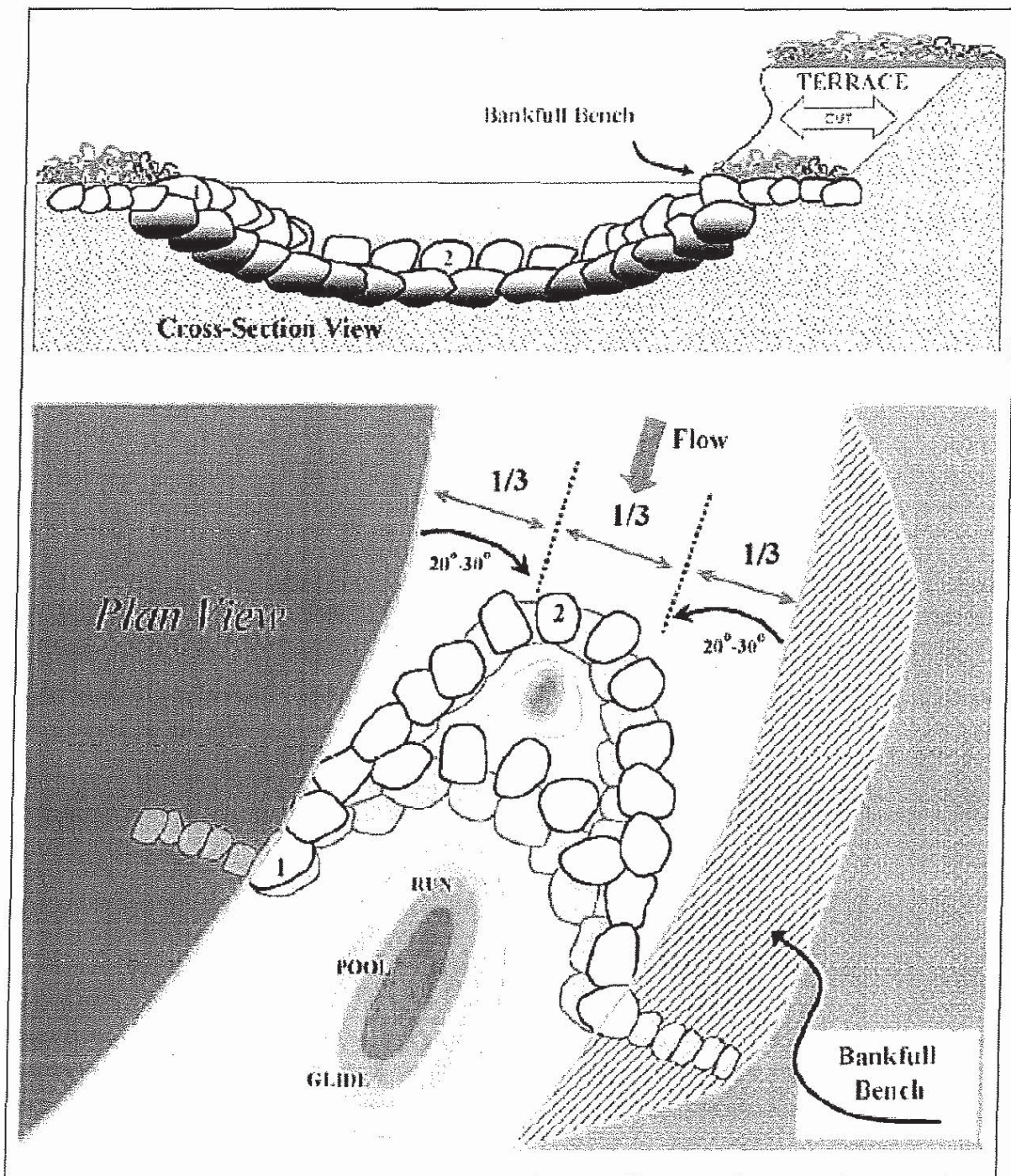


Figure 16. Boulder cross vane and constructed bankfull bench (NRCS, 2007).

Brandu

Enclosed is a signed
copy by Bentley S/ly.

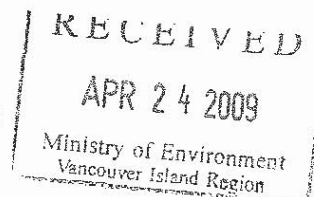
Many thanks for
your prompt & kind
attention.

Regards

Patricia



Ministry of Environment



Approval Application or Notification for Changes In and About a Stream

Under Section 9 of the Water Act and Part 7 of the Water Act Regulations

Incomplete or inaccurate forms do not constitute Notification & will not be accepted.

Proceeding with works after submission of an incomplete or inaccurate form would be a violation of the Water Regulation

☐ APPROVAL APPLICATION

☒ NOTIFICATION¹ (see USERS' GUIDE)

1. Applicant Information

Name: Bentley Sly-Manager of Grounds, University of Victoria		
Address: Facilities Management PO Box 1700 STN CSC		
City: Victoria	Province: BC	Postal code: V8W 2Y2
Phone: (250) 721-7606	e-mail: bsly@uvic.ca	

2. Location of Works

Street Address of Works (or nearest town): University of Victoria 1800 Finnerty Road		
Stream Name: Hobbs Creek	Flows Into: Cadboro Bay; District of Saanich	
Location on Stream: Within Mystic Vale; majority of catchment lies within the Municipality of Oak Bay		
Reference Landmarks: Mystic Vale adjacent to Lot 1 at the University of Victoria; Cedar Hill Cross Road to Cadboro Bay Road		Amount of disturbance in m ² : 2m ² X 30
Multiple Sites: YES /NO: Yes		Number of sites: 30
Latitude: 48° 27' 36" N	Longitude: 123° 18' 21" W	Elevation: 0-100m
Legal description of property where work is proposed: Lot 1, Sections 31, 44, 71, and 72, Victoria District, Registered Plan Number: VIP 57957		

3. Drawing, Plan and Site Map

1. Attach drawing showing lot boundaries, location of buildings and of proposed works, stream direction and flow.
2. Attach a key map at an appropriate scale showing the location of the site.
3. Attach engineering drawings (may be required for works identified with ^F under **Requires Approval** section below).

4. Proposed Timing for Work

Start (day/month/year): May 1, 2009	Finish (day/month/year): September 15, 2009
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FOR OFFICE USE ONLY

<div>Date Received:</div> <div></div>	Water File Number: NI-2090 CHA-EIS 89575
	Client Number: Updated Application
	Application Number:
	Amount Received:
	Receipt Number:

5. Type of Works

Requires Approval:

- ☐ Bank Erosion Protection ^E
- ☐ Bridge Installation/maintenance/removal (other than clear span) ^E
- ☐ Stream Diversion ^{QP} Diversion berm structure plan required
- ☐ Large Debris Removal – by machine ^{QP} plan required
- ☐ Gravel Removal ^{QP}
- ☐ Other: Provide details in space below

*Provide culvert dimensions:

Length: 20 metres

Width:

Diameter: 1.5 metres

^E Professional Engineer may be required

^{QP} Qualified Professional may be required

Requires Notification:

- ☐ Installation*/maintenance/removal of road crossing **culvert** (*follow Forest Practices Code Stream Crossing Guidebook)
- ☐ Construction/maintenance/removal of a **clear span bridge**
- ☐ Construction/maintenance of a **pipeline crossing**
- ☐ Construction/maintenance/removal of a **pier or wharf**
- ☐ Cutting of **annual vegetation** in a stream channel
- ☐ Repair/maintenance of existing **dike** or **erosion protection works**
- ☐ Construction/maintenance of **storm water outfalls**
- ☐ Control of **Eurasian Watermilfoil** or other **aquatic vegetation**
- ☐ Construction/maintenance of **ice bridge, winter ford or snowfall**
- ☐ Maintenance of minor and routine nature by a public utility
- ☐ Removal of a **beaver dam** (As authorized under the Wildlife Act)
- ☒ Small debris removal – by hand
- ☐ Construction of a **temporary ford**
- ☐ Construction of a **temporary diversion** around a worksite

The following require **Notification** and may only be undertaken by the Crown in right of either Canada or British Columbia, or their Agents:

Federal/Provincial

- ☐ Construction/maintenance/removal of a flow or water level **measuring device**
- ☐ Construction/removal of a **fish fence** or **screen**, **fish** or **game guard**
- ☐ Restoration/maintenance of **fish habitat**

The following require **Notification** and may only be undertaken by the Crown in right of either British Columbia, or a Municipality, or their Agents:

Provincial/Municipal

- ☒ Restoration/maintenance of a **stream channel**
- ☐ Clearing of an obstruction from a bridge or culvert during a flood emergency¹
- ☐ Construction or placement of **erosion protection works** or **flood protection works** during a flood emergency²

¹ Some activities fitting the description for Notification may be reviewed by Ministry/Agency staff, who may decide that an Approval is required

² Must be completed under direction of the Crown. No notification is required prior to undertaking works, but a description of changes must be submitted to a habitat officer within 72 hours of the change

^{QP} QP means a professional who through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within their area of expertise.

Detailed Description of Work to be Performed (continue on next page):

Total area disturbed by proposed works (all sites): 2m² X 30.

The Hobbs Creek Watershed, a small urban watershed on Southern Vancouver Island, is approximately 150 hectares in size. The principle stream associated with this watershed is Hobbs Creek that runs about 1.5 km from its headwaters in the Municipality of Oak Bay to Cadboro Bay in the District of Saanich. The mid-section of this stream, located in Mystic Vale (a steep gully) on University of Victoria lands, is the focus of this Section 9 application.

During 2008 and 2009, a Proper Functioning Condition Assessment (Pritchard *et al.*, 1998,1999) of Hobbs Creek was conducted by Aqua-Tex Scientific Consulting Ltd. This assessment provides an updated health status of this system based on a previous Proper Functioning Condition Assessment completed in 2002. The PFC Assessment resulted in recommendations intended to rehabilitate and protect the health of this stream. Beginning in 2002, a series of in-stream rehabilitation measures have been implemented by University staff under the supervision of Aqua-Tex Scientific staff, and Brian LaCas, P.Eng. The works proposed for the summer of 2009 are a continuation of a long-term management strategy, implemented by the University, to reestablish the highest degree of functional condition within this creek. These works will need to be integrated with similar stream enhancement projects in the lower most reaches of this system that have been undertaken and/or promoted by the District of Saanich over the past five years. This small urban catchment has headwaters dominated by extensive single-family residential development (in Oak Bay) that result in a typical flashy hydrological profile. The stream channel, which receives high volume, short duration, stormwater runoff flows, has been subject to extensive erosion and downcutting. The proposed works, part of a long-term management program implemented by the University, is designed to minimize erosion and resulting sediment loading that have adversely affected the functional condition of two downstream ponds (Galimberti Pond and Mystic Pond).

The proposed work on Hobbs Creek within Mystic Vale includes a reconnaissance of the functional status of weirs presently within the channel, replacement of weirs that are failing, and the addition of new weir structures to continue the stream restoration started in 2002. Of key concern for this area are the results of a small slope failure that have resulted in some sediment loading into Hobbs Creek; this sediment is currently blocking portions of the channel downstream of Parking Lot 1 at the University of Victoria. While water is still moving downstream by percolating through the sandy sediment, there is concern that as the sand compacts this will no longer be an efficient means of water transport. Additionally, the sediment has reduced the functional condition of those reaches below the sediment source input. The structure of these weirs will be based upon Rosgen weir designs (see Figures 11-16) and altered where necessary to meet the particular needs of specific reaches within the channel. During this rehabilitation effort, invasive species removal will also occur along with replanting of bare areas. Additionally, as trampling is a large issue in this publicly accessible area, fencing will be installed where required. The aim of the fencing is to restrict access to the riparian zone to enable young riparian vegetation to grow thereby providing increased stability to the stream banks. In a few areas, small debris is blocking the channel. This material will be removed and, where appropriate, i.e. if the pieces are large enough, will be utilized within other designed structures. Note the works proposed will be monitored using Photopoint Monitoring (Hall, 2001).

The request for this Section 9 Notification is as a result of a Proper Functioning Condition assessment conducted by Aqua-Tex Scientific Consulting Ltd. to determine the functional status of Hobbs Creek. This assessment was a follow-up to one conducted in 2002 also commissioned by the University of Victoria. The 2002 assessment recommended the implementation of multiple weirs to begin the process of rebuilding the downcut channel. Since then, Hobbs Creek has improved in function overall (see Figure 3). However, in order to maintain this positive trend, rehabilitation work must be continued especially to overcome the degrading action of the sediment input from the slope failure in Mystic Vale.

References

- Cowley, E.R., and T.A. Burton. 2005. Monitoring Streambanks and Riparian Vegetation- Multiple Indicators. Technical Bulletin No. 2005-2, March, 2005. U.S. Department of the Interior, Bureau of Land Management. Boise, ID.
- Hall, F.C., 2001. Ground-based photographic monitoring. Gen. Tech. Rep. PNW-GTR-503. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 340 p. <http://www.fs.fed.us/pnw/pubs/gtr503/>
- Lewis, L., L. Clark, R. Krapf, M. Manning, J. Staats, T. Subirge, L. Townsend and B. Ypsilantis. 2003. Riparian area management: riparian-wetland soils. TR 1737-19. US Department of the Interior. Bureau of Land Management, BLM/ST/ST-03/001+1737, National Science and Technology Center, Denver, CO. 124 pp.
- Meidinger, D., and J. Pojar. 1999. The ecology of the Coastal Douglas Fir zone. In: Ecosystems of British Columbia Special Report Series #6. Prepared for: B.C. Ministry of Forests, Research Branch. Victoria, B.C. 6pp.

Natural Resources Conservation Service (NRCS), 2007. Stream Restoration Design. National Engineering Handbook. Part 654. Chapter 11 Rosgen Geomorphic Channel Design. USDA.

Pojar, J. and A. MacKinnon. 1994. Plants of Coastal British Columbia, including Washington, Oregon and Alaska. BC Ministry of Forests and Lone Pine Publishing. Vancouver BC. 527 pp.

Prichard, D., F. Berg, W. Hagenbuck, R. Krapf, R. Leinard, S. Leonard, M. Manning, C. Noble, and J. Staats. 1999. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lentic areas. TR 1737-16. Bureau of Land Management, BLM/RS/ST-99/001+1737, National Applied Resource Sciences Center, Denver, CO. 109 pp.

Prichard, D., J. Anderson, C. Correll, J. Fogg, K. Gebhardt, R. Krapf, S. Leonard, B. Mitchell, and J. Staats. 1998. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lotic areas. TR 1737-15. Bureau of Land Management, BLM/RS/ST-98/001+1737, National Applied Resource Sciences Center, Denver, CO. 126 pp.

RCL Consulting Ltd. 2004. Integrated Stormwater Management Plan. University of Victoria Project No. 02-4367. Prepared for the University of Victoria. Victoria, B.C. 192 pp.

Rosgen, D. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, CO. 352 pp.

Rosgen, D. and L. Silvey. 1998. Field guide for stream classification. Wildland Hydrology, Pagosa Springs, CO. 193 pp.

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6. Land Ownership

Please check one of the following:

☒ The applicant is the owner of the property.

☐ The property is Crown land. Tenure/licence number:

--

☐ The property is owned by the following Landowner (i.e. Landowner is different from applicant):

Landowner's Name:		
Address:		
City:	Province:	Postal code:
Phone:	e-mail:	

Do you have the Landowner's written approval to enter the land(s) to complete the works? ☒ Yes ☐ No

Note: a) Ownership of all parcels of land on which the proposed works will occur must be identified, b) do not attach the written approval with the application, but keep it for your files as you may be asked to produce it during an inspection or audit.

7. Who is doing the Work?

Contact information for company designing and supervising construction of the work (if different from applicant):

Company Name: Aqua-Tex Scientific Consulting Ltd.		
Contact Name: Wm. Patrick Lucey	Professional Affiliation: R.P. Bio.	
Address: 201-3690 Shelbourne St.		
City: Victoria	Province: B.C.	Postal Code: V8P 4H2
Phone: (250) 598-0266 / (250) 427-5906	e-mail: aqua-tex@islandnet.com	

Contact information for company undertaking the construction (if different from applicant):

Company Name:		
Contact Name:		
Address:		
City:	Province:	Postal Code:
Phone:	e-mail:	

8. Statement of Intent

By submitting this application form, I declare that the information contained on this form is complete and accurate information. I have read, understood and will meet the requirements to construct works and changes in and about a stream in accordance with Section 9 of the *Water Act* and Part 7 Water Act Regulations including, for Notifications, **Terms and Conditions** as specified by a Habitat Officer of the Ministry of Environment

Signed: _____

Application Date: 15/04/2009
day/month/year

9. Submission Instructions

Send the completed form along with the following attachments to the local office in which the proposed works are located. Addresses for local offices are listed on the instruction sheet. **Please note that the Approval application fee of \$130 is non-refundable.** If the proposed works require an Approval, prior to proceeding further with this application please ensure that this project will be able to proceed under the *Federal Fisheries Act*.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Sketch plan (mandatory) | <input type="checkbox"/> Engineering drawing (mandatory for works requiring approval noted with ^E) |
| <input checked="" type="checkbox"/> Key location map (mandatory) | <input type="checkbox"/> For works requiring an Approval, a cheque or money order for \$130 payable to: Minister of Finance. The fee is non-refundable. |

10. Responsibilities

You are required to comply with all applicable federal, provincial and municipal laws and regulations. If you anticipate that the planned work may result in harmful alteration, disruption or destruction of fish habitat you should send a copy of your completed Notification/Approval Application directly to the nearest office of Fisheries and Oceans Canada. Review and comment by DFO may necessitate changes to the proposed works.

Has a copy of this notification/approval application been sent to Fisheries and Oceans Canada (check one)?
YES ☒ NO ☐

If YES, indicate the DFO office that the notification/approval application has been sent (for DFO offices, see Users' Guide):

Mr. Brad Rushton. **CCEP** [Fish & Wildlife Biologist] Habitat Management Technologist
Fisheries and Oceans Government of Canada Tel: 250.746.9717 Fax 250.746.8397
Email: rushtonb@pac.dfo-mpo.gc.ca
PO Box 241, 5653 Club Road
Duncan, BC V9L 3X3

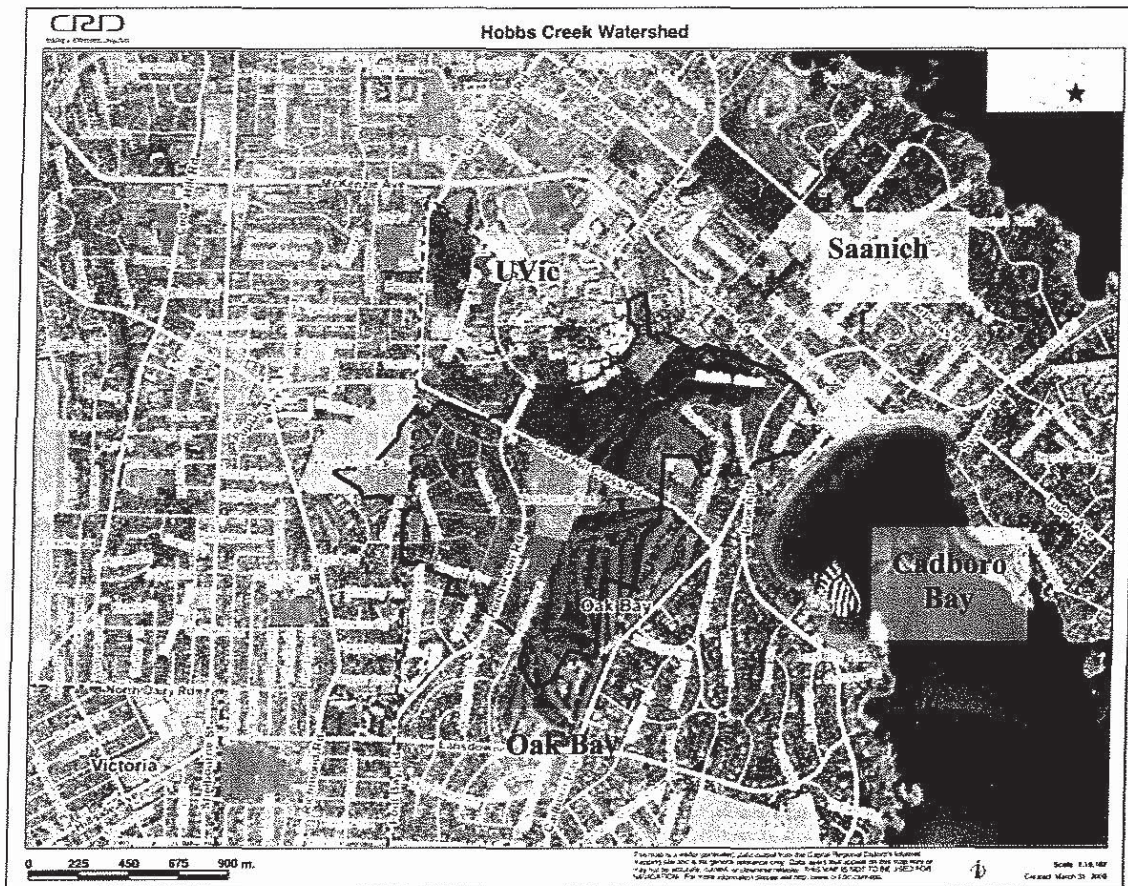


Figure 1. The Hobbs Creek Watershed (outlined in blue, filled in red), is a small urban watershed with a catchment area including parts of the Municipality of Oak Bay, the District of Saanich, and the University of Victoria. The stream discharges into Cadboro Bay. (Image Source: CRD Natural Areas Atlas).



Figure 2. Location of Mystic Vale (outlined in black) where the proposed in-stream works for Hobbs Creek are to be conducted. Direction of flow is indicated by the dotted blue line. Note, the Mystic Vale space (middle reaches) has a headwater catchment dominated by residential development and typical high impermeable surface areas; the lower most reaches are similarly dominated by residential development, stream channel channelization, and a high percentage of impermeable surface area. (Image Source: CRD Natural Areas Atlas).

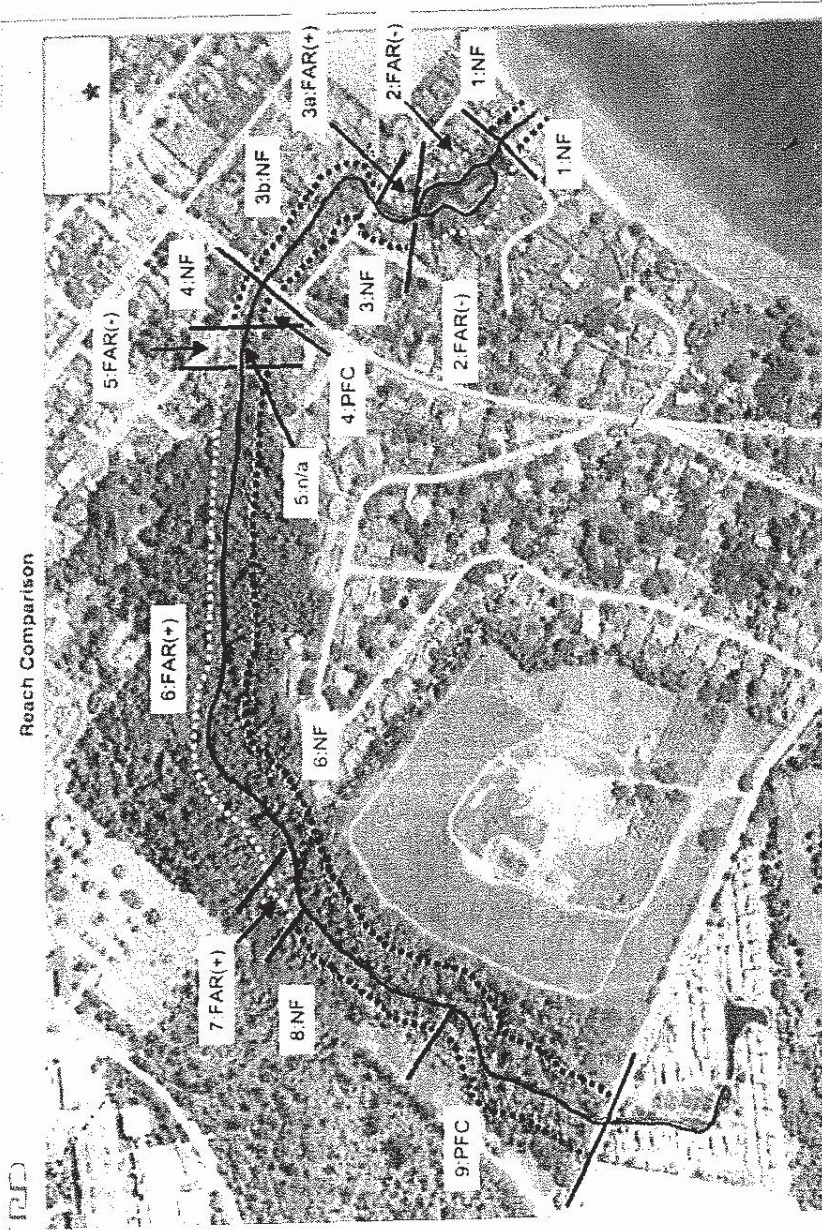


Figure 3. Proper Functioning Condition comparison between 2002 and 2008 assessments. The blue line represents Hobbs Creek and Mystic Pond. The 2002 PFC assessment is presented by the line underneath the blue line of Hobbs Creek, while the 2008 assessment is shown above the blue line (Purple writing is indicative of the 2002 assessment for each reach [1-6]; black writing represents the 2008 assessment for each reach [1-9]). Proper Functioning Condition = Green, Functional-At-Risk= Yellow, Non Functional = Red. (Image Source: CRD Natural Areas Atlas, 2009).

Photographs:



Figure 4. Location of the slope failure near the second footbridge in Mystic Vale. The slope failure occurred in the Winter of 2007/2008. Note, the sandy sediment that has partially filled the stream channel (foreground) (yellow arrow). The small slope failure has not resulted in any damage to that vegetation immediately upslope of the stream channel. The trail location, established a decade ago, has resulted in trampling of the riparian and upslope vegetation leading to a reduction in channel bank stability.



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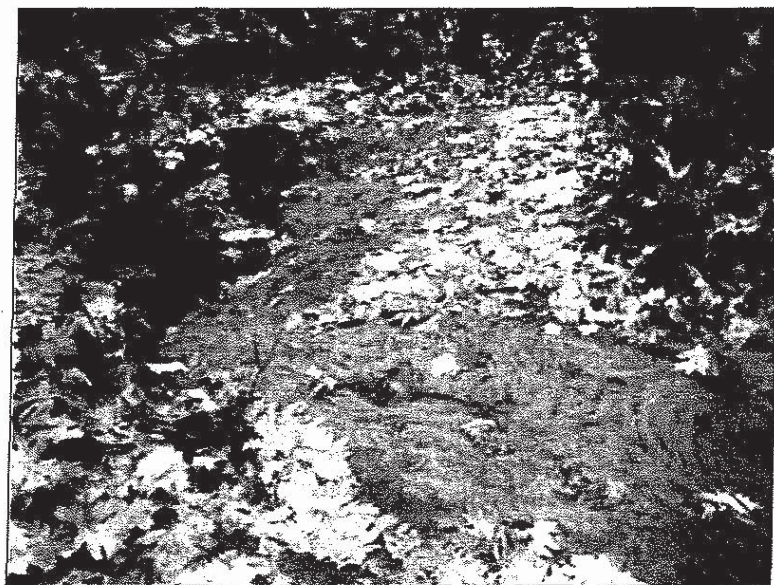


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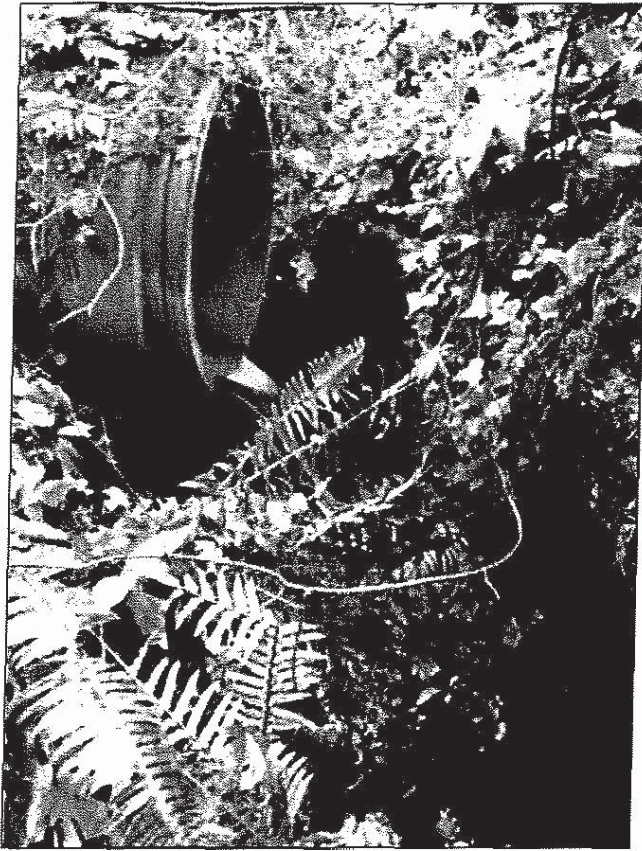


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Examples of In-Stream Structures: Rosgen Geomorphic Channel Design

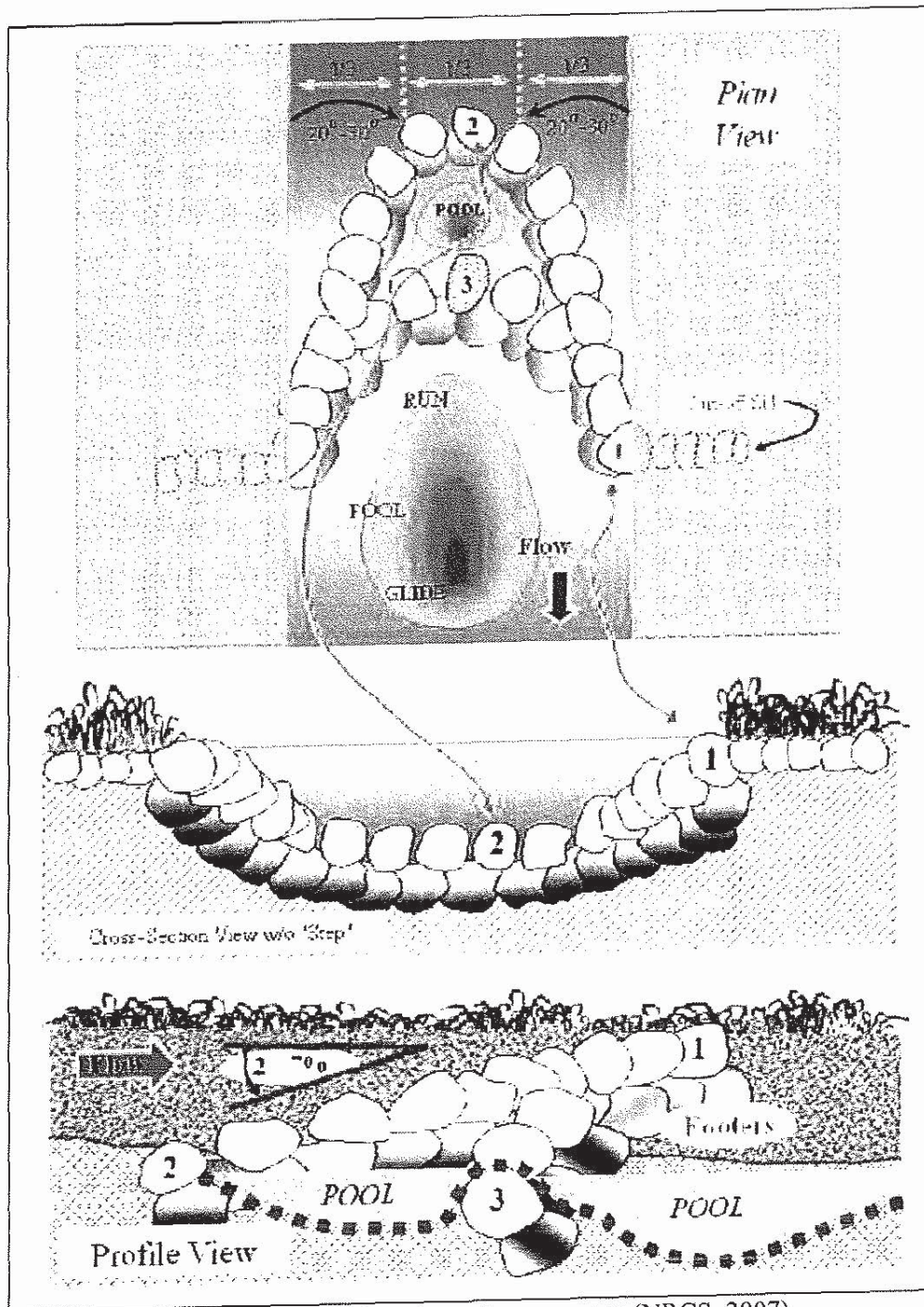


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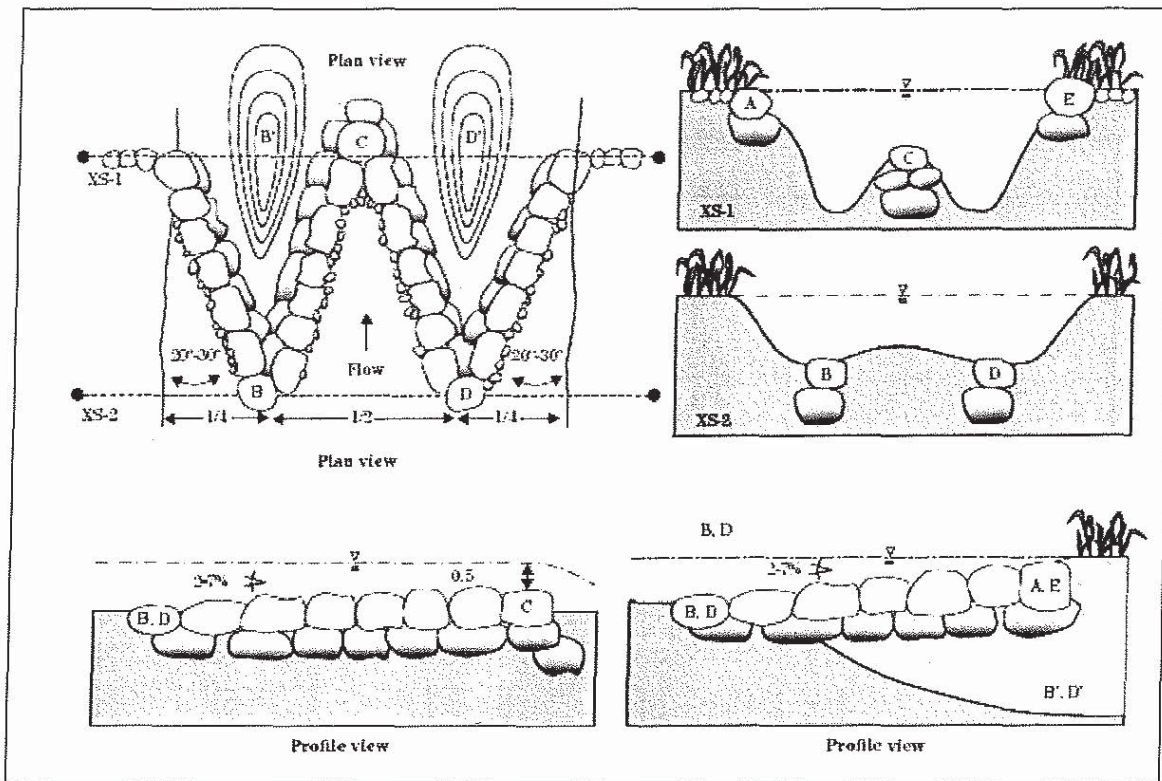


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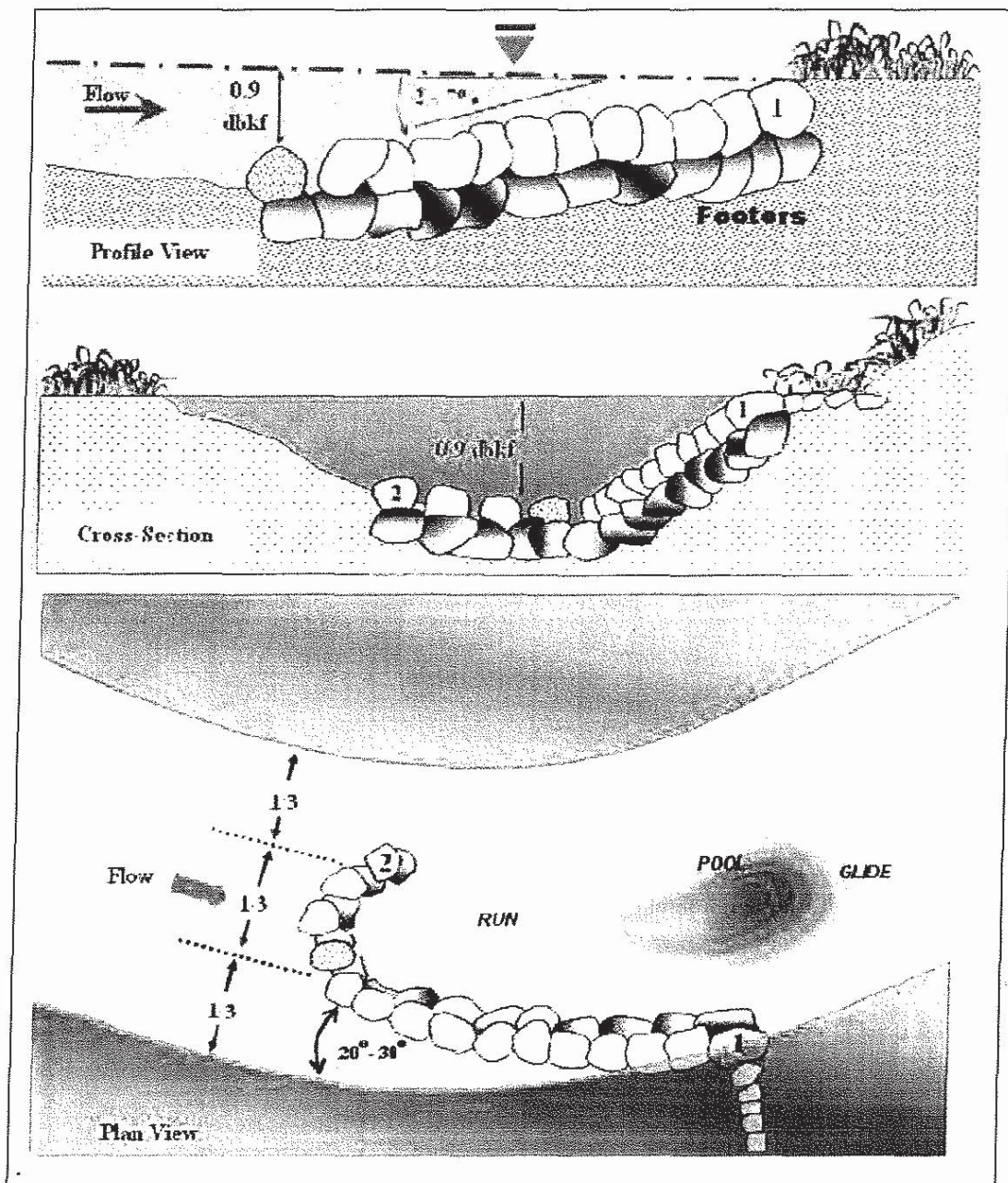


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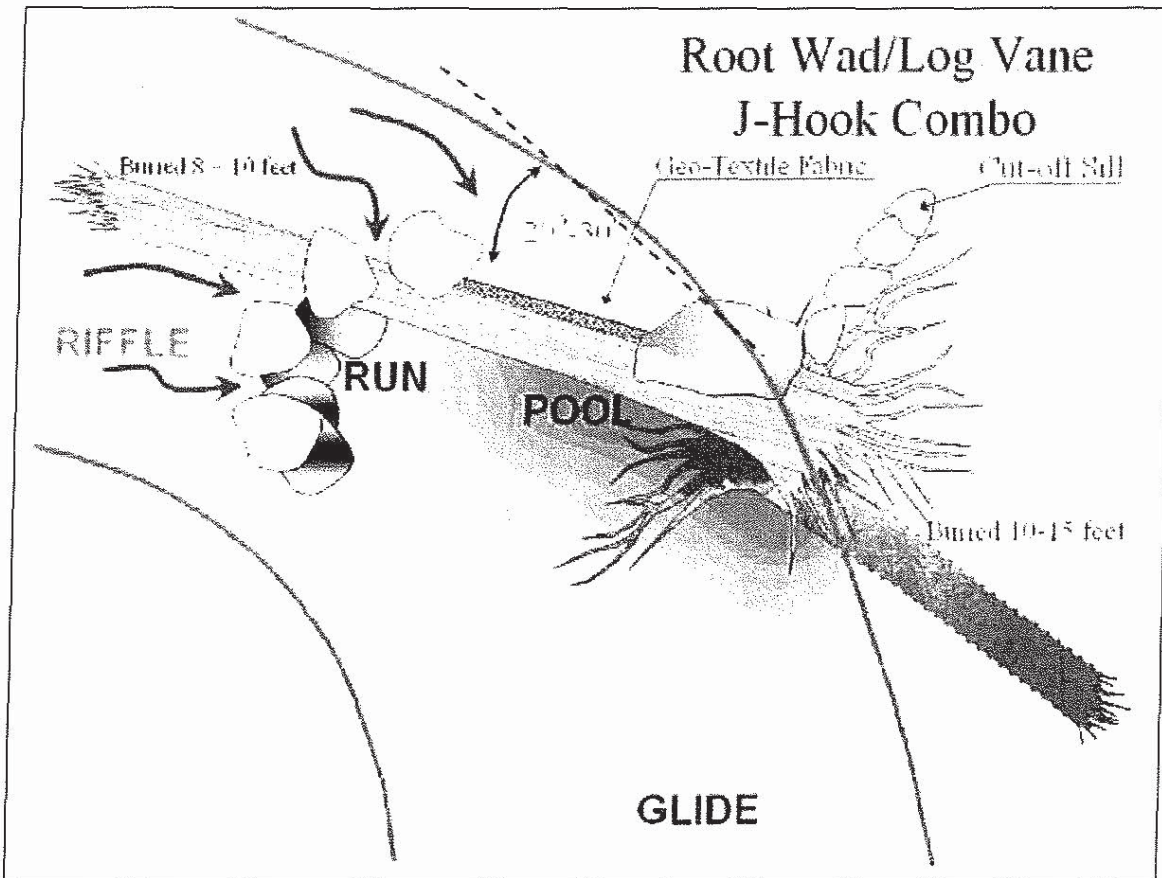


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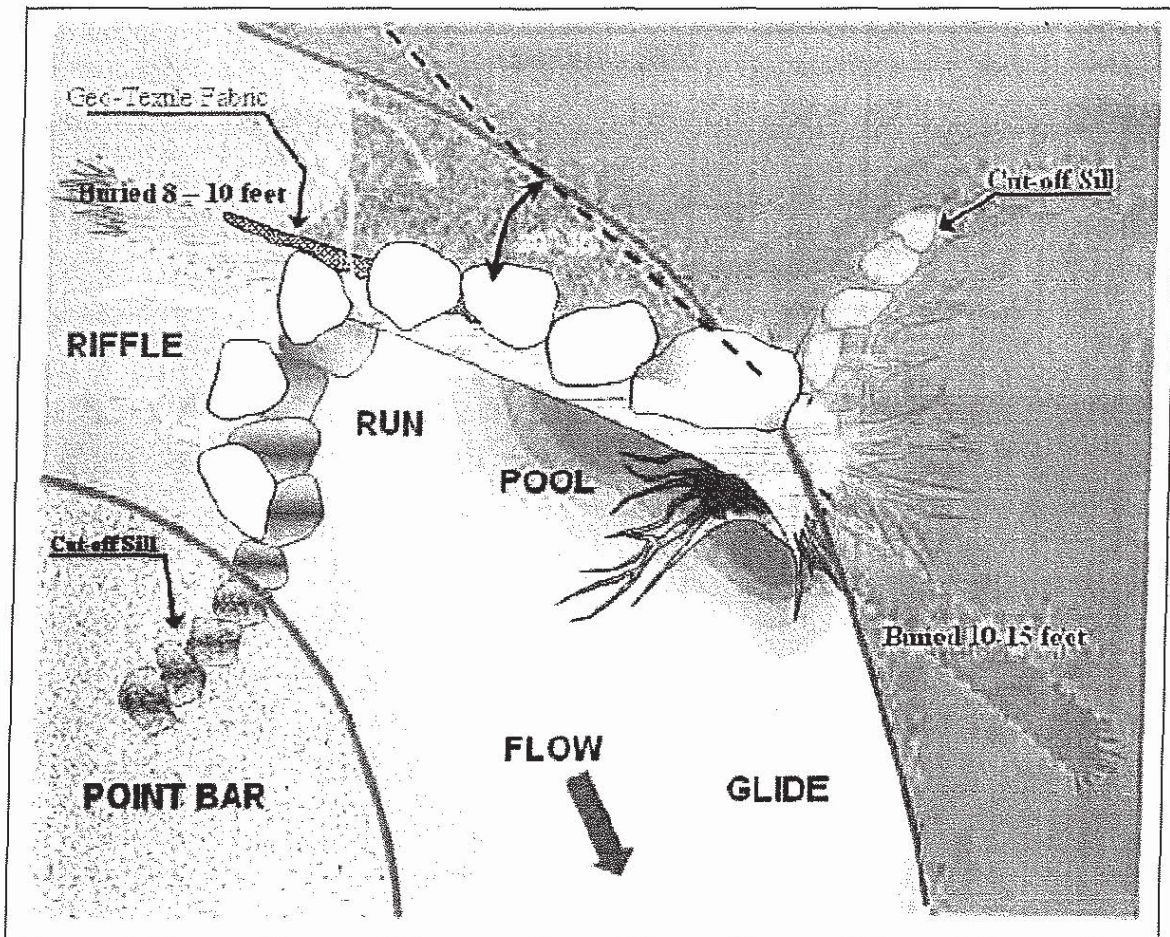


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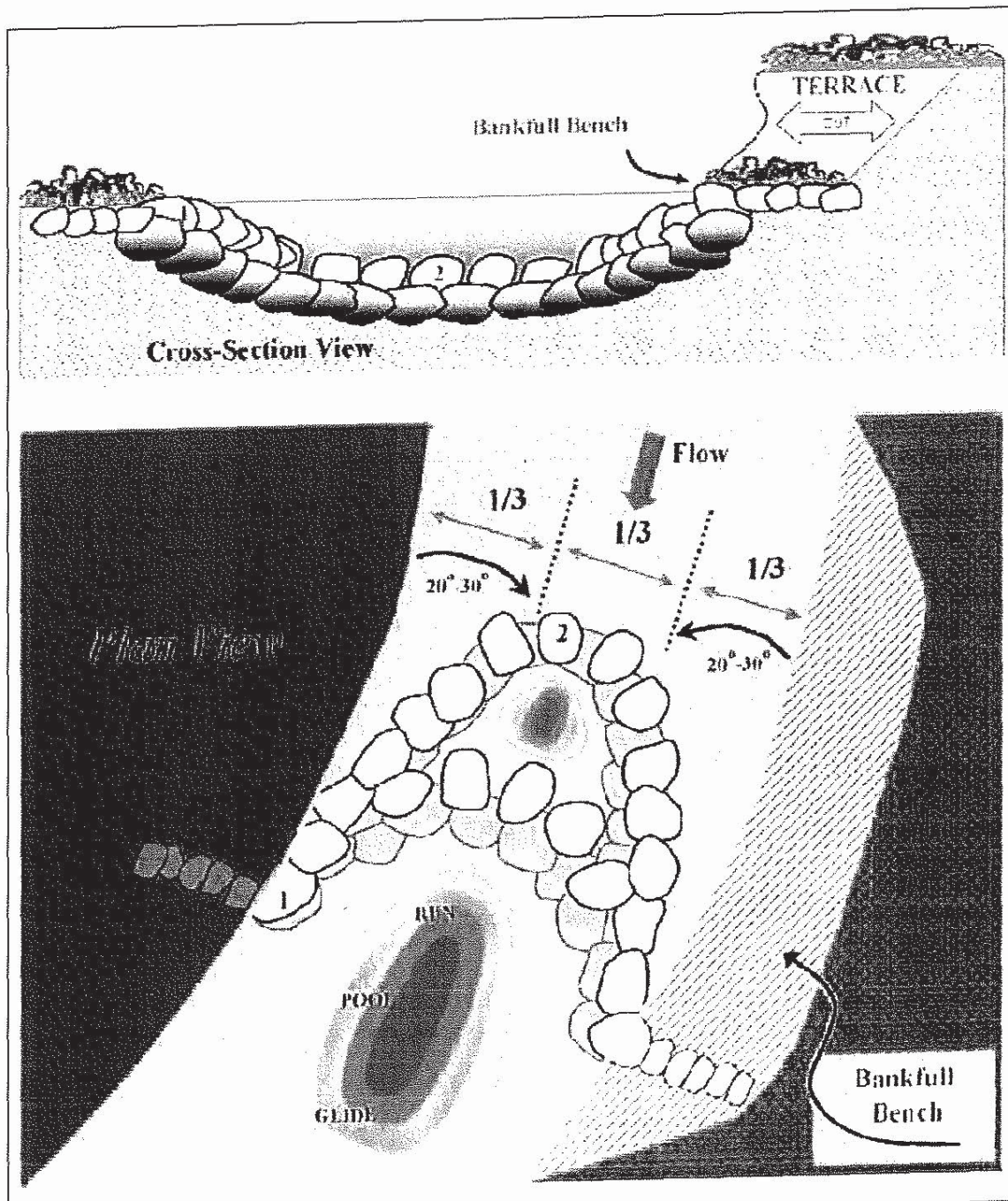


Figure 16. Boulder cross vane and constructed bankfull bench (NRCS, 2007).

Pages 52 through 53 redacted for the following reasons:

Not Responsive

Barr, Brenda M ENV:EX

From: Barr, Brenda M ENV:EX
Sent: Thu, May 4, 2006 11:58 AM
To: 'tjames@fmgt.uvic.ca'
Cc: Law, Peter ENV:EX
Subject: Section 9 Notification Confirmation - Hobbs Creek
Attachments: Terms and Conditions For Changes In And About A Stream Specified By.doc

This is a confirmation that our office has received your application for a Section 9 Notification, and has been assigned file number N1-2090 . Please quote this file number, if you should have any questions. Upon review, our Habitat Officer may contact you regarding this application.

Please read and adhere to the terms in *User's Guide to Working In and Around Water*, and the attached *Habitat Officer - Terms and Conditions*.

For projects proposed to occur "outside the reduced risk work window", then a technical rationale should be submitted that demonstrates there would be no increased risk to fish and wildlife populations and habitats as a result of the proposed works and should include confirmation that the works:

- are in a section of stream with confirmed absence of fish or species at risk;
- are not in a stream or section of a stream immediately upstream of a section or stream with fish or species at risk;
- would not adversely impact any individual, species or population of fish or species at risk;
- do not include the use of concrete pours;
- would not result in the discharge of sediment to downstream sections or streams with fish or species at risk; and
- would not impact benthic macro-invertebrate production.

This can be submitted via email. Please quote your file number.

Brenda Barr
Administrative Assistant
Ministry of Environment
2080A Labieux Road, Nanaimo BC V9T 6J9
Tel: (250) 751-3100 Fax: (250) 751-3103
mail to: Brenda.Barr@gov.bc.ca

Barr, Brenda M ENV:EX


From: Barr, Brenda M ENV:EX
Sent: Tuesday, May 5, 2009 5:42 PM
To: 'bsly@uvic.ca'; 'aqua-tex@islandnet.com'
Subject: RE: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Habitat Officer, Peter Law has reviewed your application, and would like to know how many sites will actually be worked on in this area. Figures 11 to 16 seem to reference different sites on Hobbs Creek, and we would like to know which sites will be rehabilitated using which technique (on fig#).

Thanks

Brenda Barr

Ministry of Environment

 Please consider the environment
before printing this email

From: Barr, Brenda M ENV:EX
Sent: Friday, April 17, 2009 1:36 PM
To: 'bsly@uvic.ca'; 'aqua-tex@islandnet.com'
Subject: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Our office has received your application for a Section 9 Notification, and has been assigned file number N1-2090 . Please quote this file number, if you should have any questions.

Please forward a signed copy of the application (page 6 Statement of Intent) by the applicant, UVIC, Bentley Sly.

For your information, Section 9 of the *Water Act* regulates "changes in or about a stream." Part 7 of the *Water Act* regulation– referred to as "the Regulation" – ensures that water quality, fish and wildlife habitat and the rights of licensed water users are not compromised. The Regulation allows for a review period of 45 days prior to commencing your work. This review is conducted by the Habitat Officer, who will usually confirm acceptance of the application or ask for clarification on details of the project within 10 working days.

All work must comply to the attached *Habitat Officer – Terms and Conditions*. We encourage you to read this information, as you are accepting the legal responsibility for the work.

For projects proposed to occur "outside the reduced risk work window", then a technical rationale should be submitted that demonstrates there would be no increased risk to fish and wildlife populations and habitats as a result of the proposed works, and should include confirmation that the works:

- are in a section of stream with confirmed absence of fish or species at risk;
- are not in a stream or section of a stream immediately upstream of a section or stream with fish or species at risk;
- would not adversely impact any individual, species or population of fish or species at risk;
- do not include the use of concrete pours;
- would not result in the discharge of sediment to downstream sections or streams with fish or species at risk; and
- would not impact benthic macro-invertebrate production.

Please read and adhere to the terms in *User's Guide to Working In and Around Water*, which you can access at

http://www.env.gov.bc.ca/wsd/water_rights/licence_application/section9/index.html.

It is the applicant's responsibility to ensure that all sections of the notification form are complete. Submission of an incomplete form does not constitute notification.

Brenda Barr

Administrative Assistant

Ministry of Environment

2080A Labieux Rd., Nanaimo BC V9T 6J9

☎ 250 751-3120 📠 250 751-3103

✉ Brenda.Barr@gov.bc.ca

♻️ Please consider the environment
before printing this email

Barr, Brenda M ENV:EX

From: Aqua-Tex Scientific [aqua-tex@islandnet.com]
Sent: Thursday, June 30, 2011 10:45 AM
To: Telfer, Kevin FLNR:EX
Cc: Barr, Brenda M ENV:EX; Aqua-Tex Victoria Scientific; Bentley Sly
Subject: Fwd: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC
Attachments: Hobbs Sect 9 09-04-15.pdf; ATT00001.htm; image001.jpg; ATT00002.htm; image002.jpg; ATT00003.htm

Kevin

In the spring of 2009, we submitted a Section 9 notification to continue the long-standing work on the restoration of Hobbs Creek at UVic. This project has been on-going, in fits and starts, since 2000. All the original work was reviewed by hydrologist Brian LaCas (P.Eng.) and flows from his review.

The work that was proposed in 2009 was not undertaken, because of budget constraints. The University now wants to resurrect this project for this year.

Below you will find the correspondence trail with Pete Law.

What do we need to do to resurrect this project? Can we simply bring it forward and update the dates to this year (July- Sept, or into the fall if the channel remains dry)? The application remains the same- some work along the edge of Canoe Pond to keep the dogs out of it, and the installation of some sediment traps to stabilize the channel.

For your information, there are no fish in this part of the creek, and the downstream portions consist of channelized reaches and dug-out back yard ponds, before it flows into the ocean at Cadboro Bay. We are not aware of any salmonids in the system. The creek is almost dry in summer, except when it gets stormwater runoff from the surrounding area, at which point it flashes up and then quickly recedes. The University's long-term goal is to restore the functional condition of the channel and work with the neighbouring communities (Saanich & Oak Bay) to control stormwater flows.

I have attached a copy of the 2009 application to make it easier for you to review it. The original signature of Bentley Sly, UVic, should be on file in your office (per Brenda's request in the email trail).

Thanks,

Cori





Cori L. Barraclough, M.Sc., R.P. Bio.
Aqua-Tex Scientific
201-3690 Shelbourne St
Victoria BC V8P 4H2
Tel: (250) 598-0266
aqua-tex@islandnet.com

390 7th Avenue
Kimberley BC V1A 2Z7
Tel: (250) 427-0260

On 5-May-09, at 5:41 PM, Barr, Brenda M ENV:EX wrote:


<image001.gif>

Habitat Officer, Peter Law has reviewed your application, and would like to know how many sites will actually be worked on in this area. Figures 11 to 16 seem to reference different sites on Hobbs Creek, and we would like to know which sites will be rehabilitated using which technique (on fig#).

Thanks

Brenda Barr

Ministry of Environment

 Please consider the environment
before printing this email

From: Barr, Brenda M ENV:EX
Sent: Friday, April 17, 2009 1:36 PM
To: 'bsly@uvic.ca'; 'aqua-tex@islandnet.com'
Subject: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Our office has received your application for a Section 9 Notification, and has been assigned file number N1-2090 . Please quote this file number, if you should have any questions.

Please forward a signed copy of the application (page 6 Statement of Intent) by the applicant, UVIC, Bentley Sly.

For your information, Section 9 of the *Water Act* regulates "changes in or about a stream." Part 7 of the *Water Act* regulation – referred to as "the Regulation" – ensures that water quality, fish and wildlife habitat and the rights of licensed water users are not compromised. The Regulation allows for a review period of 45 days prior to commencing your work. This review is conducted by the Habitat Officer, who will usually confirm acceptance of the application or ask for clarification on details of the project within 10 working days.

All work must comply to the attached *Habitat Officer – Terms and Conditions*. We encourage you to read this information, as you are accepting the legal responsibility for the work.

For projects proposed to occur "outside the reduced risk work window", then a

technical rationale should be submitted that demonstrates there would be no increased risk to fish and wildlife populations and habitats as a result of the proposed works, and should include confirmation that the works:

- are in a section of stream with confirmed absence of fish or species at risk;
- are not in a stream or section of a stream immediately upstream of a section or stream with fish or species at risk;
- would not adversely impact any individual, species or population of fish or species at risk;
- do not include the use of concrete pours;
- would not result in the discharge of sediment to downstream sections or streams with fish or species at risk; and
- would not impact benthic macro-invertebrate production.

Please read and adhere to the terms in *User's Guide to Working In and Around Water*, which you can access at http://www.env.gov.bc.ca/wsd/water_rights/licence_application/section9/index.html.

It is the applicant's responsibility to ensure that all sections of the notification form are complete. Submission of an incomplete form does not constitute notification.

Brenda Barr

Administrative Assistant
Ministry of Environment

2080A Labieux Rd., Nanaimo BC V9T 6J9

☎ 250 751-3120 📠 250 751-3103

✉ Brenda.Barr@gov.bc.ca

♻️ Please consider the environment
before printing this email

Cori L. Barraclough, M.Sc., R.P. Bio.
Aqua-Tex Scientific
201-3690 Shelbourne St
Victoria BC V8P 4H2
Tel: (250) 598-0266
aqua-tex@islandnet.com

390 7th Avenue
Kimberley BC V1A 2Z7
Tel: (250) 427-0260

Begin forwarded message:

From: Aqua-Tex Scientific <aqua-tex@islandnet.com>
Date: June 30, 2011 10:29:01 AM PDT
To: Aqua-tex Scientific <aqua-tex@islandnet.com>
Subject: Fwd: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Begin forwarded message:

From: "Law, Peter ENV:EX" <Peter.Law@gov.bc.ca>
Date: July 20, 2009 8:04:11 AM PDT
To: "Aqua-Tex Scientific" <aqua-tex@islandnet.com>, "Barr, Brenda M ENV:EX" <Brenda.Barr@gov.bc.ca>
Cc: "Bentley Sly" <bsly@uvic.ca>
Subject: RE: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

OK, thanks for the update.
Pete

From: Aqua-Tex Scientific [<mailto:aqua-tex@islandnet.com>]
Sent: Thursday, July 16, 2009 9:38 AM
To: Barr, Brenda M ENV:EX
Cc: Bentley Sly; Law, Peter ENV:EX
Subject: Re: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Peter

Since this application was submitted, we have met several times with UVic to determine in which areas of the stream they wish to pursue restoration work this year. We have identified "Canoe Pond" as the focus. This is the pond at the top end of Mystic Vale. It is an area that is heavily trampled by dogs, and is in need of some fencing, trail realignment and, budget permitting, widening of the bridge to permit it to span the floodplain. We may also install a "W-weir" downstream as outlined in the application.

This is the only major work proposed this year. The only other work might be minor adjustments/repair to the existing log weirs that are located along the length of the channel to prevent them from being eroded by fall rains.

The water level is already very low (about 5 cm deep and 75 cm wide). In another month I expect it to be nearly dry, barring any major rain.

Attached are two photos of canoe pond.

Regards,

Cori

VIN-Vancouver Island (Nanaimo)

Referral Slip

Fri, Apr 17, 2009 10:28 AM

Action: Notification Review	Due:	Log ID: 89575
Bentley Sly Manager of Grounds University of Victoria Facilities Management PO Box 1700 STN CSC Victoria BC V8W 2Y2	Type:	Notification
	Status:	
	Office:	VIN-Vancouver Island (Nanaimo)
	Entered By:	BMBARR
	Batch:	
	MOE File:	76945-20/N1-2090
Agency/Applicant File:		
Referred:		
Received:		2009/04/16
Closed:		
Start Date:		2009/05/01
Finish Date:		2009/09/15

Phone: 250 721-7606

Fax:

Email: bsly@uvic.ca

Proponent/Agent: Patrick Lucey-aqua-tex@islandnet.com-250 598-0266-Aqua-Tex Scientific Consulting

Category: Notification Sec 9

Purpose: Stream Channel & Small Debris Removal

Watershed:

Location

University of Victoria, 1800 Finnerty Rd
 Hobbs Creek, flows into Cadboro Bay, District of Saanich
 Within Mystic Vale: majority of catchment lies within the Municipality of Oak Bay
 Vystic Vale adjacent to Lot 1 at the UIV; Cedar Hill Rd to Cadboro Bay Rd
 Lot 1, Sections 31, 44, 71, & 72, Victoria District, Registered Plan Number VIP 57957

Other Info.

Clean up and repair in Hobbs Creek, to target the invasive ivy and arrest the erosion into Mystic Pond, continuation of work that was done several years ago.

Referrals

From: VIN-Vancouver Island (Nanaimo)	Sent: 2009/04/17	Rcvd:	Status: Sent
To: Ecosystems Section - Env Stewardship	Due:	Active:	State:
Contact: Law, Peter - Habitat Officer	Cmpltd:	Action: Review and comment	

Barr, Brenda M ENV:EX

From: Aqua-Tex Scientific [aqua-tex@islandnet.com]
Sent: Thursday, June 30, 2011 2:15 PM
To: Barr, Brenda M ENV:EX
Cc: Bentley Sly; Aqua-Tex Victoria Scientific
Subject: Hobbs Creek Section 9 application- updated
Attachments: Sect9 Hobbs 110630.pdf

Brenda

Thanks for your call. Here is the file with updated dates. As requested, I noted in the signature box that Bentley's signature is on the 2009 file.

I updated the disturbed area calculation (m2) to include the edge of Canoe Pond, but everything else is the same. I did update the wording above the signature box to reflect the current version of the application form.

Thank you very much for all your help with these files. We really appreciate it!

Happy Canada Day!

Cori

Cori L. Barraclough, M.Sc., R.P. Bio.
Aqua-Tex Scientific
201-3690 Shelbourne St
Victoria BC V8P 4H2
Tel: (250) 598-0266
aqua-tex@islandnet.com

390 7th Avenue
Kimberley BC V1A 2Z7
Tel: (250) 427-0260

Ministry of Environment

Approval Application or Notification for Changes In and About a Stream Under Section 9 of the Water Act and Part 7 of the Water Act Regulations

Incomplete or inaccurate forms do not constitute Notification & will not be accepted.

Proceeding with works after submission of an incomplete or inaccurate form would be a violation of the Water Regulation

☐ APPROVAL APPLICATION

☒ NOTIFICATION¹ (see USERS' GUIDE)

1. Applicant Information

Name: Bentley Sly-Manager of Grounds, University of Victoria		
Address: Facilities Management PO Box 1700 STN CSC		
City: Victoria	Province: BC	Postal code: V8W 2Y2
Phone: (250) 721-7606	e-mail: bsly@uvic.ca	

2. Location of Works

Street Address of Works (or nearest town): University of Victoria 1800 Finnerty Road		
Stream Name: Hobbs Creek	Flows Into: Cadboro Bay; District of Saanich	
Location on Stream: Within Mystic Vale; majority of catchment lies within the Municipality of Oak Bay		
Reference Landmarks: Mystic Vale adjacent to Lot 1 at the University of Victoria; Cedar Hill Cross Road to Cadboro Bay Road	Amount of disturbance in m ² : 2m ² X 30	
Multiple Sites: YES /NO: Yes	Number of sites: 30	
Latitude: 48° 27' 36" N	Longitude: 123° 18' 21" W	Elevation: 0-100m
Legal description of property where work is proposed: Lot 1, Sections 31, 44, 71, and 72, Victoria District, Registered Plan Number: VIP 57957		

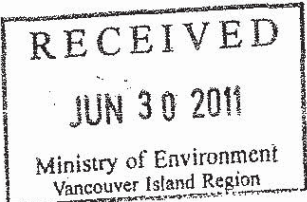
3. Drawing, Plan and Site Map

1. Attach drawing showing lot boundaries, location of buildings and of proposed works, stream direction and flow.
2. Attach a key map at an appropriate scale showing the location of the site.
3. Attach engineering drawings (may be required for works identified with ^e under **Requires Approval** section below).

4. Proposed Timing for Work

Start (day/month/year): July 15, 2011	Finish (day/month/year): September 15, 2011
---------------------------------------	---

FOR OFFICE USE ONLY

Date Received: 	Water File Number: NI-2090 CHA-ERS 95243
	Client Number:
	Application Number:
	Amount Received:
	Receipt Number:

5. Type of Works

Requires Approval:

- ☐ Bank Erosion Protection ^E
- ☐ Bridge Installation/maintenance/removal (other than clear span) ^E
- ☐ Stream Diversion ^{QP} Diversion berm structure plan required
- ☐ Large Debris Removal – by machine ^{QP} plan required
- ☐ Gravel Removal ^{QP}
- ☐ Other: Provide details in space below

*Provide culvert dimensions:

Length: 20 metres

Width:

Diameter: 1.5 metres

^E Professional Engineer may be required
^{QP} Qualified Professional may be required

Requires Notification:

- ☐ Installation*/maintenance/removal of road crossing **culvert** (*follow Forest Practices Code Stream Crossing Guidebook)
- ☐ Construction/maintenance/removal of a **clear span bridge**
- ☐ Construction/maintenance of a **pipeline crossing**
- ☐ Construction/maintenance/removal of a **pier or wharf**
- ☐ Cutting of **annual vegetation** in a stream channel
- ☐ Repair/maintenance of existing **dike or erosion protection works**
- ☐ Construction/maintenance of **storm water outfalls**
- ☐ Control of **Eurasian Watermilfoil** or other **aquatic vegetation**
- ☐ Construction/maintenance of **ice bridge, winter ford or snowfall**
- ☐ Maintenance of minor and routine nature by a public utility
- ☐ Removal of a **beaver dam** (As authorized under the Wildlife Act)
- ☒ Small debris removal – by hand
- ☐ Construction of a **temporary ford**
- ☐ Construction of a **temporary diversion** around a worksite

The following require Notification and may only be undertaken by the Crown in right of either Canada or British Columbia, or their Agents:

Federal/Provincial

- ☐ Construction/maintenance/removal of a flow or water level **measuring device**
- ☐ Construction/removal of a **fish fence or screen, fish or game guard**
- ☐ Restoration/maintenance of **fish habitat**

The following require Notification and may only be undertaken by the Crown in right of either British Columbia, or a Municipality, or their Agents:

Provincial/Municipal

- ☒ Restoration/maintenance of a **stream channel**
- ☐ Clearing of an obstruction from a bridge or culvert during a flood emergency¹
- ☐ Construction or placement of **erosion protection works or flood protection works** during a flood emergency²

¹ Some activities fitting the description for Notification may be reviewed by Ministry/Agency staff, who may decide that an Approval is required

² Must be completed under direction of the Crown. No notification is required prior to undertaking works, but a description of changes must be submitted to a habitat officer within 72 hours of the change

^{QP} QP means a professional who through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within their area of expertise.

Detailed Description of Work to be Performed (continue on next page):

Total area disturbed by proposed works (all sites): 2m² X 30 (weirs); 200m² bank protection Canoe Pond

The Hobbs Creek Watershed, a small urban watershed on Southern Vancouver Island, is approximately 150 hectares in size. The principle stream associated with this watershed is Hobbs Creek that runs about 1.5 km from its headwaters in the Municipality of Oak Bay to Cadboro Bay in the District of Saanich. The mid-section of this stream, located in Mystic Vale (a steep gully) on University of Victoria lands, is the focus of this Section 9 application.

During 2008 and 2009, a Proper Functioning Condition Assessment (Pritchard *et al.*, 1998,1999) of Hobbs Creek was conducted by Aqua-Tex Scientific Consulting Ltd. This assessment provides an updated health status of this system based on a previous Proper Functioning Condition Assessment completed in 2002. The PFC Assessment resulted in recommendations intended to rehabilitate and protect the health of this stream. Beginning in 2002, a series of in-stream rehabilitation measures have been implemented by University staff under the supervision of Aqua-Tex Scientific staff, and Brian LaCas, P.Eng. The works proposed for the summer of 2009 are a continuation of a long-term management strategy, implemented by the University, to reestablish the highest degree of functional condition within this creek. These works will need to be integrated with similar stream enhancement projects in the lower most reaches of this system that have been undertaken and/or promoted by the District of Saanich over the past five years. This small urban catchment has headwaters dominated by extensive single-family residential development (in Oak Bay) that result in a typical flashy hydrological profile. The stream channel, which receives high volume, short duration, stormwater runoff flows, has been subject to extensive erosion and downcutting. The proposed works, part of a long-term management program implemented by the University, is designed to minimize erosion and resulting sediment loading that have adversely affected the functional condition of two downstream ponds (Galimberti Pond and Mystic Pond).

The proposed work on Hobbs Creek within Mystic Vale includes a reconnaissance of the functional status of weirs presently within the channel, replacement of weirs that are failing, and the addition of new weir structures to continue the stream restoration started in 2002. Of key concern for this area are the results of a small slope failure that have resulted in some sediment loading into Hobbs Creek; this sediment is currently blocking portions of the channel downstream of Parking Lot 1 at the University of Victoria. While water is still moving downstream by percolating through the sandy sediment, there is concern that as the sand compacts this will no longer be an efficient means of water transport. Additionally, the sediment has reduced the functional condition of those reaches below the sediment source input. The structure of these weirs will be based upon Rosgen weir designs (see Figures 11-16) and altered where necessary to meet the particular needs of specific reaches within the channel. During this rehabilitation effort, invasive species removal will also occur along with replanting of bare areas. Additionally, as trampling is a large issue in this publicly accessible area, fencing will be installed where required. The aim of the fencing is to restrict access to the riparian zone to enable young riparian vegetation to grow thereby providing increased stability to the stream banks. In a few areas, small debris is blocking the channel. This material will be removed and, where appropriate, i.e. if the pieces are large enough, will be utilized within other designed structures. Note the works proposed will be monitored using Photopoint Monitoring (Hall, 2001).

The request for this Section 9 Notification is as a result of a Proper Functioning Condition assessment conducted by Aqua-Tex Scientific Consulting Ltd. to determine the functional status of Hobbs Creek. This assessment was a follow-up to one conducted in 2002 also commissioned by the University of Victoria. The 2002 assessment recommended the implementation of multiple weirs to begin the process of rebuilding the downcut channel. Since then, Hobbs Creek has improved in function overall (see Figure 3). However, in order to maintain this positive trend, rehabilitation work must be continued especially to overcome the degrading action of the sediment input from the slope failure in Mystic Vale.

References

- Cowley, E.R., and T.A. Burton. 2005. Monitoring Streambanks and Riparian Vegetation- Multiple Indicators. Technical Bulletin No. 2005-2, March, 2005. U.S. Department of the Interior, Bureau of Land Management. Boise, ID.
- Hall, F.C., 2001. Ground-based photographic monitoring. Gen. Tech. Rep. PNW-GTR-503. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 340 p. <http://www.fs.fed.us/pnw/pubs/gtr503/>
- Lewis, L., L. Clark, R. Krapf, M. Manning, J. Staats, T. Subirge, L. Townsend and B. Ypsilantis. 2003. Riparian area management: riparian-wetland soils. TR 1737-19. US Department of the Interior. Bureau of Land Management, BLM/ST/ST-03/001+1737, National Science and Technology Center, Denver, CO. 124 pp.
- Meidinger, D., and J. Pojar. 1999. The ecology of the Coastal Douglas Fir zone. In: Ecosystems of British Columbia Special Report Series #6. Prepared for: B.C. Ministry of Forests, Research Branch. Victoria, B.C. 6pp.

Natural Resources Conservation Service (NRCS), 2007. Stream Restoration Design. National Engineering Handbook. Part 654. Chapter 11 Rosgen Geomorphic Channel Design. USDA.

Pojar, J. and A. MacKinnon. 1994. Plants of Coastal British Columbia, including Washington, Oregon and Alaska. BC Ministry of Forests and Lone Pine Publishing. Vancouver BC. 527 pp.

Prichard, D., F. Berg, W. Hagenbuck, R. Krapf, R. Leinard, S. Leonard, M. Manning, C. Noble, and J. Staats. 1999. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lentic areas. TR 1737-16. Bureau of Land Management, BLM/RS/ST-99/001+1737, National Applied Resource Sciences Center, Denver, CO. 109 pp.

Prichard, D., J. Anderson, C. Correll, J. Fogg, K. Gebhardt, R. Krapf, S. Leonard, B. Mitchell, and J. Staats. 1998. Riparian area management: a users guide to assessing Proper Functioning Condition and the supporting science for lotic areas. TR 1737-15. Bureau of Land Management, BLM/RS/ST-98/001+1737, National Applied Resource Sciences Center, Denver, CO. 126 pp.

RCL Consulting Ltd. 2004. Integrated Stormwater Management Plan. University of Victoria Project No. 02-4367. Prepared for the University of Victoria. Victoria, B.C. 192 pp.

Rosgen, D. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, CO. 352 pp.

Rosgen, D. and L. Silvey. 1998. Field guide for stream classification. Wildland Hydrology, Pagosa Springs, CO. 193 pp.

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6. Land Ownership

Please check one of the following:

☒ The applicant is the owner of the property.

☐ The property is Crown land. Tenure/licence number:

--

☐ The property is owned by the following Landowner (i.e. Landowner is different from applicant):

Landowner's Name:

Address:

City:

Province:

Postal code:

Phone:

e-mail:

Do you have the Landowner's written approval to enter the land(s) to complete the works? ☒ Yes ☐ No

Note: a) Ownership of all parcels of land on which the proposed works will occur must be identified, b) do not attach the written approval with the application, but keep it for your files as you may be asked to produce it during an inspection or audit.

7. Who is doing the Work?

Contact information for company designing and supervising construction of the work (if different from applicant):

Company Name: Aqua-Tex Scientific Consulting Ltd.

Contact Name: Wm. Patrick Lucey

Professional Affiliation: R.P. Bio.

Address: 201-3690 Shelbourne St.

City: Victoria

Province: B.C.

Postal Code: V8P 4H2

Phone: (250) 598-0266 / (250) 427-5906

e-mail: aqua-tex@islandnet.com

Contact information for company undertaking the construction (if different from applicant):

Company Name:

Contact Name:

Address:

City:

Province:

Postal Code:

Phone:

e-mail:

8. Statement of Intent

By submitting this application form, I declare that the information contained on this form is complete and accurate information. I have read, understood and will meet the requirements to construct works and changes in and about a stream in accordance with Section 9 of the *Water Act* and Part 7 Water Act Regulations including, for Notifications, Terms and Conditions as specified by a Habitat Officer of the Ministry of Environment.

With respect to a Notification, in accordance with Part 7 of the Water Regulation, Section 40(1), I declare that I have submitted my application 45 days prior to the commencement of any work by me, or anyone employed by me. I understand that I will be receiving a confirmation of receipt of the application by Ministry of Environment (including confirmation of the applicable dates for the 45 day period) and that, unless I receive a response from a Habitat Officer within this 45 day notification period, I understand that I should not commence any activities until the 45 day notification period has passed. I understand that it is an offence under the Water Act to make changes in and about a stream without authority.

Signed: _____
Please see Bentley Sly signature on file (2009 application)

Application Date: 30/06/2011
day/month/year

9. Submission Instructions

Send the completed form along with the following attachments to the local office in which the proposed works are located. Addresses for local offices are listed on the instruction sheet. **Please note that the Approval application fee of \$130 is non-refundable.** If the proposed works require an Approval, prior to proceeding further with this application please ensure that this project will be able to proceed under the *Federal Fisheries Act*.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Sketch plan (mandatory) | <input type="checkbox"/> Engineering drawing (mandatory for works requiring approval noted with ^E) |
| <input checked="" type="checkbox"/> Key location map (mandatory) | <input type="checkbox"/> For works requiring an Approval, a cheque or money order for \$130 payable to: Minister of Finance. The fee is non-refundable. |

10. Responsibilities

You are required to comply with all applicable federal, provincial and municipal laws and regulations. If you anticipate that the planned work may result in harmful alteration, disruption or destruction of fish habitat you should send a copy of your completed Notification/Approval Application directly to the nearest office of Fisheries and Oceans Canada. Review and comment by DFO may necessitate changes to the proposed works.

Has a copy of this notification/approval application been sent to Fisheries and Oceans Canada (check one)?
YES ☒ NO ☐

If YES, indicate the DFO office that the notification/approval application has been sent (for DFO offices, see Users' Guide):

Mr. Brad Rushton. **CCEP** [Fish & Wildlife Biologist] Habitat Management Technologist
Fisheries and Oceans Government of Canada Tel: 250.746.9717 Fax 250.746.8397
Email: rushtonb@pac.dfo-mpo.gc.ca
PO Box 241, 5653 Club Road
Duncan, BC V9L 3X3

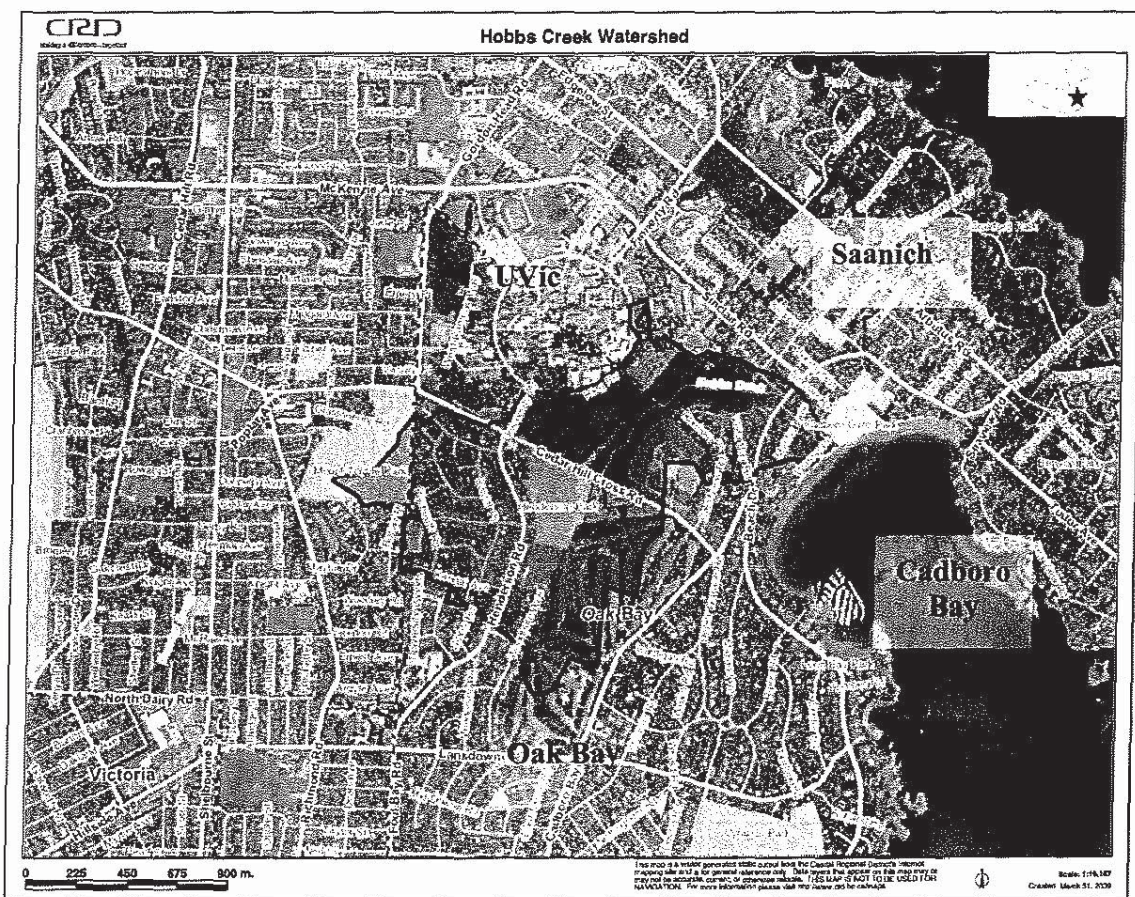


Figure 1. The Hobbs Creek Watershed (outlined in blue, filled in red), is a small urban watershed with a catchment area including parts of the Municipality of Oak Bay, the District of Saanich, and the University of Victoria. The stream discharges into Cadboro Bay. (Image Source: CRD Natural Areas Atlas).

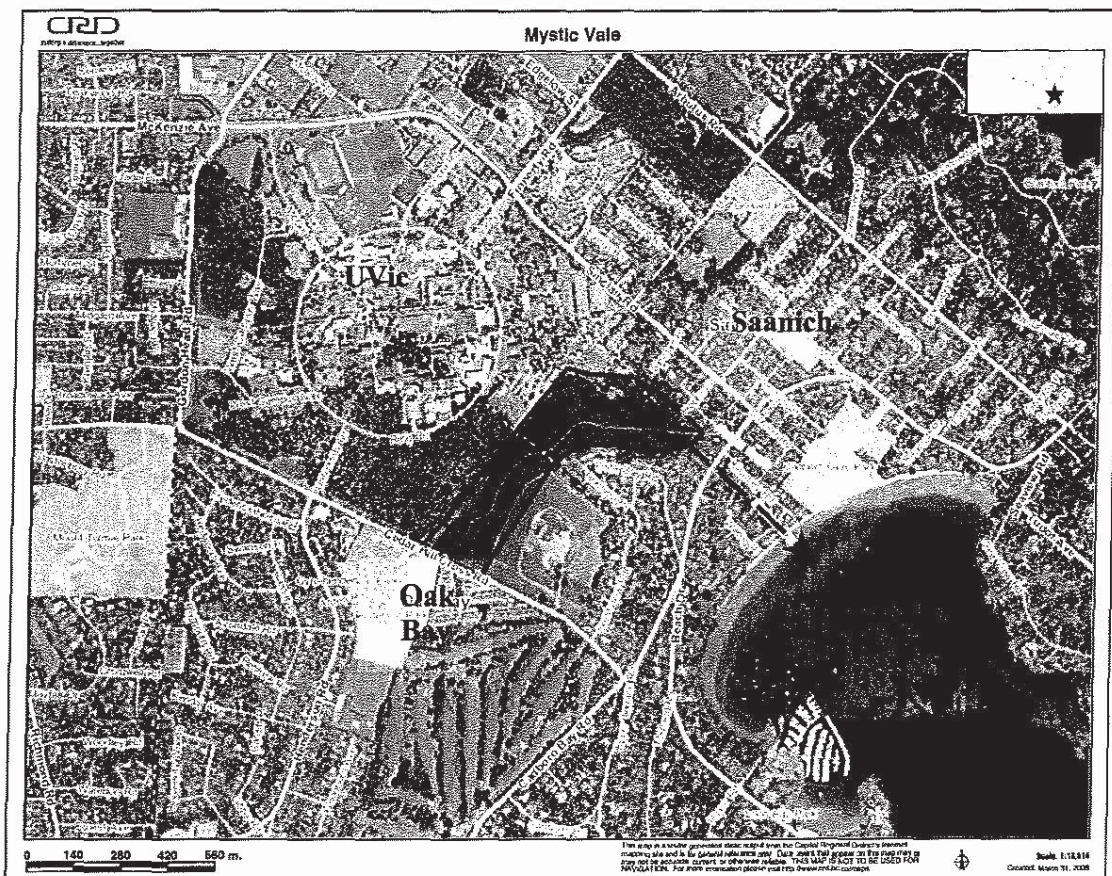
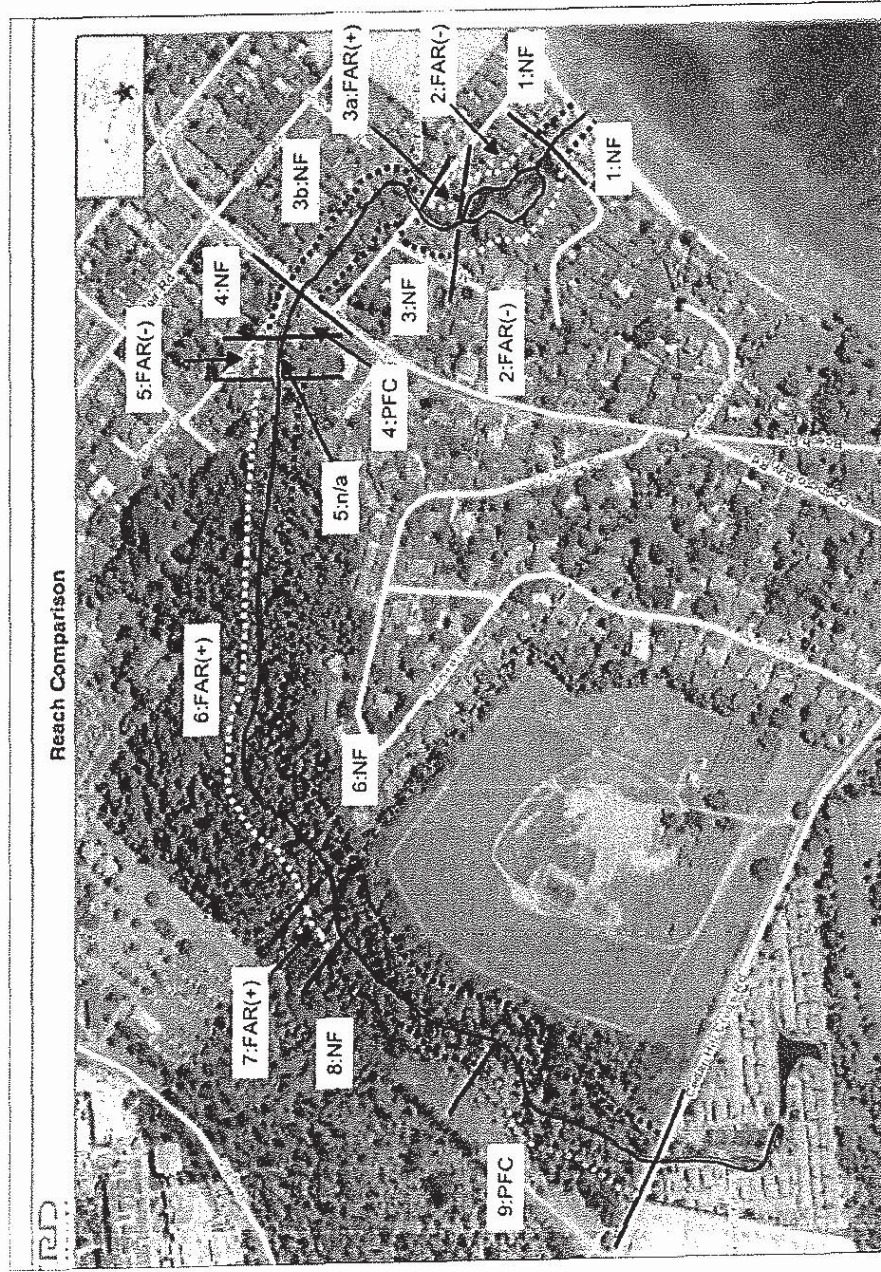


Figure 2. Location of Mystic Vale (outlined in black) where the proposed in-stream works for Hobbs Creek are to be conducted. Direction of flow is indicated by the dotted blue line. Note, the Mystic Vale space (middle reaches) has a headwater catchment dominated by residential development and typical high impermeable surface areas; the lower most reaches are similarly dominated by residential development, stream channel channelization, and a high percentage of impermeable surface area. (Image Source: CRD Natural Areas Atlas).



Photographs:



Figure 4. Location of the slope failure near the second footbridge in Mystic Vale. The slope failure occurred in the Winter of 2007/2008. Note, the sandy sediment that has partially filled the stream channel (foreground) (yellow arrow). The small slope failure has not resulted in any damage to that vegetation immediately upslope of the stream channel. The trail location, established a decade ago, has resulted in trampling of the riparian and upslope vegetation leading to a reduction in channel bank stability.



Figure 5. Point of entry for sediment from the slope failure into Hobbs Creek. Note the sediment build-up just inside the channel in the middle of the photograph (yellow arrow).

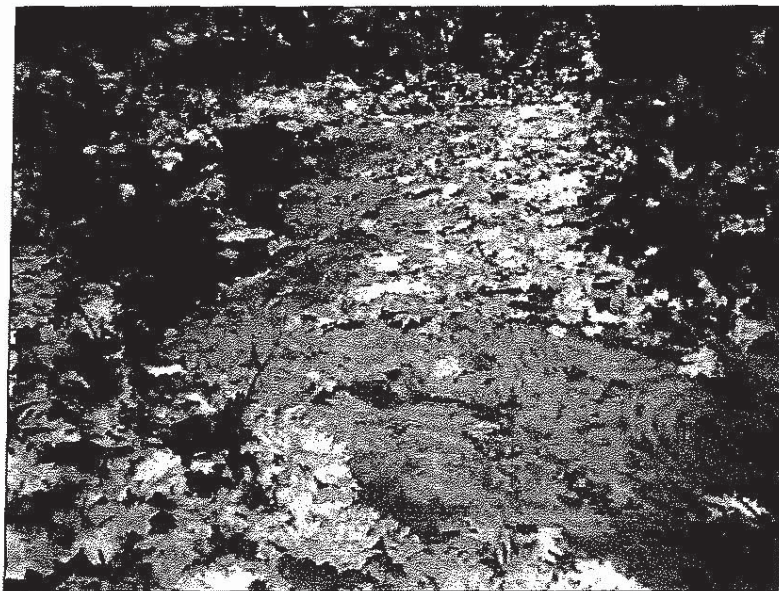


Figure 6. Downstream of the slope failure the sediment is building up the channel bottom to the same height as the banks. While water is still able to percolate through the sandy material, there is concern that this will not be possible as the sands begin to compact. Another concern is the absence of any woody material or roots within this sandy layer to provide a cellulose armature to stabilize the sediment and, ultimately, to raise the channel's benthic elevation to enable the stream to re-access its historical floodplain.



Figure 7. An example of a weir structure previously installed to minimize downstream sediment loading and to increase channel complexity. A review of existing structures for function, efficacy, and stability will enable the team to determine what needs to be replaced. Note the bare bank on the right of the photo caused by excessive trampling.



Figure 8. Upstream of the slope failure, evidence of downcutting is present. Also note the presence of English ivy, an invasive species abundant throughout Mystic Vale but especially concentrated in the lower reaches of Hobbs Creek.



Figure 9. Hobbs Creek just downstream of Cedar Hill Road (Reach 9 of the 2008 assessment). This portion of the creek is the only section in Proper Functioning Condition despite having some localized trampling issues. Note this reach evidences sinuosity, stable banks, in-stream complexity and some natural weir structures.



Figure 10. This culvert coming from Cedar Hill Road discharges water into a large, energy dissipating pool. This pool acts as an energy absorbing structure thereby reducing the erosional effect downstream of the water being ejected out of the mouth of the culvert. This point of discharge receives high volume, flashy, stormwater runoff from the headwater residential development in Oak Bay.

Examples of In-Stream Structures: Rosgen Geomorphic Channel Design

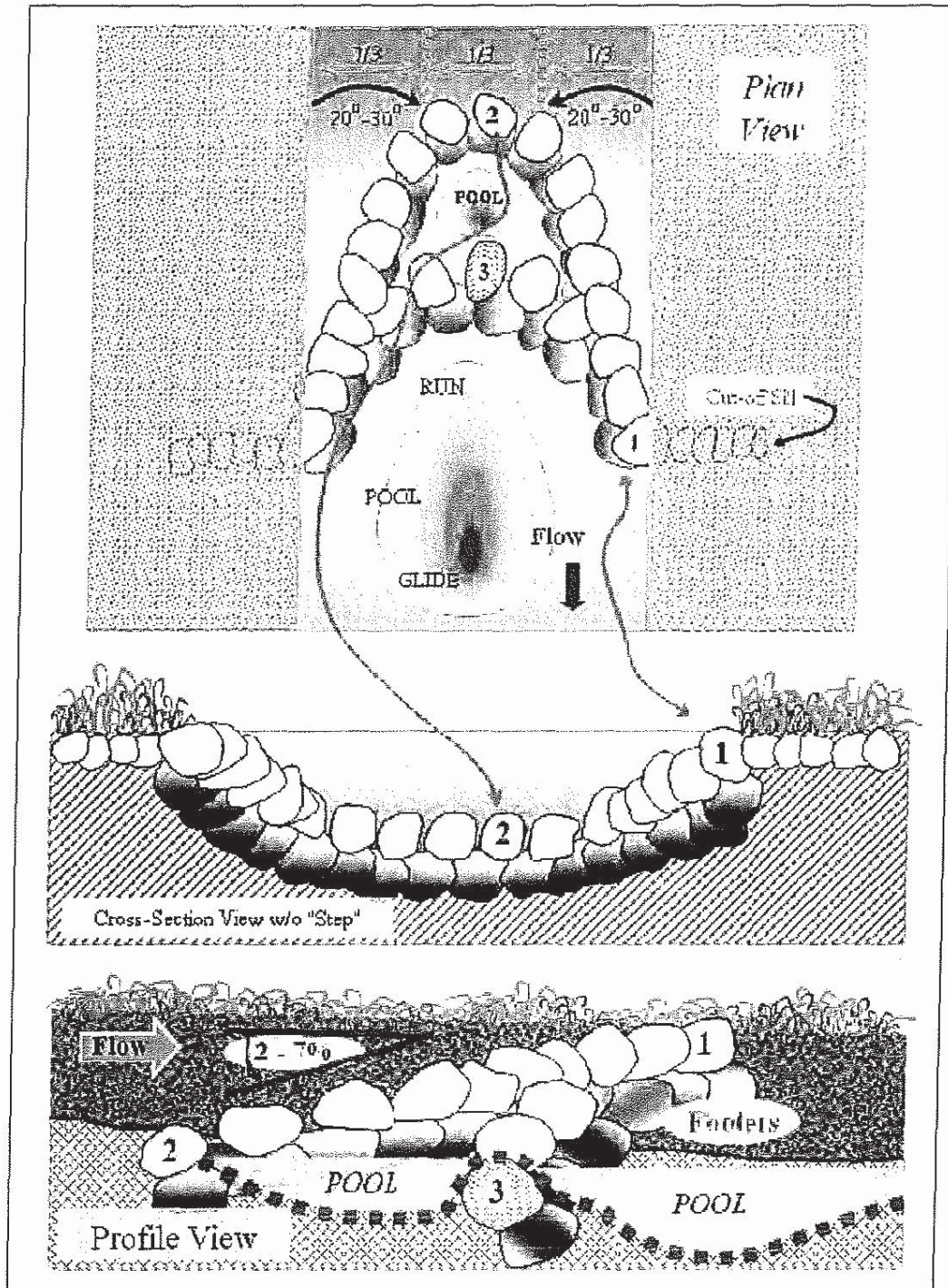


Figure 11. Cross section, profile and plan view of a cross vane (NRCS, 2007).

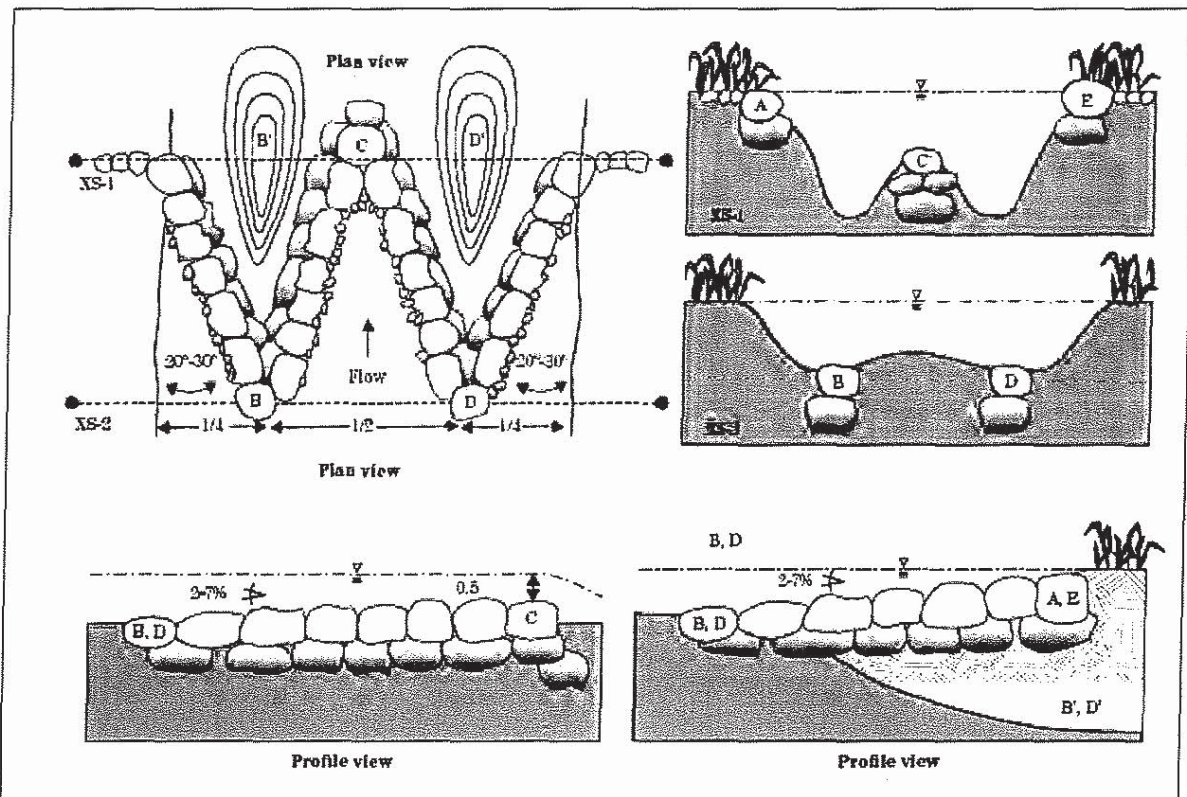


Figure 12. Plan, cross-section and profile views of a W-weir structure (NRCS, 2007).

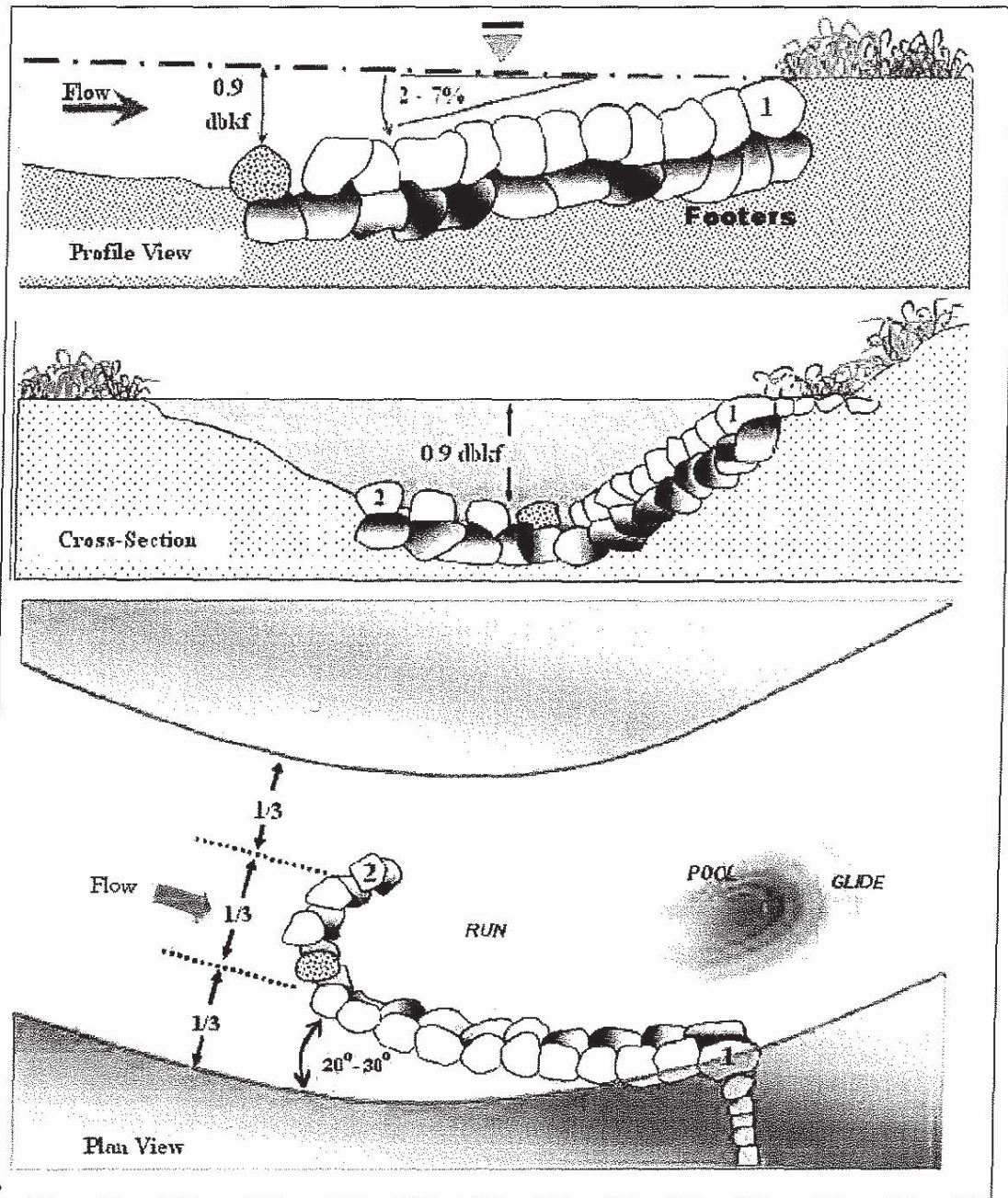


Figure 13. Profile, Cross-section and Plan View of a J-Hook vane structure (NRCS, 2007).

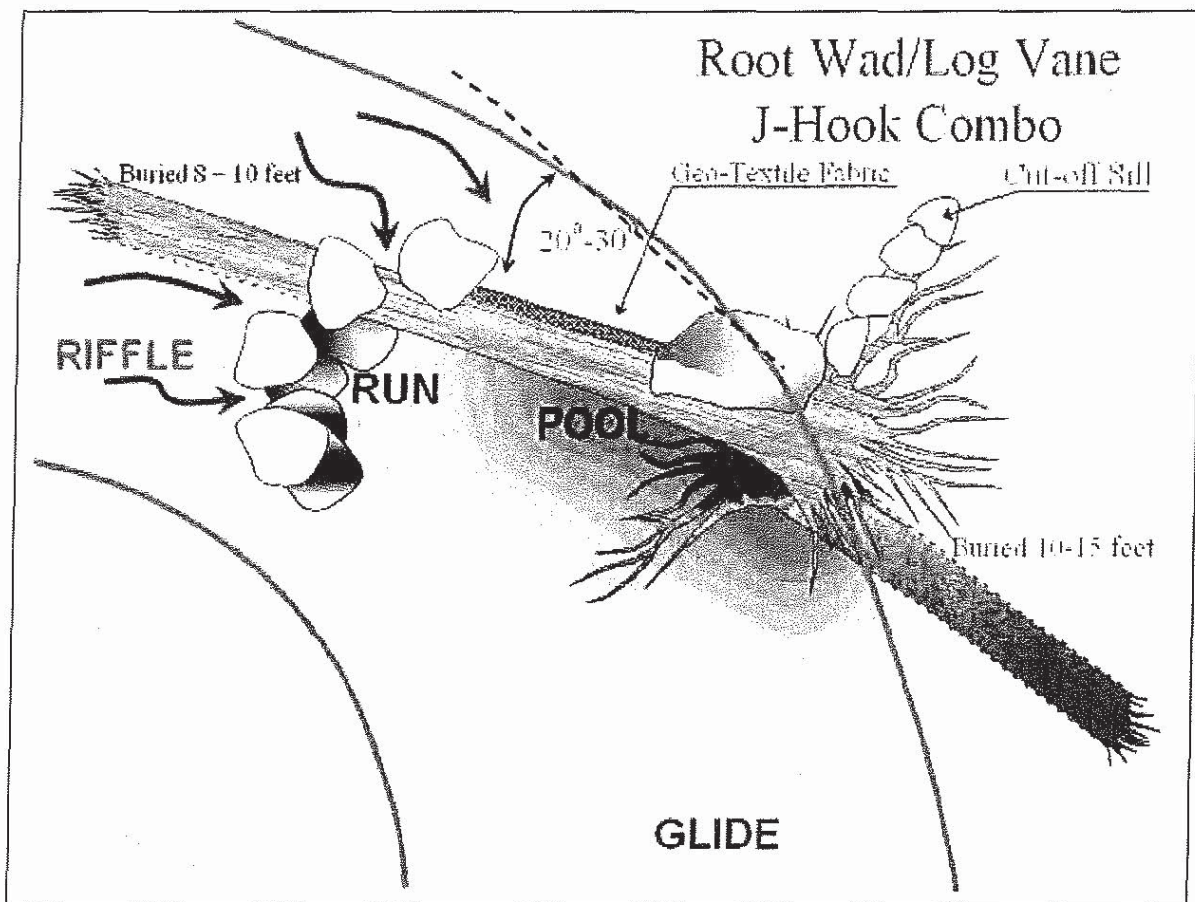


Figure 14. Log vane/ J-hook combination with rootwad (NRCS, 2007).

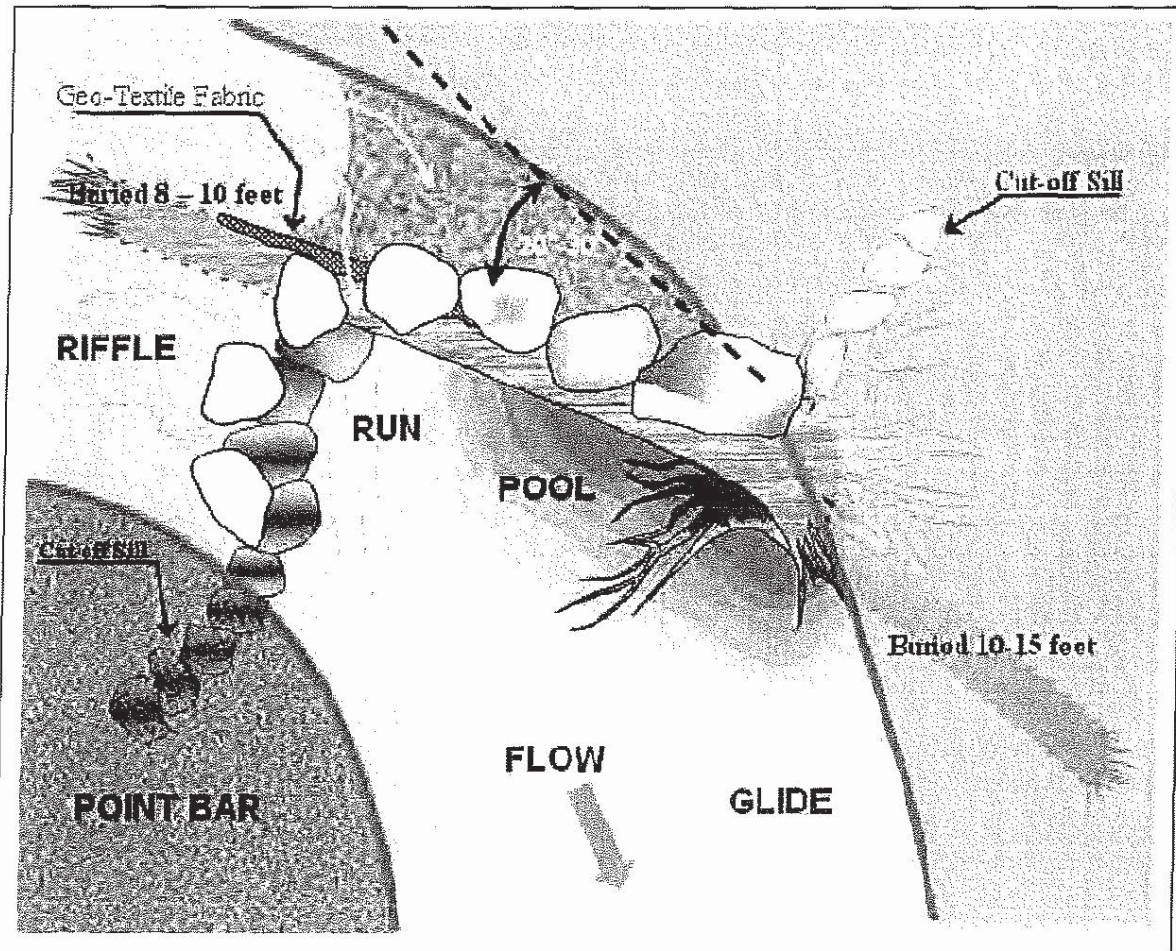


Figure 15. Rock vane/J-hook combo with rootwad and log vane footer (NRCS, 2007).

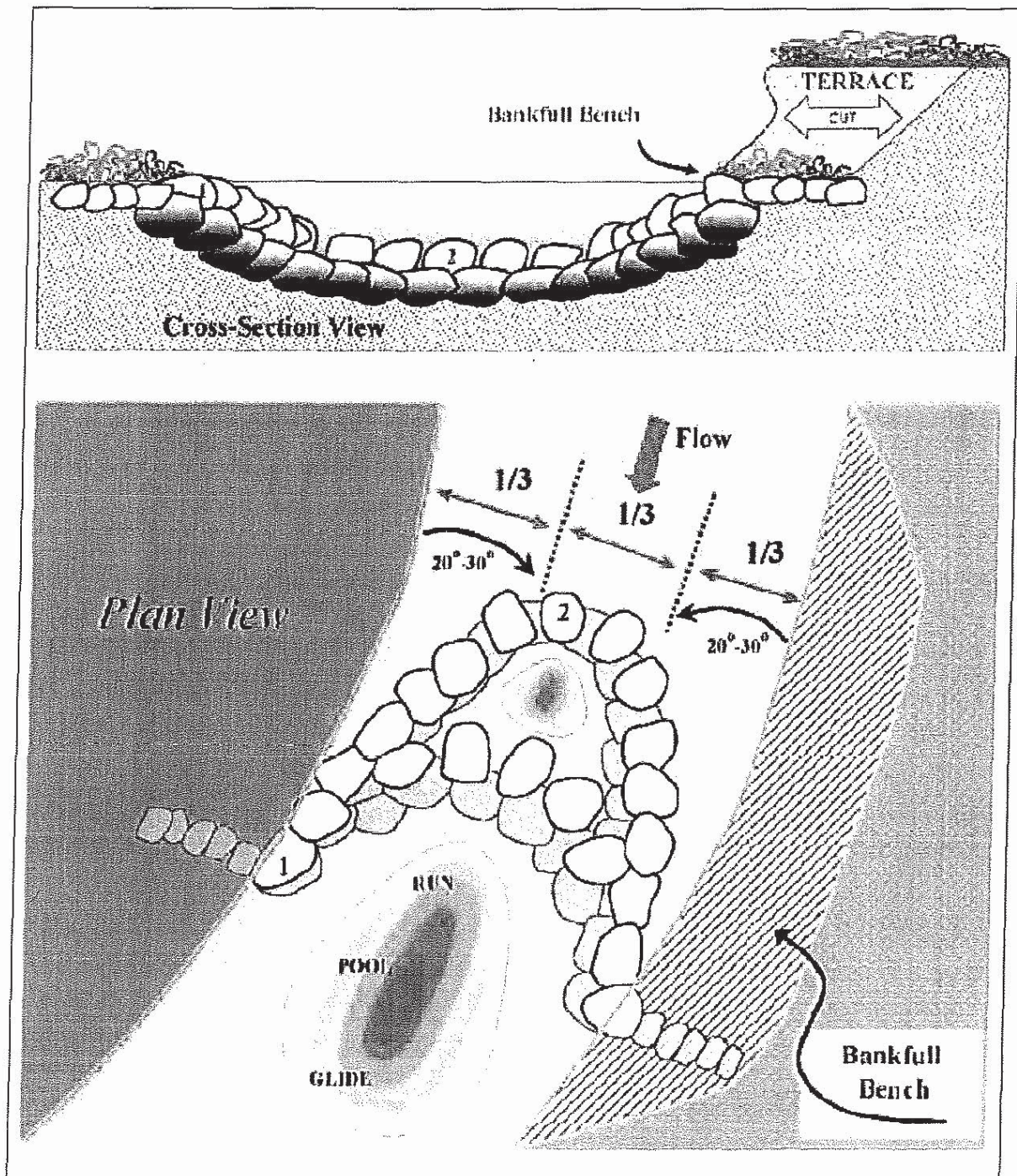


Figure 16. Boulder cross vane and constructed bankfull bench (NRCS, 2007).

Barr, Brenda M ENV:EX


From: Barr, Brenda M ENV:EX
Sent: Tuesday, July 12, 2011 4:17 PM
To: 'Bentley Sly'; 'Aqua-Tex Scientific'
Subject: RE: Section 9 Notification ~ N1-2090 ~ University of Victoria, 1800 Finnerty Rd., Hobbs Creek

Habitat Officer, Grant Bracher has reviewed and accepted your application, you may proceed with your proposed changes with the following conditions:

- Complete work by September 15, 2011
- Take appropriate erosion/sediment control measures

Notifications received by this office will be used to plan and carry out on-site inspections and monitoring during and after the changes in and about a stream.

Brenda Barr | Ministry of Environment | 250 751-3120

 Please consider the environment before printing this email

From: Barr, Brenda M ENV:EX
Sent: Tuesday, July 5, 2011 7:45 AM
To: 'Bentley Sly'; 'Aqua-Tex Scientific'
Subject: Section 9 Notification ~ N1-2090 ~ University of Victoria, 1800 Finnerty Rd., Hobbs Creek

File: N1-2090

Ministry of Forests, Lands and Natural Resource Operations has received your application for a *Water Act* Section 9 Notification. Please quote the above file number, if you have any questions.

It is the applicant's responsibility to ensure that all sections of the notification form are complete. Submission of an incomplete form does not constitute Notification/Authorization to proceed.

Section 9 of the *Water Act* regulates "changes in or about a stream." Part 7 of the *Water Act* regulation – referred to as "the Regulation" – ensures that water quality, fish and wildlife habitat and the rights of licensed water users are not compromised.

Under Section 40 of the Regulation:

A person must not make a change in and about a stream unless that person

- a) notifies a habitat officer of the region in which the change in and about a stream will be located, by providing the information specified in the notification form available from the ministry, of the particulars of the proposed change at least 45 days prior to commencing to make the change, and
- b) obtains from a habitat officer the terms and conditions described in Section 42 on which the change can proceed prior to commencing to make the change.

The Habitat Officer will usually confirm acceptance of the application or ask for clarification of details of the project within 10 working days. Once the Habitat Officer has completed their review, you may proceed with the work. However, if after 45 days you have not received a response from the Habitat Officer, you may proceed with the work.

You are encourage to read the information indicated at the links below, as you are accepting the legal responsibility for the work.

All work must comply with the attached *Habitat Officer – Terms and Conditions*. West Coast Region *Terms and Conditions* can be accessed at http://www.env.gov.bc.ca/wsd/regions/vir/wateract/terms_conditions.html. Please read and adhere to the terms in *User's Guide to Working In and Around Water*, which you can access at http://www.env.gov.bc.ca/wsd/water_rights/licence_application/section9/index.html, and please refer to the Best Management Practices (BMP's) Instream Works available at <http://www.env.gov.bc.ca/wld/instreamworks/index.htm#>.

Brenda Barr | Administration | **Ministry of Environment** | West Coast Region
On Behalf of | **Ministry of Forests, Lands and Natural Resource Operations**
2080A Labieux Rd | Nanaimo BC | V9T 6J9 | Tel: 250 751-3120 | Fax: 250 751-3103
Brenda.Barr@gov.bc.ca |  Please consider the environment before printing this email

Log ID: 95243

Agency/Applicant File:

Watershed:

University of Victoria, 1800 Finnerty Rd
Hobbs Creek, flows into Cadboro Bay, District of Saanich
Within Mystic Vale: majority of catchment lies within the Municipality of Oak Bay
Vystic Vale adjacent to Lot 1 at the UIV; Cedar Hill Rd to Cadboro Bay Rd
Lot 1, Sections 31, 44, 71, & 72, Victoria District, Registered Plan Number VIP 57957

Continuation of work submitted in 2009, X-Ref with Cliff/Ers 89575

Clean up and repair in Hobbs Creek, to target the invasive ivy and arrest the erosion into Mystic Pond, continuation of work that was done several years ago.

From:	VIN-Vancouver Island (Nanaimo)	Sent:	2011/06/30	Rcvd:	Status:	Sent
To:	Ecosystems - Resource Stewardship	Due:		Active:	State:	
Contact:	Bracher, Grant - Habitat Officer	Complt:		Action:	Review and comment	

CHECK LIST

Nanwakolas Decision: Yes ☐ No ☐ **Level /Comments:**

✓ Check Application is Complete & Date Stamped: _____

✓ Applied in Past (Previous Applications for Same Works/Location): 2009

✓ Enter Application in CLIFF/ERS & Tracking Spreadsheet

✓ Enter in CRMS & Create File

Reports or Plans Attached

Check iMAP Map Attached ☐ Yes ☐ No Other/Notes: _____

✓ Sent Email to Applicant Acknowledging Receipt of Application..... Date: JUN 30

Sent Acknowledgement Email to Applicant with Requests..... Date: _____

Received Requested Information from Applicant..... Date: _____

✓ Sent File to Ecosystems/Habitat Officer for 10 Working Days Review... Date: JUN 30

PENDING: Date: _____

Sent Email To Applicant Requesting Info Requested by Habitat Officer. Date: _____

Received Information from Applicant/Forwarded to Habitat Officer..... Date: _____

Application is an Approval – Sent to FCBC/WSD- Notified Applicant... Date: _____

✓ Sent Confirmation/Acceptance Email to Applicant..... Date: JULY 12

✓ Close Referral/Log in CLIFF/ERS & Tracking Sheet..... Date: JULY 12

Date	
JULY 8/11	<p>- HOBBS CREEK, FLOWS INTO CADBORO RAY, DISTRICT OF SANMICH</p> <p>- CLEAN UP & REPAIR IN HOBBS CK TO TARGET INVASIVE IVY AND ARREST EROSION INTO MYSTIC POND</p> <p>- REPLACEMENT & CONSTRUCTION OF NEW WEIRS</p>

Review & Comments Due Date:

☐ Reviewed & No Concerns / Applicant May Proceed
☒ Reviewed & Proceed with Conditions (See Comments)
☐ Hold / Send Email to Applicant Requesting Information (See Comments)
☐ No Further Requirements, Applicant May Proceed

[illegible]

MINISTRY OF ENVIRONMENT – SECTION 9 NOTIFICATION
CHECK LIST

Comments & Other Supporting Information Regarding Notification:

[illegible]

Barr, Brenda M ENV:EX

From: Aqua-Tex Scientific [aqua-tex@islandnet.com]
Sent: Thursday, July 16, 2009 9:38 AM
To: Barr, Brenda M ENV:EX
Cc: Bentley Sly; Law, Peter ENV:EX
Subject: Re: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Peter

Since this application was submitted, we have met several times with UVic to determine in which areas of the stream they wish to pursue restoration work this year. We have identified "Canoe Pond" as the focus. This is the pond at the top end of Mystic Vale. It is an area that is heavily trampled by dogs, and is in need of some fencing, trail realignment and, budget permitting, widening of the bridge to permit it to span the floodplain. We may also install a "W-weir" downstream as outlined in the application.

This is the only major work proposed this year. The only other work might be minor adjustments/repair to the existing log weirs that are located along the length of the channel to prevent them from being eroded by fall rains.

The water level is already very low (about 5 cm deep and 75 cm wide). In another month I expect it to be nearly dry, barring any major rain.

Attached are two photos of canoe pond.

Regards,

Cori



Cori L. Barraclough, M.Sc., R.P. Bio.
Aqua-Tex Scientific
201-3690 Shelbourne St
Victoria BC V8P 4H2
Tel: (250) 598-0266
aqua-tex@islandnet.com

390 7th Avenue
Kimberley BC V1A 2Z7
Tel: (250) 427-0260

On 5-May-09, at 5:41 PM, Barr, Brenda M ENV:EX wrote:


<image001.gif>

Habitat Officer, Peter Law has reviewed your application, and would like to know how many sites will actually be worked on in this area. Figures 11 to 16 seem to reference different sites on Hobbs Creek, and we would like to know which sites will be rehabilitated using which technique (on fig#).

Thanks

Brenda Barr

Ministry of Environment

 Please consider the environment
before printing this email

From: Barr, Brenda M ENV:EX
Sent: Friday, April 17, 2009 1:36 PM
To: 'bsly@uvic.ca'; 'aqua-tex@islandnet.com'
Subject: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

Our office has received your application for a Section 9 Notification, and has been assigned file number N1-2090 . Please quote this file number, if you should have any questions.

Please forward a signed copy of the application (page 6 Statement of Intent) by the applicant, UVIC, Bentley Sly.

For your information, Section 9 of the *Water Act* regulates "changes in or about a stream." Part 7 of the *Water Act* regulation– referred to as "the Regulation" – ensures that water quality, fish and wildlife habitat and the rights of licensed water users are not compromised. The Regulation allows for a review period of 45 days prior to commencing your work. This review is conducted by the Habitat Officer, who will usually confirm acceptance of the application or ask for clarification on details of the project within 10 working days.

All work must comply to the attached *Habitat Officer – Terms and Conditions*. We encourage you to read this information, as you are accepting the legal responsibility for the work.

For projects proposed to occur "outside the reduced risk work window", then a technical rationale should be submitted that demonstrates there would be no increased risk to fish and wildlife

populations and habitats as a result of the proposed works, and should include confirmation that the works:

Please read and adhere to the terms in *User's Guide to Working In and Around Water*, which you can access

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Brenda Barr

Administrative Assistant

Ministry of Environment

2080A Labieux Rd., Nanaimo BC V9T 6J9

☎ 250 751-3120 📠 250 751-3103

✉ Brenda.Barr@gov.bc.ca

♻️ Please consider the environment
before printing this email

Barr, Brenda M ENV:EX


From: Barr, Brenda M ENV:EX
Sent: Thursday, July 23, 2009 3:49 PM
To: 'Aqua-Tex Scientific'
Cc: 'Bentley Sly'
Subject: RE: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

You may proceed with your proposed changes working "inside the working window".

Notifications received by this office will be used to plan and carry out on-site inspections and monitoring during and after the changes in and about a stream.

Brenda Barr

Ministry of Environment

 Please consider the environment
before printing this email

From: Law, Peter ENV:EX
Sent: Monday, July 20, 2009 8:04 AM
To: 'Aqua-Tex Scientific'; Barr, Brenda M ENV:EX
Cc: 'Bentley Sly'
Subject: RE: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

OK, thanks for the update.
Pete

From: Aqua-Tex Scientific [mailto:aqua-tex@islandnet.com]
Sent: Thursday, July 16, 2009 9:38 AM
To: Barr, Brenda M ENV:EX
Cc: Bentley Sly; Law, Peter ENV:EX
Subject: Re: Section 9 Notification - N1-2090 - Hobbs Creek, Mystic Vale, UVIC

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Administrative Assistant

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