

BELLA COOLA FLOOD RESPONSE ADVISORY COMMITTEE (FRAC)

February 29, 2012

FRAC RECOMMENDATIONS TO EMERGENCY EXECUTIVE COMMITTEE

Background:

The Bella Coola Flood Response Advisory Committee was formed as an ad-hoc advisory group by the board of directors of the Central Coast Regional District (CCRD) at their regular meeting held on July 7, 2011. The reader is requested to refer to the original FRAC terms of reference (attached) for details of the intended purpose.

Preamble:

The FRAC members conducted an exercise to appropriately rank the 29 serious flood-affected sites that were identified in the Bella Coola Valley as researched and reviewed by the membership. The group recognizes that the serious nature of several of the sites should be afforded greater consideration of availability for the \$500,000.00 Emergency Management British Columbia (EMBC) Flood Protection Program (FPP) funds due to the imminent risk of severe damage to public and private infrastructure. As such, the stated short-term recommendations are directed towards the top 7 ranked hazard sites with mid and long-term recommendations being comprised of potential mitigation options for all of the 29 identified areas.

The ranking process compared the private and community assets of the particular sites and then applied a prediction of how likely the sites were expected to be impacted by flooding in the future. A third criterion was applied that recognized the complexity of the flood risk in any situation and assessed the practical ability of the regional district to have any meaningful involvement in mitigation of the particular hazards. The asset list considered critical infrastructure, homes & businesses, agricultural land, fish habitat and more.

The members also recognize that a certain amount of available resources are best directed towards non-construction activities that may provide benefit to all areas through enhanced planning and response activities. These are detailed below in the specific recommendations.

RECOMMENDATIONS

Short-term:

1. That the following 7 top hazard areas be given priority attention:
 - a. Upper Hagensborg Dike
 - b. Hagensborg 'GAP' (between upper & lower Hagensborg flood-protection structures)
 - c. Thorsen Creek Forest road (abandoned)
 - d. Bella Coola Airport area
 - e. Lower Hagensborg Dike
 - f. Lower Townsite area
 - g. Lower Nusatsum River fan – left bank
2. That due to the imminent risk of failure to the upper Hagensborg Dike that increased provision of legally held access (by statutory right of way – ROW) be established in 3 places to allow emergency response activities to be undertaken in the event of failures occurring during future high water events. Noting that works have already been approved for improvement of one ROW that this recommendation is specifically to develop and secure 2 further access routes.
3. That communications be initiated between the CCRD and private land owners in the vicinity of the Hagensborg Gap for the purposes of identifying the best practical location for a future protective structure. Such communications might include the provision of initial engineering consultation to build on the proposed alignment recommended by Golder Associates Engineers in early 2011.
4. That cost estimates be developed for the installation of a rock barrier at the upstream end of the Thorsen Creek right bank armour and that sufficient rip-rap rock for such construction be pre-placed in an appropriate position near the proposed installation site to be used during potential emergency response activities during future high water events.
5. That the CCRD continue with the current initiative to see the Airport dike extended and upgraded, including using FPP funds to obtain legal survey information required for statutory Right of Way registration and engineered dike design.
6. That the lower Hagensborg dike be inspected by a qualified engineer for the purposes of designing a cost estimate for lower end reinforcement for the protection of the airport and Hagensborg public and private assets.
7. That the lower townsite area be inspected by a qualified engineer for the purposes of making recommendations on potential future mitigation of lower townsite flood damage at the Bella Coola Hospital, Medical Clinic and Pharmacy; Bella Coola Elementary School; Mountain View Lodge seniors housing facility and other at-risk public and private infrastructure assets.
8. That a process for bedload gravel management be investigated on the Nusatsum River fan for the purposes of stabilizing the affected river banks and establishing a management program that may be subsequently tailored to serve other identified hazard areas where gravel build-up is recognized in playing a significant role in creating flood-hazard conditions.

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9. That the CCRD pursue resources to assist private landowners become prepared for future flood events, potentially including the following:
 - a. Hiring the services of a qualified engineer to attend the Bella Coola Valley for the purposes of providing low-cost risk assessments for private landowners
 - b. Provide basic advice on the types of mitigative activities that might be appropriate for their specific properties and assets with respect to proving efforts to assist themselves
 - c. Provide information to assist residents with sourcing specialized flood protection products such as gabion baskets, sandbags and rip-rap rock
 - d. Prepare (or find) a comprehensive document containing instructions for residents to follow during flood emergency events
10. That the CCRD undertake to develop and equip a group of trained volunteers for the purposes of safely conducting real-time field assessments during flood events with which to inform the CCRD Emergency Operations Centre director of critical risks during subsequent flood events. This would include flood-watch training and the provision of specific safety and communications equipment such as hand-held radios and protective gear.

Mid-term

1. That the CCRD commit to a joint project planning process with the Nuxalk Nation for the purposes of investigating the feasibility of establishing a bedload gravel management strategy that may result in some form of an industrial gravel sales initiative for the benefit of all citizens and the natural environment.
2. That the CCRD undertake a process of estimating the potential volumes of bedload gravels available in various stream systems of concern.
3. That the CCRD undertake to identify gravel stockpile locations near to the areas where significant bedload gravels are found.
4. That the CCRD undertake to obtain legal statutory Rights of Way in strategic areas where dike access or construction may be required now or in the future and where gravel stockpiles may be located for future benefit of the regional district.
5. That the CCRD pursue a comprehensive review of all existing orphaned flood-protection structures for the purposes of pre-planning for the *potential* of future upgrading and ownership by the CCRD.

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Long-term:

1. Pending the outcome of **Mid-term** recommendation #1, that the CCRD support the establishment of a gravel management enterprise that serves to manage bedload challenges in the Bella Coola Valley.
2. That the CCRD continuously lobby senior governments for support in addressing ongoing flood risks in the region.
3. That the CCRD work towards responsible land-use planning within the district to ensure that all flood-threatened property owners are aware of the appropriate measures for flood protection activities including restrictions being placed on high-risk properties.
4. That the CCRD establish the Flood Response Advisory Committee (FRAC) as a standing CCRD committee for the purposes of providing ongoing support to the Emergency Executive Committee. And also that the terms of reference for the FRAC process be revised to indicate that the committee will reconvene annually in November, following the normal annual flood season, and complete an annual review of ongoing flood management works for delivery to the Emergency Executive Committee by the end of February each year.