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**TO:** CITY MANAGER **DATE:** 2014 March 05

**FROM:** DIRECTOR ENGINEERING

**SUBJECT:** **CANADIAN PACIFIC TRAIN DERAILMENT – METALLURGICAL COAL RECOVERY PLAN FOR SILVER CREEK, BURNABY LAKE AND BRUNETTE RIVER**

**PURPOSE:** To inform Council on Canadian National Rail’s Metallurgical Coal Recovery Plan for Silver Creek, Burnaby Lake and Brunette River.

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**RECOMMENDATION:**

1. **THAT** a copy of this report be forwarded to the Environment Committee for information.

**REPORT**

**1.0 INTRODUCTION**

At the 2014 January 27 Council Meeting, Council received an information report from staff on the progress made by Canadian National Rail (CN) with respect to environmental assessment and remediation arising from the Canadian Pacific (CP) train derailment. The derailment, which occurred near Government Road and Brighton Avenue on 2014 January 11, resulted in release of approximately 40 tonnes of metallurgical coal along the rail embankment and into Silver Creek. Given that the railway line belongs to CN, the responsibility of clean-up resided with CN.

The following report provides Council with an update on Canadian National Rail’s Metallurgical Coal Recovery Plan for Silver Creek, Burnaby Lake and Brunette River.

**2.0 METALLURGICAL COAL RECOVERY PLAN FOR SILVER CREEK, BURNABY LAKE AND BRUNETTE RIVER**

Following the incident and repair of rail embankment, CN initiated and completed an environmental assessment in late January 2014 to determine the extent of coal released into Silver Creek, Burnaby Lake and Brunette River, and document habitat condition to aid in the feasibility of practical solutions for the removal of coal accumulations.

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In February 2014, CN and its consultants prepared a coal recovery plan for Silver Creek, Burnaby Lake and Brunette River. The plan has been accepted by the Ministry of Environment and has included comments from City and Metro Vancouver staff. A copy of the plan is available in Clerk's Department.

In summary, the recovery plan includes the following:

## 2.1 Silver Creek

An estimated 5.5 m<sup>3</sup> of coal was found to be deposited in Silver Creek primarily from the derailment area and downstream of the Burnaby Lake footbridge. Recovery of coal in Silver Creek will be targeted and largely done by hand from the bank using shovels or shop vacs. Vacuum trucks will be used at accessible areas and will be done on a very limited basis.

Mitigation measures applied to limit the disturbance to aquatic life will include: ensuring minimal foot traffic in Silver Creek, minimizing mobilization of silt in the water and avoiding disturbance to aquatic life. Water quality monitoring will also be undertaken at the confluence of Silver Creek and Burnaby Lake.

## 2.2 Burnaby Lake / Brunette River

An estimated 76m<sup>3</sup> of coal was found to be deposited in Burnaby Lake primarily near the confluence with Silver Creek. In addition, an estimated 0.12 m<sup>3</sup> of coal was found to be deposited in Brunette River from Cariboo Dam to Fraser River which given the large area is not deemed to be recoverable.

For Burnaby Lake, recovery of coal in Burnaby Lake will primarily be carried out using suction dredging with vacuum truck assisted with long reach excavator. Recovered coal and water will be diverted to a multi-step water filtration system to remove coal particles and sediment. Treated water will be discharged back into the Lake and will be monitored to ensure that it meets the water quality standards.

Mitigation measures employed to limit the disturbance to aquatic life will include: aquatic salvages to remove fish, amphibians and turtles present in the work area; salvaging the turtle nesting beach to remove eggs/young turtles; undertaking dive surveys to ensure removal of turtles; installing silt curtain to isolate the work area and contained disturbed water; pumping water around the work area; installing and operating an on-site multi-step water treatment of suction dredge water; and carrying out environmental monitoring and water quality sampling during coal removal.

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### 2.3 Site Access and Equipment Staging Area

Site access, water treatment plant location, equipment staging area and water quality monitoring are noted in *Attachment #1*. CN has received authorization from Metro Vancouver to temporarily locate the multi-staged water treatment plant in the regional park and to temporarily relocate the public access path around the work area.

### 2.4 Site Restoration

Upon completion of coal removal from Silver Creek and Burnaby Lake, site restoration will be undertaken by CN and will include: restoration of park facilities to pre-work conditions; restoration of turtle nesting beach; cleaning and replacement of turtle basking logs; and any other restoration efforts required by regulatory agencies and land owners.

### 2.5 Coal Recovery Timelines

CN and its contractors have recently mobilized and completed aquatic salvage of fish, amphibians and turtles. It is presently anticipated that the work will be completed by mid-March followed by site restoration work.

Staff are monitoring the recovery activities and are pursuing discussions with the Ministry of Environment officials to require CN to provide compensation for impact to Silver Creek, Burnaby Lake and Brunette River.

## 3.0 CONCLUSION

Following the CP train derailment on 2014, January 11 and the resultant release of metallurgical coal in Silver Creek, Burnaby Lake and Brunette River, CN has developed a coal recovery plan. The Plan has been received by the B.C. Ministry of Environment with input from the City and Metro Vancouver staff. CN and its contractors have recently mobilized and completed aquatic salvage of fish, amphibians and turtles.

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It is presently anticipated that the work will be completed by mid-March followed by site restoration work. Staff are monitoring the recovery activities and are pursuing discussions with the Ministry of Environment officials to require CN to provide compensation for impact to Silver Creek, Burnaby Lake and Brunette River.



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DIRECTOR ENGINEERING

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Attachment

Copied to: Fire Chief

ATTACHMENT #1

Figure 4-1 Overview of coal recovery area and preliminary water quality monitoring stations

