Council Direction:

In response to Council’s direction on October 12, 2011 requesting staff to report back on the Battlefield Creek subwatershed and the cross over from the Davis Creek subwatershed, in particular addressing if there would be downstream impacts from new developments in the Nash Neighbourhood Secondary Plan.

Information:

The Nash Neighbourhood Secondary Plan is bounded by Upper Centennial on the east, Mud Street on the South, Davis Creek to the west, and the escarpment to the North as shown on Appendix “A” to Report PED11155(a). The westerly portion of the neighbourhood is within the Upper Davis Creek subwatershed and the easterly portion within the Battlefield Creek subwatershed.

Staff was requested to report back on the impacts of new developments within the Nash Neighbourhood Secondary Plan on flood risks downstream, particularly in the Greenhill Avenue, Jasper Drive and Bland Avenue areas.
Greenhill Avenue
Greenhill Avenue is located within the Lower Davis Creek subwatershed, and storm flows are conveyed to the Davis Creek. The Greenhill area experienced a number of severe flooding events (April 2005 and December 2006), and the cause of the flooding was investigated under the Greenhill Avenue Storm Drainage Study, following the Municipal Class Environmental Assessment process (EA). Council approved the filing of this study on June 25, 2008.

The primary cause of the flooding was determined due to the blockage of the Battlefield Creek culvert under Centennial Parkway. This blockage resulted in a large volume of water from the Battlefield Creek catchment being conveyed to the Greenhill area via the Canadian Pacific Railway (CR) right of way and Greenhill Avenue. The study also concluded the flooding was attributed to a number of other factors:

1. insufficient capacity of the Battlefield Creek culvert under Centennial Parkway;
2. erosion in Battlefield Creek;
3. insufficient capacity of the CPR culverts at Greenhill Avenue to convey a 100 year storm;
4. improper grading/lack of grading of CPR ditches; and,
5. lack of a continuous overland flow route in the Greenhill Avenue subdivision.

An earlier study, The Davis Creek Study (2006) identified multiple and severe erosion sites within the lower reach of Davis Creek and a Municipal Class Environmental Assessment was initiated to address the erosion issues. The Lower Davis Flood and Erosion Control Municipal Class EA was completed and the report was completed and filed on May 20, 2011. The recommendations of the study are currently being implemented to address the erosion areas.

The only development currently proposed in the Nash Neighbourhood Secondary Plan, within the Battlefield Creek subwatershed is the Empire Nash Subdivision (25T200803) located in the north-east corner of Green Mountain Road and Upper Centennial (see Appendix “B”). There are two stormwater management facilities planned within the Nash Neighbourhood to control flows and to address erosion concerns. Stormwater Management Ponds P2 and P1 (see Appendix “A”) will control flows to Battlefield Creek and Davis Creek, respectively, and therefore will not adversely impact properties downstream. The full development of the Nash Neighbourhood will result in the diversion of a portion of the Battlefield Creek catchment area to the Davis Creek subwatershed.
Jasper Drive and Bland Avenue
Residents from the Jasper Drive and Bland Avenue reported flooding of basements with wastewater backing into their homes during rainstorm events in July 2009 and September 2010. Public Works is currently undertaking a detailed flooding investigation on Jasper Drive and Bland Avenue to identify causes of the flooding on these streets. The results and recommendations of the study are nearing completion.

As these neighbourhoods are not within the Battlefield Creek catchment, they will not be impacted by the Empire Nash Subdivision (25T200803) development.

APPENDICES / SCHEDULES

Appendix “A”: Nash Neighbourhood Secondary Plan
Appendix “B”: Draft Plan – Empire Nash Subdivision (25T200803)