



# City of Richmond

## Report to Committee

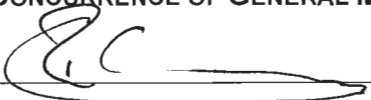

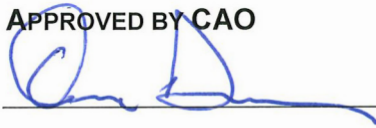
**To:** Public Works and Transportation Committee  
**From:** Lloyd Bie, P.Eng.  
Acting Director, Engineering  
**Re:** **Woodwards Slough Habitat Compensation**

**Date:** May 25, 2018  
**File:** 10-6050-01/2018-Vol  
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### Staff Recommendation

That the staff report titled "Woodwards Slough Habitat Compensation," dated May 25, 2018, from the Acting Director, Engineering, be received for information.

Lloyd Bie, P.Eng.  
Acting Director, Engineering  
(604-276-4075)

REPORT CONCURRENCE		
<b>ROUTED TO:</b>  Parks Services Sustainability	<b>CONCURRENCE</b>  <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<b>CONCURRENCE OF GENERAL MANAGER</b> 
<b>REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE</b>	<b>INITIALS:</b> 	<b>APPROVED BY CAO</b> 

## Staff Report

### Origin

The City is required through the *Federal Fisheries Act* to provide habitat compensation for infilling of drainage canals that was done to complete the Westminster Highway and Nelson Road widening capital projects. The City owned Woodward's Slough Natural Area (Woodward's Slough) has been identified as the preferred location for these compensatory works. The design for the habitat compensation works have progressed to the point where impacts to existing trees and shrubs have been identified.

The purpose of this report is to provide Council with background information for this habitat compensation work and the public information plan for the project.

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

*Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.*

### Analysis

#### Project Background

As part of the Westminster Highway and Nelson Road widening capital projects, approximately 1,700m of existing drainage canals located within the Riparian Management Area were in-filled with storm sewer pipes to provide space for additional traffic lanes and multi-use pathways. The road dedication was not wide enough to allow for relocation of the drainage canals within the project area.

The Department of Fisheries and Oceans (DFO) has required the City to create approximately 11,000 m<sup>2</sup> of new aquatic and riparian habitat to compensate for the loss of existing habitat.

Due to the size of the required aquatic and riparian compensation, there are few areas in the City available for construction of these works. Staff have identified Woodward's Slough (which is designated as a Park) as the preferred location for the work as it allows the compensation to be provided in one location and enhances the habitat value of the area. Woodward's Slough is shown in Figure 1.

**Figure 1- Project Location – Woodward's Slough - 13888 Garden City Road**

### *Existing Site Conditions*

Woodwards Slough is located at the south end of Garden City Road (13888 Garden City Road). The park is owned by the City and within the Agricultural Land Reserve (ALR). The park currently consists of mostly natural areas inaccessible to the public. There are several small groves of trees, some heavily wooded areas, a grassy meadow, an active railway line, an abandoned rail spur, and a gravel area. The Woodward's Slough Canal runs along the east side of the park; the dike along with the Woodward's Drainage Pump Station are located to the south. Crown Packaging is located to the west of the park and the South Dyke Trail is located along the south and west edges of the park. BC Hydro transmission towers and power line along with an encompassing right-of-way run through the park.

### *Agricultural Land Reserve*

The project site is located on City owned property within the ALR. City staff have discussed the habitat compensation project with planning staff at the Agricultural Land Commission (ALC) and have been advised that no formal application or notification to the ALC is required.

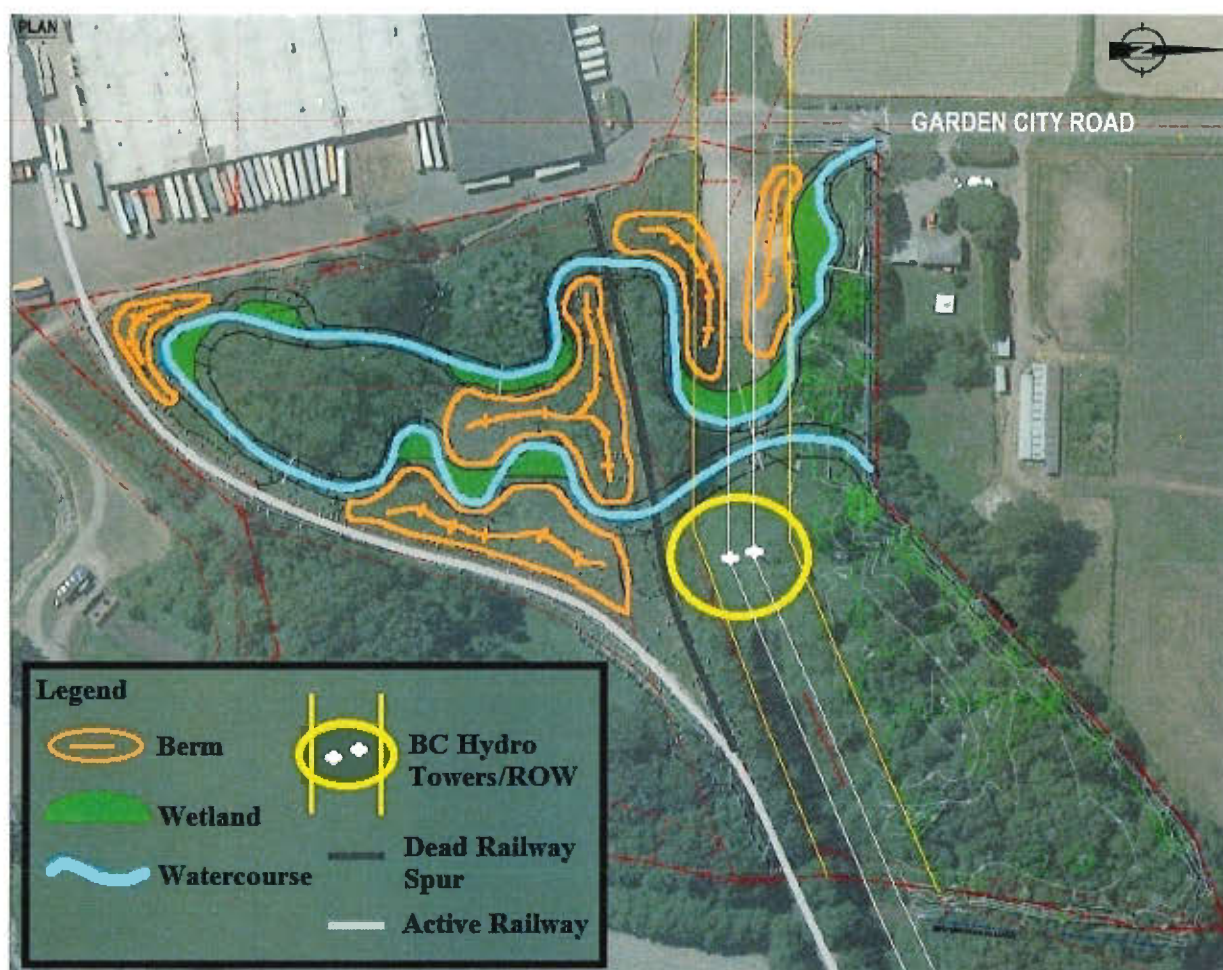
### *Project Scope*

This project creates approximately 11,000 square meters of compensatory habitat comprised of riparian vegetation fish habitat, watercourse compensatory fish habitat and cattail vegetation fish habitat consistent with the City's Ecological Network Strategy, Invasive Species Action Plan and Integrated Rainwater Resource Management Strategy.

The design layout was chosen to minimize the impact on existing trees, to follow the natural ground contours, and to allow for clearance and access to existing railway and BC Hydro infrastructure. The design also allows for excavated material from the new watercourse to be utilized onsite to create berms and hills.

The project scope for the habitat compensation is shown in Figure 2.

**Figure 2 – Project Scope – Woodward's Slough Habitat Compensation**





*Tree Removal and Compensation*

The proposed design was created to optimize the preservation of significant size trees and high value habitat. The new channel was designed to avoid existing trees where possible; however, some small trees may require removal. Adjustments will be made in the field during construction to decrease the impact on the existing trees.

As part of the project, removed vegetation will be replaced with new trees, shrubs, grasses, cattails and plants. The replacement planting will be done at this location and consists of predominantly native tree and shrub species. Invasive blackberry plants will be removed as required to accommodate the proposed works.

In advance of construction, tree protection fencing will be installed around existing trees adjacent to the construction zone and bird nest surveys will be done prior to the removal of any trees or shrubs.

*Construction Impacts to Road, Trail and Land Users*

The existing trails in the surrounding areas are used by pedestrians and recreational cyclists. Access to the adjacent residential and industrial properties, and the South Dyke Trail, will be maintained during construction.

*Project Schedule and Procurement*

The habitat compensation work is scheduled to commence in late summer 2018 by City forces. Preliminary survey layout and clearing works will commence prior to construction.

*Project Information Plan*

Project information signs will be installed at either end of the site. In addition to an overview of habitat compensation, scope and schedule, these signs will include information on impacts to trees, existing trails, parking areas, and planned interim measures. Information will also be provided on the tree and shrub compensation included in the project. Contact information for the City's Project Manager will also be provided should the public have further inquiries about the trail access, tree removal, compensation, or any other aspects of the project prior to construction.

**Financial Impact**

Funding to complete the habitat compensation at Woodward's Slough was approved by Council as part of the 2013 Capital Budget for the Westminster Highway and Nelson Road capital projects. There are sufficient funds available to complete the habitat works.

## Conclusion

Habitat compensation is required as part of the environmental compensation for the Westminster and Nelson Road Widening capital projects. Woodward's Slough has been identified as the preferred location. Design has progressed to the point where impacts to adjacent trees and shrubs have been identified and the compensatory layout has been identified. A preliminary Project Information Plan has also been formulated to communicate impacts to road and trail users, and the general public. Work will continue on finalizing the design and coordinating construction for this project.



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