

7.2 IRRIGATION & DRAINAGE



Drainage and irrigation canal

ISSUE:

Richmond has approximately 49% of floodplain lands within the Agricultural Land Reserve. These lands are primarily located in East Richmond, McLennan, and Gilmore areas. An important objective of the City is to ensure drainage of the floodplain lands, while at the same time ensure proper irrigation to promote agricultural activities.

Stormwater

Stormwater is water that flows across the land. The source is not limited to rainfall, but may also come from agricultural runoff, commercial and household activities, and other related sources. This water flows across the land and streets carrying them via Richmond's stormwater system, a combination of closed pipe systems, box culverts, open ditches, sloughs, floodboxes, and pump stations. It finally ends up in the Fraser River.

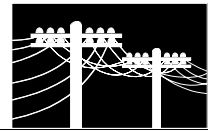
Storm drainage efficiency in Richmond is closely monitored and is upgraded through annual maintenance programs and through new construction and improvements. The primary focus of stormwater management has been on flood control. The challenge for Richmond is to balance flood control, agricultural drainage, urban development needs, and water quality improvements, which may be proposed or legislated as the City's growth increases.

OBJECTIVE 1:

Maintain and improve the quality of drainage and irrigation systems to promote the management of floodplain lands and agricultural operations.

POLICIES:

- a) Enhance the drainage network by improving pump station function and efficiency to improve drainage and irrigation for operating farms;
- b) Encourage construction of new drainage works in designated agricultural areas as part of the approval of adjacent industrial developments;
- c) Ensure that the location and construction of new roads and utilities will have a minimal impact on agricultural lands, farm holdings and operating activities;



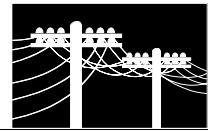
- d) Help to facilitate the improvement of agricultural infrastructure, e.g. irrigation, drainage, dyking works, and other services that support the agricultural sector.

OBJECTIVE 2:

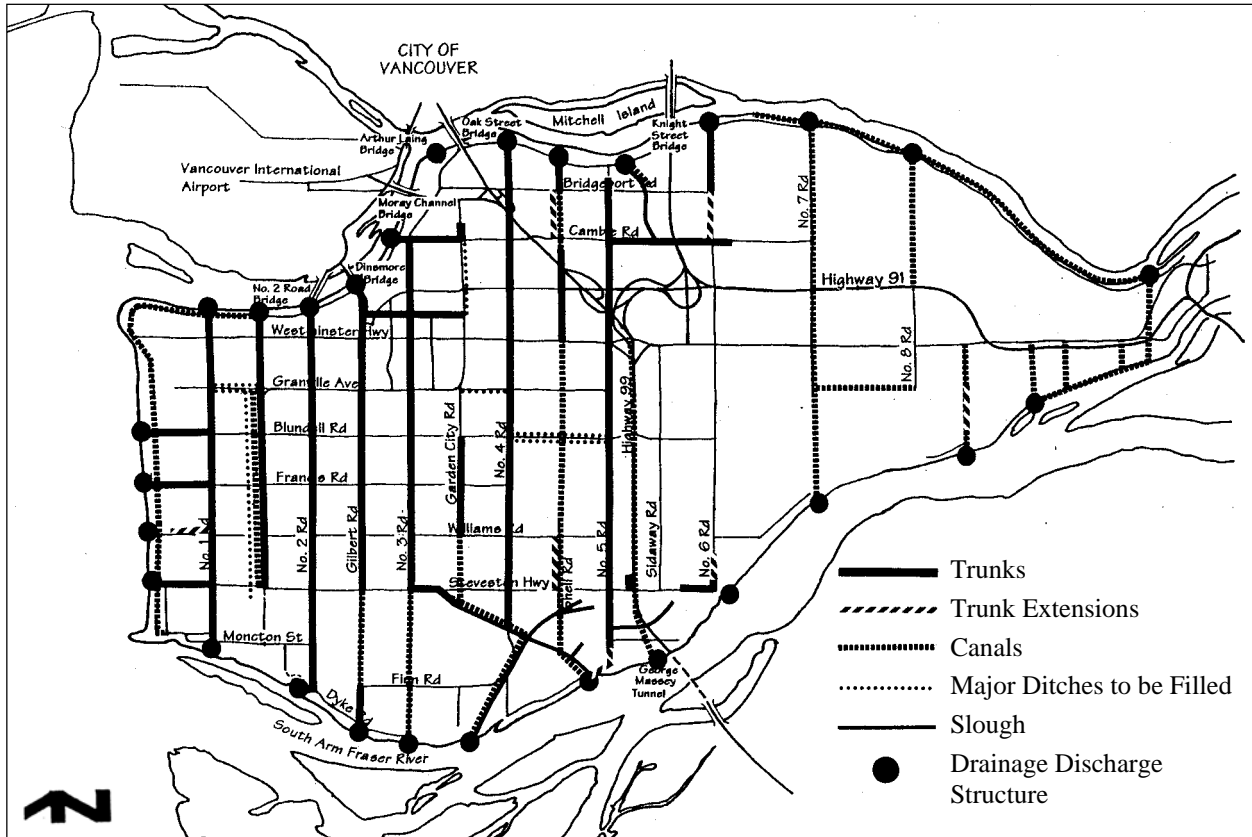
Ensure an efficient and self-supporting stormwater and wastewater collection and disposal system, which meets the needs of the public and regional clean water requirements.

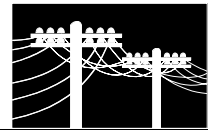
POLICIES:

- a) Maintain and improve the existing stormwater systems through an annual program of preventive maintenance and on-going appraisal;
- b) Integrate master planning for stormwater management with other city initiatives to achieve adequate drainage and to minimize pollution and erosion problems;
- c) Where necessary, limit the increase of impervious surfaces to reduce water run-off through zoning and development regulations;
- d) Work towards developing alternative strategies to deal with on-site rainfall runoff and/or detention to achieve cost effectiveness and environmental benefit;
- e) Test stormwater quality and in-pipe monitoring stations and review results with the intention of reducing sources of contaminants;
- f) Coordinate with other agencies to develop a public information and education program on stormwater pollution;
- g) Upgrade stormwater systems in established neighbourhoods through local initiative funding and/or redevelopment initiatives;
- h) Ensure proper standards for ditch crossings and culverts, and the placement of fill, concrete, or other materials or structures, in order not to block rights-of-way or impede the flow characteristics of drainage ditches and other components of the stormwater network.



Storm Drainage





Agricultural Drainage

