



City of Richmond

Report to Committee

To: Public Works & Transportation Committee **Date:** July 15, 2004
From: Eric G. Gilfillan **File:** 10-6650-00/Vol 01
Director, Operations
Re: Revised Water Shortage Response Plan (Sprinkling Restrictions)

Staff Recommendation:

That Council implement the GVRD Water Shortage Response Plan (Sprinkling Restrictions) by giving the following bylaws first, second and third readings:

- (a) Water Use Restriction Bylaw No. 7784; and
- (b) Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 7785.

Eric G. Gilfillan
Director, Operations
(1206)

Att. 3

FOR ORIGINATING DIVISION USE ONLY					
ROUTED TO:		CONCURRENCE		CONCURRENCE OF GENERAL MANAGER	
City Clerk.....	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	
Law.....	Y	<input checked="" type="checkbox"/>	N	<input type="checkbox"/>	
REVIEWED BY TAG		YES	NO	REVIEWED BY CAO	
		<input type="checkbox"/>	<input type="checkbox"/>	YES	NO
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Staff Report

Background

The Water Shortage Response Plan (WSRP) was first prepared by the Greater Vancouver Regional District and adopted by the City of Richmond as the water restriction bylaw in 1993. It is a tool to reduce demand for water during the summer months (when high demand and low rainfall can strain limited storage capacity) and in the event of water shortages due to unforeseen emergency situations at any time of the year. The most familiar component of the WSRP is the lawn sprinkling regulations. The WSRP is intended to manage discretionary uses of water in a manner, which minimizes the impact on residents and does not impose unnecessary economic hardships on businesses.

Each member municipality enacts the WSRP by implementation of a municipal bylaw, which enables municipal staff to enforce the water restrictions.

Analysis

The revised WSRP was approved by the GVRD Board at its meeting of May 26, 2004. In 2004, the original WSRP was extensively revised based on:

- a) Experience with the 1993 WSRP;
- b) Analyses of best practices and similar water shortage plans from other jurisdictions;
- c) Technical analysis of summer water use within various commercial sectors;
- d) Analysis of extensive public input during the summer of 2003;
- e) Input from the GVRD, municipal staff including the REAC Water Subcommittee; and
- f) Input from the GVRD Water Committee and public delegations to that committee

Key changes from the 1993 WSRP to the revised 2004 WSRP included:

- Combining Stages 1 (public education only) & 2 (twice-weekly sprinkling restrictions) of the 1993 WSRP into a single stage enacted automatically each year.
- The addition of a new Stage 4 containing water restrictions to be enacted only in cases of severe water shortages or extreme emergency situations.
- More uniformly applied watering restrictions on private and commercial lawns.
- More explicit wording of water use restrictions and new restrictions on certain activities not previously mentioned in the WSRP (e.g. uses of water such as fountains or aesthetic pressure washing that are viewed by the public as 'cosmetic')
- The addition of a water shortage assessment chart to provide a general guideline to the points at which increased water shortage actions (e.g. advancing to a subsequent stage in the WSRP, or increasing water withdrawn from Coquitlam reservoir) may be enacted.
- Golf courses and water depend businesses are identified and given specific direction instead of meeting a general percentage reduction in use, based on 1990 consumptions.
- The addition of an 'At-A-Glance' summary of the WSRP, primarily for use by public sector staff.

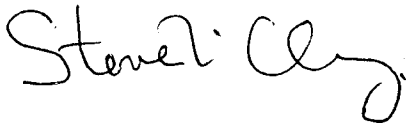
Financial Impact

The penalties level for non-compliance with the WSRP has been increased significantly to reflect urgency of the increasing stages of water restrictions. Under the old plan a \$75 fine was applied, revised penalties are outlined below.

- (a) \$100 if the offence is committed when Stage 1 Restrictions are in force;
- (b) \$200 if the offence is committed when Stage 2 Restrictions are in force;
- (c) \$500 if the offence is committed when Stage 3 Restrictions are in force;
or
- (d) \$1000 if the offence is committed when Stage 4 Restrictions are in force.

Conclusion

Since 1993, the Water Shortage Response Plan has been an important and effective tool for managing demand for water in times of shortages or emergencies. The revised WSRP provides greater clarity and consistency in the application of restrictions, guidelines for the 'triggers' that would move the region from one stage of the WSRP to another, and a new stage of water restrictions to be used as a contingency in the event of extreme shortages or emergencies.



Steve McClurg
Manager, Water Services
(1209)

SM:sm

































2004 GVWD Water Shortage Response Plan - At a Glance

 : ACCEPTABLE

 : RESTRICTED










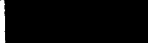













 : PROHIBITED

NOTE: These restrictions apply only to the use of treated drinking water. The WSRP restrictions do not apply to the use of rain water, gray water, or any forms of recycled water.

ACTIVITY	WSRP STAGES				RESTRICTION DETAILS
	1	2	3	4	
Residential and commercial lawn sprinkling					<p>STAGE 1: June 1-Sept. 30, even addresses Saturday and Wednesday, odd addresses Sunday and Thursday, 4-9 a.m. and 7-10 p.m.</p> <p>STAGE 2: Even-numbered addresses Wednesday, odd-numbered addresses Thursday, 4-9 a.m. and 7-10 p.m.</p> <p>STAGES 3-4: All forms of watering using treated drinking water are prohibited.</p>
New (unestablished) residential and commercial lawns, trees, shrubs, flowers					<p>STAGES 1-2: Sprinkling outside restricted times allowed only at the discretion of each municipality and with special permits to be displayed on lawn.</p> <p>STAGES 3-4: No new permits issued or renewed. All forms of watering using treated drinking water are prohibited.</p>
Flowers & vegetable gardens, decorative planters, shrubs and trees					<p>STAGE 3: Only if done by hand using a spring-loaded shut off nozzle, or using containers or drip irrigation. Use of sprinklers or soaker hoses is prohibited.</p> <p>STAGE 4: All forms of watering using treated drinking water are prohibited.</p>
Commercial flowers and vegetable gardens					STAGE 4: All forms of watering using treated drinking water are prohibited.
Private pools and spas, and garden ponds					<p>STAGE 3: Refilling is prohibited.</p> <p>STAGE 4: Refilling is prohibited.</p>
Public water play parks and pools					<p>STAGES 2-3: Unless otherwise authorized by municipality, only water play parks with user-activated switches will be operated.</p> <p>STAGE 4: All water parks shut down. Municipal outdoor pools closed. Winterization deferred until Stage 4 is lifted by GVWD.</p>
Public and commercial fountains and water features					STAGES 2-4: All shut down.
Private and commercial outdoor impermeable surfaces (i.e., driveways, sidewalks and parkades)					<p>STAGES 2-3: Only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited.</p> <p>STAGE 4: All forms of hosing of outdoor surfaces are prohibited unless ordered by a regulatory authority (i.e., WCB, public health inspector, etc...).</p>

(con't other side)

2004 GVWD Water Shortage Response Plan - At a Glance (con't)

ACTIVITY	WSRP STAGES				RESTRICTION DETAILS
	1	2	3	4	
Private and commercial pressure washing					<p>STAGES 2-3: Only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited. Private pressure washing prohibited in Stage 3.</p> <p>STAGE 4: All forms of hosing of outdoor surfaces are prohibited unless ordered by a regulatory authority for health and safety reasons (i.e., WCB, public health inspector, etc...).</p>
Outdoor car washing and boat washing					<p>STAGES 1-2: Only with hose equipped with spring-loaded shut off.</p> <p>STAGES 3-4: No outdoor washing or rinsing of vehicles and pleasure crafts, except for safety (windows, lights and licenses only).</p>
Commercial carwashes					STAGE 4: Commercial carwashes shut down.
Golf courses					<p>STAGE 1: Municipalities request golf course operators cut water use on fairways by as much as possible.</p> <p>STAGE 2: Water greens and tee areas normally; fairways only once weekly. Signage indicating the use of non-GVWD water is encouraged.</p> <p>STAGE 3: Water greens and tee areas minimally; fairways may not be watered.</p> <p>STAGE 4: All forms of watering using treated drinking water are prohibited.</p>
Commercial turf farms					STAGE 4: All forms of watering using treated drinking water are prohibited.
Artificial turf and outdoor tracks (i.e., bicycle and motorcycle tracks, running tracks)					<p>STAGES 1-3: Hosing for health and safety only.</p> <p>STAGE 4: All forms of watering using treated drinking water are prohibited.</p>
School yards, sports and sand-based playing fields					<p>STAGES 2-3: Minimum levels required to maintain areas in useable condition.</p> <p>STAGE 4: All forms of watering using treated drinking water are prohibited.</p>
Cemetery lawns					<p>STAGE 1: June 1-Sept. 30, even addresses Saturday and Wednesday, odd addresses Sunday and Thursday, 4-9 a.m. and 7-10 p.m.</p> <p>STAGE 2: Only once weekly (Wed. and Thurs.).</p> <p>STAGES 3-4: All forms of watering using treated drinking water are prohibited.</p>

Contact Information

For information regarding enforcement of the WSRP, please contact the City of Richmond's service center at 604-244-1262 or 24 hour dispatcher at 604-270-8721.

For the City of Richmond's automated WSRP information line call 604-276-4355.

For general regional WSRP information, please contact the GVRD Information Centre at 604-432-6200.

For copies of media releases issued during the WSRP implementation, please go to www.gvrd.bc.ca









2004 GVWD Water Shortage Response Plan - At a Glance

Application of the WSRP to Municipal Property

 : ACCEPTABLE

 : RESTRICTED

 : PROHIBITED

ACTIVITY	WSRP STAGES				RESTRICTION DETAILS
	1	2	3	4	
Municipal parks					<p>STAGE 2: These surfaces may be watered only within the once-weekly times.</p> <p>STAGE 3: All forms of watering using treated drinking water are prohibited.</p> <p>STAGE 4: All forms of watering using treated drinking water are prohibited. Shut down faucets in parks and public spaces, except for drinking fountains equipped with spring-loaded shut off.</p>
Municipal ornamental lawns, grassed boulevards.					<p>STAGE 1: June 1-Sept. 30, even addresses Saturday and Wednesday, odd addresses Sunday and Thursday, 4-9 a.m. and 7-10 p.m.</p> <p>STAGE 2: Only once weekly (Wed. and Thurs.)</p> <p>STAGES 3-4: All forms of watering using treated drinking water are prohibited.</p>
Municipal hydrant flushing					<p>STAGES 1-4: Only for unscheduled safety or public health reason. Routine flushing to be scheduled outside WSRP timeframe.</p>



Water Use Restriction Bylaw No. 7784

The Council of the City of Richmond enacts as follows:

PART ONE: DECLARATION AND ANNOUNCEMENT OF RESTRICTION STAGES

1.1 Declaration of Restriction Stages

- 1.1.1 The **Commissioner** may, by letter to the **General Manager, Engineering and Public Works**, declare that the Greater Vancouver Water District has activated a **restriction stage**.
- 1.1.2 If the **Commissioner** makes a declaration under subsection 1.1.1, the **restriction stage** described in the declaration comes into force in the **City** seventy-two hours after the **Commissioner** or the **General Manager, Engineering & Public Works** makes a **public announcement** of the declaration.
- 1.1.3 When a **restriction stage** comes into force under this section, any **restriction stage** that had been in force, if any, ceases to be in force.
- 1.1.4 If no **restriction stage** is in force on June 1st of any year, **Stage 1 Restrictions** come into force on that date without prior declaration of the **Commissioner** or announcement under section 1.1.2.

PART TWO: RESTRICTION STAGES

2.1 Stage 1 Restrictions

- 2.1.1 Subject to the provisions of section 2.5, when **Stage 1 Restrictions** are in force, a **person** must not:
 - (a) **water** lawns, except:
 - (i) at premises with even-numbered civic addresses, on Wednesdays and Saturdays between 4:00 a.m. and 9:00 a.m. and between 7:00 p.m. and 10:00 p.m.; and
 - (ii) at premises with odd-numbered civic addresses, on Thursdays and Sundays between 4:00 a.m. and 9:00 a.m. and between 7:00 p.m. and 10:00 p.m.; or

- (b) use a hose providing **water** to wash boats or motor vehicles, unless the hose is equipped with an **automatic shut-off device**.

2.2 Stage 2 Restrictions

2.2.1 Subject to the provisions of section 2.6, when **Stage 2 Restrictions** are in force, a **person** must not:

- (a) **water** lawns, except:
 - (i) at premises with even-numbered civic addresses, on Wednesdays between 4:00 a.m. and 9:00 a.m. and between 7:00 p.m. and 10:00 p.m.; and
 - (ii) at premises with odd-numbered civic addresses, on Thursdays between 4:00 a.m. and 9:00 a.m. and between 7:00 p.m. and 10:00 p.m.;
- (b) use a hose providing **water** to wash sidewalks, driveways, walls, roofs or other outdoor surfaces, unless the hose is equipped with an **automatic shut-off device** and the purpose of washing is:
 - (i) to prepare a surface for painting, sealing, or similar treatment;
 - (ii) to prevent or control fires; or
 - (iii) for the health or safety of any **person**; or
- (c) operate ornamental fountains.

2.3 Stage 3 Restrictions

2.3.1 Subject to the provisions of section 2.7, when **Stage 3 Restrictions** are in force, a **person** must not:

- (a) **water**:
 - (i) any lawn; or
 - (ii) flower gardens, vegetable gardens, decorative planters, shrubs or trees, unless such **watering** is carried out by hand with a hose equipped with an **automatic shut-off device** and is not carried out using sprinklers or soaker hoses;

- (b) use a hose providing **water** to wash boats or motor vehicles, unless the hose is equipped with an **automatic shut-off device** and the purpose of the washing is to maintain visibility of lights or licence plates, or through windows, or is otherwise for the safe operation of the boat or motor vehicle;
- (c) **water** as prohibited in clauses (b) and (c) of subsection 2.2.1;
- (d) use **water** to fill or re-fill garden ponds, ornamental fountains, hot-tubs, or swimming pools; or
- (e) use a hose providing **water** unless the hose is equipped with an **automatic shut-off device**.

2.4 Stage 4 Restrictions

2.4.1 Subject to the provisions of section 2.8, when **Stage 4 Restrictions** are in force, a **person** must not:

- (a) **water** as prohibited in:
 - (i) clause (c) of subsection 2.2.1; and
 - (ii) clauses (b), (d), and (e) of subsection 2.3.1;
- (b) **water**, or engage in **drip irrigation** of:
 - (i) lawns or landscaping, whether newly planted or otherwise;
 - (ii) flower or vegetable gardens;
 - (iii) decorative planters;
 - (iv) shrubs or trees;
 - (v) artificial turf; or
 - (vi) outdoor tracks;
- (c) operate a lawn sprinkler using **water** for play;
- (d) use a hose providing **water** to wash sidewalks, driveways, walls, roofs or other outdoor surfaces, unless the hose is equipped with an **automatic shut-off device** and the washing has been ordered by a regulatory authority;
- (e) operate a **water play park** or water slide; or

(f) operate a car wash.

2.4.2 For greater certainty, the provisions of subsection 2.4.1 apply to all areas of:

- (a) **commercial** nurseries and produce farms;
- (b) turf farms;
- (c) golf courses;
- (d) sports playing fields; and
- (e) school yards.

2.5 Exceptions to Water Use Restrictions – Stage 1

2.5.1 The **Stage 1 Restrictions** specified in subsections 2.1.1 do not apply to:

- (a) a **person** who **waters** lawns or landscaping at premises pursuant to a **permit**, provided the **person** is and has been at all times in compliance with the **permit**;
- (b) **watering**:
 - (i) public sports playing fields;
 - (ii) school yards;
 - (iii) turf at turf farms;
 - (iv) artificial turf or outdoor race tracks where **watering** is required for dust control or safety;
 - (v) flower gardens, vegetable gardens, decorative planters, shrubs or trees; and
 - (vi) the playing surface of golf courses; and
- (c) **commercial** car washes.

2.6 Exceptions to Water Use Restrictions – Stage 2

2.6.1 The **Stage 2 Restrictions** specified in subsection 2.2.1 do not apply to:

- (a) a **person** who **waters** lawns or landscaping at premises pursuant to a permit issued under subsection 3.1.3, provided the **person** is and has been at all times in compliance with the permit;

(b) **watering:**

- (i) as permitted in clauses (b)(i) through (v) and (c) of subsection 2.5.1.;
- (ii) flowers or produce at **commercial** nurseries or produce farms;
- (iii) trees at tree farms; and
- (iv) the tee-off areas and putting greens of golf courses.

2.7 Exceptions to Water Use Restrictions – Stage 3

2.7.1 The **Stage 3 Restrictions** specified in subsection 2.3.1 do not apply to **watering:**

- (a) as permitted in clauses (b)(i) through (iv) and (c) of subsection 2.5.1.;
- (b) flowers or produce at **commercial** nurseries or produce farms;
- (c) trees at tree farms; and
- (d) the tee-off areas and putting greens of golf courses, provided that **water** is used only to the extent necessary to maintain the viability of the grass in those areas.

2.8 Time Limit for Water Use Restrictions

2.8.1 No **Restriction Stage** remains in force after September 30th of any year, unless the **Commissioner** makes a declaration under this section.

2.8.2 At any time before or after September 30th of any year, the **Commissioner** may, by letter to the **General Manager, Engineering & Public Works** declare that notwithstanding subsection 2.8.1, a **Restriction Stage** will remain in force or come into force after September 30th.

PART THREE: PERMITS

3.1 Permits for New Lawns or Landscaping

3.1.1 A **person** who has installed a new lawn, either by placing sod or turf or by seeding, or who has installed new landscaping on a substantial part of the outdoor portion of a premises may apply to the **General Manager, Engineering & Public Works** for a permit authorizing the **person** to **water** the new lawn and new landscaping when **Stage 1 Restrictions** or **Stage 2 Restrictions** are in force.

3.1.2 An application for a **permit** must be accompanied by an application fee of \$30.00.

- 3.1.3 The **General Manager, Engineering & Public Works**, upon being satisfied that an applicant qualifies under section 3.1.1, may issue a **permit** to the applicant.
- 3.1.4 Notwithstanding **Stage 1 Restrictions** or **Stage Restrictions**, the holder of a valid **permit** is authorized to **water** new lawn and new landscaping at the premises described in the **permit** during the times and for the period specified in the **permit**.
- 3.1.5 A **permit** does not exempt the holder from **Stage 3 Restrictions** or **Stage 4 Restrictions**.
- 3.1.6 A **permit** must be affixed to a post facing the street serving the premises, beside the principal driveway from the street to the premises.
- 3.1.7 A **permit** expires and is of no force or effect 21 days after the date of its issue, unless extended under subsection 3.1.7.
- 3.1.8 Before or after the expiration of a **permit**, the **permit** holder may apply for one extension of the **permit**, but any such extension must end on or before 42 days from the date of the issue of the **permit** under section 3.1.3.

PART FOUR: DELEGATION OF AUTHORITY

4.1 Delegation of Authority of General Manager, Engineering & Public Works

- 4.1.1 The **General Manger, Engineering & Public Works** may delegate some or all of his or her powers and duties under this bylaw.

PART FIVE: INTERPRETATION

- 5.1 In this bylaw, unless the context otherwise requires:

AUTOMATIC SHUT-OFF DEVICE	means a device attached to a water hose that is spring-loaded and shuts off the supply of water automatically unless hand pressure is applied to allow the supply of water.
CITY	means the City of Richmond.
COMMERCIAL	means for profit or gain.
COMMISSIONER	means the Commissioner of the Greater Vancouver Water District.
COUNCIL	means the Council of the City .

DRIP IRRIGATION

means a system using irrigation components which consume less than 20 gallons (91 litres) per hour and operate at less than 25 PSI (172 kPa) to deliver **water** to the root zone of the plant material being irrigated.

**GENERAL MANAGER,
ENGINEERING & PUBLIC
WORKS**

means the person appointed by **Council** to the position of General Manager, Engineering & Public Works and includes a person to whom the General Manager, Engineering & Public Works has delegated authority under this bylaw.

PERMIT

means a permit issued under Part 3 of this bylaw.

PERSON

does not include a municipality, a regional district, the provincial government, or any body appointed or created under an enactment of Canada or British Columbia.

PUBLIC ANNOUNCEMENT

means one or more advertisements or public service announcements in any one of:

- (i) a television or radio broadcast from a station that broadcasts to the **City**;
- (ii) a newspaper or other publication intended for general circulation, including one that is distributed without charge to the reader, that contains news and advertising, and is distributed within the **City** at least once per week.

RESTRICTION STAGE

means restrictions on **water** use imposed by the **Commissioner**, specifically the stages of restrictions specified in Part Two of this bylaw.

STAGE 1 RESTRICTIONS

means the restrictions on **water** use specified in section 2.1 of this bylaw.

STAGE 2 RESTRICTIONS

means the restrictions on **water** use specified in section 2.2 of this bylaw.

STAGE 3 RESTRICTIONS

means the restrictions on **water** use specified in section 2.3 of this bylaw.

STAGE 4 RESTRICTIONS

means the restrictions on **water** use specified in section 2.4 of this bylaw.

WATER

used as a noun, means **water** supplied directly or indirectly by Greater Vancouver Water District or the City of Richmond, whether or not mixed with rain **water**, gray **water** or recycled **water**.

WATER OR WATERING

used as a verb, mean the application or distribution of **water** (used as a noun) to lands or plants but does not include the method known as **drip irrigation**.

WATER PLAY PARK

means a recreational facility that is primarily out of doors, that includes **water** slides longer than 10 meters.

PART SIX: OFFENCES AND PENALTIES

6.1 Any person who:

- (a) violates or who causes or allows any of the provisions of this bylaw to be violated; or
- (b) fails to comply with any of the provisions of this or any other bylaw or applicable statute; or
- (c) neglects or refrains from doing anything required under the provisions of this bylaw,

is deemed to have committed an infraction of, or an offence against this bylaw is liable on summary conviction, to the penalties provided in section 6.2, and each day that such violation is caused, or allowed to continue, constitutes a separate offence.

6.2 Upon conviction pursuant to the *Offence Act* for an offence against this bylaw, the offender is liable to the following fines:

- (a) for a first conviction, not less than \$3,000 and not more than \$10,000;
- (b) for a second or subsequent conviction, not less than \$5,000 and not more than \$10,000.

6.3 In a prosecution under this bylaw, the onus of establishing an exemption under sections 2.5, 2.6 or 2.7 lies on the **person** claiming the exemption.

PART SEVEN: PREVIOUS BYLAW REPEAL

7.1 Water Restrictions Bylaw No. 6085 (adopted May 25, 1993); and Amendment Bylaw No. 6767 (adopted June 9, 1997), are repealed.

PART EIGHT: SEVERABILITY & CITATION

8.1 If any part, section, sub-section, clause, or sub-clause of this bylaw is, for any reason, held to be invalid by the decision of a Court of competent jurisdiction, such decision does not affect the validity of the remaining portions of this bylaw.

8.2 This bylaw is cited as **“Water Use Restriction Bylaw No. 7784”**.

FIRST READING

SECOND READING

THIRD READING

ADOPTED



MAYOR

CITY CLERK



**Municipal Ticket Information Authorization Bylaw No. 7321,
Amendment Bylaw No. 7785**

The Council of the City of Richmond enacts as follows:

- 1. Bylaw No. 7321 is amended by repealing Schedule B 14 and substituting the following:

WATER USE RESTRICTION BYLAW NO. 7784

Column 1	Column 2	Column 3
Offence	Bylaw Section	Fine
Watering contrary to Stage 1 Restrictions	2.1.1	\$100
Watering contrary to Stage 2 Restrictions	2.2.1	\$200
Watering contrary to Stage 3 Restrictions	2.3.1	\$500
Watering contrary to Stage 4 Restrictions	2.4.1	\$1,000
Watering contrary to the terms of a permit	3.1.4	\$100
Failure to display permit	3.1.6	\$100

- 2. This Bylaw is cited as “**Municipal Ticket Information Authorization Bylaw No. 7139,
Amendment Bylaw No. 7785**”.

FIRST READING

SECOND READING

THIRD READING

ADOPTED

CITY OF RICHMOND
APPROVED for content by originating dept.
<i>JC</i>
APPROVED for legality by Solicitor
<i>KS</i>

MAYOR

CITY CLERK