



City of Richmond

Report to Committee

To: Public Works and Transportation Committee

Date: May 3, 2011

From: John Irving, P.Eng., MPA
Director, Engineering

File: 10-6650-09-01/2011-
Vol 01

Re: Revised Water Shortage Response Plan (Sprinkling Restrictions)

Staff Recommendation

That staff bring forward amendments to Water Use Restriction Bylaw No. 7784 in accordance with the "Revised Water Shortage Response Plan (Sprinkling Restrictions)" report from the Director, Engineering.

John Irving, P.Eng., MPA.
Director, Engineering
(4140)

Att. 1

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE		CONCURRENCE OF GENERAL MANAGER
Water Services	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
Community Bylaws	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	REVIEWED BY CAO
			YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

Staff Report

Origin

At the August 30, 2004 Regular Council Meeting, Council adopted the following motion:

“That the following bylaws, which implement the GVRD Water Shortage Response Plan (Sprinkling Restrictions), each be introduced and given 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.”

The Water Shortage Response Plan (“the Plan”) was prepared by Metro Vancouver (formerly the Greater Vancouver Regional District) and adopted by the City of Richmond as the Water Use Restriction Bylaw. The bylaw reduces demand for water during the summer months and in the event of water shortages due to unforeseen emergency situations at any time of the year. The most familiar component of the Plan is the lawn sprinkling regulations. The Plan is intended to manage discretionary uses of water while minimizing the impact on residents and does not impose unnecessary economic hardships on businesses.

Each member municipality enacts the Plan by implementation of a municipal bylaw, which enables municipal staff to enforce the water restrictions. Metro Vancouver has recommended that these bylaws be updated to reflect the new Plan.

Analysis

The 2011 Plan (attached) was approved by the Board of the Greater Vancouver Water District (GVWD) at its meeting on March 18, 2011.

Key changes from the 2004 Plan to the 2011 Plan include:

- Introducing different restrictions for residential and non-residential properties.
- Lawn sprinkling will only be permitted during mornings; sprinkling in the evening will no longer be permitted, in order to reduce evaporation.
- Revising the days and times for Stage 1 and Stage 2 Water Use Restrictions. Lawn sprinkling will be permitted only as follows:

Stage 1 Water Use Restrictions

Existing (2004 Water Shortage Response Plan):

Even-numbered addresses – Wednesday and Saturday (4-9 am and 7-10 pm)

Odd-numbered addresses – Thursday and Sunday (4-9 am and 7-10 pm)

Revised (2011 Water Shortage Response Plan):

Residential Properties¹

Even-numbered addresses – Monday, Wednesday and Saturday (4-9 am)

Odd-numbered addresses – Tuesday, Thursday and Sunday (4-9 am)

¹ Metro Vancouver’s definition for non-residential properties includes mixed use properties, where commercial and industrial components are incorporated with residential units.

Non-residential Properties¹

Even numbered addresses – Monday and Wednesday (1-6 am)

Odd numbered addresses – Tuesday and Thursday (1-6 am)

All non-residential addresses – Friday (4-9 am)

Stage 2 Water Use Restrictions

Existing (2004 Water Shortage Response Plan):

Even-numbered addresses – Wednesday (4-9 am and 7-10 pm)

Odd-numbered addresses – Thursday (4-9 am and 7-10 pm)

Revised (2011 Water Shortage Response Plan):

Residential Properties¹

Even-numbered addresses – Monday (4-9 am)

Odd-numbered addresses – Thursday (4-9 am)

Non-residential Properties¹

Even-numbered addresses – Wednesday (1-6 am)

Odd-numbered addresses – Tuesday (1-6 am)

Financial Impact

There is no financial impact anticipated.

Conclusion

The Plan has been an important and effective tool for managing demand for water during times of shortages or emergencies. The revised Plan further improves demand management and promotes water conservation.

Staff recommend that amendments be brought forward to Water Use Restriction Bylaw No. 7784 in accordance with the “Revised Water Shortage Response Plan (Sprinkling Restrictions)” report from the Director, Engineering.



Eric Sparrow, P.Eng.
Acting Manager, Engineering Planning
(4915)

JH:jh



Jason Ho, P.Eng.
Project Engineer
(1281)

¹ Metro Vancouver's definition for non-residential properties includes mixed use properties, where commercial and industrial components are incorporated with residential units.



metrovanancouver

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TO: MAYOR & EACH
COUNCILLOR
FROM: CITY CLERK'S OFFICE

DC: GM - Eng. + PW
for appropriate
action

Office of the Chair
Tel: 604 432 6215 Fax 604 451-6614

APR 15 2011

Mayor Malcolm Brodie and Council
City of Richmond
Mayor's Office
6911 No. 3 Road
Richmond, BC V6Y 2C1

File: WA-07-01- WSRP-004
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APR 21 2011

& DISTRICT

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Dear Mayor Brodie and Council:

Re: Revised Water Shortage Response Plan

At its meeting on March 18, 2011 the Board of the Greater Vancouver Water District (GVWD) approved a new version of the Water Shortage Response Plan. In particular, the 2011 Water Shortage Response Plan includes revised Lawn Sprinkling Regulations.

As you are aware, each municipality has a bylaw that implements the Water Shortage Response Plan (WSRP) and the Lawn Sprinkling Regulations. It is important that these municipal bylaws are updated to reflect the new WSRP. To assist you, enclosed are the following documents:

- the 2011 Water Shortage Response Plan dated February 21, 2011 (Attachment 1);
- the Water Shortage Response Plan Stages 1 to 4 – At a Glance summary tables (Attachment 2).
- an overview of the 2011 Water Shortage Response Plan Communication Strategy.

In adopting the 2011 WSRP the GVWD Board also resolved that enforcement is to begin June 1, 2012. The expectation is that municipalities will update their bylaws to implement the 2011 WSRP now and manage the enforcement in a transition period for the 2011 summer season with full enforcement commencing June 1, 2012.

If you or your staff have any questions, please contact Stan Woods (604-436-6909) with regards to technical questions about the WSRP, or David Hocking (604-451-6673) with regards to the WSRP Communications Strategy.

Respectfully I remain,

Lois E. Jackson
Chair, Metro Vancouver Board

LEJ/TA/ms

cc: Johnny Carline, Commissioner/Chief Administrative Officer
Municipalities of Bowen Island, Lions Bay & White Rock (Information only)

Attachments:

- 1 2011 Water Shortage Response Plan dated February 21, 2011 (4879611)
- 2 Water Shortage Response Plan Stages 1 to 4 – At a Glance summary tables (4879611)
- 3 2011 Water Shortage Response Plan Communication Strategy (4991879)

4991329

PWT - 68



2011 WATER SHORTAGE RESPONSE PLAN

February 21, 2011

Preface

The purpose of the Water Shortage Response Plan (WSRP) is to manage demand for drinking water during the summer months, and if necessary during times of emergencies. This is important because:

- rainfall is lowest and demand is highest in the summer
- storage, transmission and distribution system capacities are limited
- continued population and industrial growth have led to increased demand
- water shortages may result from unforeseen emergency situations (e.g. earthquakes, major service disruptions, etc.)

The WSRP focuses on reducing demand for outdoor water use. If persistent drought conditions occur, the WSRP contains actions that will produce significant reductions in daily water demand in the region.

The WSRP uses a staged approach, ranging from an initial standard level of water restrictions combined with timely and effective public notification to be automatically implemented each summer season, through to a highest level of restrictions intended for emergencies affecting the delivery of water.

The WSRP defines water shortage assessment general guidelines which would trigger each stage. However, water supply systems are complex and cannot always be measured by a single set of numbers. For example, a WSRP action may be needed to respond to a deficiency in the supply system such as local transmission capacity limitations, a failure of a major transmission line or other unforeseen problems with water treatment and supply infrastructure. Therefore, if the GVWD Commissioner deems it necessary, any stage of the WSRP may be enacted or delayed at any time or enacted in any order as the Commissioner deems necessary.

In cases where summer drought conditions strain the source water storage capacity of the Capilano and Seymour watersheds, a more restrictive stage of the WSRP may be activated. The factors to be monitored and considered in determining if a WSRP action (e.g., moving from Stage 1 to Stage 2) might be warranted under summer drought conditions include the following:

- storage capacity of Capilano and Seymour watersheds and draw down rates. Most of this information is reflected in the Capilano and Seymour storage graphic;
- forecasts of Capilano and Seymour storage, based on assumptions about; inflows to the watersheds, weather, supply volumes from the Coquitlam source, and GVWD water demand;
- recent trends, and forecasts of the GVWD water demand taking into account customer compliance with current restrictions;
- trends and forecasts of precipitation, snowmelt, and climatic conditions and how they may influence inflows to the source watersheds and source reservoirs;
- current levels, and recent trends in water storage (usable, emergency, total) for the Coquitlam source and how they relate to the GVWD's nominations for Coquitlam water;
- expected reduction in GVWD demand associated with taking a WSRP action.

The WSRP applies only to the use of treated drinking water. The WSRP restrictions do not apply to the use of rain water, gray water, any forms of recycled water, or other sources of water outside the GVWD/municipal water supply system.

Stage 1 Water Use Restrictions

Activated automatically on June 1 of each year, or at the discretion of the GVWD Commissioner, and remains in effect until September 30. This end date may be extended by direction of the GVWD Commissioner.

The WSRP restrictions do not apply to the use of rain water, gray water, any forms of recycled water, or other sources of water outside the GVWD/municipal water supply system.

Under Stage 1 of the WSRP:

- Municipalities will suspend hydrant flushing except for unscheduled safety or public health reasons. Routine system flushing will be scheduled outside the WSRP time frame.
- Lawn sprinkling will be restricted to three periods a week, mornings only, enforced by the member municipalities. Outdoor sprinkling of lawns using hose-connected or automatic in-ground sprinklers will be permitted only as follows:

Residential Addresses¹:

Even-numbered addresses - Monday, Wednesday and Saturday mornings (4 - 9 am)

Odd-numbered addresses - Tuesday, Thursday and Sunday mornings (4 - 9 am)

Non-residential Addresses¹:

Even numbered addresses – Monday and Wednesday mornings (1 - 6 am)

Odd numbered addresses – Tuesday and Thursday mornings (1 - 6 am)

All non-residential addresses – Friday mornings (4 - 9 am)

Cemetery lawns, ornamental lawns belonging to municipal facilities, and grassed boulevards will not be exempt and may be watered only within the three-weekly times noted above. Operation of sprinklers for children's play will not be exempt from these restrictions. Automated lawn sprinkler systems will not be exempt.

EXEMPTIONS:

- Sports playing fields and school yards, because their size makes them difficult to irrigate within the time limits, they are generally built on sand bases which do not hold moisture, and because replacement costs are high. Some artificial turf also needs to be watered for safety reasons.
- Municipal parks, because their size makes them difficult to irrigate within the time limits. However, municipalities will reduce sprinkling of parks, playing fields, etc. to minimum levels required to maintain these areas in useable condition. E.g. sand-based fields may require more frequent watering.
- Lawns at golf courses and turf farms, because the restrictions are not intended to cause undue economic hardship or disruption to a business for which lawns are the primary product or service being provided. However, municipalities will request that golf course operators cut water use on fairways by as much as possible.

¹ In cases of mixed zoning or mixed use, where commercial or industrial components are included on the same property along with residential and subject to the landscaping being watered by an in-ground sprinkling system, the designation shall then be classified as "Non-residential".

- Artificial turf requiring wetting and outdoor tracks requiring hosing for dust control or safety.
 - Newly-planted lawns will be allowed to be watered outside of restricted times, but will be required to obtain a municipal permit to be displayed on the lawn.²
 - Watering of flower and vegetable gardens, decorative planters, shrubs and trees will be allowed.
 - Filling of pools, spas, water play parks, and fountains will be allowed.
 - Washing of cars or boats will be permitted, but prudent use of water will be encouraged. Washing must be done using a spring-loaded shutoff nozzle.
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Stage 2 Water Use Restrictions

The GVWD Commissioner has the discretion to enact or delay this stage under different conditions if deemed necessary.

This stage remains in effect until September 30. However, this end date may be extended by direction of the GVWD Commissioner.

The WSRP restrictions do not apply to the use of rain water, gray water, any forms of recycled water, or other sources of water outside the GVWD/municipal water supply system.

Under Stage 2 of the WSRP:

- Lawn sprinkling will be restricted to one morning a week only, enforced by the municipalities. Outdoor sprinkling of lawns using hose-connected or automatic in-ground sprinklers will be permitted only as follows:

Residential Addresses¹:

Even-numbered addresses - Monday morning only (4 – 9 am)

Odd-numbered addresses - Thursday morning only (4 – 9 am)

Non-residential Addresses¹:

Even-numbered addresses – Wednesday morning only (1 – 6 am)

Odd-numbered addresses – Tuesday mornings only (1 – 6 am)

Municipal parks, cemetery lawns, ornamental lawns belonging to municipal facilities, and grassed boulevards will not be exempt and may be watered only within the once-weekly times noted above.

Hosing of outdoor surfaces (e.g. driveways, sidewalks, roofs) will not be allowed unless required to avoid public health and safety concerns or to prepare a surface for painting/sealing or similar treatment, and must be done using a spring-loaded shutoff nozzle.

Pressure washing is equivalent to hosing of an outdoor surface, and will not be permitted except to prepare a surface for painting, sealing or similar treatment. Pressure washing for the purpose of aesthetic cleaning will not be permitted. This will apply to both private and commercial pressure washing.

¹ In cases of mixed zoning or mixed use, where commercial or industrial components are included on the same property along with residential and subject to the landscaping being watered by an in-ground sprinkling system, the designation shall then be classified as "Non-residential"

Ornamental fountains must be shut down. This includes residential, commercial, institutional and government fountains.

Only water play parks with user-activated switches will be permitted to operate.

EXEMPTIONS:

- Golf courses may water greens and tee areas normally; fairways may only be watered once weekly. Where applicable, signage indicating the use of non-GVWD water will be encouraged.
 - Sports playing fields, school yards and sand-based playing fields may be watered at minimum levels required to maintain areas in useable condition.
 - Artificial turf requiring wetting and outdoor tracks requiring hosing for health or safety reasons.
 - Newly-planted lawns will be allowed to be watered outside of restricted times, but will be required to obtain a municipal permit to be displayed on the lawn.
 - Watering of flower and vegetable gardens, decorative planters, shrubs and trees and turf at commercial turf farms will be allowed.
 - Washing of cars or boats will be permitted, but prudent use of water will be encouraged. Washing must be done using a spring-loaded shutoff nozzle.
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Stage 3 Water Use Restrictions

The GVWD Commissioner has the discretion to enact or delay this stage under any condition as deemed necessary.

The WSRP restrictions do not apply to the use of rain water, gray water, any forms of recycled water, or other sources of water outside the GVWD/municipal water supply system.

This stage remains in effect until September 30. However, this end date may be extended by direction of the GVWD Commissioner.

Under Stage 3 of the WSRP:

All forms of lawn watering using treated drinking water will be banned completely, for sprinklers of any type. New lawns, cemetery lawns, ornamental lawns belonging to municipal buildings, and grassed boulevards will not be exempt.

Watering of shrubs and trees, flower and vegetable gardens, and decorative planters will not be permitted unless done by hand using a spring-loaded shutoff nozzle, containers or drip irrigation systems. Watering of gardens and planters using sprinklers or soaker hoses is prohibited.

Pressure washing is equivalent to hosing of an outdoor surface. Only commercial pressure washing to prepare a surface for painting, sealing or similar treatment will be permitted. Pressure washing for the purpose of aesthetic cleaning will not be permitted. Private pressure washing will be prohibited.

Exterior washing of vehicles (e.g. cars, motorcycles, recreational vehicles, trucks, boats and other marine vessels) will be prohibited, except for safety (windows, lights, licenses) and only then if using a spring-loaded shutoff nozzle. This includes residential, commercial, institutional and government vehicles.

Ornamental fountains must be shut down. This includes residential, commercial, institutional and government fountains.

Only water play parks with user-activated switches will operate.

Filling or refilling of garden ponds, hot tubs, or swimming pools will be prohibited.

EXEMPTIONS:

- Watering of turf at turf farms and flowers and vegetable at commercial gardens.
 - Commercial car washes may continue to operate in this stage, as studies have shown that commercial car washes use significantly less water per vehicle than manual washing.
 - Golf courses may water greens and tee areas at minimum levels required to maintain areas in useable condition; fairways may not be watered.
 - Sports playing fields (including sand-based) and school yards may be watered at minimum levels required to maintain areas in useable condition.
 - Artificial turf requiring wetting and outdoor tracks if required for dust control or safety reasons.
 - Hosing of outdoor surfaces (e.g. driveways, sidewalks, roofs) only if required to avoid public health and safety concerns or to prepare a surface for painting/sealing or similar treatment.
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Stage 4 Emergency Water Use Restrictions

The measures listed in this Stage are intended for cases of EMERGENCY water shortages. The GVWD Commissioner has the discretion to enact or delay this stage under any condition as deemed necessary.

This stage remains in effect until September 30. However, this end date may be extended by direction of the GVWD Commissioner.

The WSRP restrictions do not apply to the use of rain water, gray water, any forms of recycled water, or other sources of water outside the GVWD/municipal water supply system.

Under Stage 4 of the WSRP:

Restrictions are the same as Stage 3 except for:

- Any form of watering (even if done by hand, containers, soaker hoses or drip irrigation) using treated drinking water will be prohibited for:
 - commercial flower gardens
 - residential flower gardens
 - residential vegetable gardens
 - trees and shrubs

- golf courses
 - turf farms
 - new lawns
 - sports playing fields (including sand-based)
 - municipal parks
 - cemeteries
 - ornamental lawns belonging to municipal buildings, residences or businesses
 - school yards
 - artificial turf
 - outdoor tracks
 - grassed boulevards
- Municipal permits for watering new lawns will be discontinued.
 - Commercial or private pressure washing and hosing of any outdoor surfaces will not be allowed unless ordered by a regulatory authority (e.g. WCB, public health inspectors) for health and safety reasons.
 - Filling or refilling of garden ponds, hot tubs, or swimming pools will be prohibited.
 - Municipal and commercial water parks will be shut down.
 - Municipal outdoor pools will be closed, and winterization of those pools will be deferred until Stage 4 is lifted by the GVWD Commissioner.
 - All commercial car washes will be shut down.
 - Municipalities will shut down faucets in parks and public spaces (does not apply to drinking fountains with spring-loaded shutoff nozzle).
 - In addition to the outdoor water restrictions of this stage, the GVWD will request that industries that consume large amounts of indoor water implement voluntary reductions/postponements in production during Stage 4.
 - Municipalities will increase their respective enforcement and penalties for violations of the water restrictions with each successive stage of the WSRP.
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Communication of the Water Shortage Response Plan:

The GVWD supports the WSRP with region-wide communications initiatives. Advertising in the daily newspapers will be arranged by GVWD; advertising in community papers will be arranged by member municipalities. The GVWD and its member municipalities will coordinate annual public notification in newspapers, radio and other media as appropriate, including information on the frequency and amount of lawn sprinkling.

Public communications and notices by the GVWD and municipalities regarding water restrictions will be carried out in English and other languages as appropriate and increased with each successive stage of the WSRP.

Outdoor and indoor water use efficiency information and resource materials will be produced and distributed by the GVWD on behalf of the municipalities. This information will be in the most appropriate formats and media.

A staffed water conservation information service will be provided by the GVWD. Member municipalities will provide information services for inquiries on matters of enforcement and municipality-specific water issues using telephones and/or other media as appropriate.

Implementation of the Water Shortage Response Plan

The GVWD Commissioner is responsible for activating different stages of the WSRP and will notify member municipalities of the need for implementing or discontinuing each of the successive phases of the plan through the regular WSRP update bulletins.

As much notice will be provided as practically possible.

The WSRP is adopted into bylaws by each GVWD member municipality to enable consistent implementation throughout the region. Municipalities are responsible for enforcement of the WSRP in their communities. Municipalities utilize a variety of measures for enforcement, including advisory letters, ticketing and water supply restrictions.

Water Shortage Response Plan Stage 1 - At a Glance

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, any forms of recycled water, or other sources of water outside the GVWD.

ACTIVITY		RESTRICTION DETAILS
RESIDENTIAL	Lawn sprinkling	June 1-Sept. 30, even-numbered addresses - Monday, Wednesday and Saturday mornings (4 - 9 am), odd-numbered addresses - Tuesday, Thursday and Sunday mornings (4 - 9 am)
	New (unestablished) lawns.	Sprinkling outside restricted times allowed only with municipal permits to be displayed on lawn.
	Flowers, vegetables, planters, shrubs & trees	No restrictions
	Pools, spas, garden ponds	No restrictions
	Private outdoor impermeable surfaces (i.e., driveways, sidewalks)	No restrictions on hosing of outdoor impermeable surfaces
	Private pressure washing	No restrictions on pressure washing
	Outdoor car washing, boat washing	Only with hose equipped with spring-loaded shut off.
NON-RESIDENTIAL	Lawn sprinkling (including cemeteries)	June 1-Sept. 30, even numbered addresses - Monday and Wednesday mornings (1 - 6 am), odd numbered addresses - Tuesday and Thursday mornings (1 - 6am), all non-residential addresses - Friday mornings (4 - 9 am)
	New (unestablished) lawns.	Sprinkling outside restricted times allowed only with municipal permits to be displayed on lawn.
	Flowers, vegetables, decorative planters, shrubs & trees	No restrictions on watering of flowers, vegetables, planters, shrubs and trees
	Flower and vegetable gardens	No restrictions on watering of flower and vegetable gardens
	Pools, spas, garden ponds	No restrictions
	Fountains and water features	No restrictions
	Outdoor impermeable surfaces (i.e., driveways, sidewalks and parkades)	No restrictions on hosing of outdoor impermeable surfaces
	Pressure washing	No restrictions on pressure washing
	Outdoor car washing, boat washing	Only with hose equipped with spring-loaded shut off.
	Indoor commercial carwashes	No restrictions on the car washing operation
	Golf courses	Municipalities request golf course operators cut water use on fairways by as much as possible.
	Turf farms	No restrictions on watering of commercial turf
	Artificial turf and outdoor tracks (i.e., bicycle, motorcycle & running tracks)	Hosing for health and safety only.
PUBLIC	School yards, sports and sand-based playing fields	No restrictions
	Water play parks and pools	No restrictions
	Fountains and water features	No restrictions
	Municipal parks	No restrictions
	Municipal ornamental lawns, grassed boulevards.	June 1-Sept. 30, even numbered addresses - Monday and Wednesday mornings (1 - 6 am), odd numbered addresses - Tuesday and Thursday mornings (1 - 6am), all non-residential addresses - Friday mornings (4 - 9 am)
	Municipal hydrant flushing	Only for unscheduled safety or public health reason. Routine flushing to be scheduled outside WSRP timeframe.

For information regarding enforcement of the WSRP, please contact your municipality.

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

Water Shortage Response Plan Stage 2 - At a Glance

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, any forms of recycled water, or other sources of water outside the GVWD.

	ACTIVITY	RESTRICTION DETAILS
RESIDENTIAL	Lawn sprinkling	Only once weekly, even numbered addresses - Monday morning only (4 - 9 am), odd-numbered addresses - Thursday morning only (4 - 9 am)
	New (unestablished) lawns.	Sprinkling outside restricted times allowed only with municipal permits to be displayed on lawn.
	Flowers, vegetables, planters, shrubs & trees	No restrictions on watering of flowers, vegetables, planters, shrubs and trees
	Pools, spas, garden ponds	No restrictions
	Private outdoor impermeable surfaces (i.e., driveways, sidewalks)	Hosing 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	Only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited.
	Outdoor car washing, boat washing	Only with hose equipped with spring-loaded shut off.
NON-RESIDENTIAL	Lawn sprinkling (including cemeteries)	Only once weekly, even-numbered addresses - Wednesday morning only (1 - 6 am), odd-numbered addresses - Tuesday mornings only (1 - 6 am)
	New (unestablished) lawns.	Sprinkling outside restricted times allowed only with municipal permits to be displayed on lawn.
	Flowers, vegetables, decorative planters, shrubs & trees	No restrictions on watering of flowers, vegetables, planters, shrubs and trees
	Flower and vegetable gardens	No restrictions on watering of flower and vegetable gardens
	Pools, spas, garden ponds	No restrictions
	Fountains and water features	All shut down
	Outdoor impermeable surfaces (i.e., driveways, sidewalks and parkades)	Hosing only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited.
	Pressure washing	Only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited.
	Outdoor car washing, boat washing	Only with hose equipped with spring-loaded shut off.
	Indoor commercial carwashes	No restrictions on the car washing operation
	Golf courses	Water greens and tee areas normally; fairways only once weekly. Signage indicating the use of non-GVWD water is encouraged.
	Turf farms	No restrictions on watering of commercial turf
	Artificial turf and outdoor tracks (i.e., bicycle, motorcycle & running tracks)	Hosing for health and safety only.
PUBLIC	School yards, sports and sand-based playing fields	Minimum levels required to maintain areas in useable condition.
	Water play parks and pools	Only water play parks with user-activated switches will be operated.
	Fountains and water features	All shut down
	Municipal parks	Only once weekly, even-numbered addresses - Wednesday morning only (1 - 6 am), odd-numbered addresses - Tuesday mornings only (1 - 6 am)
	Municipal ornamental lawns, grassed boulevards.	Only once weekly, even-numbered addresses - Wednesday morning only (1 - 6 am), odd-numbered addresses - Tuesday mornings only (1 - 6 am)
	Municipal hydrant flushing	Only for unscheduled safety or public health reason. Routine flushing to be scheduled outside WSRP timeframe.

For information regarding enforcement of the WSRP, please contact your municipality.

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

Water Shortage Response Plan Stage 3 - At a Glance

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, any forms of recycled water, or other sources of water outside the GVWD.

	ACTIVITY	RESTRICTION DETAILS
RESIDENTIAL	Lawn sprinkling	All forms of watering using treated drinking water are prohibited.
	New (unestablished) lawns.	No new permits issued or renewed. All forms of watering using treated drinking water are prohibited.
	Flowers, vegetables, planters, shrubs & trees	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.
	Pools, spas, garden ponds	Refilling is prohibited.
	Private outdoor impermeable surfaces (i.e., driveways, sidewalks)	Hosing only for health and safety purposes or to prepare a surface for sealing or similar treatment. Washing for aesthetic purposes is prohibited.
	Private pressure washing	Private pressure washing is prohibited.
	Outdoor car washing, boat washing	No outdoor washing or rinsing of vehicles and pleasure crafts, except for safety (windows, lights and licenses only).
NON-RESIDENTIAL	Lawn sprinkling (including cemeteries)	All forms of watering using treated drinking water are prohibited.
	New (unestablished) lawns.	No new permits issued or renewed. All forms of watering using treated drinking water are prohibited.
	Flowers, vegetables, decorative planters, shrubs & trees	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.
	Flower and vegetable gardens	No restrictions on watering of flower and vegetable gardens
	Pools, spas, garden ponds	Refilling is prohibited.
	Fountains and water features	All shut down
	Outdoor impermeable surfaces (i.e., driveways, sidewalks and parkades)	Hosing only for health and safety purposes or to prepare a surface for sealing or similar treatment. Washing for aesthetic purposes is prohibited.
	Pressure washing	Only for health and safety purposes or to prepare a surface for painting or similar treatment. Washing for aesthetic purposes is prohibited.
	Outdoor car washing, boat washing	No outdoor washing or rinsing of vehicles and pleasure crafts, except for safety (windows, lights and licenses only).
	Indoor commercial carwashes	No restrictions on the car washing operation
	Golf courses	Water greens and tee areas at minimum levels required to maintain areas in useable condition; fairways may not be watered.
	Turf farms	No restrictions on watering of commercial turf
	Artificial turf and outdoor tracks (i.e., bicycle, motorcycle & running tracks)	Hosing for health and safety only.
PUBLIC	School yards, sports and sand-based playing fields	Minimum levels required to maintain areas in useable condition.
	Water play parks and pools	Only water play parks with user-activated switches will be operated.
	Fountains and water features	All shut down
	Municipal parks	All forms of watering using treated drinking water are prohibited.
	Municipal ornamental lawns, grassed boulevards.	All forms of watering using treated drinking water are prohibited.
	Municipal hydrant flushing	Only for unscheduled safety or public health reason. Routine flushing to be scheduled outside WSRP timeframe.

For information regarding enforcement of the WSRP, please contact your municipality.

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

Water Shortage Response Plan Stage 4 - At a Glance

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, any forms of recycled water, or other sources of water outside the GVWD.

	ACTIVITY	RESTRICTION DETAILS
RESIDENTIAL	Lawn sprinkling	All forms of watering using treated drinking water are prohibited.
	New (unestablished) lawns,	No new permits issued or renewed. All forms of watering using treated drinking water are prohibited.
	Flowers, vegetables, planters, shrubs & trees	All forms of watering using treated drinking water are prohibited.
	Pools, spas, garden ponds	Refilling is prohibited.
	Private outdoor impermeable surfaces (i.e., driveways, sidewalks)	All forms of hosing of outdoor surfaces are prohibited unless ordered by a regulatory authority (i.e., WCB, public health inspector, etc...).
	Private pressure washing	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...).
	Outdoor car washing, boat washing	No outdoor washing or rinsing of vehicles and pleasure crafts, except for safety (windows, lights and licenses only).
NON-RESIDENTIAL	Lawn sprinkling (including cemeteries)	All forms of watering using treated drinking water are prohibited.
	New (unestablished) lawns.	No new permits issued or renewed. All forms of watering using treated drinking water are prohibited.
	Flowers, vegetables, decorative planters, shrubs & trees	All forms of watering using treated drinking water are prohibited.
	Flower and vegetable gardens	All forms of watering using treated drinking water are prohibited.
	Pools, spas, garden ponds	Refilling is prohibited.
	Fountains and water features	All shut down
	Outdoor impermeable surfaces (i.e., driveways, sidewalks and parkades)	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...).
	Pressure washing	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...).
	Outdoor car washing, boat washing	No outdoor washing or rinsing of vehicles and pleasure crafts, except for safety (windows, lights and licenses only).
	Indoor commercial carwashes	All shut down
	Golf courses	All forms of watering using treated drinking water are prohibited.
	Turf farms	All forms of watering using treated drinking water are prohibited.
	Artificial turf and outdoor tracks (i.e., bicycle, motorcycle & running tracks)	All forms of watering using treated drinking water are prohibited.
PUBLIC	School yards, sports and sand-based playing fields	All forms of watering using treated drinking water are prohibited.
	Water play parks and pools	All water parks shut down. Municipal outdoor pools closed. Winterization deferred until Stage 4 is lifted by GVWD.
	Fountains and water features	All shut down
	Municipal parks	All forms of watering using treated drinking water are prohibited.
	Municipal ornamental lawns, grassed boulevards,	All forms of watering using treated drinking water are prohibited.
	Municipal hydrant flushing	Only for unscheduled safety or public health reason. Routine flushing to be scheduled outside WSRP timeframe.

For information regarding enforcement of the WSRP, please contact your municipality.
For general WSRP information, please contact the METRO VANCOUVER Information Centre at 604-432-6200.

2011 Water Shortage Response Plan Communication Strategy

Discussion of Communication Strategy during Adoption of 2011 WSRP

On March 18th, 2011, the GVWD Board adopted the following motion;

That the Board adopt the 2011 Water Shortage Response Plan, as presented in the report titled "Proposed Revisions to the Water Shortage Response Plan", dated February 21, 2011 with enforcement to begin June 1, 2012.

At its March 9, 2011 meeting, the Water Committee considered the report presenting the 2011 Water Shortage Response Plan and amended the recommendation by adding the text "with enforcement to begin June 1, 2012."

In discussing the new lawn sprinkling regulations the Water Committee and staff committees (e.g., REAC and REAC Water sub-committee) noted the following:

- Some municipalities have already published calendars and other municipal materials with the old sprinkling regulations and it will be difficult to reach all of the public and educate them about the new lawn sprinkling regulations;
- Given the change to the new regulations, the focus in summer 2011 should be on education and communication about wise water use and the new sprinkling regulations and hours;
- As some public may be unaware of the new sprinkling regulations, municipalities should focus on education and awareness with public watering outside of the permitted times. In previous years, municipalities have typically used a phased multi-stage program aimed at education and awareness with first and second offenders and such an approach should be continued in summer 2011.

Metro Vancouver's Role In Communicating the Revised WSRP

Metro Vancouver is responsible for communication of the water shortage response plan. This includes notification to businesses and residents regarding the implementation of the restrictions (usually in effect from June 1st to September 30th) and, if required, subsequent notifications of escalation in the restriction levels during the duration of the implementation.

This document is an overview of the Metro Vancouver communication strategy to deliver notification and information messages pertaining to the WSRP. In order to effectively reach as many water users as possible in a short amount of time, dissemination of information is mainly achieved through media relations, advertising, partners and both formal and informal networks.

Specific **communications activities** implemented by Metro Vancouver are:

1. development and placement of initial advertisement in the daily, community and ethnic papers
2. coordination of media relations
3. publishing of above information plus related materials on the Metro Vancouver Web site
4. distribution of above information plus related materials to municipalities
5. development of 'front-line staff' information for municipalities and Metro Vancouver Information Centre
6. proactive information outreach to Metro Vancouver permit holders and ICI businesses

7. proactive information outreach through community networks and stakeholder groups
8. proactive communications to the affected non-residential sector through contact with irrigation and landscaping associations, property managers and other affected business groups.

WSRP-specific activities are complemented by on-going public education and outreach initiatives targeted to residential adult- and school-aged audiences and business sectors. The Metro Vancouver works collaboratively to promote water use efficiency and conservation with partners including:

- ❖ municipal staff (i.e., Municipal Water Conservation Coordinators);
- ❖ municipal outreach groups (i.e., Sustainable Home and Garden Education Network, Compost Hotline, North Shore Recycling Program).

WSRP - Key Audiences

- Metro Vancouver residents (ads published in English, Traditional Chinese and Punjabi) of multi-family (apartment, condos, etc...) and detached dwellings
- Educational institutions and other levels of government
- Commercial building owners and operators
- Businesses and industrial large water users

WSRP - Key Messages

Key messages used for all outreach during the implementation of the WSRP are set by Metro Vancouver senior management representatives from various departments. Final approval is given by the GVWD Commissioner.

With increasing focus on sustainability, the primary message of the summer lawn sprinkling campaign has become: **"Don't Waste Water on Your Lawn"** along with messages such as:

- Let your lawn go dormant during the summer. Brown is the new green in lawn care;
- Don't waste our world-class drinking water on grass that will green up again in the fall;
- Established lawns only require one inch (2.5 cm) of water once a week to stay healthy, only water for one hour, once a week – or less if it rains;
- Sprinkling in the early morning period reduces evaporation and is more water efficient;
- Conserving water will allow Metro Vancouver to build less infrastructure – minimizing additional costs to the taxpayer and the environment.

As noted above the primary message of the summer lawn sprinkling campaign is **"Don't Waste Water on Your Lawn"** with the statement "But if you must water..." followed by a note that lawn sprinkling regulations are in effect from June 1 to September 30 and the specifics of the days and times when lawn sprinkling is permitted.

DETAILED TABLE OF WSRP COMMUNICATION ACTIVITIES

ACTIVITY	CURRENT DELIVERABLES AND NEW INITIATIVES FOR 2011
1. Newspaper advertising	<ul style="list-style-type: none"> - Information about relevant restrictions, promotion of the HomePages insert and RCBC Recycling Hotline for water use efficiency and conservation ideas - Publish English ad in daily and Community papers; Traditional Chinese ad; Punjabi ad in ethnic papers
2. Media Relations	<ul style="list-style-type: none"> - Develop news release and Q&A - If necessary, coordinate media briefing event and support Metro Vancouver Board spokesperson - Messaging regarding water use efficiency and conservation
3. Web publishing	<ul style="list-style-type: none"> - Post media materials and advertisement on Metro Vancouver Web site - Post current reservoir storage levels with weekly updates - Post 'at-a-glance' table
4. Support to member municipalities	<ul style="list-style-type: none"> - Official correspondence between GVWD Commissioner and City Managers to announce WSRP implementation period - On-going staff-level communication to provide municipalities with relevant media materials, and education and outreach materials (brochure, magnets, etc...)
5. Support to front-line staff	<ul style="list-style-type: none"> - Distribute "at-a-glance" document of WSRP highlights to support front-line staff in dealing with public calls in an efficient and consistent manner. This document also provides contacts for media and enforcement issues.
6. Proactive outreach to Metro Vancouver permit holders and ICI businesses	<ul style="list-style-type: none"> - Outreach through direct contact or in partnership with business, industry trade or professional associations - Direct contact with large water users if restriction levels escalate - communications to the affected non-residential sector through contact with irrigation and landscaping associations, property managers and other affected business groups.
7. Proactive outreach to community networks and stakeholder groups	<ul style="list-style-type: none"> - Outreach through various community networks and water conservation stakeholder groups

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