



Water Shortage Response Plan Review Consultation Summary on Proposed Changes

June 12, 2017

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1. Introduction

Metro Vancouver provides clean, safe drinking water to the region's 2.5 million residents. The region's Water Shortage Response Plan (proposed title change for 2018, Drinking Water Conservation Plan) is a regional policy developed with local governments and other stakeholders to manage the use of drinking water during periods of high demand, water shortages or in emergency situations.

2. Summary

This report describes the consultation process and summarizes the feedback received through the consultation program held late December 2016 through January 2017 to inform decision making related to the proposed changes to the water use restrictions included in the region's Water Shortage Response Plan.

A new plan is drafted, and includes seven proposed changes to the water use restrictions as well as new sections and a glossary of terms.

Metro Vancouver staff will present the draft plan and request approval from the GVWD Board in mid-2017. The presentation will include a summary of the consultation program with key stakeholders and the public. If approved by the GVWD Board, the new plan will be implemented in 2018.

3. Background

In Fall 2015, Metro Vancouver began a review of the WSRP with local governments, businesses, and the public to ensure the plan meets its purpose of reducing water use during periods of high demand and during water shortages, and to clarify and potentially adjust plan objectives, the restrictions, and the rationale for moving from one stage to another.

The WSRP was amended in November 2015 and February 2016 to address immediate concerns. A more thorough technical analysis and stakeholder review led to a further series of proposed changes, which were again presented to stakeholders and the public for consideration.

4. Consultation Goal and Objectives

The consultation program on the proposed changes to the WSRP took place between December 2016 through the end of January 2017 in order to provide staff time to review and consider the feedback prior to making final adjustments to the plan.

The goal of the consultation strategy was to:

Support the development of an updated WSRP considering input from internal stakeholders, external stakeholders, and the public.

The objectives of the consultation were to:

- Present the proposed changes to the water use restrictions
- Provide a variety of mechanisms for stakeholders and the public to provide feedback on the proposed changes

- Summarize feedback from key stakeholders and the public to present to the project team for consideration

Metro Vancouver held workshops and public dialogues, and conducted an online questionnaire to achieve these consultation objectives.

The seven proposed changes presented to participants for review and comment include:

1. Amend the activation period for Stage 1 from May 15 - October 15 to May 1 - October 15
2. Reduce lawn watering opportunities from three mornings per week to two mornings per week in Stage 1
3. Restrict watering of flowers, planters, shrubs and trees (using a sprinkler) to WSRP prescribed lawn watering hours, on any day, in Stages 1 and 2. Food plants are exempt, and hand watering and drip irrigation is allowed anytime (currently no restrictions on watering trees, flowers and shrubs with a sprinkler)
4. Restrict school yard, sports and sand-based playing field (sports field) watering to 7:00 pm – 9:00 am in Stages 1, 2 and 3, unless operating under an approved local government water management plan (currently no restrictions)
5. Allow golf courses operating under a local government approved water management plan an exemption from the WSRP watering restrictions in Stages 2 and 3. Otherwise, golf courses continue to follow the restrictions in the WSRP
6. Restrict commercial car washing to automatic systems that recirculate water, or utilize high-pressure wand facilities, in Stage 3 (currently no restrictions)
7. Allow the topping up or filling of hotel, residential strata, and private club pools and hot tubs, with a valid operating permit under the BC Pool Regulation, in Stage 3 (currently prohibited)

Metro Vancouver also welcomed additional comments on any aspect of the WSRP.

5. Consultation Process and Components

The following table describes the timing, stakeholder group and number of participants for each consultation activity on the proposed changes to the WSRP:

Consultation Activity	Timeline	Stakeholder Group	Number of participants
Local Government Workshop	December 14, 2017	Local government staff <ul style="list-style-type: none"> - Local government Chief Administrative Officers - REAC members - REAC Water Sub-Committee members - Municipal Water Conservation Coordinators (MWCC) - Municipal front line staff 	40
Online survey	December 2016 – January 2017	Members of the public and private sector representatives <ul style="list-style-type: none"> - Public surveys - Private sector surveys 	336 35

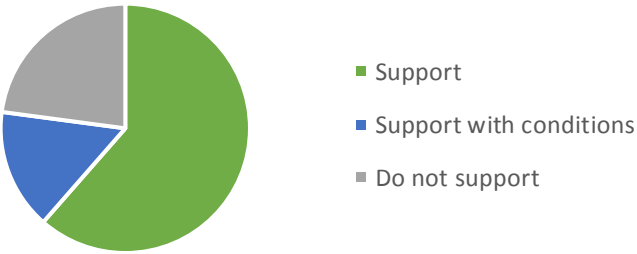
Private Sector Stakeholder Workshops	January 10, 13, 18 2017	Private sector stakeholders from the following industries directly impacted by water use restrictions: <ul style="list-style-type: none"> - Commercial cleaning (pressure washing, window cleaning) - Golf - Turf farm - Landscape and nursery - Irrigation - Pool and hot tub - Commercial car washing - Public and private school districts - Chambers of Commerce 	35
Regional Public Dialogues	January 16, 19, 25, 26 2017	Members of the public and business representatives	135

6. Consultation Feedback

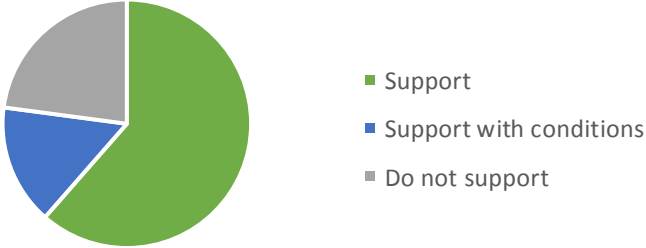
Feedback on the proposed changes to the WSRP was gathered at the workshops and dialogues by professional notetakers and through feedback forms completed by participants. Anyone interested in providing comments could also complete the online questionnaire, speak to a project representative or send Metro Vancouver a written/electronic submission.

A summary of the input received for each proposed change as well as a summary of general comments is presented below by stakeholder group. Note the public feedback is not statistical, but represents the views of those individuals who were interested in providing a written response.

Proposed Change No. 1:	Amend the activation period for Stage 1 from May 15 - October 15 to May 1 - October 15
Local Government Feedback:	<p>Local government staff were generally supportive of this change. Some of the benefits identified included that the May 1 date aligns with other jurisdictions in British Columbia and that this promotes water conservation earlier in the season to help delay or avoid the escalation of water restrictions as the summer progresses.</p> <p>A concern was raised related to changing the start date to a time when there is still typically a lot of rainfall which has the potential to confuse residents as to the need for conserving water and could possibly lead to reduced compliance.</p>
Private Sector Feedback:	While some respondents noted this change is useful for promoting water conservation, others suggested the restrictions should be linked to consumption rather than dates. One respondent suggested this change could increase water use since irrigation systems would now be programmed to water at specific

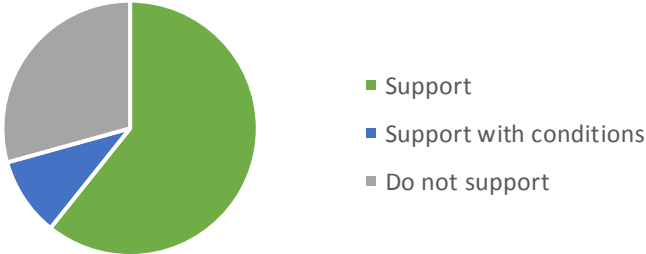
	<p>times and dates regardless of whether it is necessary.</p> <p>Gardeners and nursery owners expressed concern that new and early season plants required a certain amount of water to become robust and well-established and that earlier restrictions would prevent this important watering phase from occurring.</p> <p>Concerns were raised that an earlier activation time would significantly impact landscaping and nursery businesses since new spring plantings and after-winter repairs to lawns require more flexible watering than would be allowed under these restrictions.</p>								
<p>Public Feedback:</p>	 <table border="1"> <caption>Public Feedback Data</caption> <thead> <tr> <th>Response</th> <th>Percentage (Approximate)</th> </tr> </thead> <tbody> <tr> <td>Support</td> <td>60%</td> </tr> <tr> <td>Support with conditions</td> <td>20%</td> </tr> <tr> <td>Do not support</td> <td>20%</td> </tr> </tbody> </table>	Response	Percentage (Approximate)	Support	60%	Support with conditions	20%	Do not support	20%
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	<p>Participants were largely supportive of this proposed change since it promotes and encourages conservation especially as climate change may impact the supply of water and is viewed as a good precaution to prevent or delay having to move to Stages 2 or 3.</p> <p>Many respondents supported the idea of implementing Stage 1 all year to strengthen conservation efforts while others recommended that Stage 1 should only be implemented if there is a demonstrated need and not based on a date.</p> <p>Many respondents suggested that if Metro Vancouver increased the storage capacity of its reservoirs then there would be no need for any restrictions or the inconvenience of watering during specific times.</p> <p>People noted that this change needs to be supported by consistent monitoring and enforcement across the region.</p>								

<p>Proposed Change No. 2:</p>	<p>Reduce lawn watering opportunities from three mornings per week to two mornings per week in Stage 1</p>
<p>Local Government Feedback:</p>	<p>Local government representatives were supportive of this proposed change. However one municipality that supported reducing watering to two days for residential and non-residential properties, did not support the amendment for civic properties since this does not allow staff to finish watering the City's turfed assets prior to early morning park users accessing these spaces. They highlighted that irrigated lawns are major assets that are costly to replace, and recommended that</p>

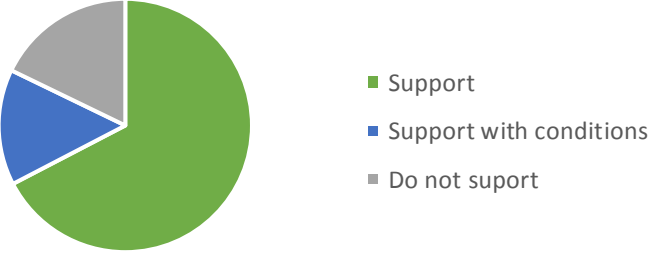
	<p>Metro Vancouver give municipalities the opportunity to develop a water management plan during Stages 1-3, which would provide flexibility in irrigation practices to protect these assets while ensuring water use reduction targets are still met.</p>								
<p>Private Sector Feedback:</p>	<p>Participants contemplated the merits of watering lawns less frequently with more water versus more frequently with less water. Some respondents pointed to a recent study by Oregon State University which found that watering more frequently with less water was more beneficial than a deep watering once per week. However, it was also suggested that dry root systems resulting from less frequent watering could become more vulnerable to Chafer beetle infestation.</p> <p>Several respondents noted that if allowable lawn watering is reduced to two mornings per week this may lead people to over-water triggered by the sense that they need to fully utilize all the available time.</p> <p>While some respondents felt two mornings is sufficient for homeowners to maintain a healthy lawn, others noted three days per week is what is required to support unestablished lawns.</p> <p>Participants also discussed that the increasing prevalence of automatic irrigation systems, which often include rain sensors, will conserve water since they do not automatically water lawns when it is raining. It was suggested that Metro Vancouver could offer incentives to people who install this technology.</p>								
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	<p>Respondents were largely supportive of this proposed change ; however, concerns were raised that the limited time periods may be misunderstood as “watering schedules” and people will water continuously during their allowable time and unnecessarily increase their overall water use.</p> <p>People also raised concerns that watering only during the morning and only two days per week is not convenient or achievable with their schedules and requested an evening time or extended morning hours. It was suggested that such a limited schedule might be suitable for automatic irrigation systems, but is not compatible with manually-operated irrigation.</p> <p>It was noted that new lawns may require more frequent watering and should therefore be exempt.</p>								

	<p>Respondents who did not support the change suggested there is no need for the restriction since this is a wet climate and lawns will receive rainwater. Respondents who did not support this change would prefer Metro Vancouver increased the size of the reservoirs instead of restricting water uses so they could continue to enjoy their lawns during the summer.</p> <p>Water metering was recommended as a way to encourage people to use less water.</p> <p>It was suggested that more consistent and severe enforcement is needed to ensure compliance with the restriction.</p>
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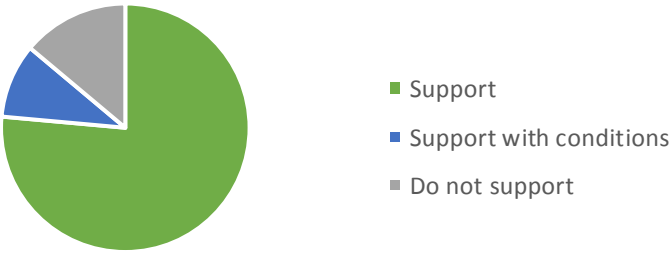
<p>Proposed Change No. 3:</p>	<p>Restrict watering of flowers, planters, shrubs and trees (using a sprinkler) to WSRP prescribed lawn watering hours, on any day, in Stages 1 and 2. Food plants are exempt, and hand watering and drip irrigation is allowed anytime (currently no restrictions on watering trees, flowers and shrubs with a sprinkler)</p>
<p>Local Government Feedback:</p>	<p>While local government participants were generally supportive of this change, there were certain conditions suggested to improve or clarify the restriction. One municipality suggested this is a good approach for residential and non-residential properties, but recommended Metro Vancouver give municipalities the opportunity to develop a water management plan during Stages 1 - 3 to provide flexibility in irrigation practices to protect the City's major assets (gardens, planters, shrubs and trees) while ensuring water use reduction targets are met.</p> <p>It was suggested that the plan needs to clearly explain that sprinkling refers specifically to using a sprinkler compared to watering by hand to minimize confusion.</p> <p>One municipality recommended Metro Vancouver should move to encourage drip irrigation over using sprinklers to reduce water lost to evaporation.</p>
<p>Private Sector Feedback:</p>	<p>Concerns were raised that trees, shrubs and flowers have different watering needs than lawns, particularly younger plantings, so watering should not be restricted in Stage 1. Several respondents suggested watering goals would be better served with increased education related to the correct way to water rather than time restrictions.</p> <p>Generally, participants were supportive of this proposed change and feedback focused primarily a few clarification questions.</p>

<p>Public Feedback:</p>	 <p>■ Support ■ Support with conditions ■ Do not support</p>
	<p>Respondents were mostly supportive of this proposed change and many encouraged Metro Vancouver to broadly educate residents about how to water plants and lawns efficiently and effectively.</p> <p>Concerns were raised again that shifting to a mornings-only schedule is not fair or convenient and that an evening time should be considered to accommodate this need. People were also concerned that hand watering is sometimes not manageable for seniors and that this restriction unfairly prevents them from tending their gardens which is an important activity. Hand watering was also seen as too time consuming and unrealistic for big residential lots given the size of their planted areas.</p> <p>It was suggested that new plants require more versatile watering so they should be exempt.</p>

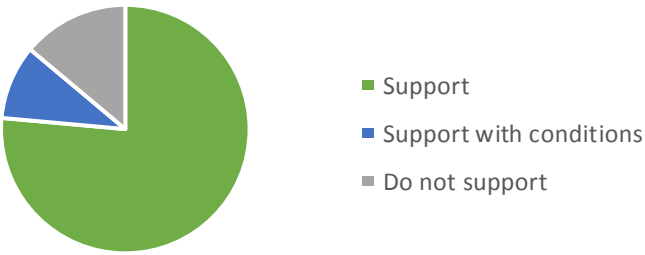
<p>Proposed Change No. 4:</p>	<p>Restrict school yard, sports and sand-based playing field (sports field) watering to 7:00 pm – 9:00 am in Stages 1, 2 and 3, unless operating under an approved local government water management plan (currently no restrictions)</p>
<p>Local Government Feedback:</p>	<p>While participants were generally supportive of this change, it was noted several times that there is a significant distinction between school yards and sports fields and that this restriction should not apply to sand-based fields at all since these fields require a specific type of maintenance to keep them in good condition. It was suggested that sand-based fields should have their own classification and that signage be created to educate residents about the unique needs and value of sand-based fields to minimize outrage when the fields are watered outside residential watering hours.</p> <p>It was also noted that restricting watering to the evening would be detrimental to some fields and there should be allowances made for daytime watering to ensure the fields are not damaged. Some participants indicated support for allowing water management plans to be developed for playing fields.</p> <p>It was suggested that 7 pm is often a period where the fields are highly used, making it impractical for watering and that watering should begin later in the evening to accommodate this.</p>

<p>Private Sector Feedback:</p>	<p>Participants noted that certain types of fields and stages of field development have specific water requirements and therefore fields should instead adhere to a water management plan setting volumetric watering targets.</p> <p>It was noted that if water management plans are allowed for fields, then it is important to have consistent information materials that organizations can post to explain why fields are being watered during certain times and the value of preserving fields due to a high cost to replace.</p> <p>A respondent suggested fields could move towards installing wells for irrigation rather than relying on the treated drinking water system.</p>								
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	<p>The majority of respondents were supportive of this proposed change. People noted that fields are a costly asset paid for by tax dollars and wanted to ensure measures were being taken to protect these assets. However, many respondents did not consider fields to be different from residential lawns and suggested they should be subject to the same water use restrictions and should go dormant/brown during a drought.</p> <p>Many people suggested watering should be managed by turf and field professionals and wanted to ensure they had been consulted in developing this restriction.</p>								

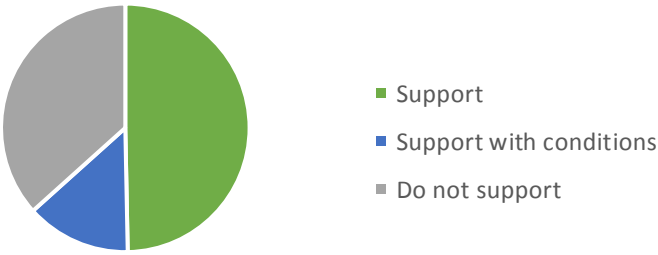
<p>Proposed Change No. 5:</p>	<p>Allow golf courses operating under a local government approved water management plan an exemption from the WSRP watering restrictions in Stages 2 and 3. Otherwise, golf courses continue to follow the restrictions in the WSRP</p>
<p>Local Government Feedback:</p>	<p>Concerns were raised that allowing water management plans could pose a significant administrative burden for local government staff. It was recommended that Metro Vancouver clearly identifies water use reduction targets for golf courses across the region and consults directly with golf course operators to ensure they can achieve these targets.</p> <p>It was also suggested that it would be beneficial to have region-wide criteria for the water management plans to ensure consistency.</p>

<p>Private Sector Feedback:</p>	<p>Participants were largely supportive of this proposed change, noting that water management plans have proven to reduce the overall amount of water used. Concerns were raised that not all local governments would have the ability to monitor these water management plans because of administrative limitations. It was suggested that Metro Vancouver should produce model water management plans to reduce the administrative burden on local governments.</p> <p>It was noted that it will be important to have consistent information materials that golf courses can post to explain why fairways are being watered during certain times and that they are adhering to an approved local government water management plan to reduce the negative response from the surrounding community when watering outside the lawn watering hours.</p>								
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	<p>The majority of respondents were supportive of this change .</p> <p>People agreed that water management plans could be effective, but wanted to ensure the plans would result in a net reduction of water use from current water use rates, that they are available for public viewing, and are properly monitored and enforced.</p> <p>Many respondents were concerned that golf is a luxury sport and that it seemed to be an extravagant use of drinking water during periods of drought. It was also suggested that golf courses should be subject to the same restrictions as residential lawns if included in the WSRP.</p>								

<p>Proposed Change No. 6:</p>	<p>Restrict commercial car washing to automatic systems that recirculate water, or utilize high-pressure wand facilities, in Stage 3 (currently no restrictions)</p>
<p>Local Government Feedback:</p>	<p>While some respondents liked that this restriction would encourage car washes to increase the water efficiency of their operations, other respondents noted that this could be a burden on each municipality since it would need to track and monitor all car wash businesses.</p> <p>Concerns were raised that many car washes would not be in compliance and therefore this restriction should be phased in over a longer period of time. It was also noted that Metro Vancouver should define ‘recirculating’ as a recovery</p>

	rate percentage so owners know how to upgrade their systems.
Private Sector Feedback:	<p>While participants acknowledged there is a need to conserve water, they expressed concern that being too restrictive with car washes all at once could potentially put them out of business during Stage 3 and suggested that rather than require recirculating, washes could be limited to ‘basic’ only. Gradually phasing in recirculating requirements was also suggested to allow companies the time to update their equipment.</p> <p>It was suggested that the restriction be consumption-based to ensure businesses that do not actually use a lot of water are not inappropriately targeted.</p>
Public Feedback:	 <p>A pie chart illustrating public feedback. The largest segment is green, representing 'Support' at approximately 70%. A smaller blue segment represents 'Support with conditions' at approximately 15%. The smallest segment is grey, representing 'Do not support' at approximately 15%.</p>
	<p>The majority of respondents supported this change and view recirculation as a good practice. While some viewed car washing as a non-essential service that should be restricted during a water shortage, many respondents were concerned that preventing a business from operating altogether is too severe. It was suggested that the restriction only apply to new facilities and existing facilities could be ‘grandfathered’ and not be penalized.</p> <p>Many people noted that it seemed unfair that car wash businesses be allowed to wash cars when residents are not allowed to wash the car in their driveway.</p> <p>Some people suggested that watering plants and lawns should take priority over car washing since vegetation has environmental benefits that car washing does not offer.</p>

Proposed Change No. 7:	Allow the topping up or filling of hotel, residential strata, and private club pools and hot tubs, with a valid operating permit under the BC Pool Regulation, in Stage 3 (currently prohibited)
Local Government Feedback:	There was strong support for this proposed change since it clarifies the types of pools and hot tubs permitted for use in Stage 3 and allows the topping up of strata pools, which was previously prohibited during Stage 3. It was noted that this change represents a principle to support water use when the benefits serve many people instead of one family. Furthermore, it was noted that the impacts of this water use on overall consumption are minimal so it was not achieving

	significant savings yet causing public hardship.
Private Sector Feedback:	<p>Respondents suggested pools need to be checked to ensure good connections to prevent wasting water and that there could be a limit on the number of times a pool can be topped up.</p> <p>Generally, participants were mostly supportive of this proposed change with minimal comments.</p>
Public Feedback:	 <p>■ Support ■ Support with conditions ■ Do not support</p>
	<p>Respondents were generally supportive of this proposed change, noting that topping up does not seem to use too much water and the ongoing benefits for many people were worth the small amount used.</p> <p>It was suggested that topping up be limited to pools that employ practices for conserving water, such as using pool covers when not in use. Other people were concerned that allowing a non-essential water use during a drought sends the wrong message about water conservation.</p> <p>Many people commented that hot tubs seem to be unnecessary during hot weather and questioned why they would be able to continue to operate.</p> <p>Questions were raised about how this restriction would be monitored and enforced.</p>

Additional comments related to any aspect of the WSRP	
Local Government Feedback:	<p>It was suggested that in addition to the water use restrictions, that implementing water metering could be an effective tool for reducing water use and supporting water conservation.</p> <p>Concerns were raised that allowing pressure washing by a commercial operation but not a private home or business owner is unfair and that the rationale for this restriction is unclear. It was suggested that the restriction could be applied to the type of machine instead of the user.</p> <p>Participants urged Metro Vancouver to treat sand-based fields, including outdoor festival areas, and golf courses in the same way to ensure they can</p>

	<p>be kept in good condition and safe from fire during dry periods.</p>
<p>Private Sector Feedback:</p>	<p>Additional comments related to the WSRP discussed the need for clarification and education about what is required for a healthy lawn, how to keep a lawn alive during a drought and using images to show what a lawn will look like at various stages of the restrictions.</p> <p>Participants also inquired as to Metro Vancouver’s plans to increase infrastructure to be able to store more water in the source reservoirs so there is less need to restrict water use.</p> <p>Many respondents noted that the WSRP must be accompanied by a robust water conservation education and awareness program in order to be truly effective.</p>
<p>Public Feedback:</p>	<p>Many respondents were supportive of increasing efforts to educate and practice water conservation year-round. Participants also suggested Metro Vancouver could encourage the use of a number of water saving mechanisms such as rain sensors and drip irrigation systems and offer incentives for installing them.</p> <p>Many participants contemplated the value of water meters as an important tool for encouraging responsible water use and urged Metro Vancouver to implement metering across the region.</p> <p>Respondents encouraged Metro Vancouver and local governments to increase and improve enforcement of the restrictions.</p> <p>Many respondents have asked for more flexible watering hours either by extending morning hours or allowing evening watering.</p> <p>Many people commented that the restrictions should not be automatically activated at a certain time but should be weather dependent e.g. delay start of Stage 1 if the region had a long and wet winter and spring.</p> <p>Several people also commented on cleaning of driveways and other hard surfaces using hoses and pressure washers. People find this a waste of water and something that should be restricted more than restricting the watering of plants.</p> <p>Respondents wanted to ensure the WSRP considers the anticipated impacts of climate change and that enough action will be taken to conserve water as summers become hotter and drier.</p> <p>On the other hand, many respondents suggested that the Lower Mainland is a wet and rainy climate and therefore the restrictions are unnecessary. Instead, respondents urged Metro Vancouver to add new water sources, such as the Fraser River or Harrison Lake, and build more infrastructure to</p>

	capture, store and treat water in order to reduce the need for restrictions and the corresponding interruptions to business and inconvenience to residents.
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7. Next Steps

Metro Vancouver is reviewing and considering the feedback received to revise and finalize the proposed changes to the plan and to bring recommendations to the Utilities Committee and the GVWD Board for adoption of the new Plan in mid-2017, with the implementation target of May 2018.