

**DATE:** October 30, 2019**FILE:** 5600-05/CVWS**TO:** Chair and Directors  
Comox Valley Water Committee**FROM:** Russell Dyson  
Chief Administrative OfficerSupported by Russell Dyson  
Chief Administrative Officer**R. Dyson****RE: Water Main Leak under Puntledge River – Close Out Report**

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**Purpose**

To provide the final report on the transmission water main repair and request a budget amendment to cover the full costs of repair.

**Recommendation from the Chief Administrative Officer:**

THAT the 2019-2023 financial plan for the Comox Valley Water Supply Service, function 300, be amended by increasing water infrastructure expenses in 2019 for the water transmission main leak repair, project No. 1146, by \$730,000;

AND FURTHER THAT funding be provided by a contribution from the capital works reserve No. 838.

**Executive Summary**

Water for the Comox Valley Water System (CVWS) is drawn from BC Hydro's penstock and treated at the water treatment facility located on Powerhouse Road. Following treatment the water exits the facility by two transmission pipelines, these pipelines provide water to the entire CVWS. The largest of these lines is a 900mm diameter steel pipeline that runs directly from the water treatment facility under the Puntledge River and onwards into the system. In early January, a leak was discovered under the east bank of the Puntledge River and the subsequent repair proved to be the largest, most complex emergency repair in the region's history. The repair effort was successfully completed and the water main was put back in service during the Easter weekend, 2019. In addition to fully resolving the leak:

- The repair allowed the Comox Valley Regional District (CVRD) to install strategic infrastructure that will minimize the impact to the system during future repairs as well as assist with future water main replacements.
- Cathodic protection was installed to further protect the section of steel water main that is under the river.
- A valve bypass was installed that will allow the submerged river crossing section to be pressure tested to assess integrity of pipe.
- A visual inspection was carried out and video documented to better understand the condition of the river crossing section.
- During the visual inspection, additional pinholes were identified and four additional patches were installed resulting in two extra days for the underwater welding team.
- A certified Metallurgist confirmed that the corrosion was developing from inside the pipe and a subsequent pressure test confirmed that the repair was successful at resolving all leaks from this section of steel pipe.

The 2019 financial plan included \$500,000 as a placeholder to facilitate the repairs. As the project plan was being developed, the magnitude of the effort was realized due to the unique challenges associated with this project. Multiple repair methods were contemplated and the most viable, and cost effective option was to send divers into the pipe via the west side of the river, for them to swim inside the pipe to the east bank and weld a patch over the identified leak. Extensive safety planning including the development of unique Safe Work Procedures was necessary to ensure the safety of all workers associated with the repair. There was extensive collaboration with Work Safe BC representatives, consultants and contractors to develop the approved plans.

Project Cost Breakdown	
Lead Consultant	\$216,923
General Contractor/Excavation	\$310,734
Pipe Fabrication/Welding/Installation	\$386,388
Underwater Welders	\$26,932
Other sub-contractors/materials	\$165,063
Greaves Temp Water system	\$18,514
Butterfly Valves (2)	\$63,446
<b>Total</b>	<b>\$1,188,000</b>

During the repair, the CVWS was forced to go to a Stage 4 water restriction level. The need for this extreme level of water restriction was due to the reliance during the repair on a single, much smaller pipe conveying water to the entire eastern zone of the water system. The community responded fabulously; water consumption dropped to an average of about 15.5 million litres per day, which ensured that the system could maintain sufficient pressure and fire protection. A business outreach review, attached as Appendix A, was undertaken with feedback from local businesses. Staff are working internally and with municipal staff to optimize the water conservation bylaw for future implementation of Stage 4 and will bring proposed changes to the Comox Valley Water Committee for consideration early in 2020.

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#### Stakeholder Distribution (Upon Agenda Publication)

Comox Valley Chamber of Commerce	✓
Downtown Courtenay Business Improvement Association	✓
Comox Business in Action	✓
Comox Valley Economic Development Society	✓

Attachments: Appendix A – “Report on Stage 4 Business Engagement - Draft”

# Report for Stage 4 Water Restrictions

Business Engagement Survey  
and Recommendations for  
Bylaw Updates

Appendix A





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Submitted October 7, 2019

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# Executive Summary

Stage 4 water restrictions were issued for the first time in the Comox Valley in April 2019. The business community was caught off-guard during the implementation of the stage 4 water restrictions for two reasons: short notice and lack of clarity on the gap between acceptable and prohibited water use activities within the bylaw.

With the assistance of the Chamber of Commerce, Global Affinity engaged with local businesses through an online/in-person survey, two round-table working groups and phone conversations to better understand commercial water use practices and gain feedback on the bylaw and the process of communicating the bylaw.

Once the review and analysis were complete, several recommendations were identified to assist in updating the stage 4 bylaw. Firstly, adjusting the terminology in the bylaw to clarify and reduce the gap between what is acceptable and what is prohibited would be most beneficial. It is also recommended to include reduction targets at all stages of the bylaw while providing flexibility in stage 4 to reflect the level of emergency. Adjusting the language in the bylaw will allow for increased enforcement depending on the level of emergency and compliance, if targets are not met.

The current bylaw - and all stage 4 bylaws reviewed from other communities in BC - does not specify that indoor water use practices will be prohibited. Should the CVRD decide to include commercial indoor water use practices in the bylaw, it is recommended to only restrict services that do not require treated drinking water, or apply the same restrictions to residential water use. However, data analysis is needed to understand whether the amount of water saved from restricting certain business practices would be worth the negative economic impact on businesses, and assist with enforcement and compliance.

Many of the issues around the implementation of stage 4 in April 2019 were related to how the restrictions were communicated. The business community would like a clear plan and reference guide to refer to if stage 4 were to occur again. These two elements, along with communicating water reduction targets, real time reduction data and offering as much advanced notice as possible would help businesses better plan for and adjust their business operations during future restrictions. Increasing water conservation education would also help businesses reduce their consumption and improve efficiency.

This report serves to improve the implementation of future stage 4 water restrictions by offering recommendations to update the bylaw and improve the clarity of commercial water use restrictions.

# Background

The objective of this project was to engage with businesses through local business associations to obtain feedback that will inform updates to the bylaw, create commercial water use guidelines and improve bylaw communications to the business community.

Global Affinity was responsible for carrying out the following activities:

- Set up all logistics for engaging with business representatives (i.e. round tables, surveys, interviews, etc.)
- Design all communication messaging, survey design and interview scripts
- Communicate with the Chamber of Commerce, Downtown Courtenay Business Improvement Association (DCBIA), Comox Business in Action (BIA) and Economic Development Society (EDS)
- Conduct two round table discussions and follow up phone interviews
- Review all correspondence compiled during the implementation of stage 4
- Research additional bylaws that include commercial water use practices
- Create a final report with recommendations to assist in updating the bylaw and creating commercial water use guidelines

The online survey was available for businesses to complete from July 9 to August 8. The survey was marketed through the CVRD, the Comox Valley Chamber of Commerce and the EDS. Downtown Courtenay BIA and Comox BIA were asked to share the survey with their members, however with a change in Executive Director for both organizations in July/August, our survey was not a priority during this transition time.

The Comox Valley Chamber of Commerce completed the following activities: e-newsletter blast (543 of 1468 contacts opened the survey email, 22 people clicked through to the survey), promoted the survey at their summer BBQ event, posted working groups in their calendar, managed RSVPs and shared the CVRD social media posts and events.

The CVRD completed the following activities: Two Facebook posts, Facebook events for the round-table working groups and a webpage dedicated to the survey at [comoxvalleyrd.ca/survey](http://comoxvalleyrd.ca/survey).

The Comox Valley Economic Development Society completed the following activities: e-newsletter blast and social media shares.

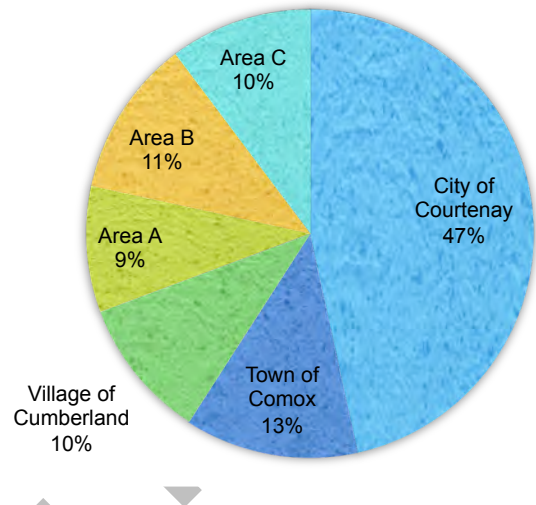
# Results

## Business Engagement Survey

There were 42 valid survey responses to the 10-question survey issued between July-August 2019. There were 61 additional surveys that were incomplete or did not qualify (operated outside of the Comox Valley Water System).

Of the 42 responses, 47% operate their business within the City of Courtenay, while the remaining 53% indicated they operate between the electoral areas and other municipalities.

The 42 respondents were from a wide variety of organization types, with the largest number from retail (9), 5 of which included grocery and/or greenhouse, and 7 respondents represented the landscape/irrigation industry.



**Figure 1: The locations in which business representatives' work.**

## WATER USE

The top 4 ways in which respondents indicated they use water on a daily basis while at work include; water for drinking (74%), indoor cleaning and maintenance (55%), personal hygiene (48%), and watering plants, trees, lawns and gardens (48%). The 11 respondents who do not use water for drinking water use it for landscape/irrigation, mechanical services, dog grooming and retail, and likely bring their own drinking water with them to work.

Several water use practices are listed as prohibited in the Stage 4 bylaw. When respondents were asked how they used water on a daily basis, respondents chose the following prohibited water use practices; water used for watering plants, trees, lawns and gardens (48%), irrigating private or public property (19%), washing windows, sidewalks and building exterior surfaces (19%), washing vehicles or boats (14%), filling up or topping off pools, hot tubs, ponds or fountains (10%) and for agricultural purposes (5%).

However, landscape and irrigation companies, exterior building cleaners and window washers use the customer's water to conduct their business services, and most do not use water at a business store location for these services.

## IMPACT OF THE RESTRICTIONS

Of the 42 respondents, one third (33%) indicated their businesses were severely affected by the restrictions. These businesses included landscape/irrigation (6), retail grocery store (2), agriculture (blueberry farm), dog groomer, car wash/oil change, hotel, spa and restaurant, retailer (hot tubs) and a non-profit. 31% of respondents were moderately affected and 36% indicated they were not affected by the water restrictions.

83% of respondents specified they clearly understood how the stage 4 water restriction bylaw applied to their business. The respondents that were uncertain (12%) were hair salons, a dog groomer and food/beverage.

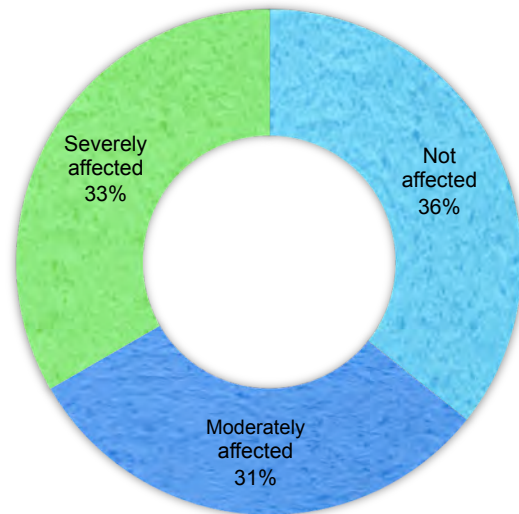
When asked for suggestions on how businesses could better prepare for and reduce the impact of future stage 4 water restrictions, businesses offered solutions such as; collect and store rain water or potable water in advance, offer education and rebate programs to reduce high water consumption and allow times during stage 4 where water is allowed. Many of the other responses pertained to improving communications and providing general comments/complaints.

## COMMUNICATION

45% of respondents noted they would like to receive direct email notification about future stage 4 water restrictions, with the remaining 55% choosing a wide variety of other options including online (12%) voicemail or text notification (9%), or via the electronic highway sign (7%).

The survey invited respondents to attend a working group and provided dates/times. Over 50% indicated they were interested but couldn't attend the set dates/times, however 9% did choose one of the events. An evening date was set and those that indicated they were interested but couldn't attend were invited to participate by phone and email.

For complete survey results, see Appendix A.



**Figure 2. The extent to which businesses' daily operations were affected by the stage 4 restrictions.**

## Round-Table Working Groups

Business members connected to the Comox Valley Water System were invited to attend one of two round-table working group sessions at the Chamber of Commerce Boardroom (2040 Cliffe Ave) on July 25 from 9-12 pm or August 7 from 5-7:30 pm.

### PURPOSE

The purpose of the working groups was to clarify commercial water use practices from businesses impacted during the emergency repairs. The targets were to develop a list of water use practices specific to the business types represented at the working groups, and applicable to other identified business groups, and to avoid conflict and retelling of loss of business during the water restrictions.

### OVERVIEW

During the first 30 minutes, the water leak repair project was introduced through a short power point presentation and a video of the repair was shown to attendees. The next 30 minutes were spent analyzing the bylaw to identify if any text was unclear. The remaining time was used to complete the rapid fire water use practices worksheet, where a business type was analyzed, and specific water use practices were listed and noted whether they were clearly identified as acceptable or prohibited in the bylaw.

### OUTCOME

Attendance was challenging over the summer with only 6 business representatives participating between the two sessions. Several people cancelled last minute. However, even with a small group, over the two sessions, 23 water use practices were analyzed and 35 ideas for improvement were gathered. 18 of the 23 water use practices identified were not clearly defined by the bylaw, and all pertained to indoor water use, mostly within the spa, hair salon, and dog grooming business categories.

Individual water use practices within these groups were pulled out, and it was agreed that it is subjective to decide what is classified as “personal hygiene” and essential, but the difference between aesthetic and hygienic was brought up several times. Aesthetic services may not be essential for personal hygiene, but all could fall under “hygiene” since water (or animal) is coming in contact with people. Additional interviews or phone conversations took place to better understand the water use practices in the “grey area” between prohibited and acceptable as per the bylaw (indoor water use), and to better understand hygienic vs. aesthetic services. All conversations and notes are incorporated into the analysis below.

For complete working group results, see Appendix B.

# Bylaw Analysis

During the working groups, the stage 4 water restrictions bylaw was reviewed with several business owners and Chamber of Commerce staff. Discussions with Vancouver Island Health Authority (VIHA) helped to clarify what they would consider “essential services” required for potable water. And discussions with the City of Vancouver and the City of Kelowna helped clarify prohibited commercial water use activities, and whether indoor water use would be targeted during stage 4 for residential or commercial customers. The results of the business engagement survey and a review of all business correspondence during the issuance of the stage 4 water restrictions also contributed to the bylaw analysis section. The following points address issues identified with the bylaw.

## a) Clarity on whether the bylaw affects indoor water use

With a consensus from business representatives, the bylaw, as it is written, does not appear to affect indoor water use, especially indoor commercial water use activities. Whether reading the stage 4 bylaw directly, or through the CVRD’s water restriction webpage<sup>1</sup>, there is a noticeable gap in what the bylaw states is acceptable (only water used for drinking, food preparation and personal hygiene), and what is prohibited (outdoor water use practices).

This gap is where all the ambiguity, confusion and frustration came from for small business owners, especially those who received calls telling them their services were not allowed under the bylaw. They couldn’t see their services noted as “prohibited”, just that their services were *assumed to fail to meet the criteria* of drinking water, food preparation and personal hygiene.

Upon researching other stage 4 water restriction bylaws in BC, no other municipalities indicated that stage 4 restrictions would affect residential or commercial indoor water use. The closest comparison is the City of Kelowna, the City of Vancouver and Abbotsford Mission, all of which note prohibited outdoor commercial water use practices in their stage 4 bylaw.

The City of Kelowna’s Water Use Restriction Stage - Schedule E<sup>2</sup> describes stage 4 as ‘Strict water use restrictions [that] are necessary to maintain critical supply. No spare water is available. [Stage 4] represents an emergency loss of supply during which water is spared for **consumptive and sanitary purposes only**. Fire protection may be compromised.’ Schedule E also shows target reduction goals for each restriction stage. Rather than a percentage reduction in stage 4, the chart notes, ‘maintain health of community’.

In conversations with Ed Hoppe, Water Quality and Customer Care Supervisor for the City of Kelowna, their list of water use activities in Schedule E all pertain to outdoor water usage. Despite having noted that water can only be used for consumptive and sanitary purposes only, they have nothing in writing addressing indoor residential or commercial water use practices that would be targeted and enforced.

Even when stage 4 was issued earlier this month to fix a leak in the south mission water distribution system, (affecting residents and businesses), the City of Kelowna never asked residents or businesses to restrict their indoor water use. When asked specifically about commercial activities such as water use for aesthetic purposes (spas, hair salons, dog groomers) or for alcoholic beverages (such as wine and beer making), Ed Hoppe noted that the City of Kelowna “would not restrict water use for these purposes – the volumes would be inconsequential”. He added that if wine and beer making had high volume usage (identified during analysis of metered water data), they would consider restricting it, but it wasn’t the case in this instance. However, he did note that if the restrictions were prolonged, and region wide, utility management would discuss if and how to address restricting indoor use, depending on the severity of the situation.

To include indoor water use, it is recommended that the bylaw be re-written to improve the clarity of which indoor water use practices are prohibited. These water use practices should be listed, or attached as a chart to Schedule ‘A’.

Addressing indoor water use comes with many additional issues, like how to enforce the bylaw, tracking customer data, and specifically defining which indoor commercial water use practices are prohibited or acceptable. Having proof of high water usage for each specific indoor activities being targeted would be extremely important before including them into the stage 4 bylaw, and would take considerable review before incorporating into the bylaw.

## b) Defining the line between hygiene and aesthetics

While drinking water and food preparation are fairly clearly defined in most people’s minds, personal hygiene is not, especially for commercial operations. This topic is very subjective and has been the focus of disagreement since implementing stage 4 in April.

Clearly treated water is needed when that water is interacting with the human body, but the issue is whether these services are necessary, especially during stage 4. Where does one draw the line on what services can continue to operate as necessary services? And where does the line between hygiene end and aesthetics begin?

To better understand these borderline services, encyclopedia.ca defines personal hygiene as, “...*maintaining cleanliness of one’s body and clothing to preserve overall health and well-being*”.<sup>3</sup> Aesthetic is defined by “*doing something to improve ones*

*appearance, in terms of beautifying oneself*”,<sup>4</sup> according to Merriam-Webster dictionary. In talking with dog groomers, aestheticians and hairdressers, there are some services that could fall to one side of the line over others. Each water use practice takes place indoors, and is subjective to whether it is considered “essential”, hygienic and/or aesthetic.

From the working groups and interviews, we advise the following split between services (see table 1). However, many factors must be addressed before incorporating this into a bylaw; such as the potential water savings from restricting these activities be quantified, will the water savings be worth the financial loss, and will there be enforcement on these indoor water use activities?

**Table 1. Aesthetic vs. hygienic commercial water use activities**

Business Type	Water use service	Hygienic/ Aesthetic	Explanation
Dog groomer	Washing dogs	Hygienic	80% of dogs need washing and need anal gland expression. Dogs affect the hygiene of a home
Dog groomer	Cutting fur/hair	Aesthetic	If the dog doesn't need to be washed, reschedule, however they won't cut the hair unless the dog is washed to avoid damaging their clippers and scissors
Dog groomer	Nail trimming	Aesthetic	Can be done without washing
Spa	Pedicure chairs	Aesthetic	Can be done with sanitizer spray instead of foot soak, however will cause financial loss
Spa	Shower head massage	Aesthetic	Can provide regular massage in place of shower head massage
Spa	Hydrotherapy relaxation soak	Aesthetic	Can reschedule
Spa	Body polish/scrubs	Aesthetic	Can reschedule
Spa	Pool/hot tub	Aesthetic/ hygienic	If pools/spas get below the filter level they become unhygienic. Asking these businesses to close and drain pools/spas causes loss of revenue
Hair salon	Hair cut/style	Hygienic/ Aesthetic	Can selectively wash hair as required, can dry cut clean hair
Hair salon	Hair colour	Aesthetic	Can reschedule
Hair salon	Hair wash	Hygienic/ Essential	Can be done at home rather than at salon – also salons could use dry shampoo

This list is not extensive, and is meant to provoke discussion. Whether these services are deemed essential, aesthetic or hygienic, understanding the true water use of these services and all business services is extremely important before incorporating into policy.

### c) Drinking water

The only point that is unclear with the term 'drinking' in section 1 of the bylaw is whether wineries, breweries and u-brews are affected by the water restrictions. If fountain drinks and coffee/tea are considered acceptable, are alcoholic beverages considered acceptable use of water?

These organizations were called and asked to store water in advance to avoid using treated drinking water for these purpose during stage 4 implementation in April. All these activities require treated drinking water to continue operating, and it was concluded that they should remain on the list of acceptable services unless there is a way to enforce indoor water use restrictions for high water consumers.

### d) Addressing cleanliness through health and safety

The first point of the bylaw must address cleanliness through a health and safety lens. Are businesses allowed to clean up spills with a mop and bucket rather than power washing? Technically, this is not considered 'personal hygiene' as defined above, however it can be argued that workspaces must maintain a level of hygiene as defined by Island Health, and remain a safe workspace as defined by Worksafe BC. In the point 5 (e) of the bylaw, cleaning outdoor surfaces is only allowed as outlined by regulatory authorities. What about indoor cleaning?

To address the issue of including water use practices that affect health and safety into the list of bylaw exceptions, Lynn Magee, the Regional Drinking Water Coordinator for Island Health was consulted, who provided a list of acceptable water use practices of potable water during boil water advisories.

**VIHA list of acceptable water use practices: Essential potable water use would include:**

- Drinking water
- Hand washing/toilet flushing
- Food preparation
- Bathing, showering, brushing teeth
- Wound cleaning
- Infant formulas
- Making ice
- Laundry
- Mopping floors

**Worksafe BC: Acceptable water use practices<sup>5</sup>**

- Clean floors regularly
- Clean up puddles or spills immediately to avoid accidents

Ensuring the bylaw aligns with health and safety regulatory bodies is important, so businesses know that their commitments to maintaining health and safety of their staff overrides the stage 4 water restrictions.

### e) Lack of reduction goals and real time data

In discussion with business representatives, many wondered to what percentage the CVRD was hoping to reduce water consumption. When shown the graph of actual water reduction results on the survey and in the working groups, it appeared that there was approximately 25% reduction in water consumption of what is normal consumption during that time. These representatives were unclear whether this was what the CVRD was hoping to achieve.

Reduction targets will help remove the ambiguity and increase clarity around what the community needs to do in order to achieve the goal. The City of Kelowna<sup>2</sup> has defined a goal of reduction targets for each stage of the water restriction bylaw. The goals are as follows:

- Stage 1: 10% reduction in peak use
- Stage 2: 20% reduction in peak use
- Stage 3: 33% reduction in peak use
- Stage 4: Maintain health of the community

In emergency situations, it is challenging to know what the reduction target is, but if there are realistic targets at all other stages, then it is easier for residents and businesses to understand that they have to help further reduce consumption past the stage 3 restriction goals.

During stage 4 implementation in April, there was no way for the public to see how much daily water consumption was reduced by. Without this real time data, it was hard for people to understand that their efforts were making a difference, and easy for those that chose to make no changes during the restrictions to carry on with business as usual.

# Recommendations

The following recommendations are based on points raised by the business community during this review of the survey, working groups, stage 4 water restriction bylaws in other BC municipalities, and through conversations with Island Health, the City of Vancouver and the City of Kelowna.

## Proposed changes to the bylaw

- 1. Confirm whether stage 4 water restrictions should include indoor water use practices.** Upon reviewing stage 4 water restriction bylaws that note prohibited commercial water use practices, none of these bylaws indicated that stage 4 restrictions would affect residential or commercial indoor water use.
- 2. Clarify the terminology.** For example, under section 2 of the bylaw, the following line raised many questions, "...without limiting the generality of section 1, prohibited uses of water during state 4 include the following..." making reference to outdoor water use practices only. Many business representatives were confused by the term, "limiting the generality", and the fact that the list of prohibited water uses are only regarding outdoor water usage, when they were getting a call to reduce their indoor water use.
- 3. Include reduction targets.** If residents and businesses understand that we are trying to reach a 50% or greater reduction of peak water usage in stage 4, they will be more likely to do their part to reach that target. Without targets, people begin to doubt if their efforts will make a difference, especially if they see their competitors carrying on with business as usual. Perhaps include a section after the list of prohibited uses of water during stage 4 that notes, "depending on the level of emergency, residential and commercial customers may be asked to restrict indoor water use to meet reduction targets, if targets are not met through enforcing the above list of prohibited water use activities."
- 4. Create language in the bylaw to allow for increased enforcement depending on the level of emergency or public compliance.** Specify that all outdoor water use is prohibited during phase 1 of stage 4 water restrictions (using the list of prohibited outdoor water uses and exceptions, which is already quite clear). If the reduction target is not met within a certain time period - this is where all aesthetic and non-essential services can be listed (which will financially impact business), and limits on residential indoor water use can be set. Without targets or enforcement of indoor water use, it would be difficult to expect significant reductions.

5. **Add a list of commercial prohibited water use activities.** Similarly to other communities, include a chart in each stage of the water restriction bylaw that notes which commercial or non-residential water use practices are prohibited.

Potential prohibited commercial water use activities for stage 4 could include:

- Watering lawns, gardens, plants, shrubs and trees for aesthetic purposes
- Watering lawns, gardens, plants, shrubs and trees for sale
- Watering edible plants and food bearing perennials
- Irrigating golf courses
- Washing vehicles or boats (except to clean windows, lights, mirrors, license plates and boat engines for safety reasons)
- Washing or power washing exterior windows, buildings or impermeable surfaces (with the exception of cleaning for sanitary or safety purposes as indicated by Island Health or WorksafeBC)
- Filling or topping up of commercial pools, hot tubs, ponds or fountains
- Operating water parks
- Testing, operating or blowing out irrigation systems
- Mixing concrete
- Using water for agricultural purposes other than drinking water for livestock

Before adding indoor commercial water use activities, it must first be determined whether the potential water savings from restricting these activities warrants the economic hardship businesses will endure by enforcing this point (i.e. non-essential aesthetic services or water used for wine/beer making).

6. **Consider the economic impact of restricting water use on commercial operations.** The City of Nanaimo's water restrictions bylaw state that, "businesses which need water for normal business activities are exempt from all watering restriction stages".<sup>6</sup> If the CVRD wishes to target indoor water use for businesses, it would be beneficial to back it up with actual consumption data to make sure their loss of revenue will be worth the potential water savings during these emergency situations.
7. **Ensure residents are clear that the water restrictions only apply to treated drinking water.** Although Port Alberni doesn't note specific prohibited commercial water use activities, they do note that the, "water restrictions do not apply to the use of rain water, gray water or any form of recycled water".<sup>7</sup> The Sunshine Coast Regional District<sup>8</sup> does note commercial farms as being restricted, and has a similar statement at the bottom of their chart. Adding a statement like this may help businesses better plan for future restrictions by securing a secondary water source to continue business during these times.

## Proposed changes to communicating stage 4 water restrictions to the business community

From the feedback we received from the business community, many business owners did not initially realize that the Stage 4 water restrictions applied to businesses, and especially to non-outdoor water use. Upon receiving a phone call or visit from a bylaw officer, they began to digest how the restrictions would affect their operations. The following suggestions pertain to better informing the business community during future stage 4 water restrictions:

1. **Provide a clear plan.** Create a document similar to Metro Vancouver's Drinking Water Conservation Plan<sup>9</sup> that provides a breakdown of how the water restrictions affect residential and non-residential water use, as well as government, schools and parks.
2. **Create a commercial water restrictions reference guide** (similar to the residential water restriction reference guide). This category would cover all non-residential water usage, including businesses, non-profit organizations and industrial operations. The CVRD's residential version uses icon graphics and is colour coded, making the chart easy to read and understand. Abbotsford Mission has a graphic PDF that includes commercial water uses along with residential water use activities.<sup>10</sup>
3. **Include commercial water restrictions along side residential water restrictions.** Make the commercial restrictions mainstream by displaying them with residential restrictions. For example, the backside of the Comox Valley Watering Schedule postcards could be used to address how the different stages affect businesses.
4. **Increase water conservation education.** Use billing data to identify high commercial water users, and advise them to install water saving devices and implement water conservation practices. Perhaps look to incentivize the installation of low flow fixtures, and fixing any leaks that may be present. Provide a list of water conservation practices for businesses, and offer suggestions based on best practices. Entice commercial water users to take a "conservation challenge" to reduce their water consumption. The City of Abbotsford has several examples of residential water conservation education that have measurable results, which could be applied to the commercial sector.<sup>11</sup>
5. **Communicate water reduction metrics during future stage 4 restrictions.** Use metered data to show how the reduction rates measure up against anticipated reduction targets. This will help people realize they have to do more to help meet these targets, and will feel like their sacrifice was worth it to help

active the overall goal. The Chamber of Commerce is willing to help communicate this information in future stage 4 water restrictions.

- 6. Provide as much notice as possible.** A very common comment from businesses was that they wished they had more notice to properly prepare for stage 4. Due to the nature of the repair, additional notice was challenging. In the future, the business community would like this to be a priority.

## Closing Remarks

The CVRD did an excellent job in communicating the stage 4 water restrictions with the business community in April. After implementation, the CVRD has prioritized strategic engagement to do an even better job with implementation of stage 4 water restrictions in the future.

Without fully understanding the extent of the leak and repair, with no known reduction targets and without seeing their water use practices listed as prohibited in the bylaw, some businesses were left feeling ostracized and frustrated. The recommendations attempt to alleviate their frustration, ensure clarity around language and communications efforts and stress the need to use data to ensure restricting indoor water use practices during stage 4 will be worth the economic hardship businesses may endure.

The recommendations are laid out as discussion points for use during analysis and review of the bylaw.

# References

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- <sup>2</sup> City of Kelowna (2019). *Schedule E - Water Use Restriction Stage*. <https://apps.kelowna.ca/CityPage/Docs/PDFs/Bylaws/Water Regulation Bylaw No. 10480.pdf>
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- <sup>4</sup> Merriam-Webster (2019). *Definition of Aesthetic*. <https://www.merriam-webster.com/dictionary/aesthetic>
- <sup>5</sup> WorksafeBC (2019). *Occupational Health and Safety Regulation* <https://www.worksafebc.com/en/law-policy/occupational-health-safety/searchable-ohs-regulation/ohs-regulation>
- <sup>6</sup> City of Nanaimo (2019). *Watering Restrictions*. <https://www.nanaimo.ca/city-services/water-sewage/watering-restrictions>
- <sup>7</sup> City of Port Alberni (2019). *City of Port Alberni Water Restrictions – At a Glance*. [https://www.portalberni.ca/sites/default/files/Water Restrictions At a Glance 2018\\_0.pdf](https://www.portalberni.ca/sites/default/files/Water Restrictions At a Glance 2018_0.pdf)
- <sup>8</sup> Sunshine Coast Regional District (2019). *Stage 4 Water Regulations Chart*. <https://www.scrd.ca/files/File/Infrastructure/Water/Stage 4 - water regulations chart.pdf>
- <sup>9</sup> Metro Vancouver (2019). *Drinking Water Conservation Plan*. <http://www.metrovancouver.org/services/water/WaterPublications/DrinkingWaterConservationPlan.pdf>
- <sup>10</sup> Abbotsford Mission Water And Sewer Services (2019) *Water Shortage Response Plan*. <https://www.ourwatermatters.ca//files/File/Water Restrictions/Abbotsford Mission Water Shortage Response Plan.pdf>
- <sup>11</sup> City of Abbotsford (2012). *Report No. ENG 26-2012: Water Shortage Response Plan and Sprinkling Restrictions for 2012*. <https://abbotsford.civicweb.net/document/26800>

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## Appendix A – Business Engagement Survey Results

There were 42 valid survey responses to the 10-question survey. There were 61 additional surveys that were incomplete or did not qualify (operated outside of the Comox Valley Water System).

### DEMOGRAPHICS

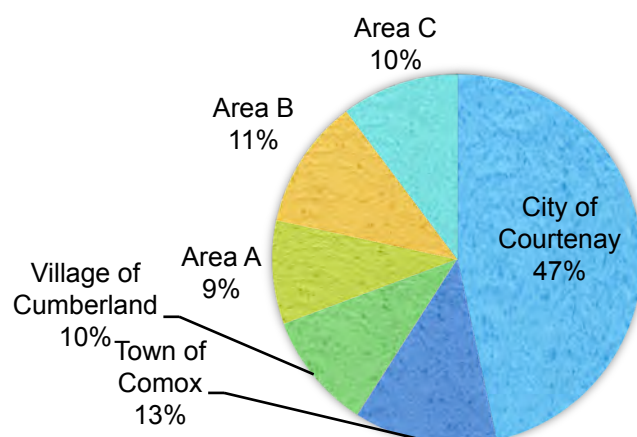
**1. What type of business do you work for or own?** (For example, carpet cleaners, grocery store, car wash, restaurant, spa, salon, etc.)

The types of business varied significantly, providing a wide variety of input from most business sectors:

- Government (3)
- Non-profit (2)
- Landscape Construction (2)
- Irrigation (3)
- Lawn maintenance (2)
- Real Estate
- Food manufacturing
- Car dealership (2)
- Retail (4)
- Retail grocery store (4)
- Retail/greenhouse
- Photography
- Food and Beverage
- Bike shop/cafe
- Agriculture
- Marine Boat Supplies
- Professional services
- Window cleaning (2)
- Health Care
- Fire Department
- Hotel, spa and restaurant
- Hair Salon (3)
- Dog grooming salon
- Car wash/oil change

**2. Please choose the area(s) of the Comox Valley in which you work. (Choose all that apply)**

*Figure 1. The locations in which business representatives' work.*



Of the 42 surveys, graph 1 shows 47% operated their business in the City of Courtenay, while the remaining 53% are split between the electoral areas and other municipalities.

Those that chose the Village of Cumberland and electoral areas, also chose areas within the Comox Valley Water System.

**3. Please view the map to confirm that your business is connected to the Comox Valley Water System.** A map was provided as a link through the online survey.

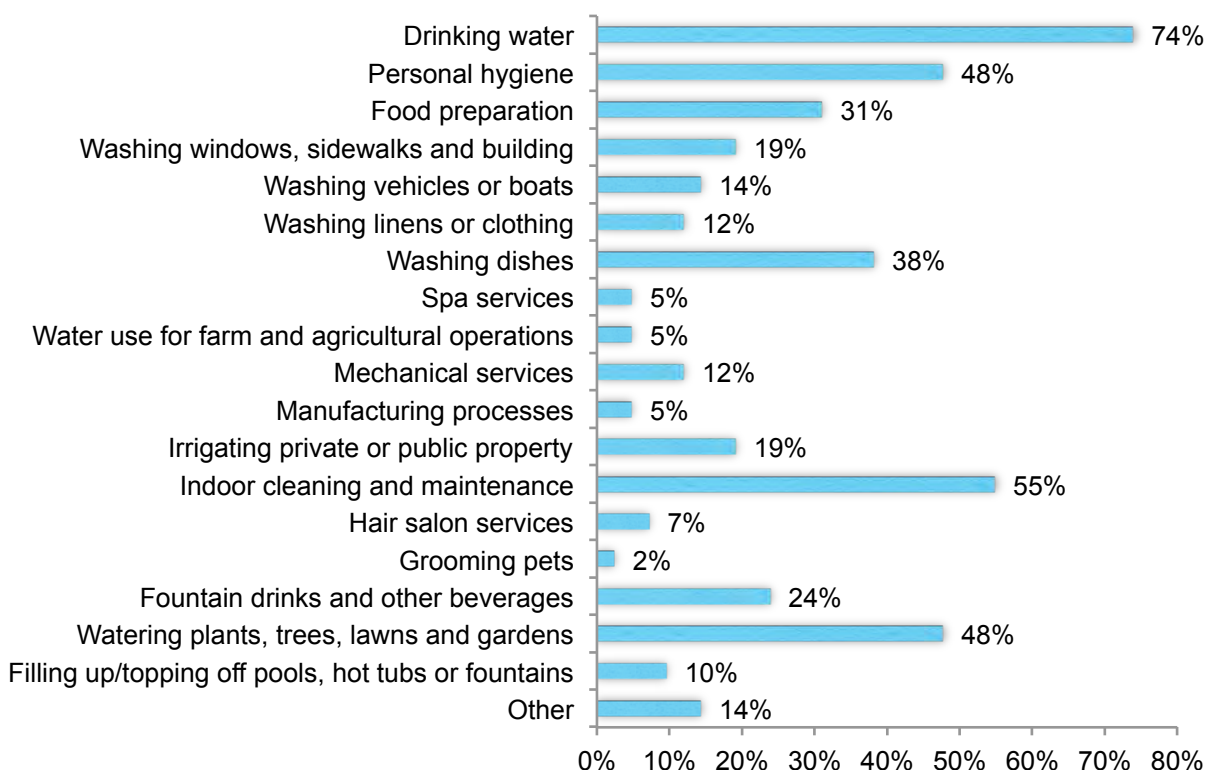
The 42 valid respondents indicated that their business was connected to the Comox Valley Water System. Only two respondents answered, "No, my business is not connected to the Comox Valley Water System." One invalid respondent was a steel manufacturer and one was a test response.

## WATER USE

### 4. How do you use water on a daily basis at work?

Respondents were able to choose all that apply to indicate how they use water daily.

*Figure 2. How respondents use water on a daily basis while at work.*



The percentage of respondents that indicated they use water for personal hygiene is surprisingly low (48%), since most of these businesses have a physical location and provide washroom facilities for staff and customers.

Landscape and irrigation companies and exterior building cleaners and window washers use the customer's water to conduct their business services, and do most do not have a store front in these locations.

The six respondents that choose "Other" noted using water for water dispensers (grocery), grass seed germination (lawn maintenance), fire protection and training (fire department), floor cleaning (retail), hygiene (retail), building cleaning and topping up of water features (landscape design).

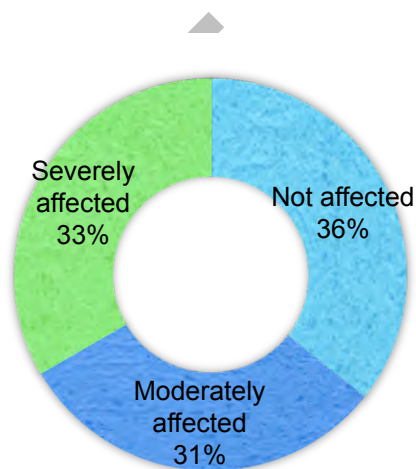
## IMPACT OF THE RESTRICTIONS

**5. The stage 4 water restrictions bylaw required all businesses and residents connected to the Comox Valley Water System to only use water for drinking, food preparation, personal hygiene and health and safety. On a scale of 1-10, how was your daily business operations affected by the implementation of the stage 4 water restrictions? (Choose the best answer)**

Of the 42 respondents, one third (14) were severely affected by the restrictions (chose 8, 9 or 10 on the scale of 1-10).

These businesses included landscape/irrigation (6), retail grocery store (2), agriculture (blueberry farm), dog groomer, car wash/oil change, hotel, spa and restaurant, retailer (hot tubs) and a non-profit. 31% of respondents were moderately affected (chose 4-7 on the scale of 1-10) and 36% indicated they were not affected by the water restrictions (chose 1-3 on the scale of 1-10).

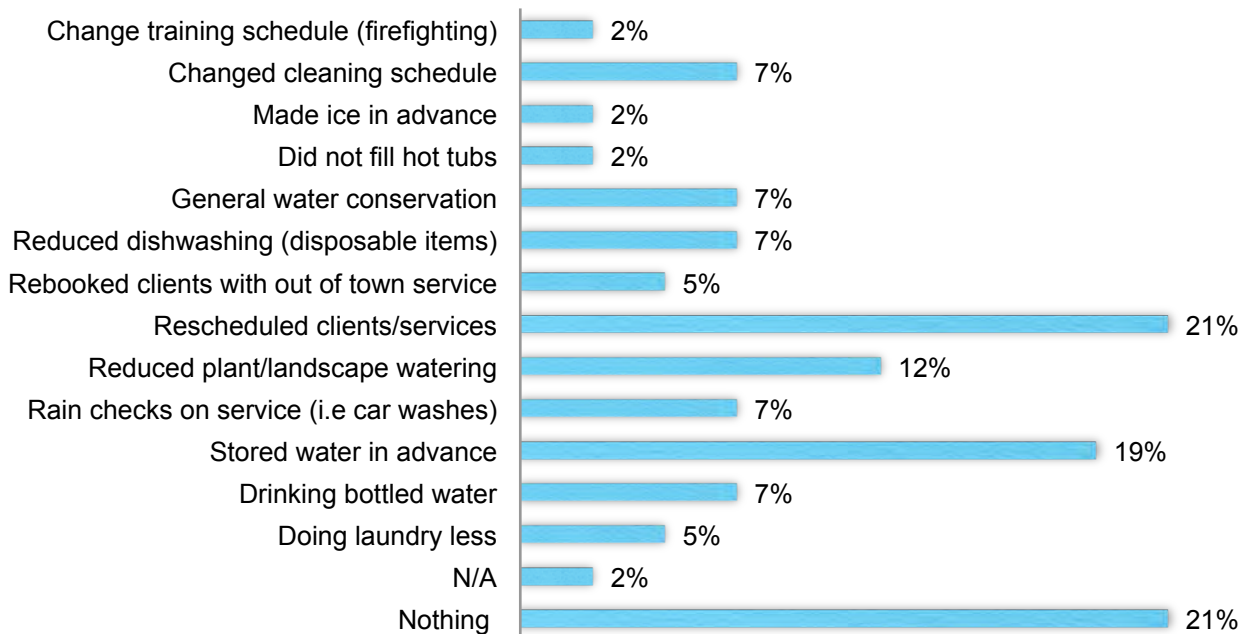
*Figure 3. The extent to which businesses' daily operations was affected by the stage 4 water restrictions.*



**6. What did your organization do to prepare for and minimize the impact of the water restrictions on your daily business operations? (For example: stored water in rain barrels, rescheduled clients, gave rain checks for car washes, etc.)**

21% of the respondents didn't do anything to prepare in advance, 21% rescheduled their clients and 19% stored water in advance.

**Figure 4. How respondents prepared for stage 4 water restrictions.**



Question 5 and 6 were combined to show what businesses did to prepare for the restrictions in relation to how severely they were affected by the stage 4 water restrictions. The majority of respondents that did nothing were mostly those not affected by the restrictions. However, the blueberry farm and the hotel and spa reported doing nothing to despite saying they were severely affected by the restrictions.

**Table 1. How respondents prepared for stage 4 water restrictions in relation to how severely they were affected by stage 4 water restrictions.**

**Legend:**

Not affected	Moderately affected	Severely affected
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Business Type	What did your organization do to prepare for and minimize the impact of the water restrictions on your daily business operations?
Government office	Nothing
Office - Real Estate	Nothing
Retail footwear	Nothing
Photography	Reduced unnecessary water usage

Clothing retail	We used tap water sparingly
Retail sales	Nothing
Professional	Used bottled water
Hair Salon	Nothing, booked three weeks in advance so not going to reschedule customers, just going to keep doing what we're doing. We're not going to not wash hair dye out of someone's hair!
City of Courtenay	N/A
Sell irrigation products	Didn't affect us, only selling parts
Hair Salon	We tried to conserve water usage by drinking bottled water & doing laundry less often
Cafe and bike shop	Nothing
Retail Grocery	Stored water in advance for outdoor plants, no control over irrigation system
Non profit - family service agency	Informed our cooking groups to limit dishwasher use whenever possible - we have an industrial sanitizer so that helps a bi, plus we increased our purchase of water bottles for water coolers.
Municipality	Education
Window/siding/roof cleaning business	Significant rescheduling, carried water on vehicles to job site in some cases
Car Dealership	We have to send our vehicles out of the valley to have them detailed-costing us about \$400 a car. We then give rain checks for customer washes.
Health Care	Stopped washing vehicles, Bottled water for drinking, no hose washing
Fire Department, Fire Department	Stopped spraying water at training, stopped washing equipment and apparatus
Hair Salon	Used disposable dishes/towels where we could to eliminate use of water in these areas, make a strong effort to reduce all areas to only necessity under health/safety for our staff and clients.
Retail Grocery	Cut back on watering, lost a few plants, but in the future would store water in jugs
Retail Grocery	Stored water for watering retail plants
Retail Café	Made ice in advance. Suspended power washing floor mats and racks weekly.
Window cleaning	Stored water and rescheduled customers
Food manufacturing	Rescheduled some food production
Car Dealership	Had to pay to have cars detailed out of town. Which costs us \$350 a vehicle.
Retail with Greenhouse	Purchased 6 x 250 gallon water totes and built platforms to use gravity to dispense water through hoses. Filled totes prior to restrictions. refilled totes from well at a residence
Marine Boat Supplies	External water storage
Non Profit	None
Irrigation Services	Unable to prepare because I wasn't informed. I focused on customers on wells.
Lawn Maintenance	We tried to get as much of out lawn repairs done but giving the notice it was difficult with the demand we had
Retail Grocery	Half a semi truck of flowers arrived, for blooming event. Filled water a week in advance from Canadian Tire (10 garbage cans) stored water in cooler, used 2 a day watering cans to fill

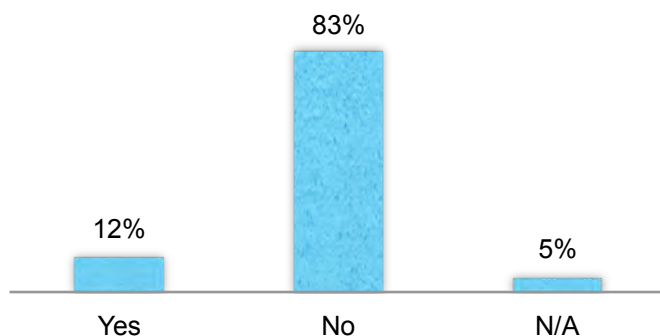
Retail Grocery	Stored water in large water containers before the restrictions hit, turn off sprinkler systems.
Landscape Construction Specializing in Custom Water Features	Rescheduled spring cleanouts of ponds, streams and water features, rescheduled new builds, stopped booking new requests due to being behind schedule
Retail store selling hot tubs and associated goods	We did not fill any hot tubs during the restrictions
Lawn Care	Rescheduled/ Lost customers
Landscape Construction - specializing in water features	Organized work outside of the affected areas.
Blueberry Farm	Nothing can be done. You cut off my water my 33 years of carefully growing my blueberry bushes can result in the whole Field dying. No more blueberry picking tradition for Comox.
Hotel, Spa and Restaurant	There was not much we could do. Based on the criteria, every hotel in town would have to close, we took the approach that washing towels and linen was a personal hygiene issue, pools and hot tubs need topping up. Landscaping suffered. Tourists may stay away due to lack of knowledge.
Irrigation	Work exclusively in Campbell River for the duration of the restrictions.
Dog Grooming Salon	Rescheduled clients WITH VERY LITTLE NOTICE GIVEN
Oil Change and Car Wash	Rain checks for small portions of car wash sales. Lost greater numbers

## BYLAW INTERPRETATION

### 7. Did you have any uncertainty about whether the restrictions applied to your water use for your business?

The majority of respondents (35) indicated that they were clear on understanding how the bylaw affected them.

**Figure 5. Percentage of respondents who were uncertain about how the restrictions applied to them.**



The 5 respondents who indicated they were uncertain about whether the restrictions applied to their business (those that answered yes) were the hair salon and dog groomer respondents. See additional comments (below).

**Additional responses for the businesses that answered ‘yes’:**

- a) Expected lower flow / pressure - *Food and beverage*
- b) Article in paper needed to be countered by local government, it seemed like we were told we couldn't wash out colour. You need to control the slander in the papers, it seemed like all hair salons would be fined - *Hair salon*
- c) It wasn't clear in the beginning how to best implement for business. Specifics about the bylaw and more details would have been helpful – *Hair salon*
- d) It was not made clear by the RD that it concerned indoor businesses as well – *Dog groomer*
- e) As a hair salon, we weren't sure but I understood that hair salons were exempt, from Facebook posts – *Hair salon*

**8. Do you have any suggestions on how your business or other businesses could further prepare for and reduce the impact of future stage 4 water restrictions?**

34 respondents answered question 8. Some respondents answered the question with best practice ideas and solutions; some offered general comments and others offered the CVRD advice on how to improve implementation of stage 4 water restrictions in the future. The responses are below.

**Best practices and solutions**

- Collect and store rain water
- Allow businesses to use water at times of the day when domestic use is at a lower level - i.e. night or mid morning
- Education and rebate programs to help move people off high water use
- Store water and filling jugs in advance (3)

**General comments**

- Good on advance warning
- There is not much we can do to prepare for these restrictions as all the tools we use to detail cars need a steady supply of water
- We use very little water and pay a large bill for it
- The impact from the pipeline repair was vastly less impactful than a boil water advisory. It was not a problem

- There isn't much more we could do to prepare for future restrictions.
- Nothing can be done. You cut off my water my 33 years of carefully growing my blueberry bushes can result in the whole Field dying. No more blueberry picking tradition for Comox.

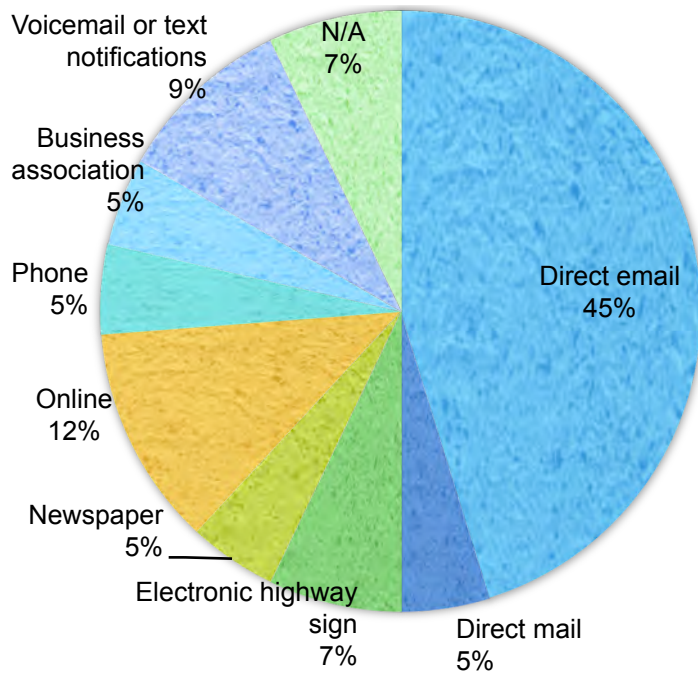
### **How the CVRD could improve communications**

- Perhaps a clearer indication of exemptions
- Planning ahead and keeping updated on water restrictions
- More advance notice would help, giving tips and strategies could help as well (3)
- Better signage for PUBLIC washroom locations
- Governments should plan and build water reservoir
- More information delivered directly to businesses
- Get the word out about what stage 4 restrictions entail
- More advertising of Stage 4 notice
- CVRD could help by scheduling maintenance such as this during winter or very rainy times
- Stage 4 restrictions SHOULD NOT APPLY to indoor businesses. Which is the case in every other BC municipality. (Researched) – *Dog groomer*
- It should not affect my business because you cannot arbitrarily select which businesses can and can't use water. Other than storing water and rescheduling there is nothing else I can do - *Window cleaner*
- Offer rainwater storage solutions to businesses and residents] Water storage is the biggest problem, work/sales for rainwater harvesting, sell a lot of water tanks, you can never have enough water storage. Have people using rainwater for their whole house, wells [are not] not up to snuff. 8-10,000 gallons of water runs whole house.
- Nanaimo RD has rebate for people storing water on their property (rebate back based on size of water tank they install).

### **9. What is the best way for your organization to receive information about future water restrictions? (Choose one answer)**

45% of respondents want to be directly emailed water restrictions notifications from the CVRD. 12% would like to view this information online, and 9% want voicemail or text notifications. 7% think the electronic highway sign is the best way to receive information about the water restrictions. 5% said they would like to receive it from a business association, by phone, by direct mail and by seeing it in the newspaper, respectively. 7% did not answer.

**Figure 6. How respondents would like to receive future water restriction notifications from the CVRD.**



No respondents chose 'Other' as an option, however there were a few comments included in the text bar:

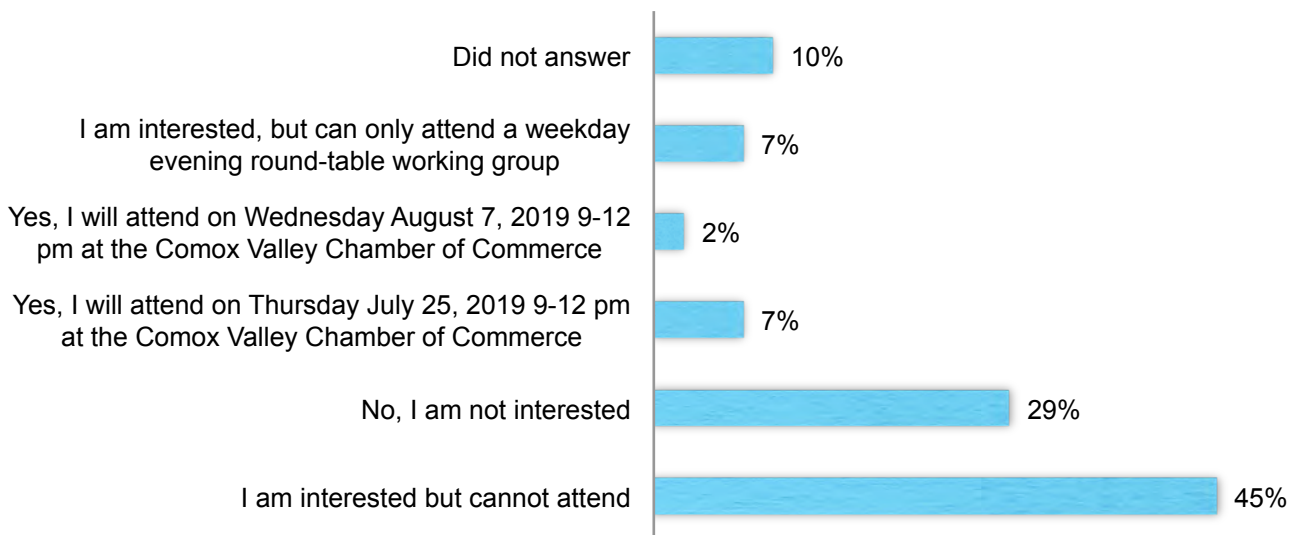
- Any notices should be in writing with advanced notice. (NOT THREE DAYS AT THE WHIM OF THE HEAD OF ENGINEERING).
- More than 1 [way] is better.
- Newspaper, email, radio, etc.
- Direct email and direct mail.

## PROVIDING ADDITIONAL INPUT

**10. The CVRD is hosting up to three round-table working groups to connect with local business representatives to create asset o guidelines on business water use practices. Are you interested in attending and/r providing additional input?**

52% of respondents were interested but could not attend one of the working groups. 9% or respondents indicated they would attend a working group. 29% were not interested.

**Figure 7. Percentage of respondents intested in provding additional input.**



Because of the low attendance indicated for the working group on August 7, the time of day was changed to 5:00-7:30 pm at the Chamber of Commerce. All respondents that indicated they were 'interested but could not attend', or 'interested, but can only attend a weekday evening', were called and invited to the evening working group session.

# Appendix B - Round Table Working Group Results

## Round Table Working Group Results – July 25, 2019

### Rapid Fire Water Use Practices Worksheet: Stage 4 Water Restrictions

#### Attendees:

- Julie K, Business Services, Comox Valley Chamber
- Doug Smith, GM, Nature's Pastures

**Purpose:** To gain clarity on business water use practices in relation to stage 4 water restrictions. This clarity will inform a set of guidelines outlining acceptable and prohibited water use practices during stage 4 water restrictions. A guideline document and potential bylaw adjustments will be submitted to the Water Committee in the fall as a proposed amendment to the Comox Valley Water Conservation Bylaw 2010.

Business Practice	Applicable business types	Clearly defined in bylaw (Y/N)	Best practice ideas (what can be done instead, and how to prepare)
Office water use (dishes, laundry for hand towels, hand washing, watering interior plants)	Offices	N – Allowed, but ways to cut	<ul style="list-style-type: none"> <li>• Laundry – do full loads</li> <li>• Install low flow toilets</li> <li>• Taps with automatic shut off</li> <li>• Taps with low flow aerators</li> <li>• Water plants with rinse water</li> </ul>
Water for preparing food products	Food service or food prep businesses	Y - Allowed	Use conservation practices – don't let the tap run when rinsing produce and dishes, use caught water for watering plants.
Cleaning	Food service or food prep business	N – not listed as prohibited but not listed in exceptions	Part of health and safety
Power washing garbage area	Food service/food prep business	N – power washing is prohibited – but arguably health and	Question raised that VIHA requires the power washing of garbage area once a month (or within some time limit)

		safety issue	
Fountain drinks	Food service	Y - allowed	Considered 'drinking water'
Drinking water	Offices	Y – allowed	Fill jugs and store in fridge to avoid running the tap for cold water
Laundry	Accommodation, salons/spas	Y – considered personal hygiene	Mandatory conservation practices – full loads, change the time of day to only use water during low draw times (8-12 pm)
Car/boat washing	Car wash, sales, car/boat maintenance	Y-prohibited	No other jurisdictions say it's okay to do this during stage 4
Dog washing	Dog groomers	N – unclear whether it's personal hygiene (ask VIHA)	Only for health and safety (washing off feces/infestations), all other grooming services are okay (like clipping, brushing, cuts, etc.)
Washing hair	Salons	N – unclear	Thought to be personal hygiene, but can easily avoid if people wash their hair at home. Reschedule appointments, especially for things that require a lot of water like colour
Water for pedicures/manicures	Spas	N – unclear	Not necessary – so should it be mandatory to reschedule appointments or use a sanitizer spray or gel instead?
Spills	All businesses	N – unclear	It seems necessary to clean up spills as a safety hazard, especially food spills. Use spray instead of water?
Running water through boat engines	Boat mechanical services	N – unclear	Should not use tap water for this. Recirculate water... reschedule appointments, fill jugs in advance.

## Notes:

- What are the rules of the health inspector (VIHA)? Need to jive with what they say, or the bylaw should state that water use regulated by Island Health for health purposes is allowed during stage 4.
- WorkSafe: Water use required by WorkSafe for safety reasons is allowed – state in bylaw
- However some of these rules are arbitrary... begin to question the rationale behind all of these rules
- If people understand the problem, it will be easier to ask them to help. It would be easy to ask each business to cut their water use by 100L per day. Conservation practices for all indoor use (catching rinse water, full loads of laundry/dishes, hair dressers asking if someone has clean hair they could just spray it damp if needed rather than doing a full wash, etc.
- Provide tips/links to getting best sinks/taps (15 sec. shut offs... or motion?)
- Cleaning not addressed in bylaw – unclear (doesn't actually state health and safety), #3 of Schedule A says "pools etc. should be drained for health and safety purposes..." Does this mean that only non-tap water can be used for cleaning?
- If it's a flow issue to ensure there is enough water left for firefighting purposes, then can times of day be set for things like laundry (8-12 pm) to reduce flow during peak times? Hotels run their laundry during busy mornings after check outs, when everyone else is using water for breakfast, showers, food prep, etc.
- Dog grooming/salons – ask VIHA's opinion whether it's personal hygiene
- Call all business types – ask what they can do to save water. They will all have ideas, and some things will be easy to start doing right away. Simple behavior practices.
- Talk to MLA – issues with provincial regulations, which could be butting heads with health authorities, safety boards and local bylaws, not all congruent. Get provincial regulations changed or get reasoning behind it. Write these into bylaw so bylaw is consistent with these other rules.
- Ensure businesses comply with health and safety regulations before complying with bylaw, or ensure those practices are exceptions.
- The Chamber is willing to email the results out, and get the word out to all businesses when these restrictions are implemented.

- Time of day – does flow time matter? Communicate best flow patterns, and suggested times to use water.
- Why aren't conservation measures common practice?
- Zoning – low water use/landscaping standard, drip irrigation. Incentives vs. penalize
- Building permits, time more important than money – make it easier to get a building permit if they install low flow.
- Rainwater – incentivize cistern/rainwater capture systems
- Challenge all businesses to reduce their consumption by 100L. Huge saving if all 1600 Comox Valley businesses reduce by 100L
- Look at example in Cape Town where by social media, people were posting what they were doing to save water, and asking "What are you doing?" which caused everyone to make change and post their practices – however there was a major water shortage for a long time
- Use social media for best practices – share good stories
- Getting businesses to connect with clients – everyone do their part (avoid double hair washing, etc.)
- Ask businesses to sit down and brainstorm how they can reduce water (should do for all resources used by business, energy, waste, etc.)
- Show daily water reduction – the technology must be there to show the public on a daily basis how much water is being reduced by. Most people didn't know if they were making a difference, and showing them daily, saying we did good today but need to do better tomorrow would really help people try harder. The Chamber could help get these daily reports out. People want to know if they are making an impact.
- Provide clear reduction targets that are tracked daily, and communicate them.

## Round Table Working Group Results – August 7, 2019

### Rapid Fire Water Use Practices Worksheet: Stage 4 Water Restrictions

#### Attendees:

- Julie K, Business Services, Comox Valley Chamber
- Scott Gilbert, Thoughtful Paws
- Angela Gilbert, Thoughtful Paws
- Don Mitchell, Mitchell's Irrigade

**Purpose:** To gain clarity on business water use practices in relation to stage 4 water restrictions. This clarity will inform a set of guidelines outlining acceptable and prohibited water use practices during stage 4 water restrictions. A guideline document and potential bylaw adjustments will be submitted to the Water Committee in the fall as a proposed amendment to the Comox Valley Water Conservation Bylaw 2010.

Business Practice	Applicable business types	Clearly defined in bylaw (Y/N)	Best practice ideas (what can be done instead, and how to prepare)
Testing irrigation systems – run water for 30 min through irrigation lines	Irrigators	N – not doing so to water plants, for maintenance	Make repairs that don't require the water to be turned on, then come back when restrictions are over to run the system. More notice
Washing dogs	Dog Groomers	N – unclear whether it's personal hygiene	Wash dogs if it's a matter of personal hygiene according to groomers – many examples proving so
Cutting dogs hair	Dog Groomers	N - need to wash to get grit out of fur, to avoid damaging equipment	Kindly ask customers to reschedule voluntarily, and allow them to have their service if they can't reschedule.
Anal gland expression	Dog Groomers	N	80% of dog do it or need it, must wash, wear rubber apron, Serious personal hygiene issue
Nail trim	Dog Groomers	N	Don't need to bath, however not viable to do this only as all other services require bathing
Hair cut	Salons	N	Don't wash unless matter of personal hygiene for the customer or staff

Hair colouring	Salons	N	Reschedule all hair colour appointments as dying hair is not an essential service
Body polish, body scrub, masks and body wraps	Spas	N	Reschedule all for these services that require water.
Hydrotherapy – water massages	Spas	N	Reschedule all for these services that require water.
Manicures/pedicures (soaking hands and feet)	Spas	N	Use sanitizer spray to continue non soaking related services, or reschedule

### Notes:

- Does flow pattern matter? Should people wash their clothing early morning or late at night? Could a business use water at those times?
- Even better communication of what the repair entailed – diver
- Indoor water use - Make voluntary conservation practices a 'challenge' rather than saying 'voluntary restrictions' – all residents and businesses are challenged to cut their indoor water use by 20% - here are some ideas. Celebrate success, encourage neighbors, businesses and friends to conserve water. This could hopefully eliminate the pettiness "well they're using water like normal so why should I make changes to my business and lose customers?"
- Dog groomers – felt less than, wasn't fair, not understood at all
- Where is the line between personal hygiene and esthetic?
- Spread out the emergency feeling between everyone, wasn't fair some just kept doing what they were doing and others lost out on business
- Ask indoor businesses to voluntarily make cuts –as a challenge "Do your part"
- Better deliver message to get people onside
- Reference the financial impact in the bylaw, like in Nanaimo's bylaw
- Did the CVRD make the reference guide? Make version for commercial
- Put indoor commercial water users into categories and challenge them to use the conservation checklist

## Additional interview with Old House Hotel and Spa

### Water Use Practices Worksheet: Stage 4 Water Restrictions

**Purpose:** To better understand water use practices within a spa.

<b>Business Practice</b>	<b>Applicable business types</b>	<b>Clearly defined in bylaw (Y/N)</b>	<b>Best practice ideas (what can be done instead, and how to prepare)</b>
Pedicures in chairs – fill with water, 4 chairs, 10+ appointments each per day, ~10L per chair = 400 L per day.	Spa	N	Issues – loss of revenue if they don't want to reschedule, not meeting customer expectation, don't want to just spray sanitizer on customer's feet.
Manicures – small bowl of water to soak hands	Spa	N	
Hydrotherapy infinity tub – for two people, for relaxation before a massage (not essential, but considered under personal hygiene for bathing)	Spa	N	Providing service to local and high-end clientele. Not offering this service would just be loss of revenue.
Vichy shower treatment – multiple showerheads provide pressure point massage that stimulates circulation and lymphatic flow	Spa	N	Not offering this service would just be loss of revenue.
Laundry	Hotel	Y	Personal hygiene, eco wash