

SUMMERLAND DROUGHT RESPONSE PLAN



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1. Introduction

1.1 GENERAL

The Summerland Drought Response Plan (the 'SDRP') has been developed as a local drought response plan to supplement the recently completed British Columbia Drought Response Plan (the 'BCDRP'). For consistency, most of the content set out in the SDRP mirrors the content of the BCDRP. The SDRP includes amendments to the BCDRP wherever it is deemed the contents of the BCDRP do not adequately deal with drought issues specific to the geographic region of Summerland and its watershed.

Like the BCDRP, the SDRP recognizes that prescribed responses to a drought event may create economic impacts which will affect some water users more significantly than others. Managing these economic impacts will require a delicate balancing of water use restrictions to ensure non-essential uses of water, like lawn and boulevard irrigation, is reduced before any water restrictions are implemented that may cause an unnecessary economic hardship upon the users.

The Director of Engineering and Public Works and the Manager of Water Operations are primarily responsible for the administration of the SDRP. They will rely on the input and expertise of the Drought Response Team to assess drought conditions and to implement drought responses.

1.2 BACKGROUND

The District of Summerland ('Summerland') is situated in a semi-arid climate and relies on stored water to supply domestic water, irrigation, and fire protection to approximately 11,700 residents and 1,600 hectares of arable land. Although Summerland is fortunate to have an adequate supply of water, there are many water supply challenges that must be monitored and carefully managed to ensure complacency does not lead to preventable water shortages. Some of these water supply challenges are:

- the possible repeat of drought conditions similar to those of 1987, 1994, 1998, and 2003,
- the need to support local agriculture, commerce, and public facilities,
- the requirement to provide minimum fish flows in Trout Creek,
- aging infrastructure,
- the increase in demand for water by others,
- climate change, and
- population growth.

1.3 OBJECTIVE

The objective of the SDRP is to identify the indicators that need to be monitored and the response actions that should be considered in order to mitigate the economic, social, and environmental impacts a drought may have on Summerland. The plan reaches this objective by:

- educating stakeholders about the categories and assessment of droughts,
- presenting response actions such as implementing levels of drought response and restricting water use based on priorities, and

- communicating and clarifying the roles of stakeholders as part of the Drought Response Team.

2. Water System Overview

The following is a short synopsis of the two water systems that Summerland operates. More detailed information on both water systems can be found in the 2008 Water Master Plan and Financial Review (the 'Water Master Plan').

2.1 SUMMERLAND WATER SYSTEM

The Summerland Water System is the main water supply system. This system services all of Summerland except for approximately 75 residents who are serviced by the Garnet Valley Water System and a few residents who irrigate from private wells. The Summerland Water System consists of 9 reservoirs and 2 emergency wells in the Trout Creek Watershed. It also includes a state of the art Level IV water treatment plant that has been operating since February of 2008.



2.2 GARNET VALLEY WATER SYSTEM

The Garnet Valley Water System services approximately 75 residences in the Garnet Valley area. This system encompasses 2 reservoirs. The water is chlorinated and there are currently no provisions or plans for filtration or additional treatment.

2.3 EMERGENCY WATER SOURCES

Okanagan Lake - The District has two water licenses for Okanagan Lake totalling 6,109 ML per year. There is one existing intake adjacent the Summerland Trout Hatchery but current pumping capacity limits the volume of water available to 2.0 ML per day. This water has limited uses as water quality would be poor, particularly during the summer.

Groundwater Wells - The District has three groundwater wells located above the Trout Creek intake. The smallest well has a capacity of .37 ML per day and services the Rodeo Ground buildings, the Caretaker residence, and the KVR commercial operation. This well is not chlorinated but is tested regularly for bacterial parameters and drinking water quality. The other two wells have a combined capacity of 5.7 ML per day and pump water directly into a flume which flows into Trout Creek. Though these wells are regularly maintained, they have background levels of radioactivity which means the wells must be flushed before use, can only be used for a limited amount of time, and must be diluted at a rate of 4:1 with Trout Creek water.

Wastewater Treatment Plant – The WWTP treats approximately 2.0 ML of wastewater per day of which 80,000 to 150,000 litres of the treated wastewater, referred to as C3 water, is chlorinated for use on-site for plant operations and landscape irrigation. The volume of C3 water could equal the total volume of treated wastewater but this would require significant

modifications to the C3 equipment. Though technically this additional C3 water could be used to irrigate adjacent farms or be trucked off-site for other non-potable uses, the expansion of the C3 water program should only be considered as a last resort. This is because there are significant issues regarding administration, assurance of public safety, and complying with provincial government regulations.

Other Emergency Water Sources – Other water sources that may be available in an emergent situation are the Pacific Agri-Food Research Centre, which pumps water from Okanagan Lake, and the Summerland Trout Hatchery, which draws water by gravity from Shaughnessy spring. Access to these sources would require discussions with the applicable agency.

3. Drought Response Team

Drought response is a community responsibility and priority that requires the collective effort of all members of the Drought Response Team. Working within the framework of the plan, Drought Response Team members will individually contribute to effectively anticipate, prepare, monitor, enforce, and deal with the challenges of a drought.

The Director of Engineering and Public Works and the Manager of Water Operations are primarily responsible for the SDRP. These responsibilities include:

- administering the plan,
- ensuring Summerland complies with the terms of the Trout Creek Water Use Plan,
- operating the reservoirs in a manner that effectively manages the water resource for fish and Summerland residents,
- monitoring the various drought indicators,
- identifying and implementing the applicable drought level for each water system,
- keeping the plan complete and current,
- fulfilling several record keeping, reporting, and communication functions.

The following outlines the responsibilities of the other members of the Drought Response Team:

3.1 ENGINEERING AND PUBLIC WORKS

Engineering and Public Works Department:

- maintains all documents related to the SDRP,
- conducts periodic reviews of the plan,
- communicates any contemplated change in a drought level to the Drought Response Team and all other stakeholders,
- communicates to the provincial government agencies as required,
- maintains liaison between Council and staff,
- conducts meetings with major water users to discuss water conservation, goals, and responsibilities in the SDRP,
- provides information regarding the drought indicators, drought response strategies, and water conservation initiatives,
- recommends yearly water volume allotment adjustments to Council.

3.2 FIRE DEPARTMENT

The Fire Chief determines the wildfire interface and fire hazard zones. The Fire Chief provides recommendations to the Drought Response Team regarding water supply requirements for fire protection, exemptions from water use and drought response restrictions that may be necessary during a fire or when extreme fire hazards threaten structures or public safety, and communicating fire hazard reduction methods to the general public.

3.3 PARKS AND RECREATION DEPARTMENT

Soil moisture sensors have been installed at the Dale Meadows sports fields to ensure proper irrigation scheduling. The Peach Orchard Water Park has timers and sensors to ensure efficient use of recreational water and drip irrigation has been installed wherever possible. The Parks and Recreation Department will be responsible for ensuring their parks and facilities comply with the applicable water restrictions. The water park will be operated as follows:

- ten hours per day in drought level 2,
- eight hours per day in drought level 3,
- closed in drought levels 4 and 5.

3.4 ADMINISTRATION DEPARTMENT

The Corporate Officer will be responsible for preparing, reviewing, and circulating all Drought Response Plan information and communication through the following media:

- radio or television broadcast,
- newspaper,
- the District newsletter,
- the District website.

3.5 COUNCIL

In response to drought events, Council may enact changes to bylaws, fund new water conservation programs, or approve changes to water volume allotments.

4. Communication and Education

Continual communication and education programs are essential to ensure the SDRP is an effective document. Communication and education programs should be an ongoing process that intensifies during the pre-drought, drought event, and post-drought levels. Information should be positive and stress that all water users have an obligation to be proactive in reducing water consumption even when a water shortage is not imminent. The following are some of the methods of ensuring the information reaches its intended audience:

- public signage,
- news media releases,
- notices on Summerland's web page,
- the internet, Facebook, etc...

- brochures,
- information printed on utility bills,
- monthly newsletters,
- direct contact with water users, and
- open house presentations

The Summerland web page (www.summerland.ca) is the most cost effective and timely method in which to communicate with water users but use by the public can be sporadic. Regardless, the website should have easy to access information on potential drought events, drought indicators, bylaws, other pertinent documentation, and links to other internet resources.

5. Drought Assessment

5.1 DROUGHT CATEGORIES

When discussing drought, water users typically think of hot, dry weather and a shortage of water. However, drought can be caused by other factors and has been defined in 4 categories in the BCDRP, Appendix 2 – Drought Definitions, as follows:

- meteorological drought,
- hydrological drought,
- agricultural drought, and
- socio-economic drought.

Meteorological Drought is generally defined by comparing the rainfall in a particular place and at a particular time with the average rainfall for that place. Meteorological drought leads to a depletion of soil moisture and this almost always has an impact on crop production. When a drought is defined this way, it only takes into consideration the reduction in rainfall amounts and does not take into account the effects of the lack of water on water reservoirs, human needs, or agriculture.

Hydrological Drought is associated with the effect low precipitation has on water levels in rivers, reservoirs, lakes, and aquifers. Hydrological droughts usually are noticed some time after meteorological droughts. First precipitation decreases and, some time after that, water levels in rivers and lakes drop. Hydrological drought affects uses which depend on ground and surface water levels and stream flows. Changes in water levels affect ecosystems, hydroelectric power generation, and recreational, industrial, and urban water use.



Agricultural Drought occurs when there is not enough water available for a particular crop to grow or livestock to thrive at a particular time. This drought does not depend only on the amount of precipitation, but also on the correct use of water. Agricultural drought is typically seen after meteorological drought but before a hydrological drought.

Socio-economic Drought occurs when the demand for an economic good exceeds supply as a result of a weather-related shortfall in water supply. The supply of many economic goods, such as water, forage, food grains, fish, and hydroelectric power, depends on weather. Severity and impact are affected by water demand, the extent of water use efficiency measures, and the ability to bring new supplies on-line.

It is important to note that the causes, timing, and severity of meteorological, hydrological, agricultural, and socio-economic droughts can significantly vary relative to each other. They can also happen independently, concurrently, or sequentially.

5.2 DROUGHT RISK

Drought risk is defined as the combination of the exposure and vulnerability to a drought event.

It is generally accepted that vulnerability to drought is high for the agricultural sector, moderate for the industrial, commercial, and institutional sectors, and low for the domestic sector. Although the domestic sector is considered the least vulnerable, this sector is comprised of the largest population base. Due to the substantial differences in vulnerability, it is imperative that an ongoing communication strategy be implemented to ensure all sectors understand the overall impact a drought has on the various sectors. As an example:

In the summer of 2003, there was minimal rainfall magnified by high temperatures which resulted in significant water shortages. Although the drought exposure was the same for all sectors, the vulnerability to this drought was more critical for the agriculture sector which requires water to sustain crops. In response to the drought event of 2003, Summerland implemented stringent watering restrictions that differed between each sector taking into account the severity of the exposure to all sectors and the vulnerability of each sector to this particular drought event.

The greatest drought risk to Summerland, although it is probably the least likely to occur, is a localized or community wide loss of potable water. Other risks may have significant aesthetic and financial impacts but the health risks associated with loss of potable water are extensive and impact the entire spectrum of the community. Emergency plans need to be prepared to deal with this potential event.

6. Pre-Drought Preparedness

A drought event can generally be defined as a sustained period of lower water supply relative to 'average' or 'normal' levels. Droughts can vary dramatically in duration and severity and be difficult to forecast. They can result in great social and economic upheaval, requiring the concerted efforts of numerous parties if a response is to be effective. It is prudent to take pre-emptive measures to reduce the impact of an inevitable drought event rather than taking reactive measures to an imminent drought.

There are many pre-drought activities that Summerland can partake in that will assist in improving household, industry, and agricultural water use efficiencies. The main activities that Summerland may undertake to prepare for drought include:

- develop, implement, enforce, and update plans and bylaws pertaining to water conservation, water use regulations, drought response, and emergency drought preparedness,
- establish water conservation strategies, water use targets, and water allocation reduction policies,
- implement water conservation programs and continuously strive to improve water use efficiency,
- encourage water conservation, stewardship, and education through local media,
- incorporate water conservation into planning and daily operations,
- promote improved efficiency of agricultural irrigation systems,
- provide historical water data to agricultural users to assist in planning for subsequent production years and irrigation scheduling, and
- identify and eliminate any existing information gaps.

7. Drought Response Levels and Indicators

7.1 Drought Response Levels

The BCDRP is organized around 4 successive levels of drought response for the Province. Not included within the scope of the BCDRP is the planning for an emergency response to a community's complete or near loss of its water supply. The SDRP is organized around 5 levels of drought response and includes some provisions for emergency response to the potential loss of supply.

In early season, January to May, the drought response level represents a forecast of potential drought conditions. Only in late June can the likelihood and extent of a drought event be more accurately assessed based on the information collected by monitoring the various indices. Summerland's 5 levels of response, their objective, and the water use and allocation targets are outlined below and summarized in Table 7.1:

- Level 1, normal conditions,
- Level 2, dry conditions,
- Level 3, very dry conditions,
- Level 4, extremely dry conditions, and
- Level 5, complete or near loss of supply.

At Level 1 (Green), conditions are normal and there is sufficient water to support ecosystem and socio-economic needs. Emphasis is on preparedness and taking action in advance of a drought event in order to increase readiness of Summerland water users.

At Level 2 (Yellow), conditions are dry and first indications of potential water supply shortages are recognized. Emphasis is on stewardship and voluntary conservation through education, communication, and planning.

At Level 3 (Orange), conditions are becoming very dry. Potentially serious ecosystem or socio-economic impacts are possible and minor impacts may already be occurring. Emphasis continues to be on voluntary conservation but more stringent watering restrictions should be imposed and enforcement should be increased.

At Level 4 (Red), conditions are extremely dry and there is not sufficient supply to meet community or ecosystem needs. Progressively more severe and widespread socio-economic impacts are expected. Stringent watering restrictions will continue to be imposed and enforcement will be strictly enforced.

At level 5 (Grey), emergency conditions exist if there is a severe meteorological drought, a hydrological drought such as a major loss of stored water, or a catastrophic event such as contamination of the water supply or a failure in Summerland's water system. Water levels in this level would be dangerously low or unavailable which would threaten current and future potable water supply. Demand does not have to be high for this level to occur as an emergency or loss in supply could occur at any time of year. Emergency water supplies are secured for drinking water and fire protection. All outdoor watering and non-essential water use is prohibited for all sectors.

The different levels, their corresponding objectives, and suggested water use and water allocation targets are summarized in Table 7.1.

Table 7.1: Drought Response Levels Summary

Level	Conditions	Significance	Objective	Target
1 (Green)	Normal Conditions	There is sufficient water to meet human and ecosystem needs	Preparedness with low-level enforcement	Reduction in community water use through education and watering restrictions
2 (Yellow)	Dry Conditions	First indications of a potential water supply problem	Voluntary conservation with mid-level enforcement	Minimum 10% additional reduction in use and water allocations
3 (Orange)	Very Dry Conditions	Potentially serious socio-economic or ecosystem impacts are possible	Compulsory restrictions with high-level enforcement	Minimum additional 20% reduction in use and water allocations
4 (Red)	Extremely Dry Conditions	Water supply insufficient to meet socio-economic and ecosystem needs	Compulsory restrictions with strict enforcement	Minimum additional 30% reduction in use and water allocations
5 (grey)	Complete or Near Loss of Supply	Potential loss of a community's potable or fire fighting supply	Emergency response	Water use limited to ensuring health and safety

7.2 Drought Indicators

According to the BCDRP, there are 3 major factors involved in the occurrence of a drought. These major factors are; low winter snow accumulation, spring weather conditions, and summer weather conditions. It is generally accepted that 2 of these factors need to exist for a drought to occur and all 3 of the factors need to exist for a severe drought to occur. The complexity in analyzing the drought factors means that multiple sub-factors, commonly referred to as indicators, need to be analyzed to determine with any degree of accuracy as to if drought is occurring or likely.

The Summerland drought indicators are used to assist the Drought Response Team in determining when it is necessary to elevate or reduce drought responses. In Summerland, there are 6 core indicators and a number of supplemental indicators that assist in the decision making process. The core indicators that are used to assist in assessing current and forecasted drought conditions and to guide plans, activities, and actions required in response to a drought event are as follows:

- the Trout Creek Trigger Graph, (see Section 7.3 below for more details)
- snow pack levels and melting rates,
- reservoir storage levels, projected date of entry into storage, and storage depletion rates,
- water source, supply, and distribution vulnerability,
- water meter consumption rates, and
- condition of the infrastructure.

These core indicators were chosen because this data tends to be readily available, easy to understand, not complicated to communicate, and is directly related to Summerland and its watershed. In addition to the core indicators, the Drought Response Team refers to additional information from other agencies and sources. These supplemental indicators may not always pertain to Summerland but the information can be useful in assessing drought conditions on a more regional or provincial basis. These supplemental indicators include:

- seasonal runoff forecasts,
- natural stream flows,
- weather forecasts. (precipitation, temperature, wind, duration)
- groundwater, water tables, and stream flows,
- historical information on droughts, water supply, climate conditions,
- aquifer levels,
- hydrometric station results,
- multi-year trends,
- wildfire danger class ratings,
- available data through other monitoring agencies.

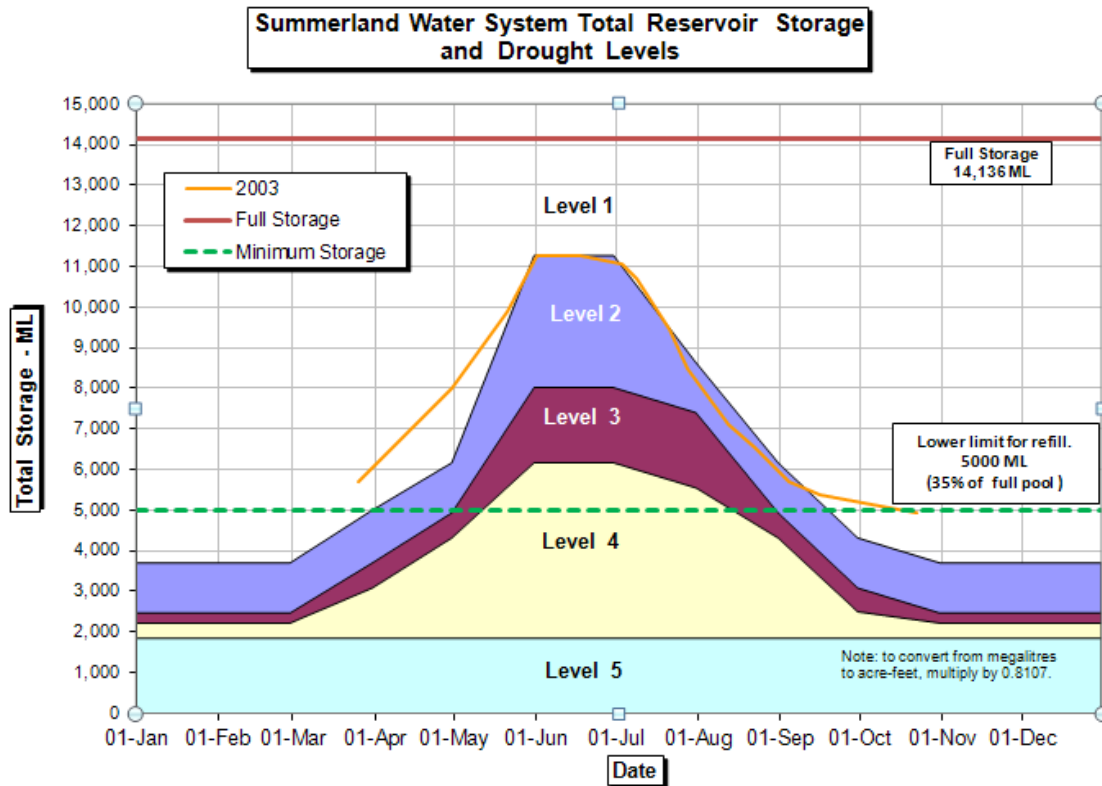
7.3 Trout Creek Water Use Plan Operating Agreement

The Trout Creek Trigger Graph, Figure 7.1, was developed as part of the Trout Creek Water Use Plan Operating Agreement. When analyzed in conjunction with other indices, the Trout Creek Trigger Graph becomes one of the most important tools for predicting drought and implementing the various drought levels.

The Trout Creek Trigger Graph indicates the calendar date, the current water storage level, the recommended drought level, and the minimum year end storage level (5,000 ML or 35% of full pool) deemed necessary to attain full storage in the coming year. The implementation of a drought level is considered when both the current water storage volume falls into one of the shaded areas on the graph and the other core and supplemental indices support the implementation. The Trout Creek Trigger Graph is posted on Summerland's website. Please

note that the 2003 storage levels are used in Figure 7.1 as an example of how the current water storage levels are shown on Summerland's website.

Figure 7.1 - Trout Creek Trigger Graph



Another outcome of the Trout Creek Water Use Plan Operating Agreement was the recognition of the importance and obligation to maintain minimum fish flow requirements in Trout Creek, especially during a drought event. As part of the Trout Creek Water Use Plan Operating Agreement, procedures were developed and fish flow requirements were identified to ensure sufficient water is released to support fish.

The amount of water to be released for fish at any given time is determined by several indices as follows;

1. the Trout Creek Trigger Graph is reviewed to determine what level of drought Summerland is currently in,
2. the amount of water flowing in Camp Creek is measured,
3. the current month and level are used to find the multiplier outlined in Table 7.2,
4. the flow measured in Camp Creek is multiplied by the applicable multiplier,
5. the product is the amount of water that must be released in the watershed to meet the fish flow requirements at the Trout Creek intake.

Example: If it is June, the drought level is at Level 3, and the flow in Camp Creek is 2.9 ML/day then, from Table 7.2, the multiplier would be 6 and the amount required to be released for fish flow would be: 2.9 ML/day x 6 (multiplier) = 17.4 ML/day

Table 7.2 Fish flow releases per Operating Agreement B (multiple of Camp Creek flow)

Month	Level 1	Level 2	Level 3	Level 4	Level 5
June	10	8	6	4	0
July	10	10	9	4	0
August	10	10	10	4	0
September	10	10	10	4	0
October	10	10	10	4	0

A similar procedure is used to establish community water use targets in relation to historical water usage. The datum used for historical water usage is Summerland's recorded community water use of 2002. This datum is considered 100% of acceptable water use by Summerland in a non-drought year and should be reduced as the various drought levels are implemented. Table 7.3 outlines the allowable use targets, based on the current month and drought level, and indicated as a percentage of the 2002 datum.

Table 7.3 Monthly usage targets (as a % of 2002 usage)

Month	2002	Level 1	Level 2	Level 3	Level 4	Level 5
June	100 %	90%	85%	80%	70%	0%
July	100 %	90%	85%	80%	70%	0%
August	100 %	90%	85%	80%	70%	0%
September	100 %	90%	85%	80%	70%	0%
October	100 %	50%	50%	50%	50%	0%

8. Drought Response Actions

8.1 Drought Actions

The Drought Response Team provides recommendation as to when to move up or ease back from one drought level to another. Drought indicators should be monitored at least once a month and drought levels should typically be adjusted monthly to facilitate a smooth transition for water users and to allow time for conservation measures to take effect. In exceptional circumstances the Drought Response Team may find it necessary to recommend moving up more than 1 response level at a time.

The Drought Response Team is encouraged to make early recommendations for the implementation of a Level 2 drought response to eliminate or reduce the potential for having to move into a more drastic level. Responses to a drought need to be implemented before Summerland actually enters into a drought event to attempt to mitigate the droughts impact. They also need to remain in effect after a drought event has subsided to ensure the response has had the desired affect.

This section provides a high level summary of actions that may be undertaken at each level of drought. These actions are intended to be general guidance for drought response and will usually be carried out during drought season (June-October). Implementation of early season drought levels (January-May) may be a potential indication of impending drought during the

months of June through October. The amount of precipitation in May and June will also provide an indication of the potential for and the extent and severity of a drought.

It should be noted that every drought is different and that creative responses that deviate from the specific actions listed below will be necessary to address the situation at hand and to deal with any unforeseen circumstances.

Level 1 (Green)

At Level 1, conditions are normal and emphasis is on drought preparedness. The appropriate actions are summarized in Section 4, above and include the least restrictive watering restrictions.

Level 2 (Yellow)

At Level 2, emphasis is on stewardship and voluntary conservation through education, communication, and planning. As a general guideline, water users should target a minimum 10% reduction in water use. The overall objective is to begin preparations under the precautionary assumption that stream flow conditions may deteriorate further. Key actions that should be undertaken include the following:

- issue news releases and information bulletins informing public of an anticipated or impending drought,
- review water conservation advice, guidelines, and materials and update as appropriate,
- advise agricultural producers to take early actions,
- introduce more stringent outdoor watering restrictions,
- increase monitoring frequency on storage levels and stream flow conditions.

Level 3 (Orange)

At Level 3, conditions are becoming very dry. Emphasis continues to be on water conservation. As a general guideline, water users should aim to reduce use by an additional 20%. Key actions that should be undertaken include the following:

- intensify communication efforts based on current conditions,
- issue updated news releases, bulletins, and advertizing to advise targeted audiences of watering restrictions and to encourage conservation,
- provide updates on local water supply status and forecast future conditions,
- correspond directly to high volume water users requesting immediate implementation of voluntary conservation measures,
- introduce more stringent outdoor watering restrictions,
- enforce compliance through bylaws,
- provide access to waivers for agricultural producers seeking to meet minimum production levels to maintain farm status for tax purposes, [thereby avoiding unnecessary use of water]

Level 4 (Red)

At Level 4, voluntary measures and increasing use of restrictions will continue but may be augmented by regulatory responses by the provincial government. This may include mandatory reductions or cessation of water use. Water users should work together to minimize water use wherever possible in order to ensure that community and ecosystem needs will be met. As a

general guideline, water users should aim to reduce use by an additional 30%. Key actions that should be undertaken include the following:

- increase frequency of communication with all water users through media, advertising, internet, email updates, and other channels,
- continue to issue information,
- introduce more stringent watering restrictions or ban outdoor watering if necessary,
- consider the diversion of available water from annual crops to perennial crops and higher value crops to keep them alive for future years,
- prepare for emergency response where risk of loss of supply exists.

Level 5 (Grey)

The extreme outcome of drought is loss, near loss, or failure of a community's potable water supply or supply for fire fighting. In this event the objective becomes an emergency response and the protection of public health and safety. The District must monitor its water resource closely to ensure that any mitigation measures undertaken are sufficient to prevent the loss or failure of water supplies and ensure that water supplies are adequate to maintain public health and safety. Depending on circumstances it may be necessary to impose comprehensive and closely monitored watering restrictions, allocate water on a per capita basis, seek use of alternative water supplies, or declare a state of emergency.

The provincial emergency management framework is activated when a local government requires support to manage an emergency or disaster. Local authorities can find detailed guidance on developing Emergency Drought Consequence Plans in *Dealing with Drought: A Handbook for Water Suppliers in British Columbia, 2009 Update*, available on-line. The District should work towards preparing an Emergency Drought Consequence Plan to supplement this Drought Response Plan.

The District should report all emergency situations that affect the health and safety of the public to Emergency Management B.C. Where loss or failure of water supply is imminent, the District should also contact the Province through the Drinking Water Officer, Ministry of Healthy Living and Sport (MHLS) and EMBC.

8.2 Post-Drought Actions

At the completion of a drought event the emphasis should shift to maintaining the resources affected and to applying the lessons learned to improve long term water sustainability. Some tasks to consider include:

- the Drought Response Team should remove existing drought level and communicate the return to Level 1 (Green),
- a review of the effectiveness of procedures and systems to monitor and characterize indicators should be performed and identified improvements should be implemented,
- The Drought Response Team should hold a post drought workshop to assess the equity, efficiency, and effectiveness of communications, information, actions, and monitoring that were undertaken. Lessons learned should be documented. This might result in recommended improvements to Summerland's Drought Response Plan,
- stakeholders and individuals who demonstrated a strong stewardship ethic during the drought should be profiled and publicly recognized,

- revisit established water conservation strategies and reduction targets; continuously improve community water use efficiency.

9. Future Refinements

This SDRP is considered a “living document” and may be updated and improved from time to time based on experiences. The provincial government has indicated in *Living Water Smart: British Columbia's Water Plan* that water laws will be improved to protect ecological values, provide for more community involvement, and provide incentives to be more water efficient. Further modifications to the SDRP may be required in response to future changes to Provincial legislation.

10. Reference Materials

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