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REPORT TO REGIONAL WATER SUPPLY COMMISSION MEETING OF MAY 20, 2026

SUBJECT **Greater Victoria Water Supply Area 2025 Wildfire Management Update**

ISSUE SUMMARY

To provide an update on wildfire management for the Greater Victoria Water Supply Area (GVWSA) for the past wildfire season (2025) and plans for 2026..

BACKGROUND

Several risk assessments of the GVWSA have been completed over the years. In all cases, the risk of large-scale wildfire has been determined to be the greatest land-based threat to drinking water quality and infrastructure in the GVWSA. Landscape level wildfire is assessed as a low likelihood but high consequence risk.

Water quality impacts associated with large fires stem from sediment, soils, woody debris, potential contaminants and nutrients washing into source water reservoirs from severely burned areas. A large pulse of nutrients entering the reservoir may also lead to algal blooms affecting taste, odour and potential toxicity. Physical infrastructure in the GVWSA may also be destroyed or damaged by a large wildfire, and the ability of the watershed lands to hold water may also be affected (increased runoff rates).

Given these risks, the Watershed Protection division has developed a comprehensive wildfire management program including planning, prevention, detection, response, forest fuel reduction and burned area rehabilitation preparedness. Wildfire program updates from 2025 and plans for 2026 follow.

Planning

A comprehensive *GVWSA Wildfire Management Plan* was prepared in 2015, providing an overview of GVWSA climate, weather, forest fuels, potential fire behaviour, fire history and strategies for wildfire prevention, detection, suppression and fuel management. In 2026, staff will be updating the plan to reflect advances in technology, new information and current conditions.

Each spring the *GVWSA Wildfire Preparedness Plan* is updated and distributed to staff and external agencies annually, providing operational procedures for wildfire reporting and readiness. The 2026 *GVWSA Wildfire Preparedness Plan* has been prepared and distributed.

Prevention

Wildfire prevention activities begin with restricting public access and enforcing the GVWSA Protection Bylaw to reduce the probability of fire starts from unauthorized access. Revisions to the bylaw in 2026 will increase fines and improve enforcement capability when it is needed.

In 2025, there were 69 instances of unauthorized individuals or groups detected in the GVWSA, with a further 42 instances of unauthorized access on neighbouring park and private lands. Unauthorized entries have been largely on the edges of the GVWSA by foot, bicycle and motorbike. Three cold campfires were found, with two in the GVWSA. Where interaction was possible, positive outcomes were achieved by informing the public of their location and the necessity of a closed watershed, and enforcement in the form of two written warnings and two bylaw tickets. In 2026, security improvements on newly acquired lands are planned with the goal of reducing trespass in these areas.

Detection

It is important for the GVWSA wildfire management program to detect any fires early, to increase the probability of controlling and suppressing the fire. Fire starts are detected by ground patrols, air patrols, tracking lightning strikes and, more recently, by drones and fixed infrared wildfire cameras. In July 2025, the Watershed Protection Gatekeeper provided the first report to the British Columbia Wildfire Service (BCWS) of the Grass Lake fire in Sea-to-Sea Regional Park through a new hourly routine of fire / smoke scouting through the wildfire cameras. The early detection and reporting allowed BCWS to contain the fire quickly and at a small size compared with the 2024 Old Man Lake fire, though fuel and weather conditions were similar.

The long-standing air patrol contract service provided by the Victoria Flying Club has not been renewed in 2026 at their request. Given demonstrated effectiveness of the two wildfire cameras and drones, rather than seeking a new air patrol vendor an automated real-time monitoring service for the camera network will be procured in 2026. Use of such systems is on the rise in Canada and the United States as an integral part of wildfire detection programs.

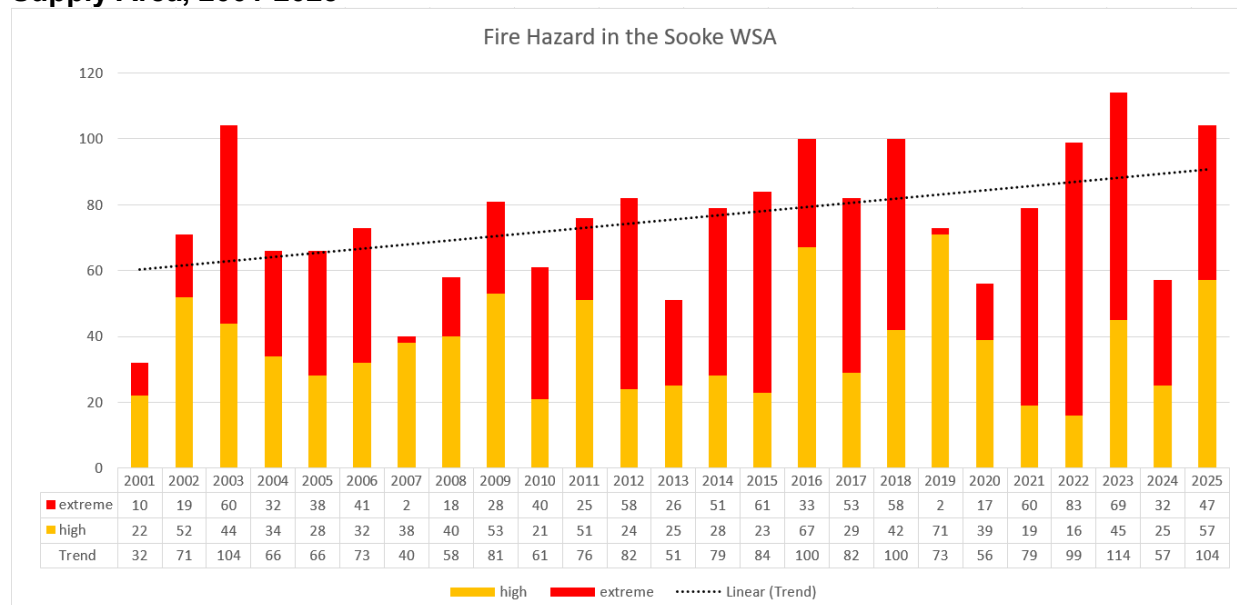
Wildfire Response

There were no fires within the GVWSA in 2025, thus no service was required from BCWS under the terms of our Wildfire Response Agreement; however, Watershed Protection supported BCWS helicopter operations out of the Goldstream Field Operations Centre to fight the Sea-to-Sea wildfire at Grass Lake and also supported BCWS by supplying an initial attack crew on standby for 10 days under the terms of our Wildfire Resource Sharing Agreement.

Wildfire Conditions

In 2025, the GVWSA experienced 104 days in high and extreme fire danger compared with 57 days in 2024. The trend line shows an increase of 30 additional high and extreme fire danger days over the last 25 years, extending the most dangerous part of the fire season by a month into both spring and fall (see figure below). In 2025, there were more days in high than in extreme due to significant rainfall in late May and June 2025, and heavy rain on August 15 - 16 dampening fire danger ratings and providing welcome relief.

Figure 1: The number of days in High and Extreme Fire Danger Rating in the Sooke Water Supply Area, 2001-2025



Forest Fuel Reduction

FireSmart zones around infrastructure and fuel reduced corridors that have been implemented over the last 15 years were maintained in 2025 (Appendix A).

The initiative to reduce forest fuels and improve forest resilience through thinning was trialed in 2023-2024 and monitored through 2025. Early results indicate microclimate changes: thinned sites are slightly warmer, drier and windier at the forest floor during the day, but also cooler and moister at night, and are reasonable while the fuel buildup is considerably reduced. Woody debris remaining after the thinning treatment represented the same or reduced fuel hazard. Both microclimate changes and debris fuel hazard are expected to decrease over time as the canopy fills in and woody debris decomposes. Another thinning project is being planned in 2026 for implementation in 2027 in strategic locations for wildfire management.

Like thinning, juvenile spacing of young forest plantations was undertaken in 2024 and 2025 to reduce densities before they cause a greater forest fuel hazard and to improve forest resilience. Fuel hazard information is also being collected on these sites for before and after monitoring.

In 2026, the large volume of modelling results from the Natural Sciences and Engineering Research Council of Canada (NSERC) and University of Victoria study of the effect of forest treatments on forest and wildfire is being reviewed to further guide watershed forest stewardship planning. A three-month auxiliary staff resource has been hired to assist in this review in 2026.

In 2025, staff undertook a trial prescribed understory burn in a small portion of one of the areas thinned in 2023/24 (Appendix A). The remaining woody debris did not require additional treatment (actual fuel load was not high), but there was enough debris remaining to benefit from a light burn. It was an opportunity to address the remaining fuel risk, introduce beneficial fire onto the landscape and trial prescribed burning as tool to reduce forest fuel under a young forest stand.

A burn plan was developed by staff and approved by BCWS providing the weather and fuel conditions, planning, notifications, preparations, resources and equipment required to implement the burn. The required environmental conditions of moist soils with slightly dried fuels occur only a few days, if at all, each spring and fall. In 2025, the required weather and forest fuel conditions occurred on May 9 and 28, and with BCWS staff assistance, two of the small areas were successfully burned (0.9 ha total). In keeping with the approved burn plans, a large portion of the smallest fuels (finger size and smaller) was consumed, as well as some reduction of medium-sized fuels. At the same time, the fire intensity and residence time (how long it burns on the same spot) did not result in complete reduction of forest floor mosses and surface roots (duff layer). This allowed for a rapid regrowth of herbaceous species and low shrubs. The objectives of the burn plan were met, smoke generated was light and dispersed before leaving the GVWSA, and staff learned and practiced prescribed burning in collaboration with BCWS staff.

Figure 2: Understory prescribed fire, May 9 and 28, 2025



Clockwise from top left: intensity of burn and ground fuels being reduced; regrowth one month post-burn; combined BCWS and CRD burning crew; and, smoke generated.

For 2026, additional prescribed understory burning is planned in the previously thinned areas pending the appropriate weather/forest fuel conditions, as well as a prescribed burn on a 6 ha area of the “Kapoor” lands. First Nations were invited to view and discuss the proposed burn on the Kapoor lands and there was interest and discussion, with an invitation to view the burning when and if it occurs.

CONCLUSION

Wildfire management remains the highest priority program in managing the Greater Victoria Water Supply Area (GVWSA) lands and forests. The GVWSA experienced an extended period of high and extreme fire danger in 2025, but there were no wildfires. A prescribed understory burn trial was implemented to reduce remaining forest fuels in a previously thinned area and to learn more about this technique. The treatment was a success and provides another tool to help manage forest fuels in longer, warmer and drier-trending wildfire seasons. Plans for 2026 include procuring a wildfire camera monitoring system to aid detection, learning from modelling research on the effect of forest treatments on GVWSA forests and wildfires in a changing climate, implementing additional prescribed burning and planning future thinning and spacing projects.

RECOMMENDATION

There is no recommendation. This report is for information only.

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ATTACHMENT(S)

Appendix A: 2025 Wildfire Management Map