

Village of Lytton Community Wildfire Protection and Recovery Plan



B.A. Blackwell & Associates Ltd.
Louis Orioux RPF, Debrah Zemanek, RPF
November 9, 2022



These photos were taken during field work for the plan conducted by forest professionals from B.A. Blackwell & Associates in April of this year (April 11 – 14 2022) The photo on the left is of a fuel managed stand in Lytton above the airport that the fire burned through. You can see how the fuel management increased survival, which is one of the things we'll be talking about in this presentation.

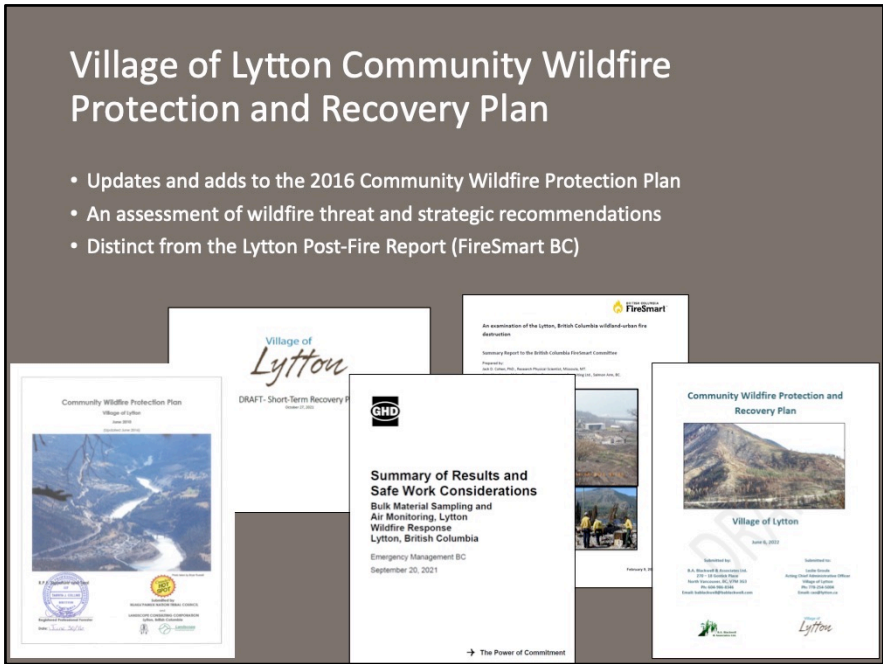
The photo on the right is taken from the pedestrian/rail bridge crossing the Fraser River just south of town. The amount of grass that can already be seen growing back on the banks illustrates the problem that Lytton is dealing with.

Today I'll be presenting the draft recommendations on wildfire resilience that we have developed for the Village of Lytton.

Agenda

- Introduction – what is the Community Wildfire Protection and Recovery Plan?
- Plan Findings
- Photos and Plan Recommendations
- Questions

- This will be a 15 minute presentation with a short Q&A period at the end.



When we are talking about Lytton and fire recovery, there are a number of reports and plans to keep straight, which I wanted to bring up here for clarity. The most closely related document to this plan is the recently released review by FireSmart BC examining the Lytton fire. That report also has strategic recommendations for the Village of Lytton and Lytton First Nation. We have reviewed this report in detail and have aligned recommendations wherever possible.

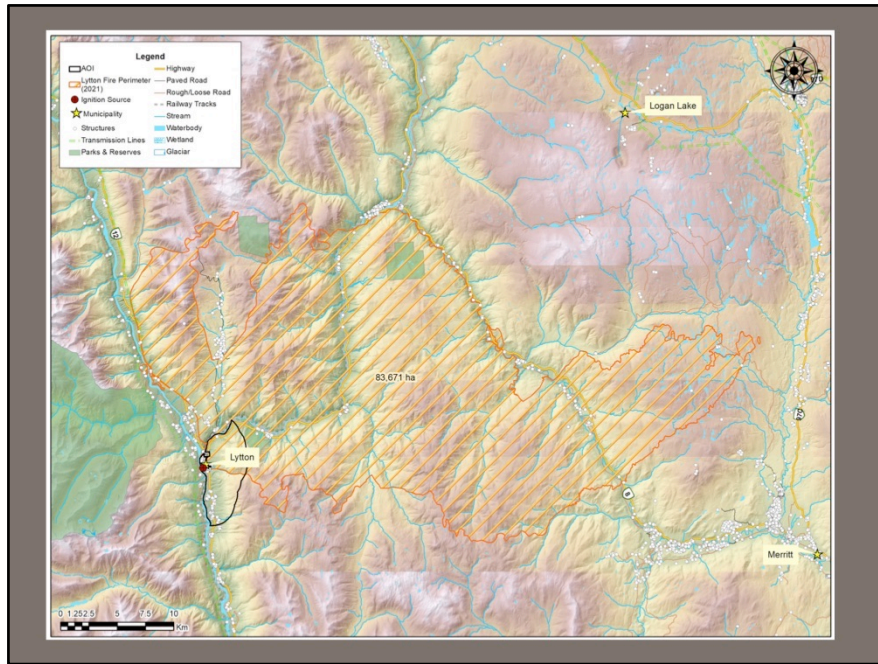
The next slides show photos from our field visit interspersed with recommendations. I think you'll find that many of these photos help illustrate why we are making these recommendations. Our recommendations are also informed through consultation with BC Wildfire Service, Lytton Fire Department, Lytton public works, and Tawnya Collins, who has been leading the TLKemchEEn (TL-KUM-SHEEN) FireSmart Committee since 2016.

We have 36 recommendations in total and we've highlighted 14 of the highest priority ones here.

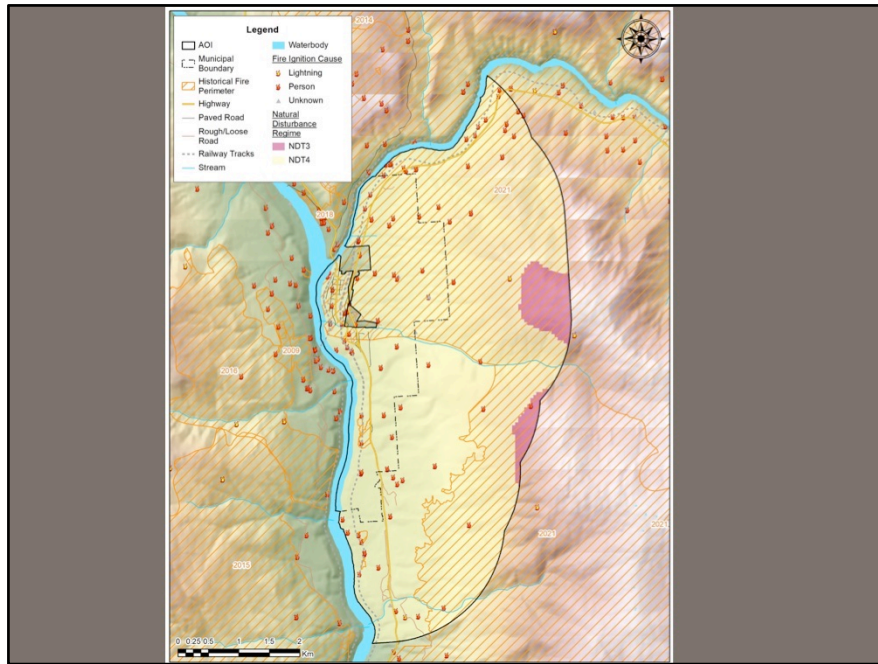
Plan Findings

- Fire History
- Updated Fuel Type
- Updated Fire Threat
- Past and Proposed Treatment Units

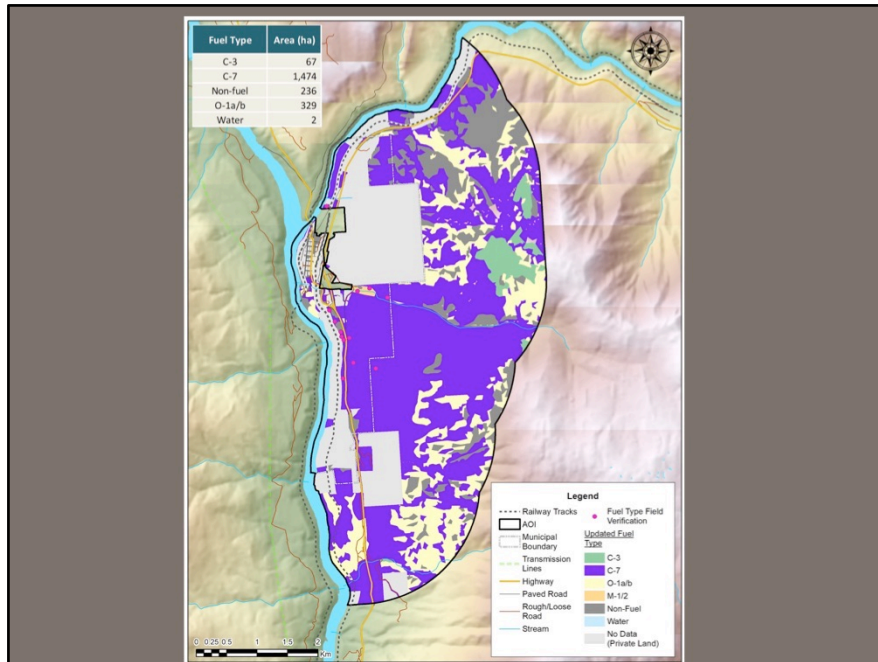
- This will be a 15 minute presentation with a short Q&A period at the end.



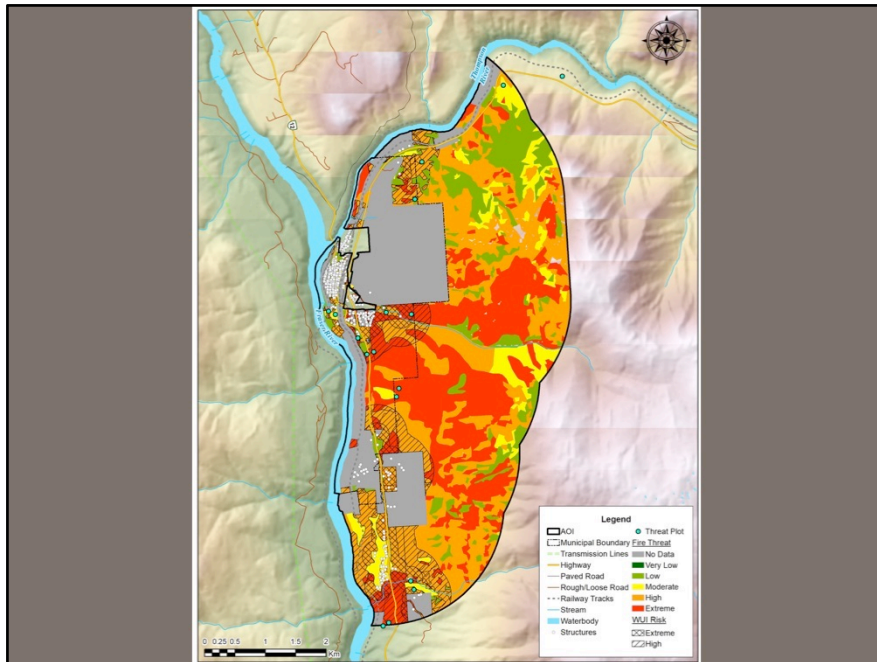
This map shows the extent of the 2021 Lytton Creek Fire



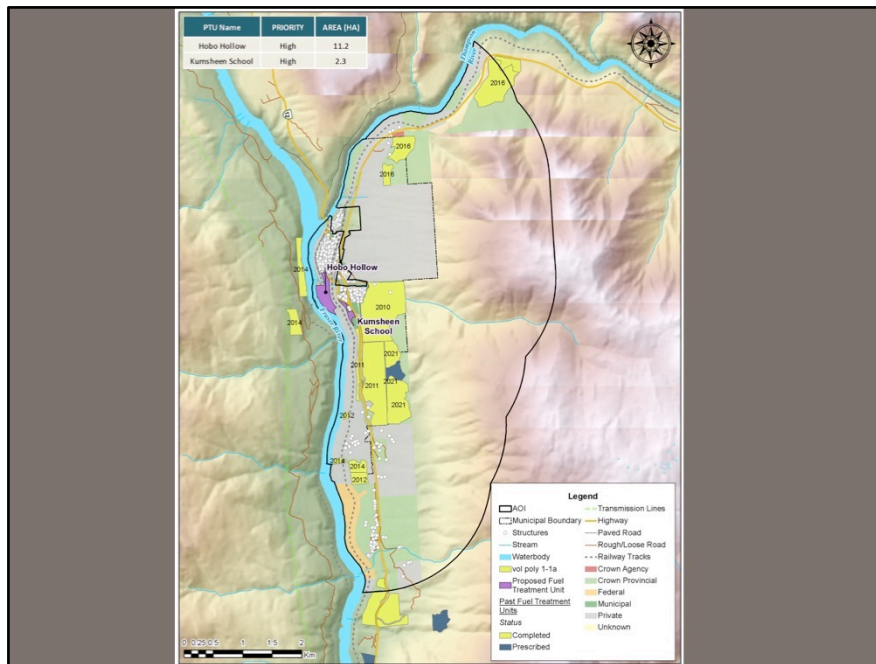
This slide shows historic fire ignitions (since 1950) and perimeters (1910 onwards). As you can see - and as we all know – Lytton is situated in an ecosystem prone to frequent wildfires. Very high summer temperatures, low humidity, and high wind speeds. Coupled with high probability of human-caused ignition (symbolized on the map), the Village’s wildfire resiliency will be all about expecting future fires.



Fuel type. BCWS burn severity mapping was used, as well as field verification and ortho imagery, to update polygons. Low and moderate severity burns were typed as C-7 (open forest, surviving overstorey) or O-1a/b (grassland). Grass was already seen growing back. Higher severity were typed as non-fuel. Severe forest floor scorching means that there will be little vegetation regrowth for some time. Visits to portions of the 2014 Botanie fire confirmed that 8 years later, there was little fuel regrowth. Some invasive weeds.



As a result of fuel type updating, fire regime, and topography, local fire threat was updated. As you can see, areas that burned severely are classified as lower risk now, due to the lack of fuel. However, moderately burned areas are typed as high to extreme because they are still vegetated. It doesn't mean the fire threat is exactly the same as before, but it still fits into a broad category of 'high risk'. Steep, west facing slopes also play into that.



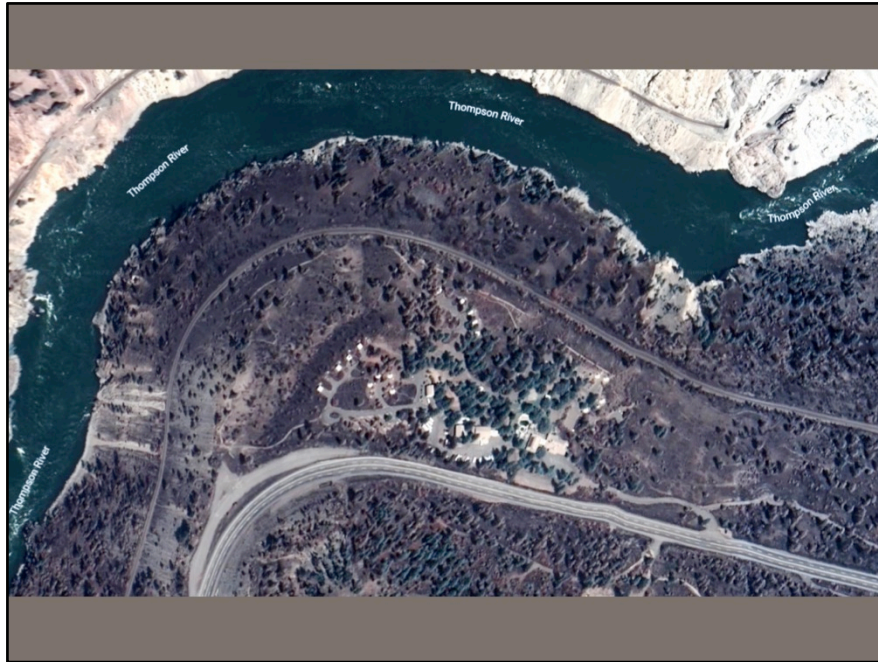
This map is a visualization of all the fuel treatment work that has already taken place in Lytton. The Rattlers unit crew has been doing work since 2012 to thin and prescribe burn areas on Crown land around town. What was really positive to see is that although the Lytton Creek fire still burned through treated areas, the treatment effectively dropped the fire severity. Tree survival was much greater in treated areas. That has resulted in ecological benefits and shows how in less severe fire weather, treatments act as intended to create 'defensible space' where fire retardant, fuel guards, and water application can be most effective.

This map also shows two new proposed treatment areas that are at least partially on municipal land.

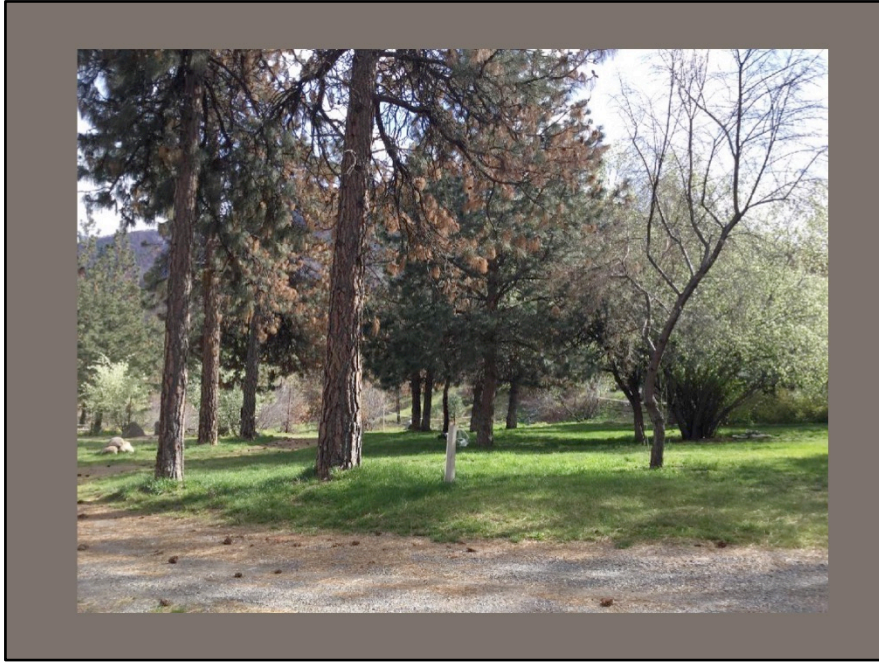


Photos and Selected Plan Recommendations

I will go over 14 of the most important recommendations. The plan consists of 36 total.



I want to start off with this slide that really illustrates the potential for Lytton to resist future wildfire events through application of FireSmart principles. Google Earth aerial of Kumsheen Rafting resort. Fire was spreading rapidly from the south and 'parted' around main cabin area, which **had been raked of needles and watered.**



Area that survived the fire at Kumsheen. Very little mortality, although severe wildfire burned around.

Recommendation:

Allow for more irrigation of public and private greenspaces throughout the fire season.

Must be undertaken in combination with a water supply review (see Fire Department Water Recommendations) as increased municipal water availability may be required. One option may be a permanent irrigation intake from the Fraser River, under CN tracks, or from the Thompson River, leading to sprinklers throughout town.

We have met with Dave Mitchell & Associates, who as you know are taking on the Fire Services Review. They are aware of our recommendations regarding water supply.



From Google Earth



Looking north, towards Highway 16 bridge

Pre-fire Google Earth –
Skihist parking lot.
Cured grass, low crowns





Same place, post-fire.

A combination of spring burning, mowing, and increased watering should be applied on public and private greenspaces. All three grass management tools should be considered, and may not all be applicable everywhere.



Above CN works yard - bank between tracks and town. Candidate for the 'wet line' shown earlier, where bank may be too steep to mow grass and too close to structures to burn.

This picture shows how even the deciduous shrubs burned up. It shows that almost *any fuel* can spread severe fire if *dry* (on June 30, 2020: 7% RH, 58 degrees) and *it's windy* (78 km/hr from the south)



Another example of the steep scarps that we are dealing with around Lytton - sparse fuel, steep and sandy. This is below Kumsheen school, above CP tracks, just south of where the fire started.



Looking south to where fire started – this bank is free of trees but has consistent grass coverage.
In hot and windy conditions, these banks have to be free of long, dry vegetation to have a chance at slowing fire spread



Unburnt grass by Kumsheen School – vantage up to field.
Several season build up.



Unburned area beside CP tracks and Environment Canada weather station. South of town.

Ponderosa pine needles are very volatile and a big concern for BC Wildfire Service. Have to be burnt or maintained every few years.



This picture is of Skihist Provincial Park Day Use Area north of Lytton. Clear that vegetation management works to reduce fire intensity.



Edge of bank – clear halting of surface fire. Green grass doesn't burn.

Recommendations:

Keep all public and private greenspaces free of conifer needles. Target April for clean-up annually. Incentivize residents through community clean-up events like the Cemetery Clean Up, or neighbourhood events. Consider providing food, tools, trucks or bins for debris disposal and doing pruning at the same time. Consider using school groups for public areas.

Regularly mow all municipal greenspaces, including ditches, banks, and parks. Grass should be kept to <10 cm during the fire season.

Grass and needle management may be combined with a prescribed burning program in the spring or fall, *and/or with an irrigation program.*



This picture is from Google earth pre-fire (but another smokey summer) looking down at the public works building from Main Street.

Although it has ignition resistant siding (cement) and a metal roof, it's very likely that the gable end vents were open to embers, because this structure burned down in the fire. The 1a (Non-Combustible Zone, 1.5 m) is not mitigated either – shelves housing pipes form a surface for ember accumulation. Demonstrates importance of very robust FireSmart construction.



Looking up towards Main Street – public works building site that was destroyed in the fire.

Recommendations:

Conduct FireSmart Critical Infrastructure Assessments for public works and community/government buildings.
Apply FireSmart principles in construction and vegetation setbacks as soon as possible for existing and new infrastructure.

Invest in back-up generators for any critical infrastructure that does not have one. Encourage private businesses that provide critical services, like gas stations and grocery stores, to follow suit.

Recommendation:

Make it easy for residents who are rebuilding to comply with the new (FireSmart) Building Bylaw.

Compliance can be addressed through:

- a) provision of information, i.e. easy-to-reference guides, in-person and virtual presentations and workshops, media releases;
- b) meaningful enforcement, i.e. stringent review of building permit applications;
- c) incentives, i.e. cheap access to FireSmart landscaping plants.



East side of Hwy 1, south of town.
Clear line between private, unmanaged forest and managed, Skuppah First Nation land.

Recommendations:

Adopt a policy to notify large private land holders of wildfire threat for parcels that are identified as high wildfire risk through a professional assessment or judgement.

Develop fuel management prescriptions for identified fuel management areas. Prioritize a prescription for Hobo Hollow south of the village that includes municipal, federal, and private (CP and CN) land.

Fund or encourage adjacent jurisdictions to continue to fund fuel management and maintenance activities. Consider ways to facilitate [BCWS] prescribed burning on municipal and/or private land.

Recommendations:

Actively participate in monthly TLKemchEEN FireSmart Committee meetings. In the absence of a Fraser Basin Community Wildfire Roundtable, consider holding meetings that also include regional stakeholders, for example Thompson Nicola Regional District, Ministry of Forest (Cascades Natural Resource District), BC Parks (Skihist Provincial Park).

Engage with the Fraser Basin Council regarding a potential Lytton Community Wildfire Roundtable.

TLKemcheen (TL-KUM-SHEEN) FireSmart committee has included representatives from BC Wildfire Service, Lytton First Nation, Skuppah First Nation, and the Village.

Recommendations:

Members of the LFD should be trained in SPP-WFF1 including annual refresher, and trained to OFC Exterior Standards.

Enforce the Village of Lytton fire ban, or grant the Lytton Fire Department (LFD) the authority to enforce. LFD may require additional resources to do so.

Host a Community Wildfire Resilience Day to celebrate community resilience following the Lytton Creek fire, and continually increase FireSmart awareness. Consider making it part of a larger 'Emergency Preparedness Day' that includes impact and adaptation information on flooding, landslides, and extreme heat. It may be useful to co-host an event with Lytton First Nation, and possibly other regional partners.

TLKemcheen (TL-KUM-SHEEN) FireSmart committee has included representatives from BC Wildfire Service, Lytton First Nation, Skuppah First Nation, and the Village.

Thank you! Any questions?