



March 2009

City of Rossland
Community Wildfire Protection Plan
Final Report

Section 5: Wildfire Prevention, Preparedness & Response

Preventing, preparing for and responding to wildfire emergencies are important priorities for the City of Rossland. The City is located in an area subject to wildfire ignition and - under high fire danger conditions – wildfire impingements on several areas within or adjacent to the City. Local fire and forestry officials are attempting to mitigate the potential impacts of wildfire on interface communities with a variety of wildfire prevention, preparedness and response initiatives.

Wildfire Prevention

Programs and initiatives that encourage residents in areas vulnerable to wildfire to implement FireSmart recommended guidelines and increase wildfire preparedness are important in preventing or minimizing interface fire risk. Even highly effective wildfire prevention programs cannot prevent all wildfires and interface wildfire prevention initiatives that focus on prevention of interface fire disasters in addition to conventional fire prevention messages can be highly effective.

Local government can reduce the potential for interface fire disasters and wildfire damage through both public education and the use of legislative tools. Community leaders must continue to support ‘FireSmart community’ public education initiatives as well as seeking opportunities to mitigate interface fire hazard through the use of FireSmart planning guidelines backed with legislative authority.

5.1 - Public Education - Effective public education is important in preventing or minimizing fire risk in the wildland / urban interface. Political leaders, community planners and fire officials need to work together to present a consistent interface fire risk reduction message to the public.

Development of a public education program is a priority item in the City’s CWPP planning process. The goal of the public education program will be to refocus public awareness on wildfire hazard to interface areas in the context of what is being provided by the CWPP initiative (eg. projected fire scenarios compiled with hazard assessments and established interface fire danger zones to allow planning and prioritization of fuel reduction treatments and other mitigations).

Over time, a number of public education opportunities will present themselves with respect to preventing or minimizing fire risk in the wildland / urban interface. Following a period of heavy wildfire activity, particularly when interface areas are involved, public interest in wildfire hazard mitigation will be very high (eg. B.C.’s 2003 wildfire season). A series of presentations across the Regional District of Central Kootenay in the fall of 2003 consistently drew large audiences from the interested public and local residents. Other events - such as Fire Prevention Week, Fire Dept. open houses and school or youth group presentations also provide public education opportunities.

Fire officials should consider the benefits of delivering a number of short presentations to service club or business organizations at their respective meetings or dinners. Membership of these groups is comprised of influential and committed community members that will be interested in what is being provided by the CWPP initiative. Fire officials should expect a special level of interest from this group as catastrophic wildfire events during peak tourist season months are a significant issue in terms of business continuity.



March 2009

City of Rossland Community Wildfire Protection Plan Final Report

There is a strong possibility that the membership of these groups will provide insightful and locally relevant input on additional or alternative approaches that could be of great value to the CWPP initiative.

Public Education Presentations - All public education presentations should be based on recommendations provided by the **FireSmart – Protecting Your Community from Wildfire** manual. The FireSmart Manual is very comprehensive (173 pages) and contains a great deal of information which can be used to encourage community-based prevention plans or initiatives to reduce the risk of fire losses and enhance safety in the wildland/urban interface.

FireSmart Powerpoint Presentation: This presentation binder / CD package was developed by the Kootenay Interface Steering Team and distributed by the BC Office of the Fire Commissioner. The FireSmart Powerpoint Presentation is very flexible and is designed to assist local planning or fire officials that may be requested to deliver a presentation on standard FireSmart manual content to various audiences.

The package consists of a series of slides and speakers notes prepared for each of the principal FireSmart manual chapters. The slides can be customized to allow presenters to address a wide variety of audiences, each with its own issues and information requirements. Full details on presentation structure and delivery are contained in the presentation package.

Public Education Display: Use of a three-panel display by planning and fire officials at scheduled events is a highly effective public education methodology. Orthophoto maps and sign panels are used to graphically convey information specific to the City of Rossland CWPP. The three panels convey information in a logical sequence. The first panel provides information on ‘Challenges’ - Wildfire Risk Assessment summaries from projected fire scenarios and location of specifically identified interface Fire Danger Zones. The second panel provides information on ‘Solutions’ - proposed fuel reduction treatments and other mitigations for application in specifically identified WUI Fire Protection Units. The third panel provides further detail on ‘Solutions’ - generic FireSmart hazard mitigation information.

While highly useful for public education displays the three panel display will also be frequently referenced by the project team during CWPP orientations provided to project associates and City officials.

Fire Danger Signs - The use of a large, roadside wildfire danger sign is another highly effective public education tool. Fire danger signs should be positioned in a prominent location that assures residents and visitors alike will view the sign information (use of highway and airport access routes will ensure visitors are alerted to high fire danger conditions). The signs would be changed with increases or reduction to fire danger by a designated City staff member working in consultation with BC Ministry of Forests and Range Protection staff.



March 2009

City of Rossland
Community Wildfire Protection Plan
Final Report

FireSmart Demonstration Properties - The City should work to establish FireSmart demonstration properties in selected high or extreme hazard level areas. FireSmart demonstration properties will feature both FireSmart building materials and construction techniques as well as FireSmart vegetation management techniques. Demonstration properties are especially viable in high visibility locations where City owned land remains vacant adjacent properties with owners that have expressed an interest in building or retrofitting in compliance with FireSmart recommended guidelines. Signs can be prepared and positioned to show before and after views, explain general FireSmart hazard mitigation strategies and assist in conveying fire prevention messages to the interface public.

- Recommendation 5.1.1*** Planning and fire officials should commit to provision of regularly scheduled public education presentations augmented with additional presentation series following periods of heavy wildfire activity. One methodology would be to establish different target groups – schools, residents and business leaders – and ensure each group received a customized presentation on a multi-year rotation basis.
- Recommendation 5.1.2*** Planning and fire officials should work to develop a Rossland specific Powerpoint presentation product. Developed in consultation with interface fire protection specialists the presentation would address FireSmart structural fire protection issues - ‘Understanding Structural Ignitions’- why structures ignite during wildland interface fire events with an overview coverage of the three part FireSmart mitigation strategy (vegetation management, structural options and infrastructural modifications) specific to the Rossland area.
- Recommendation 5.1.3*** Planning and fire officials should work to develop a Rossland specific public education display, fire danger signs and FireSmart demonstration properties in consultation with both interface fire protection, planning and media development specialists.
- Recommendation 5.1.4*** The City should review all wildfire prevention and suppression policies to ensure that activities such as industrial closures, fire tool requirements and prevention activities are regulated by City bylaw as provincial authority under the provincial Wildfire Act and Regulation no longer applies within municipalities.
- Recommendation 5.1.5*** The City should develop an ancillary wildfire prevention program for use during periods of high fire danger (when provincial fire bans or fire advisories are in place for the City area). Such restrictions would be determined by an appointed staff representative via consultation with the following link: <http://www.bcwildfire.ca/hprScripts/DgrCls/index.asp?Region=6>



March 2009

City of Rossland Community Wildfire Protection Plan Final Report

Wildfire Preparedness

City fire and emergency response officials must be prepared for both the possibility and the effects of periods of high wildfire activity in the vicinity of the City. Large wildfires burning anywhere in the West Kootenay region can affect City businesses, particularly if tourists and the travelling public alter travel plans. Wildfire ignitions or spread into forests adjacent the City may require evacuation of residents and visitors to safe areas.

5.2 - Fire Danger Monitoring and Communications: The City can be affected by wildfire danger and wildfire activity however the traveling public or tourist perception of wildfire conditions in the City area can also have a significant effect on the City and businesses. Media reportage of fire incidents is often brief, sometimes inaccurate, and can influence the vacation plans of the traveling public and tourists with scheduled reservations – it is important that accurate and up to date information on wildfire status be conveyed to these groups.

Recommendation 5.2.1 During periods of high wildfire activity in the City area - City should monitor (via appointed staff representative) the BC Ministry of Forests and Range Protection Branch website which features a ‘Current Situation’ link - - <http://bcwildfire.ca/Situation/> providing details on any active wildfires in the City area. The City staff representative should contact BC MoFR Southeast Fire Centre fire management staff for the latest information on any fires adjacent to or affecting the City.

Recommendation 5.2.2 In the event that significant wildfire activity is occurring in the City area, a ‘Daily Wildfire Update’ should be provided by an appointed City Media / Communications person. Wildfire updates should be accessible on the City website and available to assist all front line service staff in providing responses to resident inquiries regarding wildfire activity.



March 2009

City of Rossland
Community Wildfire Protection Plan
Final Report

5.3 - Wildfire Evacuation Planning: This plan recognizes the potential requirement for evacuation of City residents and visitors during wildfire emergencies at or near the City.

The evacuation procedure will be triggered by a major fire or fires starting or advancing to within a pre-determined distance of the City or a fire ignition threatening the City or access to the City by direct fire impingement or ember transport / spot fire ignition. City fire and emergency response personnel will monitor any wildfire activity in the vicinity of the City via regular communication with BC Ministry of Forests and Range fire officials. Evacuation procedures establish evacuation triggers for specific areas and identify primary / secondary evacuation routes and safety zones for evacuee marshalling.

The City features a number of evacuation route possibilities. The City features a number of fuel-free areas within and adjacent most areas of the City. While a complete evacuation of the City due to wildfire threat is unlikely, evacuation of specific City areas or resident groups (those vulnerable to high smoke concentrations and poor air quality) may be required.

This plan uses a Fire Danger Zone rating system to define WUI Protection Units subject to various levels of fire danger (See Section 2.0 Wildfire Risk Assessment). Units classified as Fire Danger Zone 1 are most likely to require evacuation of residents – development of unit specific wildfire evacuation procedures is recommended for these units. Units classified as Fire Danger Zone 2 or 3 are less likely to require evacuation of residents – development of more general wildfire evacuation procedures is recommended for these units. The following information will be included in the written wildfire evacuation procedure:

Unit's 1 – 4 Primary Evacuation Route - is designated as the most direct route to the Rossland downtown (intersection of Columbia and Washington).

Unit's 1 – 4 Secondary Evacuation Route – there is no secondary evacuation routes.

Unit 5 Primary Evacuation Route – is designated as east on Kirkup, McLeod or Elmore into the townsite core and then via the most direct route to the Rossland downtown (intersection of Columbia and Washington).

Unit 5 Secondary Evacuation Route – there is no secondary evacuation routes.

Unit 6 Primary Evacuation Route – is designated as north on Happy Valley and /or east on Park to Columbia and then via most direct route to the Rossland downtown (intersection of Columbia and Washington).

Unit 6 Secondary Evacuation Routes – there are no secondary evacuation routes.

Unit 7 Primary Evacuation Route – is designated as via most direct route to Cedar / Tamarack and west to Highway 3B and then northwest to the Rossland downtown (intersection of Columbia and Washington).

Unit 7 Secondary Evacuation Routes – is designated as via most direct route to Cedar / Tamarack and west to Highway 3B and then south and east to Warfield.



March 2009

**City of Rossland
Community Wildfire Protection Plan
Final Report**

Unit 8 Primary Evacuation Route – is designated as via most direct route to Redstone and east to Highway 3B and then northwest to the Rossland downtown (intersection of Columbia and Washington).

Unit 8 Secondary Evacuation Routes – is designated as via most direct route to Redstone and east to Highway 3B and then south and east to Warfield.

Unit 9 Primary Evacuation Route – is designated as north via most direct route to Thompson, Davies and then north to the Rossland downtown (intersection of Columbia and Washington).

Unit 9 Secondary Evacuation Routes - there are no secondary evacuation routes.

Unit's 10 + 11 Primary Evacuation Route – is designated as north on Monte Vista or south on Black Bear to Highway 22 and then east to Columbia and east into the Rossland downtown (intersection of Columbia and Washington).

Unit's 10 + 11 Secondary Evacuation Routes - is designated as north on Monte Vista or south on Black Bear to Highway 22 and then west to Paterson.

Unit 13 Primary Evacuation Route – is designated as south on Red Mountain Rd. to Highway 3B and then south to Columbia and east into the Rossland downtown (intersection of Columbia and Washington).

Unit 13 Secondary Evacuation Routes - is designated as north on Red Mountain Rd. to Red Resort.

Unit's 14 + 15 Primary Evacuation Route – is designated as south or north to Highway 3B and then south to Columbia and east into the Rossland downtown (intersection of Columbia and Washington).

Unit's 14 + 15 Secondary Evacuation Routes - is designated as south or north to Highway 3B and then north to Highway 3.

Recommendation 5.3.1 A written wildfire evacuation procedure should be included as part of the City Emergency Response Plan – a component of the City Emergency Program. City fire and emergency response officials should meet with BC Ministry of Forests and Range Protection, Provincial Emergency Program (PEP) and Regional District emergency planning representatives to review the wildfire evacuation plan.



March 2009

**City of Rossland
Community Wildfire Protection Plan
Final Report**

5.4 - Post-Wildfire Rehabilitation Planning: Watershed stability is dependent on intact standing and surface vegetation and soil that resists sedimentation. Any significant wildfire disturbance could seriously affect watershed stability. There are some areas in Rossland where wildfire impacts on steep, burned slopes with erosive soils could, with sudden storm events, result in a variety of slope stability issues.

Post wildfire rehabilitation planning is important and helps to avoid long term damage to slopes, soils or storm drain infrastructure by designating restoration activities that will mitigate damage caused by fire suppression activity or high intensity fire. Provision of timely post wildfire damage assessments and mitigation recommendations assists City officials to obtain contractors for required rehabilitation work. It is important that the work is completed before any major storm events occur with the potential to trigger undesirable post-wildfire effects. Sudden, high intensity rainfall events, even of short duration, on areas with post wildfire water repelling soils are often linked to flooding and increased erosion.

Recommendation 5.4.1 The City should develop post wildfire rehabilitation plans that address the full range of rehabilitation activities that may be required on a large burn area (500 – 4,000 ha's). Initially, rehabilitation work will focus on stabilization of slopes and protection of infrastructure. Post wildfire rehabilitation work will be limited to a short period of time in the fall (Aug. – Nov.).

Recommendation 5.4.2 A list of contractors that are qualified and capable of providing post-wildfire assessments and emergency stabilization/rehabilitation of damaged areas should be developed.



March 2009

City of Rossland Community Wildfire Protection Plan Final Report

Wildfire Response

Use of safe and effective wildfire response procedures by trained members of the Rossland Fire Dept. can contain small wildfire ignitions before they escape control and become major wildfire incidents. The City of Rossland Fire Dept. currently responds to wildfires and is compensated at prescribed rates for that action in accordance with the conditions outlined in the BCMoFR Southeast Fire Centre Operating Guidelines.

5.5 - Wildfire Reporting and Response: Detection and reporting of wildfire ignitions during periods of high and extreme wildfire hazard is critical to the success of wildfire initial attack efforts. All wildfires detected within and adjacent the City are reported to the Rossland Fire Dept. and / or the MoFR Wildfire Reporting line - 1-800-663-5555 (or *5555 on most cellular networks. Changes to the Wildfire Act restrict MoFR wildfire response on fires within City limits to provision of suppression assistance subject to resource availability and on an as requested / required basis. MoFR resource availability is restricted prior to May 15 and after September 1 during any fire season.

Recommendation 5.5.1 City fire and emergency response officials should review wildfire reporting and initial response procedures with BC Ministry of Forests and Range protection representatives annually.

5.6 - Training and Equipment: The Rossland Fire Dept. currently responds to structural and wildfire ignitions with approximately 17 members under the direction of the Fire Chief. All members are volunteer or paid on call - volunteer member turnover is relatively constant. One full time member from Kootenay Boundary Regional Fire Services (KBRFS) in Trail is on call at Rossland Monday to Friday 0800 – 1600 hrs.

Rossland Fire Dept members have participated in wildland fire suppression and interface operations training since the early 1990's. Currently, 7 out of 17 members have taken basic wildland fire suppression training, 6 out of 17 members have taken the S-215 - Fire Operations in the WUI training and 4 out of 17 members have ICS 100 training. Ongoing training in wildland fire suppression , interface fire operations and Incident Command System basics is required to ensure safe and effective response to wildfire incidents.

The Rossland Fire Dept. is equipped to provide basic wildfire suppression with 2 engines and 1 tender. Engine 1 is 4WD with 1050 gpm – 400 gallon tank. Engine 12 is 4WD with 840 gpm – 250 gallon tank. Tender 1 is 4WD with a 1,500 gallon tank and a Hale HP400B18 pump – low pressure high volume (460 gpm – 100 psi) portable pump (160 lbs).

Wildland equipment is carried on Tender 1. Wildland hose supply is 6 x 100' x 1 ½" quick connect hose, 1 x 100' x 1" quick connect hose and 13 x 50' x 5/8" econoflow hose. A variety of wildland nozzles, valves and adapters are maintained on the tender. A Class A foam system on Engine 1 is not configured for wildland use. Handtools include: 3 pulaskis, 4 shovels, 3 backpack pumps. A portable reservoir (1,000 gals) is carried on the tender and an additional portable reservoir is available at the fire hall.

Wildland personal protective equipment maintained for Rossland Fire Dept members includes: 10 sets of Nomex coveralls and 15 hard hats with wildland goggles. Members on wildland responses wear turnout boots and structural firefighting gloves.



March 2009

City of Rossland
Community Wildfire Protection Plan
Final Report

Recommendation 5.6.1 All Rossland Fire Dept. members should be provided with a basic wildland fire suppression training course on an annual basis. Rossland Fire Dept members should also be provided with interface fire operations and Incident Command System training with reviews provided on an annual basis.

Recommendation 5.6.2 Additional wildfire suppression equipment would improve Rossland Fire Dept. wildfire suppression effectiveness. The following items should be purchased:

- 7 pulaskis and 6 fire shovels;
- pressure pump (Wildfire Striker II Plus, Wildfire Ultra-Striker or Wildfire Mark 3) complete (suction hose, fuel can, tool kit with valves + nozzles etc.);
- volume pump (Honda WH30X or equivalent) complete (suction hose, fuel can, tool kit with valves + nozzles etc.);
- 1,000' x 1 ½" wildland lined fire hose lengths;
- sufficient quantity of wildland personal protective equipment to outfit 20 firefighters with Nomex coveralls, helmets, wildland boots, gloves, goggles, ear protection.

5.7 - Structure and Site Preparation: In the event that a wildfire threat to the City is expected or imminent - additional fire protection measures can be provided by implementation of a number of pre-planned structure and site preparation actions. To the extent that firefighters can work on and adjacent structures with no danger from fire exposure – the following structure and site preparations are recommended:

Structure Preparation Actions - The general intent of structure preparations is to eliminate ignition opportunities at airborne ember entry or accumulation points on or under structures.

- Close all doors and windows - check for and rectify any ember entry or accumulation hazards.
- All ember entry points including soffits, fascia, foundation skirting and unscreened vents should be covered.
- All combustibles (deck furniture, door mats, firewood, BBQ's, etc.) that can be removed from decks should be moved inside structures.
- Existing lawn/garden sprinkler networks should be configured to ensure wetting of any structural components vulnerable to ignition such as: deck/rail/stairway structures, specimen trees, vegetation clusters or hedges / fences adjacent structure exteriors.
- Where roof materials are rated (higher ignition resistance) – wetting of roof surfaces is normally a lower priority than wetting of deck and access stairway structure surfaces and other immovable Priority Zone 1 combustibles. Where sprinkling of roof surfaces is required, sprinklers should be mounted on the corners of the roof, spaced laterally along the roof edge or on 3m pole/tripod structures adjacent the buildings.



March 2009

City of Rossland Community Wildfire Protection Plan Final Report

Site Preparation Actions - The general intent of site preparations is to eliminate ignition opportunities in fuels or on combustibles located in Priority Zones 1 and 2. Mitigations on those portions of Priority Zones 1 + 2 that are downslope of the lodge facility are a priority.

- All combustibles (lawn furniture, firewood etc.) that can be removed from Priority Zone 1 should be moved inside structures or moved to a location at least 30m distant and not downslope from the structures.
- All concentrations of standing trees and accumulated surface fuels (beyond those permitted by FireSmart recommended guidelines) in Priority Zone 2 should be removed to a location at least 30m distant and not downslope from structures.
- Existing lawn/garden sprinkler networks should be configured to ensure wetting of Priority Zone 1 and a portion of Priority Zone 2 (with priority to those portions of Priority Zones 1 + 2 that are downslope of any structure).

Sprinkler Protection Systems: A number of structural complexes in priority WUI Fire Protection Units remain vulnerable to wildfire threat pending compliance with FireSmart hazard mitigations (as provided in Section 3 – Facility Hazard Assessment & Mitigation). Establishment of pre-planned wildfire protection sprinkler networks, supplied from the existing hydrant system would significantly reduce the threat from an advancing wildfire. The existing fire hydrant systems have been mapped on the WUI Fire Protection Unit orthophoto map base with the objective of facilitating further planning of structural protection using sprinkler systems.

Note: The provincial government has maintained several Structural Protection Unit (SPU) trailers since 2003. These trailers contain complete sprinkler protection systems capable of protecting approximately twenty-five structures. During periods of high wildfire danger with multiple interface fire incidents occurring – these SPU trailers are unlikely to be available to all communities that may require them. The province’s intent in providing the SPU trailers was not to provide structural protection for the entire province but rather to provide an example of structural protection possibilities - motivating municipalities to acquire independent caches of sprinkler protection equipment.

Recommendation 5.7.1 Tactical response plans should be prepared for WUI Protection Unit values at risk on a priority basis – plans will list general structure and site preparation actions including installation of sprinkler protection systems.

Recommendation 5.7.2 The City should purchase a basic structural sprinkler protection system. A basic sprinkler kit package would include sufficient equipment (sprinkler heads, hoses, valves and adapters, mounting poles and brackets) to provide rooftop sprinklers for twenty-five structures and Priority Zone 1 and 2 sprinkler coverage for a kilometer of sprinkler line. Rossland Fire Dept. members should be trained and exercise in the rapid assembly and activation of the sprinkler system.



March 2009

**City of Rossland
Community Wildfire Protection Plan
Final Report**

5.8 - Firefighting Access and Water Supply:

The majority of the City’s wildfire protection units feature good access to both City and MoFR suppression resources. Areas within City limits subject to wildfire ignition and located in areas inaccessible to City Fire Dept. resources should be noted by any tactical response planning process and discussed with MoFR officials.

Reservoir Water Supply: The City has 2 reservoirs – see Figure 5-1 below. The entire City water system is supplied from these reservoirs. Under drought conditions reservoir capacity will be lowered as re-supply of reservoir water is limited. The duration of water supply from reservoirs will vary with tactical water requirements and is untested.

Figure 5-1 – Reservoir Technical Detail

<i>Reservoir</i>		<i>Unit</i>	<i>Capacity gals</i>	<i>Resupply and Reliability</i>
1	Star Gulch	12	1.1 M litres (242,000 IG)	Flow from Topping, Hanna & Murphy Creek Up to 50% volume reductions (3m water level drop) have been recorded during drought or peak fire use.
2	Ophir	n/a	1.6 M litres (352,000 IG)	Flow from Topping Creek – online and serviceable at July, 2009 Flows into Star Gulch reservoir providing total system capacity of (2.66 M litres (586,000 IG)

Note: A hydrant located on West Little Sheep Creek at the Cascade Highway (west of Unit 10 – Mine Museum) is not reservoir supplied and provides 80 – 90 psi. This hydrant is reliable (gravity fed and drought serviceable).

Hydrant Water Supply: Tactical response that requires water delivery will be hydrant supported with alternative water supplies identified by tactical response planning.

City hydrants feature varying static pressures and flow capabilities. Hydrant pressures range from 75 - 100 psi in the higher elevation sections of the City to 150 – 250 psi in the lower elevation sections of the City. Hydrant fire flow capacities range from 700 – 5,000 litres / minute (155 – 1,100 Imp. Gals / min.).

In the event of electrical power failure, City hydrants are gravity supplied and will remain functional with two exceptions:

- i) hydrants in Unit 14 (Red Resort) gravity feed from a 500,000 Imp. gallon tank that is re-supplied by an electric pump located at the Star Gulch water treatment plant / pumping station.
- ii) hydrants in Unit 2 (Core NE) – north of 6th Ave. east of Washington and extending into Unit 5 (Macleod North) gravity feed from the Kootenay Columbia water tower (250,000 Imp. gallons) that is re-supplied by an electric pump located at the Kirkup pumping station.



March 2009

**City of Rossland
Community Wildfire Protection Plan
Final Report**

The City has identified installation of generators at the Star Gulch water treatment plant / pumping station as a priority.

Assessment of the adequacy of hydrant system reliability, pressures and fire flows for tactical response to wildfire threatening values at risk is a component of tactical response planning which should be accomplished

- Recommendation 5.8.1** City fire officials should commence a formal tactical response planning process for all Fire Danger Zone 1 and 2 WUI Protection Units. Tactical response access as well as resource and water requirements for both planned sprinkler systems and tactical engine needs should be included in the tactical response plan.
- Recommendation 5.8.2** City fire officials should work with City Works personnel to ensure adequate hydrant water supply in all foreseeable wildfire tactical response situations. Exercises to test the effectiveness of emergency firefighting water supplies during wildfire tactical response are recommended.
- Recommendation 5.8.3** City fire officials should work with City Works personnel to ensure that generator capacity is installed at both the Star Gulch water treatment plant / pumping station and the Kirkup pumping station to ensure hydrant water supplies are unaffected by electrical power failure.