MCDOUGALL CREEK WILDFIRE

DEBRIS WASTE MANAGEMENT PLAN



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Report prepared by the City of Kelowna

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BACKGROUND

The McDougall Creek Wildfire Debris Waste Management Plan was authorized by the Central Okanagan Regional Emergency Program. This document outlines options for affected property owners and their agents to manage wastes created due to the wildfire.

The McDougall Creek wildfire started on August 15th. It exploded during an extremely windy afternoon on August 17th travelling over 10 kilometers and subsequently burning some 14,000 hectares of land on both sides of Okanagan Lake impacting some 200 structures in the following days. A substantial portion of the area burned was heavily forested. The fire was finally contained on September 21st. The fire directly impacted portions of West Kelowna, Westbank First Nations, West Electoral Area of the Central Okanagan Regional District, Kelowna, and Lake Country.

Disaster Debris Waste Management Plans are developed at all levels of government to provide direction on how these wastes are handled during and in the cleanup after the event. Following a disaster event such as the McDougall Creek Wildfire, planning must occur to provide clear direction for disposal of debris products, and to accommodate the extra load on the solid waste management facilities. To protect the life of the landfill and the environment it is imperative that wherever possible wastes are recycled or reused and handled in an appropriate fashion. The health and safety of residents and workers is paramount while dealing with these wastes.

This plan provides a region wide approach to delivering debris waste management services and communicating with affected property owners and residents within the 5 communities affected. It is understood this plan will evolve and adjust as the cleanup is implemented over the next two years or more.

<u>ACKNOWLEDGEMENT</u>

This plan was developed with the input and/or review by the following representatives of the affected communities.

Member Name	<u>Organization</u>	<u>Role</u>
John Vos	Kelowna Special Project Manager	Project Manager
Travis Kendel	CORD Engineering Manager	Member
Scott Hoekstra	Kelowna Solid Waste Manager	Member
Candace Pilling	Kelowna Solid Waste Supervisor	Member
Everett Wilcox	Kelowna Solid Waste Supervisor	Member
Kevin Van Vliet	Kelowna Utilities Manager	Member
Matthew Salmon	Lake Country Engineering Manager	Member
Sid Smith	Lake Country Manager	Member
Rob Hillis	West Kelowna Engineering Manager	Member
Graeme Diminick	WFN Planning & Development Manager	Member

A special acknowledgement to the many firms that have responded to requests for providing service to impacted properties.

This plan was developed using the BC Debris Waste Management Guidance as well as established Disaster Response plans from other jurisdictions in Canada and the United States. The plan also builds on the Central Okanagan Returning Home Guide which touches on some of the same aspects of waste handling and recovery.

OVERALL PLAN PURPOSE

The goal of this plan is twofold:

- 1) To provide consistent region wide information on where waste created by the wildfire should be recycled or disposed of.
- 2) To provide waste management information to all affected communities agencies' issuing permits for cleanup and rebuilding of property or to other communication outlets that can distribute this information to affected property owners and their agents.

The scope of this plan does not include:

- 1) Onsite debris removal procedures and requirements.
- 2) Detailed requirements each receiving facility has for the wastes they are prepared to accept.

 Property owners/agents should contact those facilities to confirm requirements.
- 3) Storm water management and protection strategy for wildfire burned areas.
- 4) Work in environmentally sensitive areas within the wildfire zone.
- 5) Air monitoring, soil sampling, final erosion control.
- 6) Traffic control.

TYPES OF WASTES CONSIDERED IN THIS PLAN

Green Waste/Vegetative Debris

- This waste group is not considered a major component of the fire. It is a component of the waste stream
 because it survived the fire and may need to be disposed of prematurely as the structures at that location
 no longer exist. These products can be disposed of in the property's green waste bin or brought to the
 landfill or Westside Transfer station for composting.
- It should be noted that depending on the amount of charring of these materials and what these wastes are co-mingled with, these materials may be managed and charged as garbage. It is encouraged that green wastes that may be composted are separated from the charred material that may have to be disposed. While the charred green waste/vegetative debris may be disposed of as garbage, please do not mix them in with construction/renovation/demolition debris.
- It is hard to define what level of char will be considered acceptable for composting without visually seeing the materials. As a general guide, the materials are still representative of woody debris, i.e. if the debris is 50% unburnt and not ash then they should be compostable.

Tree Waste

• This group of waste is anticipated to be exceptionally large as the wildfire impacted a very large area of forest and many of the properties in this wildfire zone had numerous trees on their property. In simple terms tens of thousands of trees may have been impacted to varying degrees. The condition of those trees will dictate their ability to be saved or used for other purposes. It is anticipated that all properties under the responsibility/ownership of a level of government will make their own arrangements to deal with tree waste. Private property owners have several options to deal with their damaged trees. Options are discussed in Appendix 2.

Construction/Renovation/Demolition Debris

Landfills manage significant amounts of potentially flammable material such as wood from demolition, foams and paper/cardboard. Hot loads such as ashes and smoldering waste from house fires can be a potential ignition source if placed into the landfill or recycling areas. The Glenmore Landfill requires waste from fires to have been extinguished for a minimum of seven days before disposal to ensure that the waste will not re-ignite.

Loads from burned buildings require hazardous material assessments and proper management for asbestos containing hazardous materials. However, the requirement to separate shingles and gypsum as mandatory recyclable materials may be waived.

- Demolition and renovation debris will be coming from structures with varying degrees of fire damage. Quantities are unknown as an inventory of fully or partially burnt homes has not been conducted. As noted in the Return Home Guide the property owner or their agent must follow WorksafeBC Requirements and have a Hazardous Waste Assessment conducted prior to beginning the demolition or renovation (see Appendix 1 for a list of known local contractors). For questions regarding WorksafeBC requirements please visit www.worksafebc.com. The following Worksafe staff are available for any clarifications:
 - 1) Laura Symlie Occupational Hygiene Officer, laura.symlie@worksafe.bc.ca 250-470-1716
 - 2) Eric Tupholme Prevention Supervisor, Prevention Supervisor, Eric.Tupholme@worksafe.bc.ca 250-979-4153
- Standard landfill requirements apply to all <u>non-burnt</u> structures, buildings, or portions thereof.
- Hazardous wastes, such as lead and mercury, and asbestos containing materials will be identified through
 the Hazardous Waste Assessment performed by a Qualified Professional prior to demolition or renovation.
 If identified, these materials should be handled by an Abatement Contractor. A preliminary list of Hazardous
 Waste Assessment Consultants and Abatement Contractors have been identified in Appendix 1.
- Asbestos containing hazardous materials, burnt demolition and renovation debris and soils, including the
 ash from these sites, will be accepted for disposal at the Glenmore Landfill but require special handling and
 delivery to the Landfill. More information is provided in Appendix 5: Landfill Requirements for Fire
 Damaged Debris Containing Controlled Materials.

NOTE: Information regarding the management of concrete from burnt structures can be found below under Concrete.

Bulky Solid Waste

• This category applies to items such as furniture and mattresses which have the potential of reuse or recycling. A significant quantity is not expected in this category in a wildfire, as the impacted structures will likely include these materials with the Demolition or Renovation.

Concrete

- With some 200 structures impacted by the wildfire it is anticipated that in the order of 20,000 metric tonnes of concrete wastes will be generated as property owners rebuild. There are several local private businesses in the area that accept concrete which is then crushed and reused. There may be situations where the volume of concrete from impacted properties warrants bringing in equipment to complete the crushing onsite. Properties and their agents considering that approach should contact their local government for any rules and regulations for doing this. The businesses, their locations, current rates, and conditions are provided in Appendix 3.
- It should be noted that several businesses do require a Hazardous Materials Assessment conducted to ensure their facility and staff are not negatively impacted. Mixed loads containing earth and organic wastes may be rejected at these facilities. Contact the businesses in advance to verify pricing and clarify acceptance requirements.

Metals and White Goods

- Within this category are vehicles, tools, white goods, and various miscellaneous metals that survived the fire. These products are all recyclable and are dealt with in Appendix 4.
- White goods refer to appliances such as stoves, dishwashers, fridges, and freezers. Through the Returning Home Guide, the property owners have been asked to use the free pickup service for those fridges and freezers that were full of spoiled food, or to personally deliver them to the landfill or transfer station. Once any food waste or ozone depleting substances have been removed, white goods can be recycled. White Goods within fire impacted structures will be part of demolition. Some of the metal recycling firms also take appliances.

Hazardous Waste Goods

Hazardous Waste Goods includes products such as flammable liquids, pool chemicals, paint, pesticides, propane cylinders and other materials banned from landfills. For disposal options visit rdco.com/recycle or call 250-469-6250. This is not expected to be a significant quantity from the impacted structures but is listed in order to ensure that the waste list is comprehensive. Construction/Renovation/Demolition Waste is dealt with above.

E-Waste

• E-Wastes include computers, tablets, phones etc. and are all recyclable. Recycling locations are available at the rdco.com/recycle website or call 250-469-6250. Please ensure all batteries are removed and recycled separately as they pose a high risk of fire or explosion when not properly handled.

DEBRIS WASTE MANAGEMENT SERVICE DELIVERY STRATEGY

- Due to this event's location, the consensus of the affected jurisdictions is that there are sufficient locations for disposal of wastes properties will generate. These locations provide an environmentally responsible approach for managing these materials. In some debris management scenarios, it is advantageous for the local government to set up temporary waste diversion sites to concentrate products for initial handling before delivery to an appropriate disposal/recycling/reuse site. There is an ongoing investigation into whether temporary tree debris collection locations on either side of Okanagan Lake are necessary and viable.
- There is a deliberate strategy to minimize delivery of waste products to the Glenmore Landfill whenever possible as they are still recovering from the impact of the wildfire on their site, as well there are some site renovations which impact their space availability at this time. While they can handle wildfire debris demolition (see Appendix 5), garbage and other solid waste streams for which they are the only authorized permitted site within the region, the plan encourages delivery of other materials to suitable alternative locations. To verify requirements at the Glenmore Landfill property owners and their agents should review , Accepted products at www.kelowna.ca/landfill or Accepted products & tipping fees | City of Kelowna or contact the landfill directly at 250-469-8880.
- The following appendices outline the options and information available for the different waste materials. It
 should be noted there may be additional service providers that are not listed due to the time constraints in
 gathering information for this plan. Searches on the internet may provide additional locations. In order to
 fully understand the receiver's requirements for the waste materials the property owner or agent should
 contact the number provided.

ATTACHMENT 1 – PROPERTY OWNERS/AGENT PLAN SUMMARY

This is a summary of the McDougall Creek Wildfire Debris Waste Management Plan, which was prepared by the City of Kelowna in September 2023 on behalf of the Central Okanagan Regional Emergency Program The plan outlines options for affected property owners and their agents to manage wastes created by the wildfire, which burned some 14,000 hectares of land and impacted some 200 structures in five communities. The plan provides a region-wide approach to delivering debris waste management services and communicating with affected property owners and residents. The plan also describes the types of wastes considered in the plan, such as green waste, tree waste, construction/renovation/demolition debris, bulky solid waste, concrete, metals, white goods, hazardous waste goods, and e-waste. The plan provides information on where these wastes can be recycled or disposed of, and what requirements and conditions apply for each waste stream. The plan also explains the landfill requirements for fire damaged debris containing controlled materials, and the need to follow WorksafeBC and environmental regulations. The plan aims to protect the life of the landfill and the environment, and to ensure the health and safety of residents and workers while dealing with these wastes.

APPENDIX 1 – HAZARD CONSULTANTS

'Assessment Contractors' - Primarily provide hazard assessments and inspections

Assessment Contractors	E-mail	Office Location	Phone
ABT HazPro	testing.hazpro@gmail.com	Penticton	250-486-0819
Apex EHS Service	jwidmer@apexehs.ca	Kelowna	250-868-0667
Chase Valley Environmental Solutions	environmental@chasevalley.ca	Penticton	250-486-4322
Compass Environmental Solutions	atiel.cve@gmail.com	Penticton	250-486-0818 cell
Keltech Environmental Ltd	arobison@shaw.ca	Kelowna	250-870-2939
Mission Hills Environmental Services Inc.	missionhillsenvironmental@gmail.com	W. Kelowna	250-826-8494
Peak Environmental	info@peakenvironmental.ca	W. Kelowna	10877-518-7325
Pinchin West	dschearer@pinchinwest.com	Kelowna	250-868-8090
Skyview Inspection Services - Penticton	bc@skyviewinspectionservices.com	Penticton	250-490-1118
TerraWest Environmental Inc	mbarnett@terrawest.ca	Kelowna	250-469-3322
WSP	paul.ell@wsp.com	Kelowna	250-491-9778

'Abatement Contractors - Primarily provide abatement services to remove hazards.

Abatement Contractors	E-mail	Office Location	Phone
Alpine Abatement Ltd.	alpineabatement@gmail.com	Kelowna	250-878-3199
Cotter's Haz Mat Abatement & Demo	dcotter@telus.net	Penticton/Valley	250-493-6308
Empire Abatement Services Inc	empireabatement@gmail.com	W. Kelowna	250-826-9541
Grayhawk Industries	rocky.becker@grayhawkindustries.com		250-765-1531
MacDonald Builders Ltd	Maccid@telus.net	Penticton	250-809-6820
NorHaz Solutions Inc	info@norhaz.com	Penticton	1-844-466-7429
Napp Enterprises Ltd.	geoff@napp.ca	Kelowna	250-317-4864
Okanagan Restoration Services Ltd	Kelowna.reception@okrestore.com	Kelowna	250-491-0224
Stutters DKI	scr@stutters.com	Okanagan Valley	1-877-763-1540
TGM Contractors Ltd	tim@tgmcontractors.com	Kelowna	250-317-3629

WORKSAFE BC OHS Regulation 20.112 Hazardous materials (updated February 1st, 2015) requires an assessment and abatement of hazardous material (asbestos etc.) be done by a qualified professional before any demolition or salvage of machinery, equipment, a building or a structure, or the renovation/alteration of a building or structure. Disposal criteria for RDOS Landfills: See RDOS Landfill Waste Disposal Application page Z "Hazard Assessment Documentation".

"Qualified" means being knowledgeable of the work, the hazards involved and the means to control the hazards, by reason of

Regional District of Okanagan Similkameen Solid Waste Information:

REDONAL DISTRICT
RDOS
OKANAGAN

Phone: 250-490-4144 Toll Free: 1-877-810-3737 email: info@rdos.bc.ca Web: www.rdos.bc.ca/demo

APPENDIX 2 – TREE WASTE DISPOSAL OPTIONS

- There are several alternatives to landfilling for dealing with damaged trees and bushes for property owners and their agents (insurers).
- It is anticipated that for crown land and for larger properties owned by local governments that logging of recoverable timber from fire damaged trees may occur. In some cases, damaged trees will be left standing or left lying to decompose naturally.
- For larger private properties greater than 1-hectare owners/agents may be able to engage a logging firm that will deliver them to Tolko that uses the wood in lumber. This assumes the trees are suitable. Property owners or agents can contact Tolko's log buyer (Byron Gardner at 250-550-0413) if they wish to pursue a logging option. Property owners/agents may also consider chipping which Tolko will accept at their cogeneration facility in Armstrong. Alternatively, the owner may choose to cut down danger trees and leave others standing. Trees could be cut up for firewood or be left lying to decompose naturally. A professional should be engaged to manage and implement whatever solution is determined.
- On smaller properties the owner/agent may choose options such as cutting down danger trees, bucking up trees for firewood or having them chipped. In every case the owner/agent should hire a professional and conduct the work consistent with the local government requirements.
- The community of local governments are exploring whether one or more centralized drop off facilities could occur for the first year of the plan to assist property owners. If the decision is made to implement this, then this plan will be updated.
- It should be noted that the Westside Transfer station does NOT accept logs. The Glenmore Landfill and the Westside Transfer Station accept prunings (smaller branches and small pieces of wood) of less than 8 inches in diameter. Again, fire damaged woody debris will be considered as garbage and charged consistent to bylaw requirements. It is hard to define what level of char will be considered acceptable for composting without visually seeing the materials. As a general guide, if the materials are still representative of woody debris, i.e. if the debris is 50% unburnt and not ash then they should be compostable. It is encouraged that green wastes that may be composted are separated from the charred material that may have to be disposed. While the charred green waste/vegetative debris may be disposed of as garbage, please do not mix them in with construction/renovation/demolition debris.

APPENDIX 3 – CONCRETE RECYLING CONTRACTORS

NOTE: Additional businesses may accept waste concrete in the area, call local pits

- Pricing has been provided by the businesses below and are current as of September 25, 2023. PRICING MAY
 CHANGE AT ANY TIME. Contact the businesses in advance to verify pricing and clarify acceptance
 requirements.
- ARTHON 4875 South Perimeter Rd 250-764-8812 call in advance
 - o Pricing \$40/tonne clean, \$45/tonne with rebar, Asphalt \$22/tonne
- ANSELL AGGREGATES Two locations 250-769-4293
 - o Kelowna 688 Willow Park Rd
 - Pricing Clean \$25/tonne, With Rebar \$44.50 oversize -\$60, With debris \$100/tonne
 - West Kelowna Trepanier follow signs to pit
 - Pricing- Clean- \$18/tonne, With Rebar-\$45, Oversize -\$60, with debris -\$100
- AG APPEL Call for details 250-861-1211
 - Must set up account in advance of any delivery and require Hazard Clearance letter
- KELOWNA SAND AND GRAVEL Gillard Service Rd 250-764-2695
 - o Pricing \$100/tonne no rebar or debris
- PIER MAC- Oyama Pit on 15651 Sawmill Rd, Lake Country 250-548-4061,
 - o Pricing Clean \$35/tonne, With Rebar \$45/tonne
- EMIL ANDERSON Pit in West Kelowna off Stevens Rd, call office at 250-762-9999
 - Call in advance, price will be negotiated prior to delivery
- WESTLAKE PAVING/LAFARGE 2455 McDougall Rd, West Kelowna 250-769-4166
 - o Pricing \$110/tonne clean concrete with no rebar

APPENDIX 4 – METAL RECYCLERS

NOTE: EACH FACILITY MAY OR MAY NOT ACCEPT ALL THE METAL PRODUCTS

NOTE: AUTOMOBILE RECYCLING REQUIRES SPECIAL HANDLING TO REMOVE LIQUIDS, check with the facility in advance

- PLANET EARTH RECYCLING 1400 Industrial Rd, Kelowna 250-768-0878
- KNOX MOUNTAIN METALS 930 Bay Avenue, Kelowna 250-763-6502
- KELOWNA RECYCLING 1972 Windsor Rd, Kelowna 250-860-2866
- ABC RECYCLING 3258 Highway 97N, Kelowna 250-765-6607
- INTERIOR METAL RECYCLING 232 Tilley Rd Kelowna 250-766-7278
- WESTSIDE TRANSFER STATION 2640 Asquith Rd, West Kelowna 250-469-6250
 Friday thru Monday, residents only, no commercial traffic
- GLENMORE LANDFILL 2720 John Hindle Drive, 250-469-8880

<u>APPENDIX 5 – LANDFILLING REQUIRMENTS FOR FIRE DAMAGED DEBRIS</u> <u>CONTAINING CONTROLLED MATERIALS</u>

(October 10, 2023) <u>This section applies to the burnt portion of structures or buildings only. Standard landfill requirements apply to all non-burnt structures, buildings, or portions thereof.</u>

WorksafeBC requires a Hazardous Materials Assessment to be completed by a Qualified Professional prior to the demolition or construction of structures or buildings. See Construction/Renovation/Demolition Debris for more information.

All burnt demolition and renovation debris waste, including ash, from structures or buildings will be treated as a Controlled Waste and require special handling. The handling requirements will differ depending on the details in the Hazardous Materials Assessment and if the waste is found to have Asbestos Containing Materials or not. These wastes can be brought to the Glenmore Landfill for disposal but require special handling as a Controlled Material on the incident site, while in transport, and during disposal at the landfill. The goal is to protect the workers and the environment during collection, transportation, and disposal. Disposal requirements are as follows:

- Asbestos Containing Materials:
 - Must follow the existing Glenmore Landfill Asbestos acceptance requirements.
 - See Asbestos under Accepted products at <u>www.kelowna.ca/landfill</u>.
- Burnt Demolition and Renovation Debris Waste From Structures or Buildings, OTHER THAN asbestos:
 NOTE: This includes ash and the top layer of soil with ash (approx. 6 inches), where a building, structure or vehicle has been burnt.
 - Are accepted for disposal on Mondays, Wednesdays, and Fridays from 9 a.m. to 1 p.m.
 - Haulers must receive written approval from the landfill management a minimum of 24 hours prior to disposal.
 - o Maximum container size is a 20-yard bin liner controlled waste containment sack:
 - The containers must be properly sealed to prevent materials escaping.
 - o To schedule a disposal appointment:
 - Contact Landfill Administration at <u>landfill@kelowna.ca</u> Monday to Friday between 7:30
 a.m. and 3:30 p.m. with the following:
 - Include 'Fire Debris Request' and the address in the email subject line;

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- Requested date for disposal;
- Expected volume (number and size of containers) for disposal; and
- Include the Hazardous Waste Assessment Report and other supporting documents as an attachment.
- o Haulers are required to place this waste as requested by landfill staff at the time of disposal.
- See <u>www.kelowna.ca/landfill</u> for more information regarding Fire Damaged Debris containing Controlled Materials, OTHER THAN asbestos.

The Glenmore Landfill - Landfill Requirements For Fire Damaged Debris Containing Controlled Materials are subject to change. Please visit www.kelowna.ca/landfill for the most current acceptance requirements prior to material loading and delivery.

ACTION ITEMS

- 1. Review the McDougall Creek Wildfire Debris Waste Management Plan.
- 2. Identify the types of waste generated by the wildfire on your property.
- 3. Follow the guidelines in the plan for managing each type of waste.
- 4. Ensure the health and safety of residents and workers while dealing with these wastes.
- 5. Follow WorksafeBC requirements and have a Hazardous Waste Assessment conducted prior to beginning demolition or renovation.
- 6. Contact the appropriate facilities to confirm their requirements for accepting waste.
- 7. Hire a professional to manage and implement the chosen solution for dealing with tree waste.
- 8. Consider recycling or reusing waste materials wherever possible.
- 9. Follow the landfill requirements for disposal of wastes remaining.

COMPREHENSIVE LIST OF DEBRIS CONTAINING CONTROLLED MATERIALS OR HAZARDOUS WASTES

- Burnt demolition and renovation debris waste from structures or buildings, treated as a controlled waste.
- Asbestos-containing materials.
- Hazardous waste goods, including flammable liquids, pool chemicals, paint, pesticides, propane cylinders, and other materials banned from landfills.

COMPREHENSIVE LIST OF ACCEPTIBLE DEBRIS FOR THIS PLAN

- Green Waste/Vegetative Debris
- Tree Waste
- Construction/Renovation/Demolition Debris
- Bulky Solid Waste
- Concrete
- Metals and White Goods
- Hazardous Waste Goods
- E-Waste