

Wildland-Urban Interface Wildfire Risk Strategy Action Plan

Action ID	Action Title and Description	Relevant FireSmart Disciplines	Scale	Implementation Timeline	Cost	Impact	Potential Key Performance Indicator
VM1	<p>Expand a Wildland Fuel Treatment Program</p> <ul style="list-style-type: none"> Utilize the City of Edmonton's Fire Exposure Assessment (FEA) as the foundational planning tool for the Wildland Fuel Treatment Program. Prioritize ground-truthing and field-based vegetation inventories in all high fuel hazard areas identified by the FEA to characterize vegetation types and stand structure, and use this data to develop science-based, site-specific fuel treatment plans across forested areas within the Wildland-Urban Interface (WUI). Establish a formalized Trailside Fuel Treatment Program to systematically reduce excess combustible woody debris accumulation along recreational trails in ravine areas and public parks. Conduct recurring field assessments and implement targeted understory thinning, ladder fuel removal, and debris clearing in high-risk forest stands to create defensible corridors and reduce fire spread potential near residential areas. Implement a Grassland Fuel Management Program to monitor and actively reduce the accumulation of tall dry grasses near public parks, natural areas, and other valued City assets. Construct permanent and seasonal fuel breaks (e.g. gravel pathways, mown buffer zones, and prescribed burn corridors) between native, unmaintained grasslands and built infrastructure to limit fire spread potential during high-risk conditions. Scale up the use of prescribed fire as a core, recurring component of the Wildland Fuel Treatment Program, recognizing fire as an ecologically essential disturbance that supports habitat renewal and biodiversity. Develop a formal Prescribed Burning Program with established burn plans, trained and certified burn crews, defined seasonal burn windows, and community engagement protocols. Prioritize high and moderate-risk WUI areas and meaningfully integrate Indigenous Traditional Knowledge and land stewardship practices into all phases of prescribed burn planning, implementation, and monitoring. Leverage the Wildland Fuel Treatment Program as a strategic vehicle for integrated vegetation stewardship by using treatment activities to systematically control invasive plant species and proactively reintroduce native, fire-adapted, and ecologically appropriate species. Align species management objectives with the City's naturalization goals to strengthen ecosystem resilience across all treated areas. In alignment with the Top of Bank (TOB) Policy, formally designate TOB linear features (e.g., pathways, roadways) as structural fuel breaks and emergency access routes within the Wildland Fuel Treatment Program. Prioritize vegetation management and pathway expansion in high fire-exposure areas identified through the FEA, enforce a minimum 15 m TOB setback wherever operationally feasible, and ensure TOB corridors are maintained as integrated components of Edmonton's wildfire resilience infrastructure. 	Vegetation Management, Cross Training, Development, Emergency Planning	WUI-Specific	4 years	High	High	<p>Treated Areas:</p> <p>Annual hectares of mechanical fuel treatments completed within the WUI.</p> <p>Annual linear distance (km) of fuel treatments completed along trail corridors.</p> <p>Annual hectares of prescribed burn treatments.</p>
VM2	<p>Incentivize Property Owners within the WUI to Adopt Wildfire-resilient Vegetation Practices</p> <p>Incentivize residents to adopt wildfire-resilient vegetation management practices, through grants, rebates, or community pilot programs (e.g., community chipping program). Objectives should include wildfire-resilient vegetation management activities and prioritizing preferred vegetation for shelterbelts, privacy screens, and yard ornamentals.</p>	Vegetation Management, Development, Interagency Cooperation	WUI-Specific	3 years	Medium	Medium	<p>Program Launch: Establishment of an incentive program.</p> <p>Program Participation: Annual count of mitigation grant and/or rebate applications.</p>
VM3	<p>Develop Wildfire Resilient Landscape Design and Construction Standards for Public Parks, Environmental Reserves, and Top of Bank Areas</p> <p>Develop and refine standards and operational SOPs for tree species selection, planting, density, and maintenance across city-owned properties, including public parks, environmental reserves, and top-of-bank areas, that consider site-specific factors in alignment with this strategy. Standards may be tiered based on park type, intensity of use, and proximity to the Wildland Urban Interface (WUI) or other valued assets, prioritizing the transition to drought, heat, and fire-resistant species to enhance climate resilience.</p>	Vegetation Management, Development	WUI-Specific	4 years	Low	Medium	Standard Completion: Completion and adoption of fire-resilient design standards.

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LD1	<p>Implement Wildfire Resilience Measures into the Zoning Bylaw</p> <p>Through Action 6 of the CRPD Action Plan and under the authority of Part 17, Section 624 of the Municipal Governance Act, add a Wildfire Resilience Overlay to the Zoning Bylaw that clearly maps which properties are within the regulated wildland-urban interface and apply appropriate zoning regulations to applicable types of development in order to mitigate wildfire risk.</p>	Legislation, Development, Education, Emergency Planning	WUI-Specific	2 years	Low	High	WUI Regulatory Integration: Completion of the Wildfire Resilience Overlay and its formal adoption into the Zoning Bylaw.
LD2	<p>Update Governing Policies and Plans to Incorporate Wildfire Resilience</p> <ul style="list-style-type: none"> • Through Action 7 of the CRPD Action Plan, identify opportunities to integrate wildfire risk mitigation standards in WUI areas within the City's Design and Construction Standards. • Through Action 8 of the CRPD Action Plan, identify priority design outcomes that support wildfire resilience through neighbourhood design. • Review and update the Ribbon of Green Strategy, Urban Forest Asset Management Plan, and City-Wide Natural Area Management Plan for opportunities to integrate Wildfire risk mitigation into park design and operations, Vegetation Management in natural areas. When implementing the Breathe: Green Network Strategy, look for opportunities to integrate wildfire resilience. • When updating the City Plan and District Plans, determine whether appropriate direction from the Wildfire Risk Strategy can be incorporated to inform future land use. 	Education, Vegetation Management, Legislation, Development	City-Wide	Ongoing	Low	Medium	<p>Policy Integration: % of governing documents (e.g., City Plan, Breathe) updated with wildfire resilience language.</p> <p>Operational Alignment: % of management plans (e.g., Forestry, Natural Areas) with synchronized vegetation protocols.</p>
ED1	<p>FireSmart Engagement and Education Program</p> <ul style="list-style-type: none"> • Continue to champion the FireSmart program in collaboration with FireSmart Alberta with focused consideration for properties in areas exposed to wildland fuels. • Distribute educational resources through physical mailouts to properties residing in the WUI and utilize social media communications for wider educational purposes. • Deliver FireSmart presentations at public events. • Promote the FireSmart Neighbourhood Recognition Program (NRP) and work with neighbourhood champions and committees to share resources and support volunteer neighbourhood events and the NRP process. Encourage community participation. • Conduct periodic surveys to measure wildfire awareness and education program effectiveness. Refine outreach strategies and track progress over time. 	Education, Cross Training	City-Wide	1 years	Medium	High	<p>Outreach Impact: Total volume of physical mailouts and digital engagement on wildfire campaigns.</p> <p>Neighborhood Recognition: Annual number of communities achieving or renewing FireSmart NRP status.</p> <p>Program Uptake: Measured increase in community access to resources and program participation.</p>
EP1	<p>Develop Structure Protection Plans</p> <p>Develop structure protection plans for critical infrastructure in high-risk WUI areas and neighbourhoods based on wildfire hazard risk assessments. Neighbourhood-level and/or asset-specific risk assessment should be informed by wildfire exposure mapping and in-field validation of fuel hazards and structure vulnerabilities. Ensure structure protection plans are available to and understood by City teams involved in response efforts.</p>	Emergency Planning, Cross Training, Interagency Cooperation	WUI-Specific	2 years	High	High	<p>Asset Protection: % of critical infrastructure in high-risk zones with a validated SPP.</p> <p>Personnel Readiness: % of emergency response personnel trained or oriented on localized SPPs.</p> <p>Plan Currency: % of protection plans updated to reflect new developments or fuel hazards.</p>

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EP2	<p>Develop a Wildfire Data Collection and Monitoring Program</p> <ul style="list-style-type: none"> Establish real-time inter-departmental wildfire data sharing to delineate fire extents and gather essential data for post-wildfire assessments and ecological monitoring. Continue developing the EmberWise Tool and drone overwatch program to improve wildfire monitoring and response. During periods of High to Extreme wildfire weather, utilize the City's drone overwatch program and EmberWise platform to closely monitor Fire Hazards in WUI areas. Drones should be launched immediately upon receipt of a 911 call about a wildfire to assist with initial size-up and ongoing monitoring of response efforts. Develop a multi-layer GIS map that has all critical infrastructure (including gas lines, power lines, water lines), wildfire exposure layers, and evac routes to support first responder size-up and response planning. The map/application should be user-friendly to support easy in-field operations. Utilize dual-use city and traffic cameras to monitor heat, fire migration, evacuation progress, security of property, among others. 	Development, Emergency Planning, Vegetation Management, Education	City-Wide	3 years	High	High	<p>System Integration: Establishment of real-time, inter-departmental wildfire data-sharing protocols.</p> <p>Monitoring Compliance: % of target flights achieved of scheduled drone monitoring flights.</p> <p>Operational Readiness: Completion and field-usability of the multi-layer GIS emergency response map.</p> <p>Surveillance Coverage: % of high-risk WUI areas monitored via drones and sensors.</p>
EP3	<p>Expand Tactical Emergency Wildland Response Planning</p> <ul style="list-style-type: none"> Establish standards for wildfire-fighting equipment/apparatus for all fire stations/trucks with significant WUI areas in their district. Consider stocking a reserve apparatus at fire stations in high-risk WUI areas during periods of high fire danger. Increase firefighting staffing during periods of high fire danger at fire stations with significant WUI coverage. Extra staffing should be planned for in the early spring before vegetation green up and in mid to late summer during hot and dry conditions. Integrate wildfire considerations into an all-hazards evacuation plan in alignment with provincial requirements. The plans should clearly outline procedures for early warning systems, evacuation routes, and communication strategies. 	Emergency Planning, Interagency Cooperation, Cross Training, Development	City-Wide	Ongoing	High	Medium	<p>Standardization Compliance: % of WUI-district stations achieving 100% adherence to the new wildland equipment and reserve apparatus standards.</p> <p>Peak-Risk Coverage: % of "High" to "Extreme" fire danger days where augmented staffing targets were fully met in high-risk districts.</p>
EP4	<p>Review Risks to City Facilities and Response Infrastructure</p> <p>Review the locations of city-owned facilities and/or critical infrastructure that may be in WUI areas. If assets are exposed to potential fire hazards, consider structure protection improvements and/or secondary backup locations/resources that could be used to support operations in an emergency WUI fire.</p>	Emergency Planning	WUI-Specific	3 years	Medium	Medium	<p>Facility Assessment: % of WUI-based City facilities with a completed FireSmart assessment.</p> <p>Resilience Upgrades: Number of high-priority facilities with integrated secondary power or structural protection improvements.</p>
CT1	<p>Expand Tactical Emergency Wildland Response Training Program</p> <ul style="list-style-type: none"> Develop a training and certification program for municipal staff and partner agencies to increase organizational awareness and capacity for wildfire risk management and response. The program should highlight key wildfire initiatives and the responsibilities of various municipal departments, and when they apply (e.g., Prevention, Mitigation, Preparedness, Response, Recovery) and a Continuous Improvement system. Provide accreditation and specialized training for all EFRS recruits and existing staff focused on standards for WUI fire response and Incident Command System training. Conduct joint training exercises and simulations with local public safety partners and supporting organizations. 	Emergency Planning, Cross Training, Interagency Cooperation	City-Wide	3 years	High	Medium	<p>Personnel Accreditation: % of EFRS personnel and recruits with NFPA-compliant wildland firefighting accreditation.</p> <p>Operational Drills: Completion and validation of an annual joint simulation or tabletop wildfire exercise.</p> <p>Operational Readiness: Adherence to provincial training requirements for employees with key emergency management responsibilities.</p>

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IC1	<p>Establish a Firesmart Action Group</p> <ul style="list-style-type: none"> • Create a cross-departmental group to establish and monitor annual implementation plans and report on progress to leadership and Council. • Collaborate with utilities, transportation agencies, and industrial operators to encourage the development of wildfire mitigation plans on large private properties and utility corridors. Align FireSmart principles across critical infrastructure sectors. • Collaborate with external agencies, including surrounding municipalities, Indigenous partners, utility companies, community organizations, and other governmental agencies to align on FireSmart disciplines and progress. • Establish a group Chair and Lead Coordinator and create a Terms of Reference for roles for all group members (internal and external). 	Emergency Planning, Cross Training, Interagency Cooperation, Education, Vegetation Management, Development, Legislation	Regional	2 Years	Medium	High	<p>Group Launch: Establishment of the FireSmart Action Group.</p> <p>Program Governance: Approval of the FireSmart Action Group Terms of Reference and the appointment of a Chair and Lead Coordinator.</p> <p>Annual Progress: Completion of an annual report detailing strategy implementation and performance.</p>
IC2	<p>Collaborative Prescribed & Cultural Burn Program</p> <p>Use City-led prescribed and cultural burns as opportunities for joint training with Indigenous partners, for education and academic research, and to integrate and advance the COE's Indigenous Framework. Promote traditional fire stewardship and vegetation management best practices.</p>	Vegetation Management, Education, Cross Training, Interagency Cooperation	Regional	2 years	Medium	Medium	<p>Burn Footprint: Annual hectares of cultural burn treatments.</p> <p>Indigenous Collaboration: Number of burn events co-led with Indigenous knowledge keepers and practitioners.</p> <p>Ecological Recovery: % of burn sites showing improved biodiversity post-assessment.</p>
IC3	<p>Review and Update Mutual Aid Agreements</p> <p>At the next renewal of Mutual Aid Agreements, consider the need for wildfire responses and planning updates. Use the renewal process as an opportunity to connect with neighbouring municipalities to align on wildfire risk management approaches and response procedures. Consider opportunities for communication systems and other resource sharing.</p>	Emergency Planning, Interagency Cooperation	Regional	Ongoing	Low	Low	<p>Mutual Aid Updates: Number of Mutual Aid Agreements updated.</p>