

BURNING BANFF: WEBPAGES AND FUTURE HANDBOOK

Outline

2026-01-17 version (numbering matches organization of webpages, update Section 80)
Project will start off with a set of webpages around this outline, evolve towards something more formal in a year or two,

Komar photo, album of topics below

-Title stolen from Steve Pyne... same source as “Keepers of the Flame”.

-This is an outline for grouping website pages, but down the road this could be synthesized into a participants-based E-handbook. Website pages stresses T/N photos, other dynamic series.

This outline version flows out of Pengelly, White and Westhaver lectures for FIEM in Tucson, and the October 2024 BVN talk:

<https://bowvalleynaturalists.org/event/firesmart-in-the-canadian-rockies-integrating-fire-vegetation-and-wildlife-outcomes-with-cliff-white/>

01. Intro Roof to Region

- 01.1 Burning Crisis: Waterton, Jasper, Banff
- 01.2 View over Banff, the roof to region diagram
- 01.3 Sawback2- national transportation corridor
- 01.4: Safeguard Banff
- 01.41: Three Burning Questions (Babe Ruth on raking leaves theme)
- 04.1 Fire Management Options
- 06.1 Potential Solutions: High Priority Zones,
- 06.2 Potential Solutions: Bow Valley Community Forest

10. Eco-Cultural Fire History

- Indigenous land use explains fire history, vegetation patterns
- long-term legacy of homelands and resource management
- the Indigenous perspectives on fire use, timing, containment;
- safely integrating components of Indigenous fire into the Banff’s program;
- expanding Indigenous ignitions to achieving long-term fire regimes, fuel mgmt. etc.
- Jasper fire history
- Biome Overview: T/N of NW ecoregions
- Banff Fire History
- Ignition Causes: Indigenous and lightning North Am historic stats (lightning fires are unnatural)
- Banff fire history maps: valley burning patterns etc. refer to fire square pages

20. Fire Behavior and Risk

21. Fire Triangle to Fire Square

- Banff Admin Building
- Canmore Admin Buildings over time

22. Terrain

- Minnewanka series

24. Weather - firenado/mobile home image

- Marks weather database
- series: Hirsch and Heathcott wind rose for Banff
- series: some dynamic synoptic frontal passings
- series: spring snowmelt patterns (JJFarr/Hebblewhite)
- series: daily temperature wind pulse coming up the trench

26. Fuels - Tunnel looking west

- CW biomass/ecoregion model
- forest succession
- T/N Banff/Canmore town urban development density

28. Governance - Banff admin then/now

- Indigenous ignitions, movement/occupation models
- T/N Banff Admin building
- Canmore trailers to modern building
- T/N graphic model showing move to urban-community forest governance transition
- Indigenous peoples recognition and reconciliation... tie to Burning for Bison

29. BurnBox Integration

- Current models, wind problems
- Burn-P3 output example, wind problems
- Banff's NE Winds

30. Reduce Fire Risk with Ecological and Cultural Restoration

31. Overview of ecological management

- ecological and cultural management direction
- short fire intervals reduce fire risk
- vegetation management to reduce fire risk (the table0
- fire vegetation management zoning to guide actions

32. Ecological Fire Case Histories

- Burning for bison: burning and butchering bison
- Fading gold: aspen decline

- Douglas fir and juniper
- impacts high intensity fire Sask Xing
- Caribou, differential fire frequency, ungulates and wolves

40. Infrastructure Protection and Evacuation

- Collages of ember showers on vehicles, fire fighters, then buildings (Jasper Miette hotel)
- Jenn Beverly et al.: fire exposure models for Lake Louise, Banff, Canmore
- Overview: Sulphur Mountain
- 41. evacuation: Banff East Gate then and now
- 42. Air quality
- 43. Powerlines: glading versus screening
- 44. FireSmart Human Communities
- video of building burning
- Greenville CA Jasper then/now of building
- T/N of Jasper's work.. what worked, what didn't
- T/N of Banff/Canmore urban development, importance of getting this done
- Banff example:
- Canmore example: Peaks of Grassi
- solicit images of folks on the job in Banff and Canmore
- Express jobs- Waterton

50. Fuelbreaks

52. Design and Construction

- GEarth-moving Carrot Creek to Silvertip
- Fire use Action Line-
- Fuelbreak Types- natural terrain, last day of season ignition, boreal blackline, shaded, major scale harvesting patterns
- Slash treatment

54. Ops and Maintenance-

- T/N on how these are linked.. just a difference of seasonal timing and set-up urgency
- T/N Carrot Creek 2025-09-27 Field Trip Report (BB's first page!!)
- T/N Guides Rock Quickies

56. Forgotten Fuel Breaks

- Mountain Legacy, Google Earth then/now images of past work
- historical story of park prisoners, alternative service projects... cheap labour
- Banff Park containment unit series... how this made the program work
- Kananaskis Country then/now images of fuelbreaks, burning treatments

57. Faulty Fuelbreaks

- Tunnel Toe-tie to Banff NE Winds
- Cascade-
- Norquay-

60. Prescribed Burning

- Video Carrot Creek
- The basics of strip firing against a fuelbreak.. anyone got a time series
- Making wind- building a good column etc.
- Lots of good/bad stories could go in here- again photoseries good for web

70. Wildfire Containment

- main threats: escaped pbs, lightning, public, highways, powerlines
- the beauty of existing maintained fuelbreaks
- again some good stories with image sequences would work
- working the upwind side-manage intensities (Sask Xing)

80. Built for Burning: Current Problems, Future Prospects

81. Prescription for Disaster: BYK 2020 Fire Plan

- “A camel is a horse designed by consensus”
- 1985 Fire Plan Delusions: needed to evolve from random unit choice towards game of 3-dimensional chess during period 1985 to 2010;
- 2001 Bow Cascade Fairholme EMA plan, 2008 Mtn Park Strategic EA Plan, 2009 Banff Fire Mgmt Strategy summarize park plan direction, good examples of then fire managers knowledge,
- these docs formed part of basis for Parks Canada ministerial 2006 ski area guidelines and 2010 Norquay ski area mgmt. guidelines (e.g., integrate fire and ski area lease management objectives for net ecological gain);
- 2006 caribou habitat and 2008 Alta Link powerline glading versus screening issues;
- post-2010 staffing shuffles, 2020 planners forced to ignore what works, choose 3-park consensus option;
- contrast 35-year difference between BNP, YNP and KNP fire mgmt. evolution;
- 2020 BYK Plan attempt to merge philosophies (see Kootenay Park Plan objectives in 2020 plan)—but Banff is not Kootenay or Yoho—these parks use up valley spread and the continental divide and Banff as their backstop for minimal management (e.g. 2003 and 2017 fires).
- Banff has no backstop, down valley gets warmer and windier, Banff needs fuel breaks and active management, e.g., Fairholme, Red Deer, Panther units etc.;
- post 2016- bias towards burning in Banff's backcountry (following 1990-2010 procedures),
- in Bow Valley 2020 plan creates high biomass, beetle kill, moving towards Kootenay/Jasper option scenario;
- Lost science (refer to some case histories in section 32)- create conifer cover, lose deciduous areas and grasslands;

- Meadow unit historical analysis, modern implementation outcomes, fails due to simple perimeter vs area analysis... small units too risky for return on investment, don't reflect historic burning pattern;
- Politics of delay (why did this plan evolve the way it did?),
- Bottom line: science, traditional knowledge, and experience not enough to overpower recent Parks Canada politics for Bow Valley mgmt, but fire smart landscape approach still working in Red Deer, Panther etc.

82. Ingredients for Success

- Banff has one of the northern hemisphere's most advance fire mgmt. program;
- Banff has amazing set of factors that could create success
- narrow valleys, consistent winds, massive mountain ranges
- re-Taming Fire- prescribe fire versus humans, dogs, wolves, and fire analogy,
- much of Banff favorable location, narrow valleys anchored with fuelbreaks,
- Plant and wildlife ecology link humans and fires
- Indigenous capacity building- bison hunts in Red Deer, future prescribed fire use?

84. Pathways Forward

- basics of photosynthesis, annual biomass accumulation
- costs of various treatment options
- outcomes of 2020 plan versus other options could be modelled with Burn P3+ to evaluate optimal cost benefit options

88. Smouldering Future Issues

- T/N Calgary
- T/N Trans Canada Highway
- smoke in valley, Canmore 2026 complaint
- series smoke dispersal across North America

90. Hall of Flame

This could be a pot-pourri of interesting events, lessons learned etc. Current park staff might want to use their "nom de guerre", veterans could mention other participants.. "share the flame, share the blame".