MPBI Projects by Strategic Initiative October 2005

Initiative: 1A1 Development and delivery of decision support tools

PO #	Organization	Project Title:
2.05	CFS-PFC	Historical frequency, intensity and extent of mountain pine beetle disturbance in landscapes of British Columbia and Alberta.
3.02	FERIC	Review and synthesis of historical adaptive management strategies to control mountain pine beetle.
3.08	BCMOF	Plan for establishment of long-term monitoring plots in mountain pine beetle killed stands.
3.09	BCMOF	Test and refine a new approach to stocking assessment in stands resulting from MPB salvage partial cutting.
3.21	UBC	Predicting stream temperature responses to BC MPB epidemic: test of predictive model developed by Mellina et al. (2002).
8.26	BCMOF	Hydrologic effects of Mountain Pine Beetle infestation and salvage harvesting operations.
8.27	UBC	Exploring opportunities for mitigating the ecological impacts of current and future mountain pine beetle outbreaks through improved planning.
8.30	UVIC	Review and synthesis of potential hydrological impacts of MPB and related harvesting activities in B.C.
8.32	UBC	Possible Forest Futures: Avoiding predictable surprises of MPB management.
8.39	BCMOF	Effects of overstory mortality on snow accumulation and ablation.
8.40	UBC	Mountain pine beetle impacts on channel morphology and woody debris in forested landscapes.

Initiative: 1A2 Determination of environmental risks and opportunities

PO #	Organization	Project Title:
2.04	CFS-PFC	Effects of fire return rates on forest age distribution and on the susceptibility of lodgepole pine stands to attack by the mountain pine beetle.
2.07	CFS-PFC	Incorporating mountain pine beetle impacts on stand dynamics in stand and landscape level models.
3.23	BCMOF	Wildfire risk assessment and prediction for mountain pine beetle killed lodgepole pine stands.
4.02	UBC	Time of burning and stand susceptibility to the MPB in Canada's Southern Rocky Mountains.
5.01	CFS-PFC	Impact of mountain pine beetle on stand and fuel dynamics in Kootenay and Waterton Lakes National Parks.
8.04	Parks Canada	The influence of mountain pine beetle on stand dynamics in Rocky Mountain National Parks, Canada.
8.35	UBC	Modeling natural regeneration and following mountain pine beetle attacks in the Southern and Central Interior of British Columbia.

Initiative: 1A3 Development of stand-level decision-support tools

PO #	Organization	Project Title:
1.01	CFS-PFC	Expansion of "beetle-proofing" research, and operational evaluation for feedback and adaptive management.
3.01	CFS-NFC	A synthesis of the economic efficiency of beetle-proofing management options.
3.07	UBC	Integrating silvicultural control of mountain pine beetle with wildlife and sustainable forest management objectives.
3.22	FERIC	Review and synthesis of regeneration methods in beetle-killed stands following mountain pine beetle attack.
8.02	UBC	Assessing ecological effects of MPB salvage operations.

Initiative: 1A3 Development of stand-level decision-support tools

PO #	Organization	Project Title:
8.03	UNBC	Assessment of post-beetle impacts on natural regeneration of lodgepole pine.
8.05	UBC	Factors affecting the ecological legacy of unsalvaged post-beetle stands.
8.23	UNBC	Stand level effects of the mountain pine beetle outbreak in the central BC Interior.

Initiative: 1B1 Market support information - Aesthetic and Performance Properties of post-MPB wood

PO #	Organization	Project Title:
2.06	CFS-PFC	Phytosanitary risks associated with MPB-killed trees.
3.06	UBC	Fitness and pathogenicity of the fungi associated with the MPB and other secondary beetles.
3.12	UBC	Alternative wood products from stained MPB lumber.
3.28	PAPRICAN	A synthesis of the literature on the blue stain impacts on major forest products.
8.36	UBC	Decay fungi and associated rates of decay in standing trees killed by mountain pine beetle.

Initiative: 1B2 Market support information - Physical Properties of post-MPB wood

PO #	Organization	Project Title:
3.15	FORINTEK	Maximizing value recovery from MPB attacked pine for veneer products.
3.16	FORINTEK	Implications of properties of post-MPB wood.
3.24	FORINTEK	Optimizing drying of post-MPB wood.
3.25	FORINTEK	Improving value recovery of OSB from post-MPB wood.
8.06	FORINTEK	Addressing marketplace durability issues with beetle-killed lodgepole pine.
8.07	FORINTEK	Quantifying lumber value recovery from beetle-killed trees.
8.08	FORINTEK	Optimization of gluing, lay-up and pressing for MPB plywood.
8.09	FORINTEK	Optimizing drying and MSR lumber grade recovery of post-MPB wood.
8.10	UNBC	Predicting decay and degrade rates in standing and fallen trees killed by the Mountain Pine Beetle.
8.14	PAPRICAN	Development of a portable rapid assessment tool to quantify wood and fibre quality deterioration.
8.22	CFS-PFC	Sample plan to measure tree characteristics related to the shelf of MPB-killed lodgepole pine trees in British Columbia.
8.33	UNBC	Evaluation and review of potential impacts of MPB infestation to composite board production and related manufacturing activities in B.C.
8.34	FORINTEK	True shape and defects data from MPB affected stems.
8.41	FORINTEK	Heat disinfestation of MPB-affected wood.

Initiative: 1B3 Market support information - Chemical Properties of post-MPB wood

PO #	Organization	Project Title:
3.10	PAPRICAN	Synthesis of impacts of increased use of chips with elevated pitch levels, dry chips (standing dead) and chips with blue stain on pulping.
8.12	PAPRICAN	Assessment of the economic (pulping and pulp quality) effects of increased lodgepole pine in SPF chip mixtures.
8.13	PAPRICAN	Evaluation of chipping options for beetle-killed lodgepole pine wood to maintain wood and fibre quality.
8.15	PAPRICAN	A wood and fibre quality deterioration model for mountain pine beetle infested trees by biogeoclimatic subzone.
8.21	UBC	Chemical, mechanical, and durability properties of mountain pine beetle infested timber.
8.42	PAPRICAN	Quantifying the effect of extractives from mountain pine beetle attacked lodgepole pine for pulp and papermaking.
8.43	PAPRICAN	Operational Extractives Management from Mountain Pine Beetle Attacked Lodgepole Pine for Pulp and Papermaking.
8.49	PAPRICAN	Overcoming the brightness ceiling for mechanical pulps prepared from blue-stained lodgepole pine chips.
8.50	PAPRICAN	Kraft Pulp and Paper Mill Utilization Options for Grey-Stage Wood.

Initiative: 1C1 Impacts on resourced-based communities

PO #	Organization	Project Title:
3.11	CFS-NFC	Assessing the economic impacts of mountain pine beetle infestations and other natural disturbance in B.C.
3.17	ESBC	Southern Interior MPB 2003 workshop.
3.18	EP	MPBI project on the SFM exhibition in Exploration Place, Prince George, B.C.
3.26	CFS-NFC	Socio-economic dimensions of community vulnerability to mountain pine beetle.
3.27	CFS-NFC	Assessing the economic impacts of mountain pine beetle infestations and other natural disturbance in forest dependent regions of B.C.
8.16	UBC	Public perceptions of mountain pine beetle management alternatives.
8.24	UBC	The economic impact of natural disturbances - A review and synthesis of policy responses.
8.31	CFS-PFC	Video documentary on the contribution of control-burns in achieving forest health and ecology objectives.
8.37	UNBC	Northern Interior MPB 2005 workshop.
8.51	TRU	Southern Interior MPB 2005 workshop.

Initiative: 2D1 Analysis of MPB population response across a hierarchy of scales

PO #	Organization	Project Title:
1.02	CFS-PFC	Impacts of climate change on range expansion of the MPB.
1.02C	UNBC	The potential of Ips mexicanus to limit endemic MPB populations.
1.03	CFS-PFC	MPB outbreak development: The endemic-incipient transition.
1.05	CFS-PFC	Microbal impacts on larvae of mountain pine beetle
3.19	BCMOF	Retrospective spatial analysis and implications of mountain pine beetle in mixed-species stands.
6.02	CFS-PFC	Refinement of the Shore/Safranyik mountain pine beetle risk assessment method by incorporation of host susceptibility characteristics.
6.03	CFS-PFC	Characterization of the jack pine forests of western Canada for susceptibility to infestation by the mountain pine beetle.
8.44	UNBC	Using reconstructed outbreak histories of mountain pine beetle, fire and climate to predict the risk of future outbreaks
8.45	UNBC	Terpenoid defense in pines as a factor affecting the eastern spread of the mountain pine beetle.
8.46	CFS-NFC	Risk of colonization of jack pine by the mountain pine beetle and its phytopathogenic ophiostomoid fungi.

Initiative: 2D2 Spatial modeling of MPB populations across a hierarchy of scales

PO #	Organization	Project Title:
1.04	UoA	Modeling infestation and mortality rates for lodgepole pine trees attacked by the mountain pine beetle.
2.01	CFS-PFC	Projection of the efficacy of MPB management at the landscape scale.
2.03	CFS-PFC	Incorporating present and future climatic suitability into decision support tools to predict geographic spread and risk for the mountain pine beetle.
2.03B	UoC	Data visualization techniques for MPB dispersal scenarios.
3.04	UNBC	Modeling of MPB transport and dispersion using atmospheric models.
3.05	WLU	Spatial-temporal analysis of MPB infestations to characterize pattern, risk, and spread at the landscape level.
3.20	UNBC	Mountain pine beetle population studies for prioritization of stand management during outbreak.
4.01	UoC	Environmental effects on dispersal and reproduction in MPB.
8.19	UoA	Modeling spatio-temporal patterns of MPB infestation.
8.47	UoC	MPB dispersal through managed and unmanaged forest landscapes

Initiative: 2D3 Enhanced tools to identify, monitor and assess response to MPB

PO #	Organization	Project Title:
2.02	CFS-PFC	Synthesis and assessment of remote sensing techniques for detection of green, red, and grey stages of MPB attack.
2.08	CFS-PFC	Workshop to aid in the development of research priorities for remote sensing of MPB attack.
3.03	BCMOF	Provincial level projection of the current MPB outbreak.
3.29	UVIC	Literature review - remote sensing of insect infestations.
6.01	CFS-PFC	Red attack stage mapping with remotely sensed data.
7.01	CFS-PFC	Monitoring to reduce the future risk of mountain pine beetle attack: Project management and monitoring implementation
8.17	WLU	A landscape-level, spatial investigation of the response of MPB populations to treatment.
8.20	UBC	Spatial and temporal patterns of MPB infestation and susceptibility in newly infested stands within the South Peace region of B.C.
8.48	UBC	Monitoring to reduce the future risk of mountain pine beetle attack: Aerial and satellite image processing methods