

Thank you to the following participants who helped create this glossary of terms during two workshops held on on 3/9/10 and 6/22/10 in Boulder, Colorado attended by representatives of three Front Range Collaboratives: The Northern Front Range Mountain Pine Beetle Work Group, the Colorado Watershed Wildfire Protection Work Group and the Front Range Roundtable (work between workshops was done by the Roundtable's Science & Monitoring Team, also listed below).


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Term	Definition	Source
Biomass utilization	To make beneficial use of woody biomass by removing it from the forest and using it to generate a secondary product	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Carbon sequestration	The process by which atmospheric carbon dioxide is taken up by trees, grasses, and other plants through photosynthesis and stored as carbon in biomass (trunks, branches, foliage, and roots) and soils.	USFS online information (http://www.fs.fed.us/ecosystems-services/carbon.shtml)
Climate	The average course or condition of the weather at a place usually over a period of years as exhibited by temperature, wind velocity, and precipitation	Merriam-Webster online
Climate Change	Any change in climate (which is the long term pattern of weather in a particular area) that is measured over several decades or longer. The change may be due to natural or human-induced causes.	Adapted from National Oceanic and Atmospheric Administration (NOAA) http://www.cpc.ncep.noaa.gov/products/outreach/glossary.shtml#CLI
Collaboration	The pooling of appreciations and/ or tangible resources (e.g., information, money, labor, etc.) by two or more stakeholders to solve a set of problems which neither can solve individually.	Gray, B. (1985). Conditions facilitating interorganizational collaboration. Human Relations, 38(10), 911-936.
Collaborative Learning	Collaborative learning is a framework and set of techniques intended for multiparty decision situations. It is a means of designing and implementing a series of events (meetings, field trips, etc.) to promote creative thought, constructive debate, and the effective implementation of proposals that the stakeholders generate.	Daniels, S. E. a. G. B. W. (2001). Working Through Environmental Conflict: The Collaborative Learning Approach. Westport Conn., London: Praeger.
Community Infrastructure	Physical goods and institutions providing services (mostly public but some private) that contribute to the health, welfare, and safety of a community and/or that are needed for a community to exist, including but not limited to law enforcement, fire protection, education, health services, transportation infrastructure (bridges, highways, roads, fueling stations, evacuation routes) water provisioning (waste water and storm water facilities), energy (electric transmission and generation facilities, distribution lines including stations, substations, transformers, poles and towers, natural gas lines, compressors and storage and delivery facilities), and communication (transmission towers, repeaters, switching systems, phone lines, cable and fiber optics).	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Community Wildfire Protection Plan (CWPP)	A plan for an at risk community that—(A) is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community; (B) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-Federal land that will protect 1 or more at-risk communities and essential infrastructure; and (C) recommends measures to reduce structural ignitability throughout the at-risk community.	H.R. 1904-3 “Healthy Forests Restoration Act of 2003”
Community-at-Risk (HFRA)	Under HFRA Section 101(1), an at-risk community is one that: <ul style="list-style-type: none"> • Is an interface community as defined in the Federal Register notice of January 4, 2001 (66 FR 753), or a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) in or adjacent to Federal land. • Has conditions conducive to a large-scale wildland fire. • Faces a significant threat to human life or property as a result of a wildland fire. 	HFRA Section 101(1) (http://www.fs.fed.us/r6/uma/fire/potamus/resource%20book/hfra-priorities.pdf)

Critical Watershed Wildfire Plan	A document of specific planned forest treatments and other measures designed to reduce hazards of post-wildfire flood damage to water supplies, written jointly by all watershed stakeholders and coordinated with existing Community Wildfire Protection Plans	FRWWPWG document shared at 3/9/10 workshop
Crown Fire	Rapidly moving fire that burns through the crowns of woody vegetation	Kimmins, J.P. 2004. "Forest ecology: a foundation for sustainable forest management and environmental ethics in forestry." Upper Saddle River, NJ: Pearson Education, Inc. (p. 330 and G-6)
Ecological Restoration	Process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Ecosystem	Consists of biota (plants, animals, micro-organisms) within a given area, the environment that sustain it, and their interactions	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Ecosystem Resilience	The ability of an ecosystem to regain structural and functional attributes that have suffered harm from stress or disturbance	SER
Fire Intensity	The rate of energy released by the fire and is usually expressed as frontal fire (Canada) or fireline (United States) intensity (kW/m).	Kimmins, J.P. 2004. Forest ecology: a foundation for sustainable forest management and environmental ethics in forestry, 3rd edition. Upper Saddle River, NJ: Pearson Education, Inc.
Fire Risk Mitigation	Those activities implemented prior to, during, or after a fire incident which are designed to reduce or eliminate risks to persons or property and that lessen the actual or potential effects or consequences of a fire incident.	NWCG
Fire Risk Reduction	A decrease in the the probability or chance that the possible harm represented by a fire hazard will actually occur. Risk = hazard + exposure. In a fire context, risk is the chance that a fire may start as affected by the nature of the fuels and the presence of ignition agents.	SM team adapted general definition from 3 misc Health/Safety websites; fire-specific definition from SAF
Fire Severity	The [degree of] loss or decomposition of organic matter [such as crown volume scorch or tree mortality due to fire], both aboveground and belowground...and appears to be a function of fireline intensity, residence time (heating duration) and soil and plant drynessother factors such as pre-fire species composition, stand age, topography, substrate, and climate will all have some effect on how fire intensity translates into fire severity. Metrics for this parameter vary with the ecosystem. Including mortality is consistent with the definition of fire severity as a loss of organic matter; however, it is only advisable when dealing with forest trees that lack any resprouting capacity. Fire severity is correlated with fire intensity.	Adapted from SAF and Keeley, Jon E., 2009. Fire intensity, fire severity, and burn severity a brief review and suggested usage. International Journal of Wildland Fire, 18: 116-126. □
Forest Health	The state or condition of an ecosystem in which its dynamic attributes are expressed within "normal" ranges of activity relative to its ecological stage of development	SER
Forest Resilience	The ability of a forest to regain structural and fuctional attributes that have suffered harm from stress or disturbance.	SER
Front Range Roundtable Counties	Larimer, Boulder, Gilpin, Jefferson, Grand, Clear Creek, Douglas, El Paso, Teller and Park	Front Range Roundtable

Fuels Treatment	Any manipulation or removal of wildland fuels to reduce the likelihood of ignition or to lessen potential damage and resistance to control, e.g., lopping, chipping, crushing, piling, and burning —synonym fuel modification, hazard reduction	SAF
Hazard Fuel	A fuel complex defined by kind, arrangement, volume, condition (e.g., dry), and location that presents a threat of ignition and resistance to control.	NWCG
Hazard Fuel Reduction	Any treatment of living and dead fuels that reduces the potential spread or consequences of fire.	NWCG
HFRA WUI Zone	(A) an area with or adjacent to an at-risk community that is identified in recommendation to the Secretary of the Interior in a community wildfire protection plan; or (B) in the case of any area for which a community wildfire protection plan is not in effect - (i) an area extending 1/2 mile from the boundary of an at-risk community; (ii) an area within 1 1/2 miles of the boundary of an at-risk community, including any land that (I) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community; (II) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or (III) is in condition class 3, as documented by the Secretary in the project-specific environmental analysis; and (iii) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuel reduction to provide safer evacuation from the at-risk community.	H.R. 1904-3 "Healthy Forests Restoration Act of 2003"
Historical Range of Variability	The natural fluctuation in ecosystem structures or processes, and the spatial and temporal variation in these conditions, over time.	Front Range Roundtable, 2006 http://www.frontrangeroundtable.org/uploads/Roundtable_2006_recommendations.pdf
Monitoring	The collection of information over time, generally on a sample basis by measuring change in an indicator or variable, to determine the effects of resource management treatments in the long term	SAF
Monitoring - Effectiveness	Field-checking and/or collection of data to assess whether the effects of a planned and implemented management action such as mechanical thinning actually met the stated objectives of the action (e.g. "to reduce fire hazard by increasing spacing between tree crowns"). ☐	CFRI monitoring "advisory" group 2009
Monitoring - Implementation	Field-checking and/or collection of data to assess whether a planned management action such as mechanical thinning was done when, where, and how the plan/contract specified.	CFRI monitoring "advisory" group 2009
Monitoring - Response	Collection of data over a period of time to evaluate a broad suite of direct and indirect effects, intended or unintended, of a management action on an ecosystem (e.g impacts of thinning on wildlife use of habitat or rate of soil erosion into riparian zone)	CFRI monitoring "advisory" group 2009
Prescribed Fire	Any fire intentionally ignited by management under an approved plan to meet specific objectives.	http://www.nwcg.gov/general/memos/nwcg-024-and-a-2010.pdf
Risk	Risk is the combination of the probability of ignition and the possible loss 1. Probability of ignition: chance of an event occurring that could lead to exposure 2. Risk of loss: combination of hazard, value, and probability of exposure	SM team adapted general definition from 3 misc Health/Safety websites; fire-specific definition from SAF
Small-Diameter Utilization (SDU)	The harvest, sale, offer, trade, and/or use of a more specific size class of woody biomass that includes small-diameter trees that do not meet minimum specifications for sawlogs, but are large enough to be used as posts, poles, tree stakes, small pulplogs, or other similar forest products.	WOODY BIOMASS UTILIZATION DESK GUIDE, United States Department of Agriculture Forest Service National Technology & Development Program 2400—Forest Management, September 2007(http://www.forestsandrangelands.gov/Woody_Biomass/documents/biomass_deskguide.pdf)

Soil burn severity	The fire-induced changes in physical, chemical, and biological soil properties that impact hydrological and biological soil functions, and the classification of postfire soil based on fire-induced changes in these properties.	FIELD GUIDE FOR MAPPING POST-FIRE SOIL BURN SEVERITY Annette Parsons, Peter Robichaud, Sarah Lewis, Carolyn Napper, Jess Clark, Terrie Jain
Source Watershed	A watershed that delivers water for use by humans, especially for public supply and agriculture. Term is typically used in relation to a specific water user or area (e.g., "Denver's source watersheds, Colorado Springs' source watersheds")	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Structure Fire	Fire originating in and burning any part of any building, shelter, or other structure	NWCG
Sustainability	Seeking to meet the needs and aspirations of the present without compromising the ability to meet those of the future	Adapted by SM Team from the Brundtland Commission definition of "sustainable development"
Uncharacteristic Fire	Unusual or atypical pattern of fire cocurrences, frequency, size, severity, and sometimes vegetation and fire effects in a given area or ecosystem compared with the fire typical of an area before Euro-American settlement, the period over which climate, species composition, and native American influences were relatively stable and determined the fire regime	Adapted from NWCG
Water Nodes	A water-supply facility (dam, diversion, or intake) in a source watershed that serves a public water system.	FRWWPWG document shared at 3/9/10 workshop
Water Quality	How water is described or characterized. Water quality is a measure of how good the water is in terms of meeting its expected environmental values and is a neutral term that relates to the composition of water as affected by natural processes and human activities. Water quality measures may include temperature, dissolved oxygen, and the concentration of toxic substances or nutrients, odor and turbidity.	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Water Quality Impairment	Damage to the degree of water quality from its intended use for people or habitats	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Water Supply Infrastructure	Areas that contribute to the collection, storage, and discharge of water, including but not limited to lakes, reservoirs, ponds, wells, dams, diversions, canals, ditches, pipelines, siphons, flumes, weirs and gauges, pumping stations, treatment plants, fire systems (hydrants), sewer lines, lift stations, sewer treatment plants and discharge and reuse facilities; storm water ponds, impoundments, and related measuring and communications equipment.	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Watershed	An area of land that collects rain and snow and rains (sheds) this water to a stream, lake, river, or ground water, with a ridge of higher land forming the watershed divide	FRWWPWG document shared at 3/9/10 workshop
Watershed Function	Five clearly identifiable functions are exhibited by watersheds, though not necessarily all at the sametime: collection, storage, discharge, pathways for chemical reactions, and habitats. Hydrologically, there are three fundamental watershed functions: (1) collection of the water from rainfall, snowmelt, and storage that becomes runoff, (2) storage of various amounts and durations, and (3) discharge of water as runoff. In fact, the first and last of these functions have, long been incorporated in the commonly-used terms, "catchment" and "watershed"; storage is the inevitable consequence of water being detained within an area between "catching" and "shedding." Ecologically, the watershed functions in two additional ways: (4) it provides diverse sites and pathways along which vital chemical reactions take place (e.g., oxygenation), and (5) it provides habitat for the flora and fauna that constitute the biological elements of	Adapted from Peter E. Black, SUNY College of Environmental Science and Forestry, Syracuse, New York 13210; Black, P. E., 1997, Watershed functions, Journal of the American Water Resources Association, v. 33, no. 1, pp. 1-11.
Watershed Level	A standard hierarchical ranking of nested hydrolgical units, ranging in size from vast 1st-level regions like the Missouri or Colorado (two-digit codes) to small 6th-level watersheds (12 digit codes) that are typically 10,000 to 40,000 acres in size or smaller.	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable

Watershed Protection	Process of creating and implementing plans, programs, and projects to sustain and enhance watershed functions that affect the natural, and human environment within a watershed boundary.	California Watershed Program: http://www.consrv.ca.gov/dlrp/wp/Documents/California%20Watershed%20Program.pdf
Watershed Restoration	Process of assisting the recovery of a watershed's quantity and/or quality that has been degraded, damaged, or destroyed.	SER
Wildfire	An unplanned ignition caused by lightning, volcanoes, unauthorized, and accidental human-caused actions and escaped prescribed fires.	http://www.nwcg.gov/general/memos/nwcg-024-and-a-2010.pdf
Wildland Fire	A general term describing any non-structure fire that occurs in the vegetation and/or natural fuels.	http://www.nwcg.gov/general/memos/nwcg-024-and-a-2010.pdf
Wildland-Urban Interface (WUI) - as defined by HFRA	The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.	H.R. 1904-3 "Healthy Forests Restoration Act of 2003"
Woody Biomass	The by-product of management, restoration, and hazardous fuel reduction treatments, including trees and woody plants (i.e., limbs, tops, needles, leaves, and other woody parts, grown in a forest, woodland, or rangeland environment).	WOODY BIOMASS UTILIZATION DESK GUIDE
Woody Biomass - Cut available biomass (CAB)	Biomass that has been harvested and removed from the forest and is available for secondary use. It may be stacked in the forest, by the road, in transit on trucks, or in sort or storage yards.	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Woody Biomass - Standing available biomass (SAB)	Biomass that is still standing in the forest but has been made available for treatment / harvest through an analysis and decision-process by the landowner	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Woody Biomass - Standing biomass (SB)	Total vegetative biomass that exists in a forest with no implication about its accessibility or availability or desirability for harvest	3/9/10 or 6/24/10 workshop with attendees from CWWPWG, NFRMPBWG, and the Front Range Roundtable
Woody Biomass Utilization (WBU)	The harvest, sale, offer, trade, and/or use of woody biomass. This utilization results in the production of a full range of wood products, including timber, engineered lumber, paper and pulp, furniture, and value-added commodities, as well as bioenergy and/or biobased products such as plastics, ethanol, and diesel. 	WOODY BIOMASS UTILIZATION DESK GUIDE