

APPENDICES

Listing of Appendices

- Appendix A - References Cited
- Appendix B - Maps of Developed Areas and Other Spatial Information in SEUG
- Appendix C - Definitions of Terms
- Appendix D - National Environmental Policy Act (NEPA): Decision Memorandum on Action and for Application of Departmental Categorical Exclusion 1.12
- Appendix E - Cooperative Agreements
- Appendix F - Delegation of Authority Letter
- Appendix G - Fire Ecology Groups
- Appendix H - Wilderness Minimum Requirement Analysis
- Appendix I - Pre-Attack Information
- Appendix J - Moab Interagency Fire Center Annual Operating Plan
- Appendix K - Great Basin Mobilization Guide
- Appendix L - National Mobilization Guide
- Appendix M- Utah Smoke Management Plan
- Appendix N - Fire Call-up List
- Appendix O - Fire Equipment Inventory
- Appendix P - Firewise Information
- Appendix Q - Wildland Fire Implementation Plan
- Appendix R - Wildland Fire Prevention Workload Analysis
- Appendix S - Wildland Fire Situation Analysis (WFSA)
- Appendix T - A Guide for Assessing Fire Complexity and Complexity Analysis Worksheet
- Appendix U - Agency Administrator's Briefing Form
- Appendix V - Local Incident Commander Briefing Form
- Appendix W - Guidelines for Determining Need for Park Closure/Evacuations

Appendix A

REFERENCES CITED

Anderson, H. E. 1982. Aids to determining fuel models for estimating fire behavior. General Technical Report INT-122. USDA, Forest Service. Intermountain Forest and Range Experiment Station. Ogden, UT. 22 pp.

Baker, W.L., and D.J. Shinneman. 2004. Fire and restoration of pinyon-juniper woodlands in the western United States: a review. *Forest Ecology and Management* 189: 1-21.

National Park Service Organic Act, 16 USC 1- 4, August 25, 1916, ch. 408, 39 Stat. 535

National Park Service, 16 USC 272, establishing Arches National Park, November 12, 1971.

National Park Service, Public Law 88-590, establishing Canyonlands National Park, September 12, 1964.

National Park Service, Presidential Proclamation Number 1654, establishing Hovenweep National Monument, March 2, 1923.

National Park Service, Presidential Proclamation Number 804, 35 Statute 2183, establishing Natural Bridges National Monument, April 16, 1908.

USDA, USDI, et al, 1998. Wildland and Prescribed Fire Management Policy Implementation Procedures and Reference Guide. 124 pp.

USDI, et. al., 1998. Cooperative Fire Management Agreement. 15 pp.

USDI, National Park Service. 2001. Wildland Fire Management Reference Manual – 18, Chapter 4, Fire Management Plans. United States Department of Interior. 16pp

USDI, National Park Service. 2001. Conservation Planning, Environmental Impact Analysis, and Decision Making. Director's Order #12 and Handbook. United States Department of Interior. 123pp

USDI, National Park Service. 2000. Management Policies 2001. United States Department of Interior. 137pp

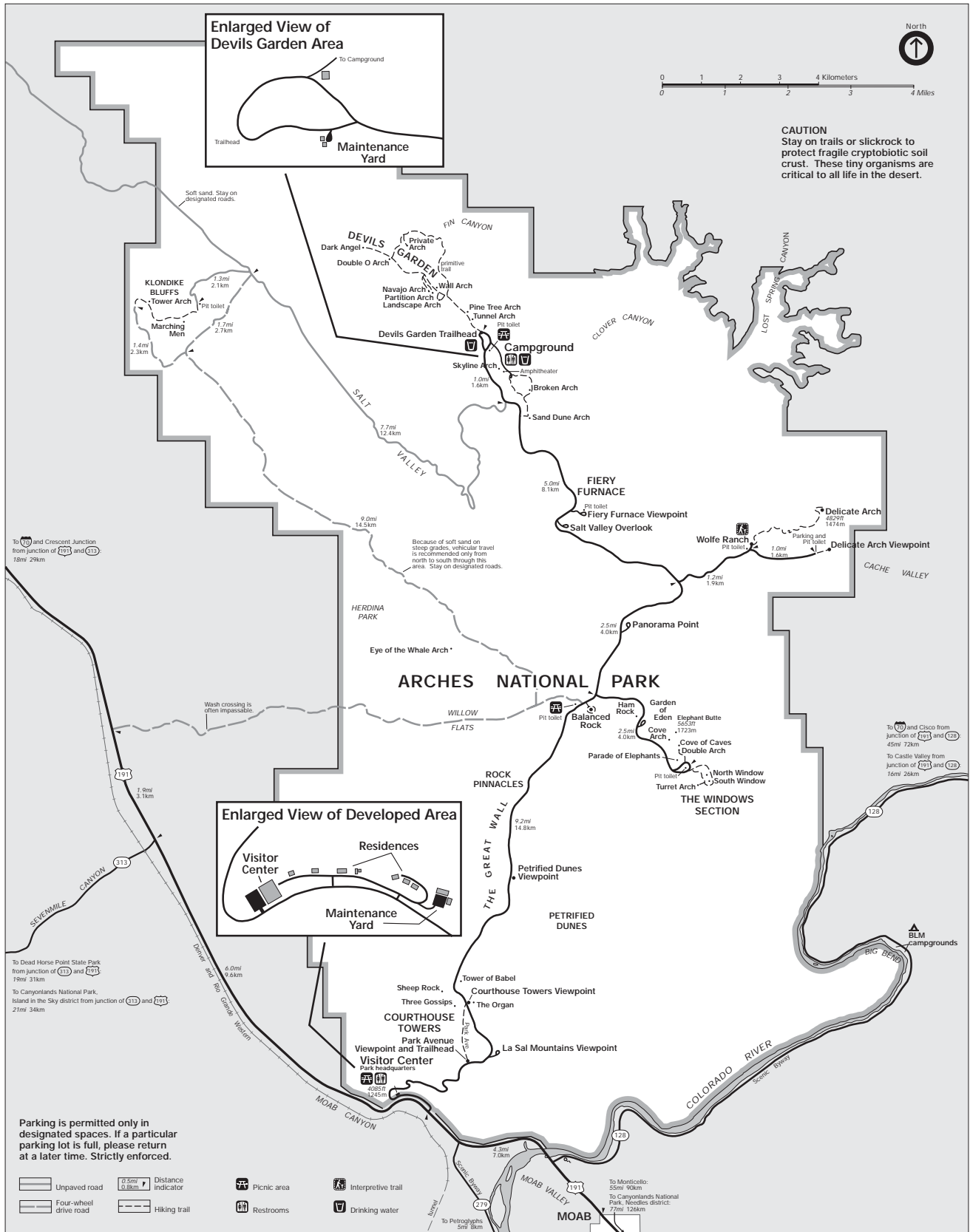
USDI, National Park Service. 1998. Director's Order 18: Wildland Fire Management. <http://www.nps.gov/fire/fire/policy/do18/do18.htm>

Appendix B

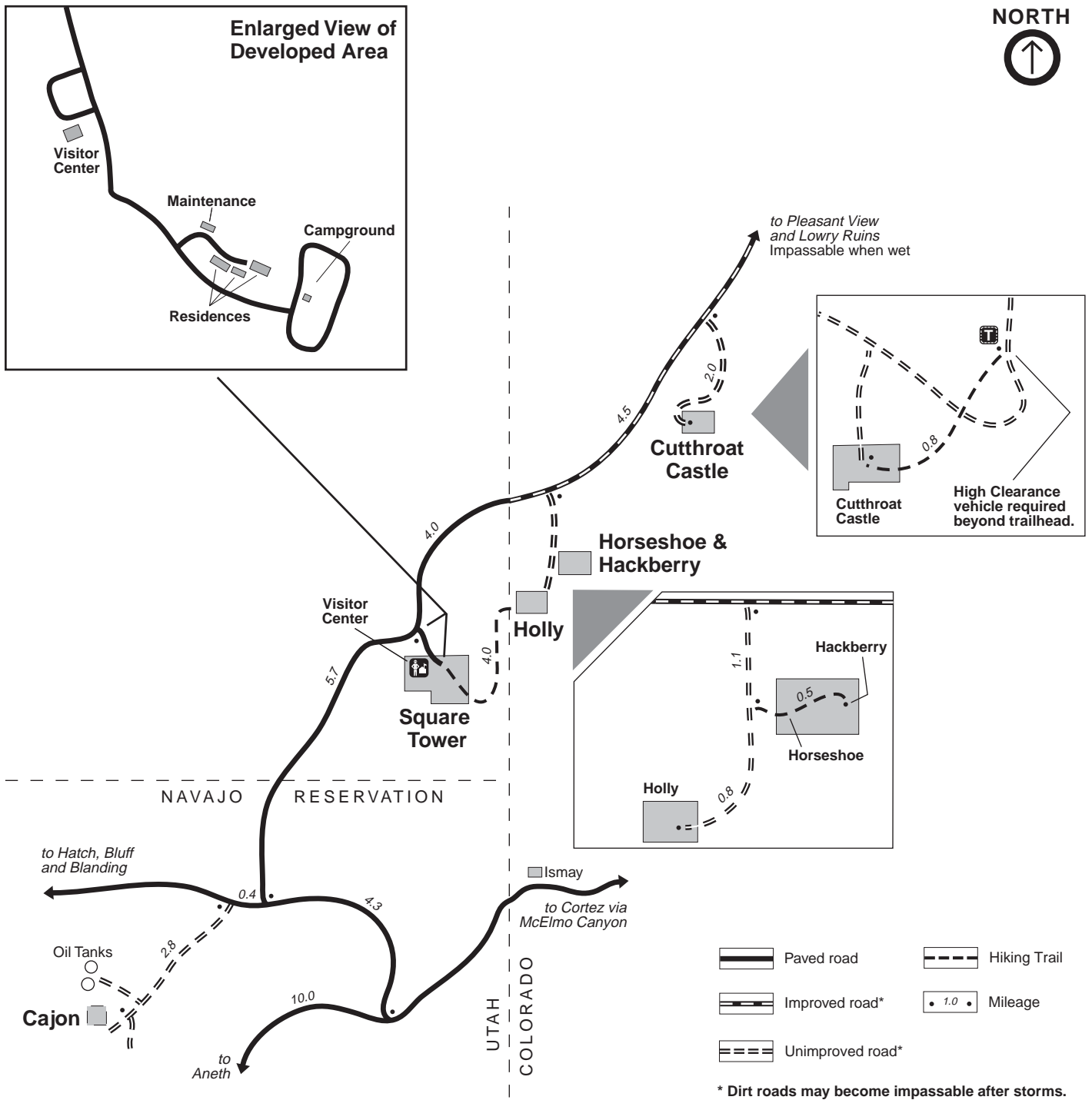
*MAPS OF DEVELOPED AREAS AND OTHER SPATIAL
INFORMATION IN SOUTHEAST UTAH GROUP PARKS*

- Arches National Park
- Hovenweep National Monument
- Natural Bridges National Monument
- Canyonlands National Park, Island in the Sky District
- Canyonlands National Park, Maze District
- Canyonlands National Park, Needles District

Arches National Park






Hovenweep National Monument

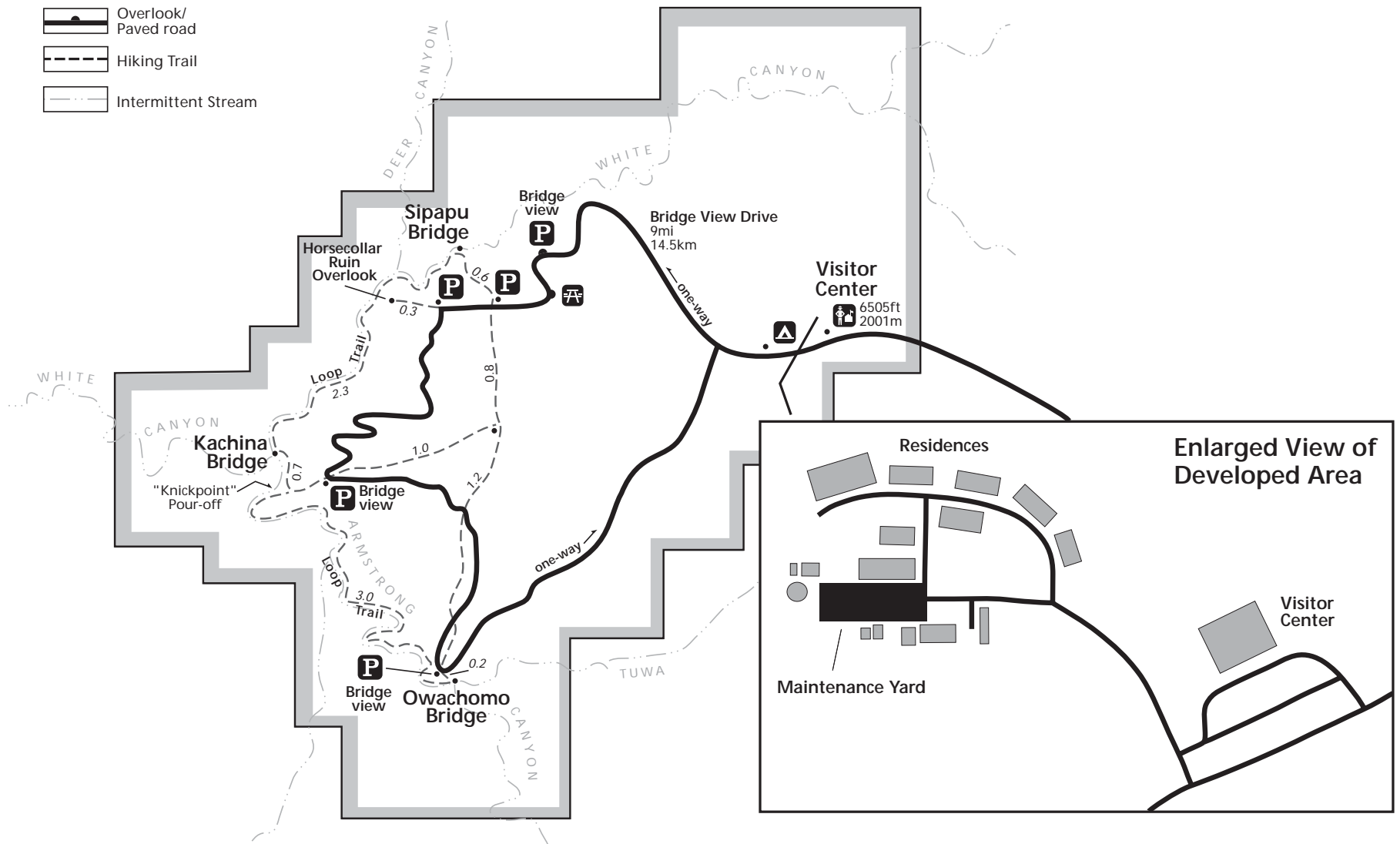


NORTH


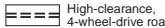




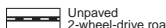










Natural Bridges National Monument

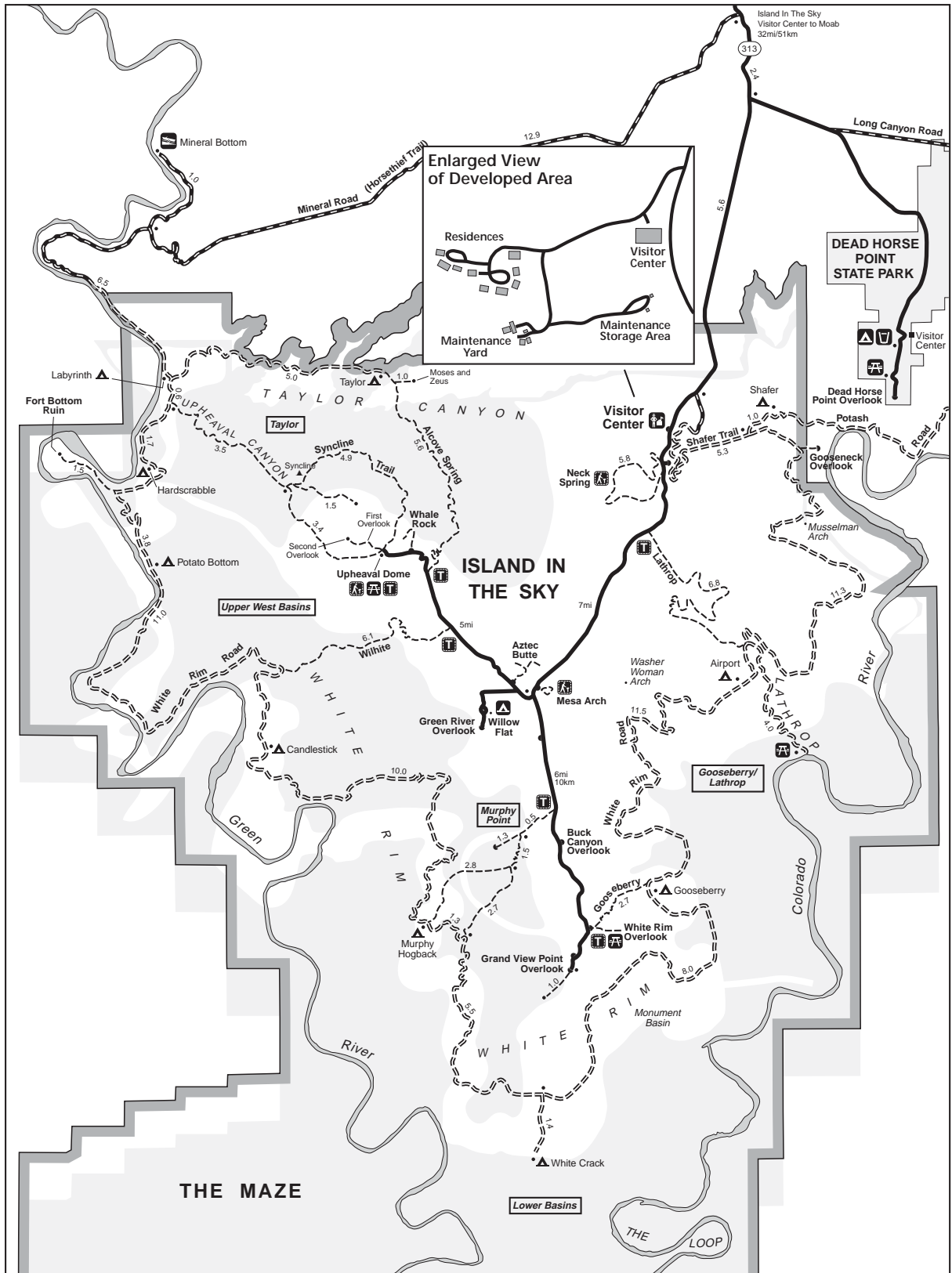
-  Overlook/
Paved road
-  Hiking Trail
-  Intermittent Stream



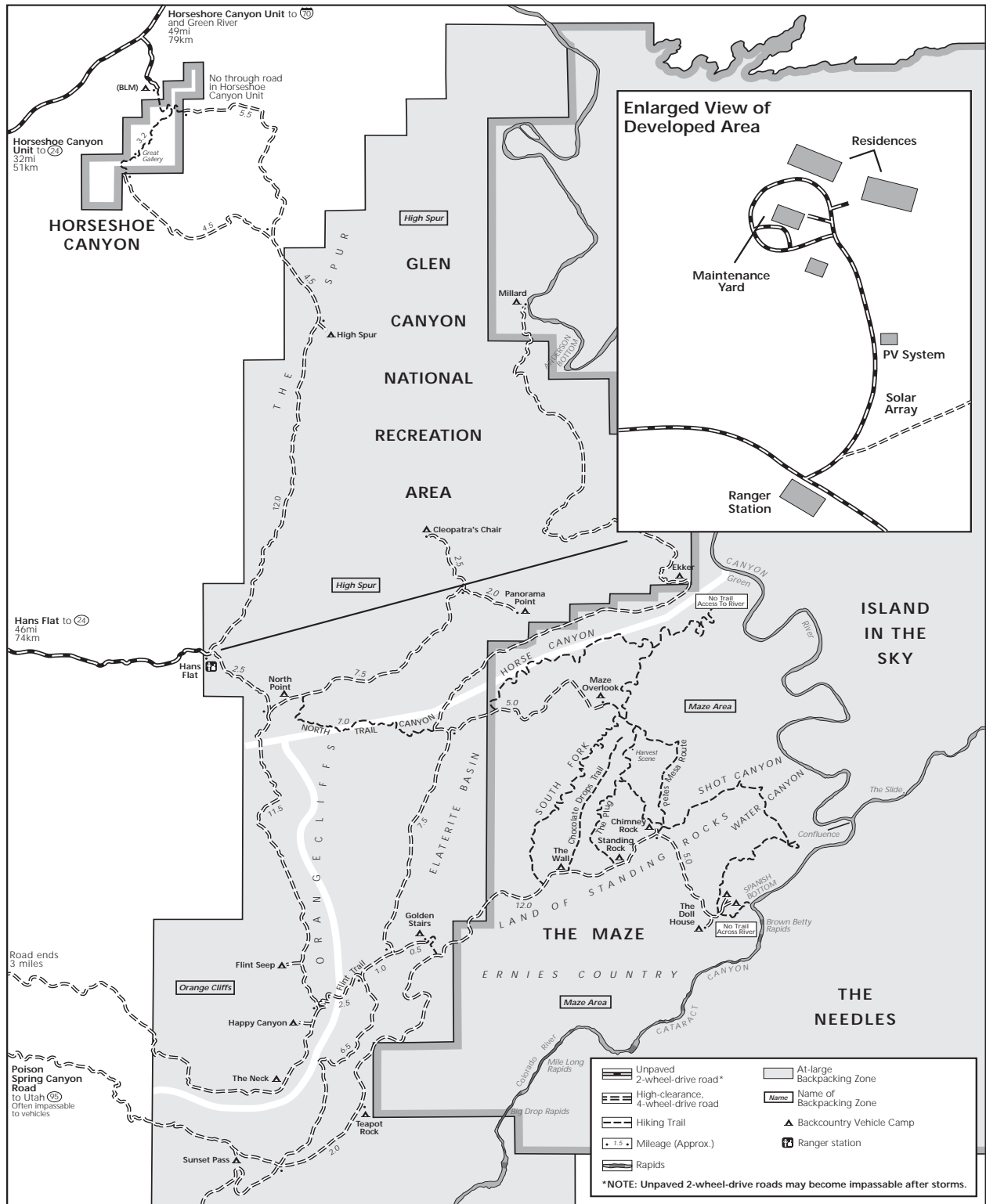
Canyonlands National Park, Island in the Sky District

- | | | | | | |
|---|---|--|--|---|---|
|  Paved road/
Pull out |  High-clearance,
4-wheel-drive road |  At-large
Backpacking Zone |  Boat launch |  Developed Campground |  Water available |
|  Unpaved
2-wheel-drive road |  Hiking Trail |  Name
Name of
Backpacking Zone |  Ranger station |  Backcountry Vehicle Camp |  Self-guiding trail |
| | | |  Picnic area |  Designated Backpacking Site |  Backcountry Trailhead Parking |

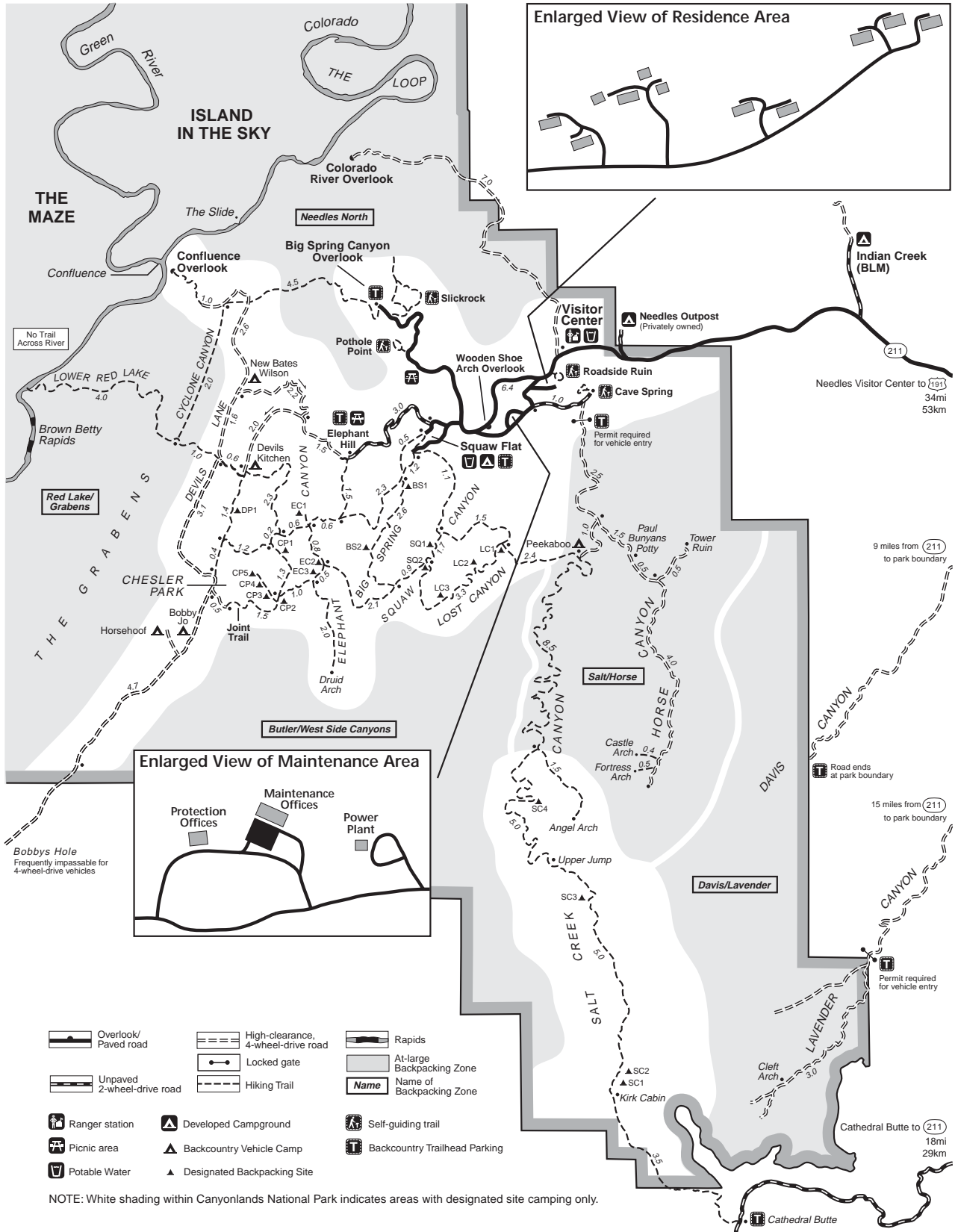
NOTE: White shading within Canyonlands National Park indicates areas with designated site camping only.



Canyonlands National Park, Maze District



Canyonlands National Park, Needles District



Appendix C

DEFINITIONS OF TERMS

Activity Fuel - Forest fuel created by timber management practices; slash.

Aerial Fuel - All live and dead vegetation located in the forest canopy or above the surface fuel, including tree branches and crowns, snags, moss, and high brush.

AFFIRMS - Administrative and Forest Fire Information Retrieval and Management System is a user-oriented, interactive computer program. That permits entry of fire weather observations and forecasts, and which performs the computation of fire danger indices, both observed and predicted. Additional information and services are available, including data storage.

Ambient Air - That portion of the atmosphere, external to buildings, to which the general public has access.

Appropriate Management Action – Specific actions taken to implement a management strategy.

Appropriate Management Response – Specific actions taken in response to a wildland fire to implement protection and fire use objectives.

Appropriate Management Strategy – A plan or direction selected by an agency administrator, which guide wildland fire management actions intended to meet protection and fire use objectives.

Available Fuel - Those fuels which will burn during a passage of a flaming front under specific burning and fuel conditions.

Backfiring - When attack is indirect, intentional setting fire to fuel inside the control line to slow, knock down, or contain a rapidly spreading fire. Backfiring provides a wide defense perimeter and may be further employed to change the force of the convection column. Backfiring makes possible a strategy of locating control lines at places where the fire can be fought on the firefighter's terms. Except for rare circumstances meeting specified criteria, backfiring is executed on a command decision made through line channels of authority.

Best Available Control Technologies (BACT) -Practices related to an emission source or activity which results in the maximum level of emission reduction practicable, considering effects on public health, safety, environmental and economic impacts and cost. BACT are the minimum measures required for serious non-attainment areas as prescribed in the Clean Air Act. For management-ignited prescribed fires, BACT includes a smoke management program which reflects the specific conditions and requirements of a local area. Elements of a smoke management program that reflects BACT include (1) smoke dispersion evaluation, (2) prescribed fire planning authorization and administration,

(3) requirements for ensuring prescribed fire qualifications, (4) public education and awareness, (5) surveillance and enforcement, (6) emission inventories and emission reduction efforts, (7) appropriate governing authority oversight.

Blowup - Sudden increase in fire intensity or rate of spread sufficient to prevent direct control or to upset existing control plans. Often accompanied by violent convection, it may also have other characteristics of a fire storm.

Burned Area Emergency Rehabilitation (BAER) – Emergency actions taken during or after wildland fire to stabilize and prevent unacceptable resource degradation or to minimize threats to life or property resulting from the fire. The scope of BAER projects are unplanned and unpredictable requiring funding on short notice.

Burning Out - Used when attack is direct, or parallel, and the control line touches points of the fire. Burning out is intentional setting fire to fuel inside the control line to strengthen the line. Burning out is almost always done by the crew boss as a part of line construction. The control line is considered incomplete unless there is no available fuel between the fire and the line.

Canopy - The stratum containing the crowns of the tallest vegetation present, (living or dead) usually above 20 feet in height.

Class I Air - An area set aside under the Clean Air Act to receive the most stringent protection of air quality from degradation. Mandatory federal Class I Areas are (1) international parks, (2) national wilderness areas which exceed 5,000 acres in size, (3) national memorial parks which exceed 5,000 acres in size, and (4) national parks which exceed 6,000 acres and were in existence prior to the 1977 Clean Air Act Amendments.

Climate - The prevalent or characteristic meteorological conditions of any place or region, and their extremes.

Cold Front - The leading edge of a relatively cold airmass that displaces warmer air. The heavier cold air may cause some of the warm air to be lifted. If the lifted air contains enough moisture, cloudiness, precipitation, and even thunderstorms may result. In case both airmasses are dry, there may be no cloud formation. Following a cold front passage (in the Northern Hemisphere), often westerly or northwesterly winds of 10 to 20 MPH, or more, continue for 12 to 24 hours.

Cold Trailing - A method of controlling a partly dead fire edge by carefully inspecting and feeling with the hand to detect any fire, digging out every live spot, and trenching any live edge. No trench is built where the fire edge is dead out.

Combustion - The rapid oxidation of combustible materials that produces heat energy.

Compactness - The spacing between fuel particles. This can be especially important in the surface layer of fuel, where the amount of air circulation affects rate of drying, rate of combustion, etc.

Contingency Plan - A back-up plan of action for implementation when actions described in the primary plan are no longer appropriate. On management-ignited prescribed fires, these are the action to be taken if the fire is declared out of prescription and designated a wildland fire.

Continuity - The proximity of fuel to each other that governs the fire's capacity to sustain itself. This applies to aerial fuel as well as surface fuel.

Control Line - An inclusive term for all constructed or natural fire barriers and treated fire edges used to control a fire.

Convection - Vertical air movements resulting in the transport of atmospheric properties. In meteorology, atmospheric motions that are predominately vertical, i.e., usually upwards.

Convection Column - The thermally-produced, ascending column of gases, smoke, and debris produced by a fire.

Crown Fire - A fire that advances from top to top of trees or shrubs more or less independently of the surface fire. Sometimes crown fires are classed as either running or dependent to distinguish the degree of independence from the surface fire.

Cultural Resources - Archeological features, recent person-made features, and select natural resources important in understanding social activities or religious beliefs of Native Americans and European Settlers on a specific site.

Direct Attack - A method of suppression that treats the fire as a whole, or all its burning edge, by wetting, cooling, smothering, or by chemically quenching it or mechanically separating it from unburned fuel.

Duff - A mat of partially decomposed organic matter immediately above the mineral soil, consisting primarily of fallen foliage, herbaceous vegetation and decaying wood (twigs and small limbs).

Equilibrium Moisture Content (EMC) - The level at which dead fuel neither gain nor lose moisture with time, under specific constant temperature and humidity. The water vapor pressure in the air is equal to the vapor pressure in the fuel. A fuel particle, at EMC, will have no net exchange of moisture with its environment.

Escaped Fire - A fire which has exceeded the first calculation of initial attack resources and reasonable reinforcements necessary for prompt control or that exceeds fire prescription.

Evaporation - The transformation of a liquid to the gaseous state. Heat is lost by the liquid during this process.

Extreme Fire Behavior - Implies a level of wildland fire behavior characteristics that ordinarily precludes methods of direct control action. One or more of the following is usually involved: High rates-of-spread; prolific crowning and/or spotting; presence of fire whirls; a strong convection column. Predictability is difficult because such fires often exercise some degree of influence on their environment, behaving erratically and sometimes dangerously.

Fine Fuel - Fuel such as grass, leaves, draped pine needles, fern. Tree moss and some kinds of slash which, when dry, ignite readily and are consumed rapidly. Also called flash fuel.

Firebrand - Any source of heat, natural or manmade, capable of igniting wildland fuel. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuel.

Fire Danger - A general term used to express an assessment of fixed and variable factors such as fire risk, fuel, weather, and topography, which influence whether fires will start, spread, and do damage; also the degree of control difficulty to be expected.

Fire Danger Rating - The process of evaluating fire danger by using a system of numerical scales.

Fire Dependent Ecosystem - A community of plants and animals that must experience recurring disturbance by fire, in order to sustain its natural plant succession, structure and composition of vegetation and maintain appropriate fuel loading and nutrient cycling to ensure proper ecosystem function.

Fire Environment - The surrounding conditions, influences, and modifying forces that determines the behavior of fires.

Fire Flank - The parts of a fire's perimeter that are roughly parallel to the main direction of spread.

Fire Frequency - The historical return interval of fire to a defined environment.

Fire Intensity - The rate of heat release for an entire fire at a specific point in time (Also see fireline intensity level).

Fireline - The part of a control line that is scraped or dug to mineral soil. Sometimes called a fire trail.

Fireline Intensity Level (FIL) - A planning level for fire management practices which incorporates flame length, fireline intensity, and BI into a system which is both measurable (flame length) and calculable (fireline intensity and BI).

Fire Management - An extension of the concept of wildland fire decision making which takes into account resource values, role of fire in the environment, the level of protection required, opportunities for management-ignited prescribed use of fire, consideration of fire effects, and the efficiency of the fire control operation.

Fire Management Unit (FMU) - A term used to denote the division of an area for fire planning purposes based on common fire management objectives.

Fire Management Zone (FMZ) - An area of land with similar vegetation, fuel, and fire history in which wildland fire is managed by a predetermined method defined in the Wildland Fire Management Plan. A subdivision of a Fire Management Unit.

Fire Occurrence - The number of wildland fires started in a given area over a given period of time.

Fire Perimeter - The entire outer edge or boundary of a fire.

Fire Prevention - Activities directed at reducing fire occurrence; includes public education, law enforcement, personal contact, and reduction of fire hazard risks.

Fire Regime - Systematic interaction of fire with the biotic and physical environment within a specified land area.

Fire Risk - The probability that a wildland fire will start as determined by the presence and activities of causative agents.

Fire Season – One or more wildland fires (types 11 and 15) in ten day period (10% occurrence rule), as recorded in the Shared Applications Computer System (SACS) for a statistically representative planning period (e.g. 10 years), Supported by fire danger indices such as designated weather observations and calculated NFDRS codes for the primary fuel model. The period or periods of the year during which wildland fires are likely to occur, spread, and do sufficient damage to warrant organized fire control; a period of the year with beginning and ending dates as established by some fire control agencies.

Fire Storm - Violent convection caused by a large continuous area of intense fire. It's often characterized by destructively violent surface indrafts near and beyond the perimeter, and sometimes by tornado-like whirls.

Fire Weather - Weather conditions which influence fire ignition, behavior, and suppression.

Flame Length - The distance measured from the tip of the flame to the middle of the flaming zone at the base of the fire. It is measured on a slant when flames are tilted due to effects of wind or slope.

Flaming Front - That zone of a moving fire within which the combustion is primarily flaming. Behind this flaming zone, combustion is primarily glowing. Light fuel typically having a shallow, flaming front, whereas heavy fuel has a deeper front.

Fog - A cloud at or near the earth's surface. Fog consists of numerous droplets of water which individually are so small that they cannot readily be distinguished by the naked eye.

Front - A transitional zone between two air masses of differing densities.

Fuel Break - A wide strip or block of land on which the native or pre-existing vegetation has been permanently modified so that fires burning into it can be more readily extinguished. It may or may not have fire lines constructed in it prior to fire occurrence.

Fuel Loading - The weight of fuel in a given area, usually expressed in tons per acre. Fuel loading may be referenced to fuel size or timelag categories; and may include surface fuel or total fuel.

Fuel Model - A simulated fuel complex for which all fuel descriptors required by the mathematical fire spread model have been specified.

Fuel Type - An identifiable association of fuel elements of distinctive species, form, size, arrangement, or other characteristics. General fuel types are grass, brush, timber, and slash.

Ground Fire - Fire that consumes the organic material beneath the surface litter of the forest floor, such as a peat fire.

Ground Fuel - All combustible materials lying beneath the ground surface including deep duff, roots, rotten buried logs, peat and other woody fuel.

Hazard - A fuel complex defined by kind, arrangement, volume, condition, and location that forms a special threat of ignition or of suppression difficulty.

Head Fire - A fire spreading or set to spread with the wind. (See backing fire.)

Humidity - The measure of water vapor content in the air.

Ignition - The initiation of combustion.

Indirect Attack - A method of suppression in which the control line is mostly located along natural fire breaks, favorable breaks in topography, or at considerable distance from the fire, and all intervening fuel is backfired or burned out. The strip to be backfired is wider

than in the parallel method and usually allows a choice of the time when burnout or backfiring will be done.

Inversion - A layer in the atmosphere where the temperature increases with altitude.

Initial Actions – Action taken by the first resources to arrive at a wildland fire to meet protection and fire use objectives.

Initial Attack – The prompt, pre-planned, aggressive suppression response consistent with firefighter, public safety, and values to be protected.

Jet Stream - A narrow meandering stream of high speed winds embedded in the normal prevailing westerly wind flow aloft.

Ladder Fuel - Fuel which provide vertical continuity between strata. Fire is able to carry from surface fuel by convection into the crowns with relative ease.

Litter - The upper most layer of loose debris composed of freshly fallen or slightly decomposed organic materials such as dead sticks, branches, twigs, and leaves and needles.

Long-range Spotting - Large glowing firebrands are carried high into the convection column and then fall out downwind beyond the main fire starting new fires. Such spotting can easily occur ¼ mile or more from the firebrand's source.

Mesic - Relating to moist habitat.

Meteorology - The science and art of dealing with the phenomena of the atmosphere, especially weather and weather conditions.

Microclimate - A small site or habitat with essentially uniform climate, fuel modifying characteristics, and burning conditions.

Minimum Impact Suppression - The application of strategy and tactics which effectively meet suppression and resource management objectives with the least cultural, environmental, and social impacts.

Moisture of Extinction - The fuel moisture content at which the fire will not spread or spreads only sporadically and in a non-predictable manner.

National Ambient Air Quality Standards (NAAQS) - Standards for maximum acceptable concentrations of pollutants in the ambient air to protect public health with an adequate margin of safety, and to protect public welfare from any known or anticipated adverse effects of such pollutants (e.g., visibility impairment, soiling, materials damage, etc.) in the ambient air.

National Environmental Policy Act (NEPA) - Establishes procedure that Federal agencies must follow in making decisions on Federal actions which may impact the environment. Procedures include evaluation of environmental effects of proposed actions, and alternatives to proposed actions; involvement of the public and cooperating agencies.

NFDRS - National Fire Danger Rating System.

NFFL - Northern Forest Fire Laboratory (renamed the Intermountain Fire Sciences Laboratory) located in Missoula, Montana.

Nuisance Smoke - Amounts of smoke in the ambient air which interferes with a right or privilege common to members of the public, including the use or enjoyment of public or private resources.

NWCG - National Wildfire Coordinating Group.

Particulate Matter - 1. Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog found in air or emissions. 2. Very small solid suspended in water. They vary in size, shape, density, and electric charge, can be gathered together by coagulation and flocculation. Any liquid or solid matter except uncombined water, which exists as a liquid or solid at standard conditions.

Patrol - 1. To travel a given route to prevent, detect, and suppress fires. 2. To go back and forth watchfully over a length of control line during or after its construction to prevent breakovers, control spot fires, or extinguish overlooked hotspots.

Perennial - Present at all seasons of the year and continuing from year to year.

Physiographic Regions - Broad descriptions of geographic areas with similar physical and climatic features.

Precipitation - The collective name for moisture in either liquid or solid form large enough to fall from the atmosphere and reach the earth's surface.

Prescription – Measurable criteria which guide selection of appropriate management response and actions. Prescription criteria may include safety, public health, environmental, geographic, and administrative, social, or legal considerations.

Prescribed Fire – Any fire ignited by management actions to meet specific resource management objectives and ignited in accordance with established prescription criteria in a predetermined area. A written, approved Prescribed Fire Plan must exist and NEPA requirements must be met prior to ignition. NEPA requirements can be met at the land use or fire management planning level.

Preparedness – Activities that lead to a safe, efficient and cost effective fire management program in support of land and resource management objectives through appropriate planning coordination.

Preparedness Analysis – Required interagency analysis used to determine budget for initial attack resources and oversight requirements. The BIA’s Fire Management Preparedness Analysis (FMPA) utilizes either the Alternative Analysis or the Interagency Initial Attack Analysis.

Rate of Spread - The relative activity of a fire extending its horizontal dimensions. It is expressed as rate of increase of the total perimeter of the fire; or as rate of forward spread of the fire front; or as rate of increase in area, depending on the intended use of the information. Usually its (forward) rate of spread is expressed in chains or acres per hour.

Relative Humidity - The ratio of the amount of moisture in the air to the amount which the air could hold at the same temperature and pressure if it were saturated; usually expressed in percent.

Running - Behavior of a fire that is spreading rapidly, usually with a well-defined head.

Savannah - Grassland containing scattered trees and drought resistant undergrowth.

Sensitive Receptor Sites - Population centers such as towns and villages, camp grounds and trails, hospitals, nursing homes, schools, roads, airports, Federal Class I Areas, etc. where smoke and air pollutants can adversely affect public health, safety, and welfare.

Seral - Of, relating to, or constituting an ecological stage in succession.

Severity Funding – Funds provided to increase wildland fire suppression response capability necessitated by abnormal weather patterns, extended drought, or other events causing abnormal increase in the fire potential and/or danger.

Size Class - An alpha character used in documentation of wildland fire that represents a size of the fire area:

Class A	less than 0.25 acres
Class B	0.26 - 9 acres
Class C	10 - 99 acres
Class D	100 - 299 acres
Class E	300 - 999 acres
Class F	1,000 - 4,999 acres
Class G	over 4,999 acres

Slash - Debris left after logging, pruning, thinning, or brush cutting; also debris resulting from thinning, wind or fire. It may include logs, chunks, bark, branches, stumps, and broken understory trees or brush.

Smoke Management Program (SMP) - Establishes a basic framework of procedures and requirements for managing smoke from prescribed fire and fire use projects. The purposes of SMP's are to mitigate the nuisance and public safety hazards (e.g., on roadways and at airports) posed by smoke intrusions into populated areas; to avoid significant deterioration of air quality and potential NAAQS violations; and to mitigate visibility impacts in Class I Areas.

Smoldering - Behavior of a fire burning without flame and barely spreading.

Snag - A standing dead tree or part of a dead tree from which at least the leaves and smaller branches have fallen.

Spot Fire - Fire set outside the perimeter of the main fire by flying (or rolling) sparks or embers.

Spotting - Behavior of a fire producing sparks or embers that are carried by convection columns and/or the wind and which start new fires beyond the zone of direct ignition by the main fire.

Stability - A state of atmosphere in which the vertical distribution of temperature is such that an air particle will resist vertical displacement from its level (Stable air).

Stand Replacing Fire - Fire which kills all or most living overstory trees in a forest and initiates secondary succession or regrowth.

State Implementation Plan (SIP) - A Clean Air Act required document in which States adopt emission reduction measures necessary to attain and maintain National Ambient Air Quality Standards, and meet other requirements of the Act.

Subsidence - An extensive sinking motion of air in the atmosphere, most frequently occurring in polar highs. The subsiding air is warmed by compression and becomes more stable. Of particular importance due to the heating and drying of the air. It is often the cause of very rapid drying of fuel in the smaller size classes.

Suppression – A management action intended to protect identified values from a fire, extinguish a fire or alter a fire's direction of spread.

Surface Fire - A fire that burns surface litter, debris, and small vegetation.

Surface Fuel - All materials lying on, or immediately above, the ground, including needles or leaves, duff, grass, small dead wood, downed logs, stumps, large limbs, low brush and reproduction.

Temperature - A measure of the degree of hotness or coldness of a substance.

Timelag - An indication of the rate a dead fuel gains or loses moisture due to changes in its environment. The time necessary for a fuel particle to lose approximately 63 percent of the difference between its initial moisture content and its equilibrium moisture content.

Topography - The configuration of the earth's surface, including its relief and the position of its natural and manmade features.

Torching - Fire burning principally as a surface fire that intermittently ignites the crowns of trees or shrubs as it advances.

Visibility - The greatest distance that prominent objects can be seen and identified by unaided, normal eyes. (Usually expressed in miles, or fractions of a mile.)

Volatile Organic Compounds (VOC) - Any organic compound which participates in atmospheric photochemical reactions, which are measured by a referenced method, an equivalent method, or an alternative method. Some compounds are specifically listed as accepted due to their having negligible photochemical reactivity.

Weather - The short-term variations of the atmosphere in terms of temperature, pressure, wind, moisture, cloudiness, precipitation, and visibility.

Wet Line - A fire control line, usually temporary, prepared by treating the fuel with water and/or chemicals which will halt the spread of the fire.

Wildland – Uncultivated lands where development is essentially nonexistent except for transportation facilities, structures, and are widely scattered.

Wildland Fire Agreements – Agreements between agencies for wildland fire protection. Includes mutual aid agreements, cooperative fire protection agreements, direct protection agreements.

1. **Mutual Aid Agreement** – Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.
2. **Direct Protection Agreement** – Agreement with a single organization for attacking wildland fires and for directing suppression action.
3. **Cooperative Agreement** – Agreements between agencies that share wildland fire resources and costs related to incidents.

Wildland Fire – 1. An unplanned wildland fire requiring suppression actions, or other action according to policy, as contrasted with a management-ignited prescribed fire burning within prepared lines enclosing a designated area, under prescribed conditions. 2. A free burning wildland fire unaffected by fire suppression measures. 3. Any non-structure, free burning and unwanted fire, other than prescribed fire, that occurs in the wildland. The term “Wildfire” is being replaced by “Wildland Fire” within the Federal government lexicon.

Wildland Fire Management Plan – A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as Preparedness Plans, Pre-planned Dispatch Plans, Prescribed Fire Plans, Hazard Fuel Reduction Plans, and Prevention Plans.

Wildland Fire Situation Analysis (WFSA) – A real time decision making process that evaluates alternative management strategies against selected safety, environmental, social, economical, political, and resource management objectives as selection criteria.

Wildland/Urban Interface (WUI) - The line, area, or zone where structures and other human development meet or intermingle with the wildland.

Wind - The horizontal movement of air relate to the surface of the earth.

Xeric - Relating to dry habitat.

Appendix D.

*NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
DECISION MEMORANDUM ON ACTION AND USE OF
DEPARTMENTAL CATEGORICAL EXCLUSION 1.12*

Decision Memorandum on Action and for Application of
Categorical Exclusion 1.12

**Implementation of a Fire and Fuels Management Program at
the Southeast Utah Group of National Parks and Monuments**

U.S. Department of the Interior
National Park Service

Purpose and Need for the Action

Federal and NPS wildland fire policy requires that each park with vegetation capable of burning have an approved fire management plan (FMP). Such a plan is to guide a fire management program that is responsive to the park's natural and cultural resource objectives and to safety considerations for park visitors, employees, and developed facilities.

The four parks of the Southeast Utah Group (SEUG), Arches and Canyonlands National Parks and Hovenweep and Natural Bridges National Monuments, encompass a similar range of vegetation communities. While this vegetation is capable of burning, wildland fire occurrence in the four parks has generally been of limited extent, with vegetation over much of the park areas so sparse and discontinuous that a fire will not spread beyond one or a few trees. Canyonlands and Arches have existing fire management plans, but these plans may not meet current federal fire policy and interagency requirements for fire management plans and terminology. Hovenweep and Natural Bridges do not currently have fire management plans.

The new SEUG FMP will establish future management direction for fire-related management activities at Southeast Utah Group parks, in accordance with current federal wildland fire policy, based on analysis of alternatives and strategies that would protect NPS as well as adjacent-land resources and values. The plan selects strategies for the management of wildland fire and fuels in the parks, as determined by NPS and cooperating fire management organizations, in order to protect the resources and values of the parks and adjacent lands.

Plan Conformance

Three of the four group parks have General Management Plans (GMP); the fourth (Hovenweep) is under the guidance of a Statement for Management while development of a GMP is underway. These management plans provide broad guidance, generally directing preservation of natural ecosystems and cultural resources, and acknowledging the need for more specific resource information.

Arches, Canyonlands, and Natural Bridges have studies identifying lands recommended or suitable for wilderness. NPS policy is to manage these lands as wilderness until Congress acts. The GMPs for Arches and Natural Bridges also direct that recommended or suitable wilderness lands be managed as wilderness.

Resource management plans for group parks recognize that SEUG vegetation is generally not conducive to large fires, that fire may have played a role in the development of some vegetation communities, but that due to the lack of fire histories, the extent of the role of natural wildfire is not understood. These plans identify the need for research on pre-Columbian vegetation conditions and fire history to explain the natural role of fire in park ecosystems.

The proposed action is consistent with these land and resource management plans. It was designed in conformance with National Park Service standards and incorporates guidelines for required and desired conditions relevant to project activities.

Compliance with the National Environmental Policy Act

The fire and fuels management program is categorically excluded from further documentation under the National Environmental Policy Act (NEPA), in accordance with 516 DM 2, Appendix 1, 1.12. Hazardous fuels reduction activities are identified through a collaborative framework as described in federal wildland fire policy. These activities (1) will not be conducted in wilderness areas or where they would impair the suitability of wilderness study areas for preservation for wilderness; (2) will not include the use of herbicides or pesticides; (3) will not involve the construction of new permanent roads or other infrastructure; (4) will not include sales of vegetative material that do not have hazardous fuels reduction as their primary purpose; (5) will not exceed 1000 acres for mechanical hazardous fuels reduction activities and will not exceed 4500 acres for hazardous fuels reduction activities using fire; (6) will only be conducted in wildland-urban interface or in Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside the wildland-urban interface.

The application of this categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects which may significantly affect the environment. None of the exceptions to categorical exclusions (516 DM 2, Appendix 2) apply.

I considered the issues and potential impacts from fire and fuels management that were identified through the planning process. The fire and fuels management program was designed to avoid or minimize these impacts. Because of the sparse fuels in much of the SEUG lands, the low incidence of wildland fire, and the protective measures incorporated into the fire management plan, there is no potential for significant effects.

Persons and Agencies Consulted

The Southeast Utah Group announced the fire management planning process and invited public input on issues and alternatives to be addressed in the plan, through scoping notices posted on park web sites and sent to local newspapers. The SEUG also requested input from federal and state agencies and Native American tribes:

- Bureau of Land Management (BLM):
 - Moab Field Office
 - Monticello Field Office
 - Richfield Office
 - Durango Public Lands Center
- Fish and Wildlife Service
- Manti-LaSal National Forest
- Utah Division of Forestry, Fire and State Lands
- State Historic Preservation Offices of Utah and Colorado
- Utah State and Institutional Trust Lands Administration
- 34 tribal organizations

Few comments were received from tribes or from the public. Two letters from the public suggested fire management issues and strategies and provided fire ecology information.

NPS staff regularly consulted with the Moab Interagency Fire Center during the planning process. Various information from agencies, particularly the Fire Center and the BLM, was incorporated into the plan.

The SEUG announced its intent to proceed with a categorical exclusion, rather than an environmental assessment, with an article in local newspapers and posted on park web sites. No public comments were submitted in response.

Decision and Rationale on Action

I have decided to implement the fire and fuels management program at the four Southeast Utah Group parks. The program includes fire suppression, limited mechanical fuels reduction, and limited prescribed fire. Because of the lack of SEUG fire history information, the apparently limited role of fire in most natural SEUG vegetative communities, the altered fire regimes in communities invaded by exotic plants like tamarisk and cheatgrass, and the competitive advantage these species have over natives when fire occurs, the SEUG will not employ wildland fire use and will only use prescribed fire for slash pile or debris burns. Under this plan the NPS will use the following wildland fire management options.

Mechanical fuels reduction would be limited to several developed areas and fire-sensitive cultural resource sites in the SEUG. These include visitor centers, maintenance facilities, administrative offices, staff housing, developed camp and picnic grounds, and archaeological or historic sites. Vegetation in and adjacent to these sites includes desert shrub, pinyon-juniper, and native and exotic grasses. Excessive fuels near these facilities and structures may be cut, cleared or pruned with hand tools or hand-operated power tools such as chainsaws, hand clippers, axes, machetes, or power brush saws. Cut slash or debris would be piled for later burning or broadcast. Site-specific planning and environmental analysis would be completed before fuels are cut near sensitive resources.

Prescribed fire would be limited to burning of slash piles resulting from fuels reduction or exotic plant control, or of other vegetative debris that is infeasible to dispose of by other means. Pile burns would be preceded by individual prescribed burn plans.

Fire suppression strategies are also outlined in the plan. Firefighter and public safety is the highest priority of every fire management activity. Minimum impact suppression tactics (MIST) would be required. Confinement strategies would be emphasized in remote and/or sparsely-vegetated areas, which comprise most of the SEUG park lands. Natural or existing fuel breaks would be used when available. More aggressive suppression strategies may be used when wildland fire threatens human life, developed areas, fire-sensitive cultural or natural resources, or lands across park boundaries. Ground disturbance would be minimized. Bulldozers, other heavy equipment, aircraft, and retardant would only be used in cases of imminent threat to life or property, and would require the park superintendent's approval on a case by case basis. Strategies would be designed to ensure that the impacts of suppression actions are not greater than those of a fire itself.

This fire management program meets the need for action. In addition, I have determined that the program is in conformance with the park land use plans and that no further environmental analysis is required.

Implementation Date

This program will be implemented on or after June 16, 2005.

Anthony J. Schetzle
General Superintendent, Southeast Utah Group

Date

Administrative Review or Appeal Opportunities

This action is not subject to administrative appeal because the NPS does not have a formal appeal process. Concerns about this action should be directed to the Intermountain Regional Director, National Park Service, P.O. Box 25287, Denver, Colorado 80225-0287.

Contact Person

For additional information concerning this decision, contact Tony Schetzle, General Superintendent, Southeast Utah Group, 2282 SW Resource Boulevard, Moab, Utah 84532, at 423-719-2101.

Appendix E.

COOPERATIVE AGREEMENTS

- Southeast Utah Interagency Wildland Fire Annual Operating Plan
- Delegation of Authority from Superintendent, SEUG, to Moab Interagency Fire Center Manager
- Interpark agreement between Mesa Verde Fire Management Office and Four Corners Park Group
- Interagency Cooperative Fire Management Agreement for the state of Colorado, among federal land management agencies and Colorado State Forest Service

Appendix F.
DELEGATION OF AUTHORITY LETTER

SOUTHEAST UTAH NATIONAL PARK GROUP

LINE OFFICER GUIDELINES

INCOMING OVERHEAD TEAM INCIDENT COMMANDER

June, 2005

DELEGATION OF AUTHORITY

As Superintendent the Southeast Utah Park Group (SEUG), I have the ultimate responsibility for protection of the Park's resources and the lives of Park visitors and employees. Your expertise in the area of fire management will assist me in fulfilling that responsibility during the present crisis. By means of this memorandum on this day of _____ at _____ hours, I am delegating to you the authority to carry out the task of suppressing the _____ fire in accordance with the attached Line Officer's Briefing Statement.

The statement will provide you with my priorities in fire suppression, specific restraints that are necessary to protect the Park's cultural and natural resources, and other guidelines for carrying out your overall task of fire suppression within this Park. In addition, the Line Officer's Briefing Statement will provide you with a list of Park Personnel who have been assigned to assist you in carrying out your duties and a list of facilities which are available to you under the conditions stated.

Upon your arrival, I (or my appointed alternate) will conduct an on-site briefing for you and your overhead organization. A fireline briefing will also be conducted for you and your staff by the local incident commander.

Superintendent, Southeast Utah Park Group

Incident Commander
Incident Management Team

Appendix G.

FIRE ECOLOGY GROUPS

Northern Forest Fire Laboratory (NFFL) fuel models 1, 2, 5, 6 and 9 (Anderson 1982) exist within the Southeast Utah Group. These five fuel models have been combined into appropriate habitat types. Two other fuel modeling schemes, the National Fire-Danger Rating System (NFDRS) and the Fire Behavior Prediction System (FBPC), are used as general guides to fuel modeling for the SEUG. The models do not fit perfectly with each plant community but can be used along with experience, fire history data and comparisons with similar plant communities in the region to predict fire behavior.

Desert shrub. Fuels in this type are mostly light and discontinuous. Fire behavior would mostly be low intensity. Flashy, fast burning fires could be expected especially on days with high winds, high temperature and low humidities. Most of the desert shrub communities contain areas without vegetation, which can act as a natural fuel break. Generally, fires will burn quickly and consume all of the fuel in an area, but will be small in size. Suppression of fires in this fuel type can be accomplished by using these natural barriers and using limited suppression tactics. Fire behavior modeling of this fuel type is difficult because it does not fit well with any of the 13 models. The closest models would be one of the grass models such as NFDRS A-Western Annual Grasses, L-Western Perennial grasses, or FBPC #1, 2 or 3 grass models.

Included in this broad category would be the **sagebrush-grassland** community type (NFFL #5). This community occupies moderately rolling areas and some level areas, particularly those sites with deep, well-developed soils. Prominent species are fringed sage, big sagebrush, shadscale, saltbush, needle-and-thread grass, Indian ricegrass, sand dropseed, and Western wheatgrass. Some sites contain significant densities of other species such as non-native cheatgrass, greasewood, forestiera, and rabbitbrush. Historic sources and relict areas indicate primal types were dominated by various grasses; sagebrush occurred primarily in scattered clumps.

Also included is the **Blackbrush-grassland** community type (NFFL #6). This community occupies flat or gently sloping surfaces characterized by uniformly thin regolith supporting sparse vegetation. Blackbrush is the dominant plant. It occurs at varying elevations and on varying geologic formations.

Pinyon Juniper. The makeup of this plant community varies throughout southeast Utah because of variations in elevation, precipitation, soil type and history of disturbance. Lower elevations of this fuel type contain sparse fuels that consist mainly of individual trees and very little ground fuels. Fires are mainly restricted to one or two trees due to the lack of fuel continuity. Higher elevation pinyon-juniper stands have heavier fuel loads and a greater potential for problem fire behavior such as crowning, torching, spotting. FBPC brush models 4 and 6 and NFDRS models G and H are appropriate for this plant community.

The pinyon-juniper (PJ) community is the most widely distributed plant community in the SEUG parks. PJ typically occupies sites where soils are shallow and/or rocky. PJ stands occur on nearly all exposures and steepness of slope at elevations from 5000 – 6300 feet. Stand density varies from scattered trees interspersed with shrubs and grasses to closed canopies. Understory vegetation and litter accumulation are typically sparse except on favorable sites and where PJ is encroaching on grasslands. Several species of shrubs, grasses, and forbs occur in the community especially on moist or ecotonal sites.

Tamarisk. Tamarisk is a non-native plant species that has established itself in riparian areas throughout the western United States including southeast Utah. It is an aggressive invader and responds well to fire by sprouting within days of a fire. Mature tamarisk stands can have high fuel loads along with a natural

volatility that causes these fuels to burn hot. Tamarisk stands tend to grow in highly dense patches with understories of thick dead fine fuels. All of these characteristics can make tamarisk fires flashy with high fire intensity. Tamarisk provides the greatest fire suppression challenge for SEUG managers, especially along the Colorado and Green river corridors which are also popular boating/camping/recreation areas for park visitors. Brush models similar to chaparral (FBPC fuel model 4, NFFL #9) are the best predictors for fire behavior.

Native plants being displaced by tamarisk are still numerous in most infested areas. Included are willows, forestiera, sqawbush and scattered Fremont cottonwoods.

Grasslands. Several areas throughout the four units consist of mainly grass cover. Spread is governed by the fine, very porous, and continuous herbaceous fuels that have cured or are nearly cured. Fires are surface fires that move rapidly through the cured grass and associated material. As with desert shrub, appropriate models include NFDRS A-Western Annual Grasses, L-Western Perennial grasses, or FBPC #1, 2 or 3 grass models.

Grassland communities are dominated by perennial grasses and sparse shrubs (NFFL #1). Typical grasses are needle-and-thread grass, galleta, Indian ricegrass, sand dropseed, and blue gamma. A few shrubs such as winterfat, Mormon tea and some fringed sage occur. Thick, sandy regolith soils appear to be critical for the occurrence of grasslands.

Appendix H.

WILDERNESS MINIMUM REQUIREMENT ANALYSIS

Wilderness Minimum Requirement Worksheet

This worksheet is to assess whether the project is the **minimum** required action for administration of the area as wilderness.

1. Describe the proposed project/activity. Motorized pumps in the Green or Colorado Rivers, chainsaws, and/or helicopter landings may be used for wildland fire suppression under the following conditions:

- In order to resolve emergencies involving human health and safety
- In order to protect key natural or cultural resources:
 - fire-vulnerable cultural sites as determined by a park archeologist
 - important T&E habitat, mature cottonwoods, native grasslands/relict areas (e.g. Virginia Park, Jasper Canyon), as determined by a resource advisor

Locations and nonconforming measures that do not meet these conditions (e.g. motorized pumps in other locations, motorized vehicles off roads) will only be used if approved by the Superintendent, analyzed and documented through case-by-case minimum requirement analyses.

2. Is this an emergency? (i.e. a situation that involves an inescapable urgency and temporary need for speed beyond that available by primitive means, such as loss of human life or serious injury, or law enforcement efforts involving serious crime or fugitive pursuit)

YES / NO The first condition above is an emergency, the second is not.

If YES Superintendent authorizes use.

If NO Go to next question.

3. Can the project/activity be accomplished outside wilderness?

YES / NO Generally no, but exceptions may be possible.

If NO Explain:

The locations of these activities are dependent on the locations of the wildland fires being suppressed. If a fire is in wilderness, the activities may need to occur in wilderness. However, on some fires sites for helicopter landings or pump operation may be feasible outside of wilderness but sufficiently close to the fire. (Upstream from Cataract Canyon, the river surfaces are excluded from wilderness, with the fluctuating waterline, where pumps would be set up, forming the boundary. Roads also reach or border sections of the rivers.)

If YES Proceed with the proposed project or activity outside wilderness.

If NO Go to next question.

4. Is the project/activity essential to the preservation of wilderness, or to the requirements of other laws, policies and/or management plans (General Management Plan, Backcountry Management Plan, River Management Plan, Wilderness Management Plan etc)?

YES

If YES Identify which law, policy or management plan:

As described above, the non-emergency use of these measures would be to protect cultural resources (archeological or historic sites), threatened and endangered species habitat (protected by the Endangered Species Act), mature cottonwoods, native grasslands and relict areas. These are all wilderness values, and all are susceptible to damage from wildland fire. Cultural sites are irreplaceable; threatened/endangered species by definition have populations so low that loss of individuals may impact the species overall; cottonwood communities, native grasslands and other relict plant communities are subject to invasion by exotic species after fire, potentially resulting in displacement of the natives.

If YES Go to next question.

If NO Do not proceed with the proposed project or activity.

5. Describe at least one alternative that can be accomplished without activities prohibited by section 4(c) of the Wilderness Act (structures or installations, motorized equipment, mechanical transport, aircraft landings).

Fire crews could reach fires by hiking, rappelling from helicopters, or parachuting (smoke jumpers). Hand tools (saws, axes etc.) could be used instead of chainsaws. In lieu of motorized pumps, hand pumps could be used, water could be dropped from aircraft or it could be dispensed with entirely.

6. Which alternative has the most beneficial/least adverse effect on wilderness character and values?

Factors to consider:

- *Would the project or activity help ensure that long term human presence is kept to a minimum and that the area is affected primarily by the forces of nature rather than being manipulated by humans?*
- *Would the project or activity improve opportunities for solitude or a primitive and unconfined type of recreation? (e.g. does the project or activity contribute to people's sense that they are in a remote area with opportunities for self-discovery, adventure, quietness, connection with nature, freedom, etc)*

The non-emergency use of these measures (for protection of key natural or cultural resources) may still require speed to be successful in protecting wilderness values, and the nonconforming measures (chainsaws, helicopter landings, motorized pumps) will often be the fastest alternatives. In some cases, wilderness-conforming alternatives as described above may provide sufficient speed or may even be the fastest alternative (e.g. smoke jumpers).

7. Identify the preferred alternative. If the alternative most beneficial or least adverse to wilderness character and values is not preferred, explain why. (Note that NPS Management Policies 6.3.5. direct that "When determining minimum requirement, the potential for disruption of wilderness character and resources will be considered before, and given significantly more weight than, economic efficiency and convenience. If a compromise of wilderness resources or character is unavoidable, only those actions that preserve wilderness character and/or have localized, short-term adverse effects will be acceptable.")

The most feasible and expeditious measures for particular situations for keeping fire from damaging fire-sensitive resources will be the preferred alternatives. These will be chosen by incident commanders on individual fires. In some cases, non-conforming measures will be ruled out as infeasible; for instance, if a water source is unavailable near a fire, then motorized pumps would not be useful.

____/s/ Jeff Troutman_____
Project initiator

__6/15/05_____
Date

Comments:

____/s/ Dave Wood_____
Wilderness Coordinator

__6/16/05_____
Date

The project is **approved** **not approved**

(Approval is contingent on completion of all other compliance)

____/s/ Anthony J. Schetzle_____
Superintendent

__6/16/05_____
Date

Appendix I.
PRE-ATTACK INFORMATION

(Maps of facilities, water sources and roads are in Appendix B.)

Contact Information for Southeast Utah Group Fire Management Plan:

<p>Southeast Utah Group, Canyonlands National Park 2282 S. West Resource Blvd. Moab, Utah 84532-3298 435-719-2100</p>	<p>FirePro Assistance from Mesa Verde National Park PO Box 8 Mesa Verde NP, CO 81330 Fire Management Officer: Marc Mullenix 970-529-5048</p>
---	--

Wildland Fire Coord		
CANY Chief Ranger Peter Fitzmaurice	435-719-2100	
Duty Officer- Peter Fitzmaurice	435-719-2120	435-260-2341
CANY Superintendent: Kate Cannon	435-719-2101	
ARCH Superintendent: Laura Joss	435-719-2201	
HOVE & NABR Supt: Corky Hays	435-692-1234 x15	
Natural Resource Advisor: Jeff Troutman	435-719-2130	
Cultural Resource Advisor: Chris Goetze	435-719-2134	

Moab Interagency Fire Center
 885 S. Sand Flats Rd.
 Moab, UT 84532C

Cell

General Fire Reporting Number: 435-259-2132		
Fire Center Manager – Cheryl Carpenter:	435-259-1851	435-220-1086
Asst. Fire Center Manager – Melani May	435-259-1852	435-260-0213
Lead Dispatcher – Tom Abell	435-259-1853	435-260-2302

Arches National Park
 435-719-2100

Superintendent - Laura Joss: 435-719-2201	
Chief Ranger - Peter Fitzmaurice: 435-719-2120	435-260-2341

Canyonlands National Park
 435-719-2100

Chief Ranger - Peter Fitzmaurice:	435-719-2120	435-260-2341
Dist. Ranger, ISKY/Maze – Kevin Moore	435-259-4712 x13	
Dist. Ranger, Needles – Michelle Busbee:	435-259-8859 x11	

Hovenweep National Monument

McElmo Rte.

Cortez, CO 81321

970-562-4282

Superintendent - Coralee Hays

435-692-1234 x15

435-459-3554

Chief Ranger - Ralph Jones

435-692-1234 x13

928-606-1166

Ranger - Chris Nickel

970-562-4282 x12

435-459-1028

Natural Bridges National Monument

HC 60 Box 1

Lake Powell, UT 84533

435-692-1234

Superintendent - Coralee Hays

435-692-1234 x15

435-459-3554

Chief Ranger - Ralph Jones

435-692-1234 x13

928-606-1166

Bureau of Land Management**Moab Field Office**

82 East Dogwood

Moab, UT 84532

435-259-2100

Field Manager - Maggie Wyatt: 435-259-2100**Fire Management Officer** - Dave Engleman

435-259-2191

435-259-9684

Asst. Fire Mgmt. Officer - Leanard Garcia

435-259-1881

435-259-9667

Monticello Field Office

435 N. Main St.

Monticello, UT 84535

435-587-1500

Field Manager - Sandra Myers

435-587-1506

Asst. Field Mgr. - Nick Sandberg

435-587-1505

**U.S. Forest Service
Manti-Lasal National Forest
Moab/Monticello Ranger District**

Moab Office
62 E. 100 N.
Moab, UT 84532
435-259-7155

District Ranger - Lee Johnson 435-636-3341
Fire Management Officer – Mickey Smith-Kause 435-636-3369

Monticello Office
496 E. Central
Monticello, UT 84535

435-587-2041
Asst. Fire Mgmt. Officer – Brian Mattax 435-587-2041 435-650-4789

**Utah Division of Forestry, Fire and Lands
Southeastern Area**

1165 S. Hwy 191, Suite 6
Moab, UT 84532

Area Manager – Bill Zanotti 435-259-3766 435-260-9809
Fire Warden - Wes Schultz 435-259-0112 435-260-8383

Radio Frequencies for Wildland Fire Activities:
See next 2 pages

To Determine Need for Park Closure/Evacuations, see Appendix W

Moab Fire Zone Standard Channel Configuration

Channels 1-5 may reverse order depending if it is BLM or FS radio, or different freq for a State Radio

Channels 6-12 are to be standard for all fire radios

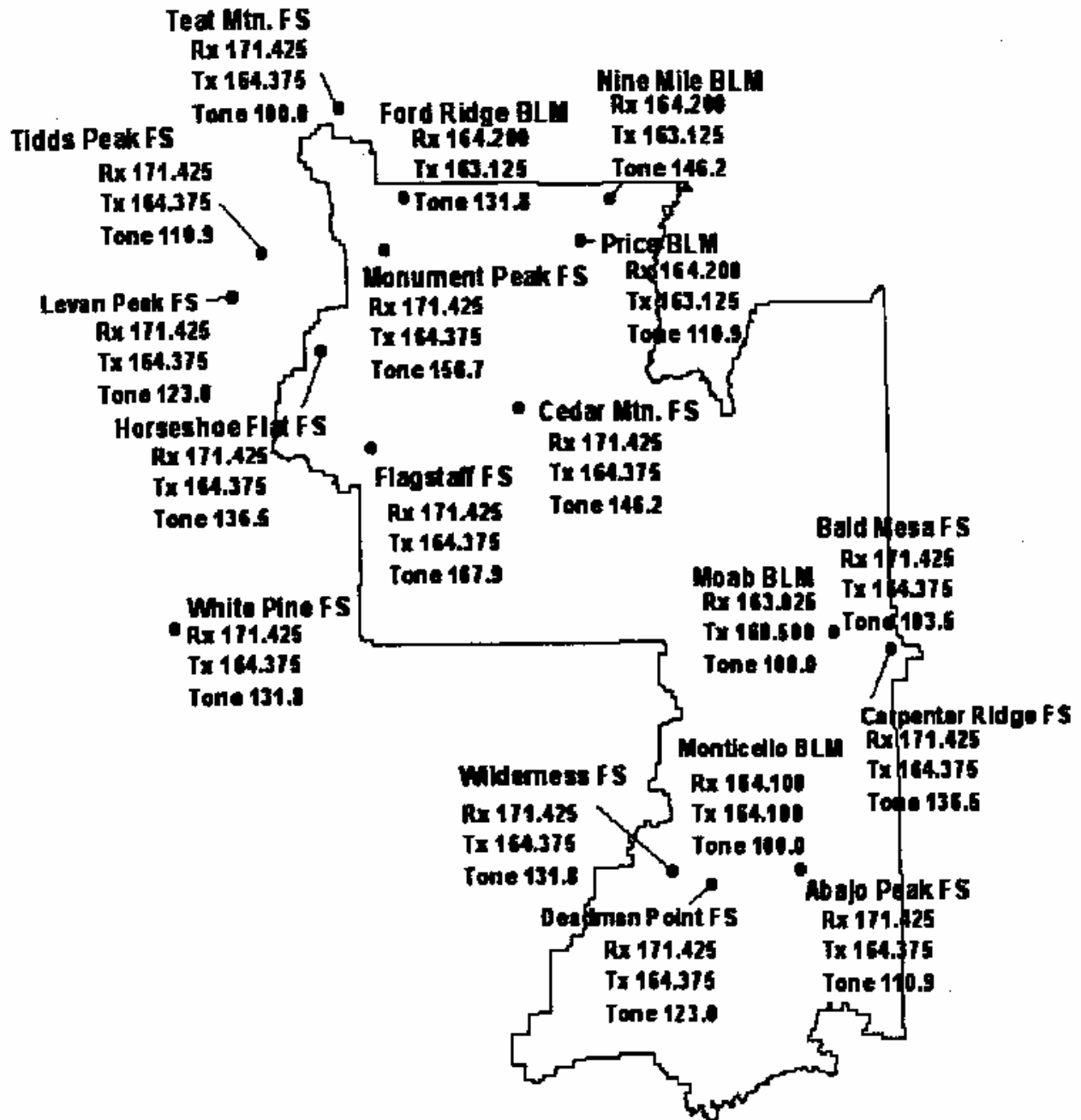
Channels 13+ are optional per agency

	Channel	TX	Tone	RX	Description
Moab Zone Interagency:	1	164.200	118.8	164.200	Price BLM
	2	163.025	100.00	163.025	Moab BLM
	3	164.100	100.00	164.100	Monticello BLM
	4	171.425		171.425	Manti 1
	5	171.425	By Repeater	164.375	Manti Rpt
	6	168.775		168.775	Fire 1
	7	172.325		172.325	Air to Gr 1
	8	170.500		170.500	Fire 2
	9	171.575		171.575	Air to Gr 2
	10	159.435		159.435	Fire 3
	11	163.100		163.100	BLM Work
	12	168.350		168.350	FS Work

Manti Repeater Tones – TX Freq

Tone 1 Abajo/Tidds	110.9
Tone 2 Deadman	123.0
Tone 3 Wilderness	131.8
Tone 4 Carpenter/Horseshoe	136.5
Tone 5 Cedar Mtn.	146.2
Tone 6 Monument Peak	156.7
Tone 7 Flagstaff	167.9
Tone 8 Bald Mesa	103.5

Radio Repeater Frequencies and Tones:



Appendix K.

*MOAB INTERAGENCY FIRE CENTER – ANNUAL
OPERATING PLAN*

The AOP can be found at www.blm.gov/utah/moab/fire/AOP.pdf

The SEUG will maintain annual updates.

Appendix L.

GREAT BASIN MOBILIZATION GUIDE

The Mobilization Guide can be found at

http://gacc.nifc.gov/egbc/administrative/policy_reports/policy_reports.htm.

The SEUG will maintain annual updates.

Appendix M.

NATIONAL INTERAGENCY MOBILIZATION GUIDE

The National Interagency Mobilization Guide can be found at

<http://www.nifc.gov/news/mobguide/index.html>.

The SEUG will maintain annual updates.

Appendix N.

UTAH SMOKE MANAGEMENT PLAN

The Utah Smoke Management Plan can be found at www.utahsmp.net.

The SEUG will maintain annual updates.

Appendix N
FIRE CALL-UP LIST

<u>Name</u>	<u>Job Title</u>	<u>Qualification</u>	<u>Telephone</u>

This list will be updated prior to the beginning of the fire season each year. The SEUG duty officer has the responsibility of maintaining an accurate call-up list. Moab Interagency Fire Center will request resources from the list through the SEUG duty officer as directed in the Superintendent's Directive on Fire Callout Procedures.

Appendix O

FIRE EQUIPMENT INVENTORY

Chief Rangers at each park will be responsible for maintaining equipment and supplies for wildland fire fighting in their respective parks. Personal Protective Equipment (PPE) is generally issued out of the Park or District caches. PPE can be obtained for firefighters through Moab Interagency Fire Center.

Fire Caches are located at:

Arches National Park
Natural Bridges National Monument
Maze District- Canyonlands NP
Island in the Sky District- Canyonlands NP
Needles District- Canyonlands NP
Hovenweep National Monument

At a minimum, each Wildland Fire Cache in the park or districts should have basic equipment and supplies to outfit a 6 person squad. Inspections and inventory at least twice a year will ensure that equipment is available and maintained in a ready-to-go condition.

PPE- gloves, hard hats, headlamp, hardhat neck cover, goggles, nomex shirt & pants, fire shelter, red pack, yellow pack, water bottles, first-aid kit

Shovel/plastic cover
Pulaski/plastic cover
McLeod
Axe/plastic cover
Metal file
Backpack or bladder pump
Chainsaw kit (gas & 2-cycle oil & container, axe and wedges)
Pump kit (gas & 2-cycle oil & container)
1 inch fire hose
2 inch fire hose
hose adapters
hose wrench
appropriate nozzles
MREs
Tents
Sleeping bags
EMT Kit
maps of park or district to handout
GPS and extra batteries
Park radio & extra batteries
Team radio

Water filter or purification tablets
 Cubitainers

Example Inventory Sheet

NFES Number	Item	Number	Location	Condition
6545-00-656-1093	1st Aid Kit (Type II)			
5110-00-596-1029	Axe, double bit			
8465-00-082-3054	Canteen (1 gal.)			
	Chainsaw, 20" bar			
4320-00-632-8996	Fedco			
	Metal file			
8415-01-211-3276	Fire Pants (32)			
-7584	Fire Pants (36)			
4240-01-121-8698	Fire Shelters			
8465-01-274-9910	Firepack, line			
	Fire hose			
	Flight Suit (42L)			
	Flight Gloves			
	Flight Suit (44L)			
1370-00-294-1279	Fusee			
8415-01-134-8232	Gloves (S,M,L)			
4240-01-055-2310	Goggles			
8415-01-055-2265	Hard Hat			
6230-00-643-3562	Headlamp			
4210-00-203-3512	McLeod			
5120-01-060-8520	Pulaski			
8465-01-141-2321	Red Bag			
8415-00-233-5818	Shirt (S)			
-5819	Shirt (M)			
8415-00-259-8718	Shirt (L)			
-8722	Shirt (XL)			
5120-00-965-0609	Shovel			
8465-01-119-5562	Sleeping Bag			
	Slip-on pump, 6.5hp, 50			

	gal.			
8465-00-118-4956	Water Bottle Case			
8465-00-102-6381	Water Bottle, 1qt.			

Appendix P

FIREWISE INFORMATION

When designing and installing a firewise landscape, consider the following:

- ⌚ Local area fire history.
- ⌚ Site location and overall terrain.
- ⌚ Prevailing winds and seasonal weather.
- ⌚ Property contours and boundaries.
- ⌚ Native vegetation.
- ⌚ Plant characteristics and placement (duffage, water and salt retention ability, aromatic oils, fuel load per area, and size).
- ⌚ Irrigation requirements.

To create a firewise landscape, remember that the primary goal is fuel reduction. To this end, initiate the zone concept. Zone 1 is closest to the structure; Zones 2-4 move progressively further away.

- ⌚ **Zone 1.** This well-irrigated area encircles the structure for at least 30' on all sides, providing space for fire suppression equipment in the event of an emergency. Plantings should be limited to carefully spaced low flammability species.
- ⌚ **Zone 2.** Low flammability plant materials should be used here. Plants should be low-growing, and the irrigation system should extend into this section.
- ⌚ **Zone 3.** Place low-growing plants and well-spaced trees in this area, remembering to keep the volume of vegetation (fuel) low.
- ⌚ **Zone 4.** This furthest zone from the structure is a natural area. Selectively prune and thin all plants and remove highly flammable vegetation

Also remember to:

- ⌚ Be sure to leave a minimum of 30' around the house to accommodate fire equipment, if necessary.
- ⌚ Widely space and carefully situate the trees you plant.
- ⌚ Take out the “ladder fuels” — vegetation that serves as a link between grass and tree tops. This arrangement can carry fire to a structure or from a structure to vegetation.
- ⌚ Give yourself added protection with “fuel breaks” like driveways, gravel walkways, and lawns.

When maintaining a landscape:

- ⌚ Keep trees and shrubs properly pruned. Prune all trees so the lowest limbs are 6' to 10' from the ground.
- ⌚ Remove leaf clutter and dead and overhanging branches.
- ⌚ Mow the lawn regularly.
- ⌚ Dispose of cuttings and debris promptly, according to local regulations.
- ⌚ Store firewood away from the house.
- ⌚ Be sure the irrigation system is well maintained.
- ⌚ Use care when refueling garden equipment and maintain it regularly.
- ⌚ Store and use flammable liquids properly.
- ⌚ Dispose of smoking materials carefully.
- ⌚ Become familiar with local regulations regarding vegetation clearances, disposal of debris, and fire safety requirements for equipment.
- ⌚ Follow manufacturers' instructions when using fertilizers and pesticides.

Access additional information on the Firewise home page: www.firewise.org

Firewise Construction Checklist

When constructing, renovating, or adding to a firewise home, consider the following:

- ⌚ Choose a firewise location.
- ⌚ Design and build a firewise structure.
- ⌚ Employ firewise landscaping and maintenance.

To select a firewise location, observe the following:

- ⌚ Slope of terrain; be sure to build on the most level portion of the land, since fire spreads more rapidly on even minor slopes.
- ⌚ Set your single-story structure at least 30 feet back from any ridge or cliff; increase distance if your home will be higher than one story.

In designing and building your firewise structure, remember that the primary goals are fuel and exposure reduction. To this end:

- ⌚ Use construction materials that are fire-resistant or non-combustible whenever possible.
- ⌚ For roof construction, consider using materials such as Class-A asphalt shingles, slate or clay tile, metal, cement and concrete products, or terra-cotta tiles.
- ⌚ Constructing a fire-resistant sub-roof can add protection as well.
- ⌚ On exterior wall facing, fire resistive materials such as stucco or masonry are much better choices than vinyl which can soften and melt.
- ⌚ Window materials and size are important. Smaller panes hold up better in their frames than larger ones. Double pane glass and tempered glass are more reliable and effective heat barriers than single pane glass. Plastic skylights can melt.
- ⌚ Install non-flammable shutters on windows and skylights.
- ⌚ To prevent sparks from entering your home through vents, cover exterior attic and underfloor vents with wire screening no larger than 1/8 of an inch mesh. Make sure under-eave and soffit vents are as close as possible to the roof line. Box in eaves, but be sure to provide adequate ventilation to prevent condensation.
- ⌚ Include a driveway that is wide enough to provide easy access for fire engines (12 feet wide with a vertical clearance of 15 feet and a slope that is less than 5 percent) . The driveway and access roads should be well-maintained, clearly marked, and include ample turnaround space near the house. Also provide easy access to fire service water supplies, whenever possible.
- ⌚ Provide at least two ground level doors for easy and safe exit and at least two means of escape (i.e., doors or windows) in each room so that everyone has a way out.
- ⌚ Keep gutters, eaves, and roofs clear of leaves and other debris.
- ⌚ Make periodic inspections of your home, looking for deterioration such as breaks and spaces between roof tiles, warping wood, or cracks and crevices in the structure.
- ⌚ Periodically inspect your property, clearing dead wood and dense vegetation at distance of at least 30 feet from your house. Move firewood away from the house or attachments like fences or decks.

Any structures attached to the house, such as decks, porches, fences, and outbuildings should be considered part of the house. These structures can act as fuel bridges, particularly if constructed from flammable materials. Therefore, consider the following:

- ⌚ If you wish to attach an all-wood fence to your house, use masonry or metal as a protective barriers between the fence and house.
- ⌚ Use metal when constructing a trellis and cover it with high-moisture, low flammability vegetation.
- ⌚ Prevent combustible materials and debris from accumulating beneath patio decks or elevated porches. Screen or box-in areas below patios and decks with wire screen no larger than 1/8 inch mesh.
- ⌚ Make sure an elevated wooden deck is not located at the top of a hill where it will be in direct line of a fire moving up slope. Consider a terrace instead.

Preparing For the Fire Season

- 1) Remove dead or overhanging branches. During the windy conditions that exist during a wildland fire, flames, sparks and firebrands could travel from the tree to the roof of this structure.
- 2) Remove leaf accumulation from your yard. Leaf accumulation provides fuel for a wildland fire.
- 3) Remove leaf clutter from your roof and gutters. During a wildland fire, leaves on the roof and/or in the gutters could be ignited by flying embers.
- 4) Remove tall, dry grasses. Tall, dry grasses provide a path for fire that can lead directly to a house.
- 5) Remove "ladder fuels". Prune tree limbs so the lowest is between 6' - 10' from the ground. Fire burning through tall, dry grass could ignite these limbs and climb to the top of the tree with relative ease.
- 6) Check your generator and/or hose to be sure it is in good repair. Refuel garden equipment carefully. Yard equipment needs annual maintenance and proper fueling. Hoses develop leaks and deteriorate with age and exposure. During wildland fire season, fuel your lawn mower properly --away from dry, flammable grasses.
- 7) Prune bushes and shrubs regularly. Remove excess growth as well as dead leaves and branches to decrease their flammability, and the threat they could pose during a wildland fire. Dispose of cuttings and debris promptly, according to local regulations.

If a Wildfire is APPROACHING:

- 1) **CALL FOR HELP.** Use a cell phone if your electrical power has been interrupted.
- 2) **CLOSE ALL ENTRANCES, WINDOWS AND OTHER OPENINGS.** This includes doors, garage doors, windows, vents and any other entrances to your residence or garage. Close shutters, heavy drapes, Venetian blinds or other window coverings. This action is recommended to prevent sparks from blowing inside your house and igniting there.
- 3) **HAVE TOOLS & WATER ACCESSIBLE.** Have a shovel, rake and long water hose accessible. Fill buckets and other bulk containers with water.
- 4) **DRESS TO PROTECT YOURSELF.** Wear cotton/woolen clothing including long pants, a long-sleeved shirt, gloves and a handkerchief to protect your face.
- 5) **WET DOWN THE ROOF.** If your roof is combustible, wet it down with a hose. Place the ladder you use for this task on the side of the roof opposite the fire.

6) **TURN OFF RESIDENTIAL FUEL.** If you use natural gas or butane, turn it off at the tank or the meter.

7) **PREPARE THE AUTOMOBILES.** Back as many vehicles as possible into the garage. Then close the garage door. In the event you evacuate, close the garage door behind you as you leave. If you do not have a garage or if the garage is full, park vehicles so they are heading in the direction of the evacuation route.

8) **EVACUATE THE FAMILY.** If evacuation becomes necessary, take your family and pets to a safe location.

Appendix Q

WILDLAND FIRE IMPLEMENTATION PLAN

WILDLAND FIRE IMPLEMENTATION PLAN STAGE 1

Fire Name					
Fire Number					
Jurisdiction(s)					
Administrative Unit(s)					
FMP Unit(s)					
Geographic Area					
Management Code					
Start Date/Time					
Discovery Date/Time					
Current Date/Time					
Current Size					
Location:	Legal Description(s)	T.	R.	Sec.	Sub.
	Latitude				
	Longitude				
	UTM:				
	County:				
	Local Description				
Cause					
Fuel Model/Conditions					
Current Weather					
Predicted Weather					
Availability of Resources					

DECISION CRITERIA CHECKLIST

Decision Element	Yes	No
Is there a threat to life, property, or resources that cannot be mitigated?		
Are potential effects on cultural and natural resources outside the range of acceptable effects?		
Are relative risk indicators and/or risk assessment results unacceptable to the appropriate Agency Administrator?		
Is there other proximate fire activity that limits or precludes successful management of this fire?		
Are there other Agency Administrator issues that preclude wildland fire use?		

The Decision Criteria Checklist is a process to assess whether or not the situation warrants continued wildland fire use implementation. A “Yes” response to any element on the checklist indicates that the appropriate management response should be suppression-oriented.

Recommended Response Action (check appropriate box)	NO-GO (Initial attack/suppression action)	
	GO (Other appropriate management response)	
Signature		Date

Appendix R.

WILDLAND FIRE PREVENTION WORKLOAD ANALYSIS

SUMMARY OF RISK ANALYSIS

Southeast Utah Group parks (SEUG) and the local communities have the potential for fires from several risks such as recreational use, wildland/urban interface, debris and slash burning, and lightning. Below is a summary of the primary risk types of the parks with their respective descriptions.

- **Debris Burning** – Debris have been burned by both the park and its neighbors in the past. Risk of spread has been low in the past because burning has occurred in winter during favorable conditions.
- **Campfires** – have caused problems in the past. Campfires associated with boating and camping along the Colorado and Green Rivers have started some of the worst fires in Canyonlands National Park. Generally, these fires occur in thick stands of the exotic tamarisk.
- **Lightning**- typical during the late summer season, lightning associated with strong thunderstorms is the most common source of wildland fire ignition in the parks. Typically, these are single tree fires and do not spread.

DETERMINATION OF HAZARDS

- The potential for an ignition is relatively low, while concerns for public and firefighter safety, and values at risk in the wildland/urban interface are high. Riparian areas used by park visitors are the biggest concern. These areas have been invaded by tamarisk which creates heavy fuel loading. Both visitor safety and natural/cultural resources are of concern.
- Fuel reduction in these high hazard areas has been ongoing and will have to continue for the life of this plan in order to reduce this risk.
- Employees with fire prevention duties should talk to people they meet about the benefits of preventing fires. If in the wildland/urban interface, talk about what people could do to make their property more fire safe. Talk to residents about defensible space and debris cleanup. Effective tools for Fire Prevention and Education include:
 - School Programs
 - Contacts through Homeowners Associations
 - Contacts through Volunteer Fire Departments
 - Burn permit system
 - Local bulletin boards
 - Fire Protection Guidelines for Wildland Residential Interface Development (Risk Rating Guide)
 - Door to door surveys

DETERMINATION OF VALUES

Historic Sites

Archeological Sites

Riparian Zones

Riparian areas in the SEUG parks provide habitat for the most diverse assemblage of plants and animals. Because the parks are in the relatively arid Colorado Plateau, the importance of riparian areas is amplified. Most animal species rely on this habitat at some stage in their life cycle.

T&E Species Habitat

Seeps & Springs

Wilderness characteristics

Opportunity for Solitude-SEUG parks with recommended or suitable wilderness areas provide remote areas that allow the wilderness visitor a refuge from modern pressures of life. The less reminders of man's domination of the environment encountered, the better the experience.

Air Quality

Arches and Canyonlands National Parks are Class I airsheds meaning they are given the highest priority for air quality protection by law. Hovenweep and Natural Bridges National Monument are Class II airshed with a lesser standard of protection. In all SEUG parks clean air is important to protection of both natural and cultural resources as well to the health of park employees and visitors.

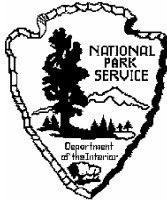
Natural Soundscape

SEUG Management strives to preserve, to the greatest extent possible, natural soundscapes of the parks, free from human-caused noise.

Night Sky

SEUG Management strives to preserve, to the greatest extent possible, the natural lightscapes which are natural resources and values that exist in the absence of human-caused light.

Appendix S.



WILDLAND FIRE SITUATION ANALYSIS (WFSA)

WILDLAND FIRE SITUATION ANALYSIS

Wildland Fire Situation Analysis (WFSA) is a decision-making process in which the Agency Administrator or representative describes the situation, establishes objectives and constraints for the management of the fire, compares multiple strategic wildland fire management alternatives, evaluates the expected effects of the alternatives, selects the preferred alternative, and documents the decision. The format and level of detail required is dependent on the specific incident and its complexity. The key is to document the decision.

WFSA INITIATION

FIRE NAME

--

JURISDICTION(S)

(i)

DATE AND TIME INITIATED

(ii)

WFSA COMPLETION/FINAL REVIEW

THE SELECTED ALTERNATIVE ACHIEVED DESIRED OBJECTIVES ON (DATE/TIME):

--

THE SELECTED ALTERNATIVE DID NOT ACHIEVE THE DESIRED OBJECTIVES AND A NEW WFSA WAS PREPARED ON (DATE/TIME):

--

AGENCY ADMINISTRATOR OR REPRESENTATIVE SIGNATURE:

--

WILDLAND FIRE SITUATION ANALYSIS

A. JURISDICTION(S):	B. GEOGRAPHIC AREA:
C. UNIT(S):	D. WFSA #:
FIRE NAME:	E. INCIDENT #:
G. ACCOUNTING CODE:	
H. DATE/TIME PREPARED:	
<p>ATTACHMENTS:</p> <ul style="list-style-type: none"><input type="checkbox"/> COMPLEXITY MATRIX/ANALYSIS¹<input type="checkbox"/> RISK ASSESSMENT¹ <input type="checkbox"/> PROBABILITY OF SUCCESS¹<input type="checkbox"/> CONSEQUENCES OF FAILURE¹<input type="checkbox"/> MAPS¹<input type="checkbox"/> DECISION TREE²<input type="checkbox"/> FIRE BEHAVIOR PROJECTIONS¹<input type="checkbox"/> CALCULATIONS OF RESOURCE REQUIREMENTS¹<input type="checkbox"/> OTHER (SPECIFY)	
<small>¹ Required</small>	
<small>² Required by the USFS</small>	

OBJECTIVES AND CONSTRAINTS

A. OBJECTIVES (must be specific and measurable):

1. **SAFETY:**

Public:

Firefighter:

2. **ECONOMIC:**

3. **ENVIRONMENTAL:**

4. **SOCIAL:**

5. **OTHER:**

B. CONSTRAINTS:

ALTERNATIVES

	(2) A	(3) B	(4) C
A. WILDLAND FIRE STRATEGY:			
B. NARRATIVE:			
C. RESOURCES NEEDED:			
HANDCREWS			
ENGINES			
DOZERS			
AIRTANKERS			
HELICOPTERS			
D. ESTIMATED FINAL FIRE SIZE:			
E. ESTIMATED CONTAIN/ CONTROL DATE			
F. COSTS:			

<p>G. RISK ASSESSMENT:</p> <p>PROBABILITY OF SUCCESS</p> <p>CONSEQUENCES OF FAILURE</p>			
<p>COMPLEXITY:</p>			
<p>ATTACH MAPS FOR EACH ALTERNATIVE</p>			

EVALUATION OF ALTERNATIVES*			
A. EVALUATION PROCESS	A	B	C
<i>SAFETY</i> Firefighter Aviation Public			
Sum of Safety Values (avg)			
<i>ECONOMIC</i> Improvements Recreation Water Wilderness Wildlife			
Sum of Economic Values			
<i>ENVIRONMENTAL</i> Air Visual Fuel T & E Species			
Sum of Environmental Values			
<i>SOCIAL</i> Employment Public Concern Cultural			
Sum of Social Values			
<i>OTHER</i> Coordination with other agencies			
Sum of Other			
TOTAL AVERAGE SCORE			

*Rated as a weighted average of all possible outcomes of alternative on a scale of 0-

ANALYSIS SUMMARY

(i) ALTERNATIVES	(ii) A	(iii) B	(iv) C
A. COMPLIANCE WITH OBJECTIVES: SAFETY ECONOMIC ENVIRONMENTAL SOCIAL OTHER			

B. PERTINENT DATA: <i>FINAL FIRE SIZE</i> <i>COMPLEXITY</i> <i>COST</i> <i>RESOURCE VALUES</i> <i>PROBABILITY of SUCCESS</i> <i>CONSEQUENCES of FAILURE</i>			
C. EXTERNAL/INTERNAL INFLUENCES:			
<i>NATIONAL AND GEOGRAPHIC PREPAREDNESS LEVEL</i>			
<i>INCIDENT PRIORITY</i>			
<i>RESOURCE AVAILABILITY</i>			
<i>WEATHER FORECAST (LONG-RANGE)</i>			
<i>FIRE BEHAVIOR PROJECTIONS</i>			

(v)

(vi)	VI. DECISION
The selected alternative is:	
RATIONALE:	

AGENCY ADMINISTRATOR SIGNATURE _____

DATE/TIME _____

DAILY REVIEW

SELECTED ALTERNATIVE TO BE REVIEWED DAILY TO DETERMINE IF STILL VALID UNTIL CONTAINMENT OR CONTROL

			PREPAREDNESS LEVEL	INCIDENT PRIORITY	RESOURCE AVAILABILITY	WEATHER FORECAST	FIRE BEHAVIOR PROJECTIONS	WFAA VALID
(vii) DATE	(viii) TIME	(ix) BY						

(x) IF WFSA IS NO LONGER VALID, A NEW WFSA WILL BE COMPLETED

Appendix T.

A GUIDE FOR ASSESSING FIRE COMPLEXITY AND COMPLEXITY ANALYSIS WORKSHEET

The following questions are presented as a guide to assist the Agency Administrator and staff in analyzing the complexity or predicted complexity of a fire situation. Because of the time required to assemble or move an Incident Management Team to a fire, this checklist should be completed when a fire escapes initial attack and be kept as part of the fire records. This document is prepared concurrently with the preparation of and attached to a new or revised Wildland Fire Situation Analysis. It must be emphasized that this analysis should, where possible, be based on predications to allow adequate time for assembling and transporting the ordered resources.

Use of the Guide:

1. Analyze each element and check the response yes or no.
2. If positive responses exceed, or are equal to, negative responses within any primary factor (A through G), the primary factor should be considered as a positive response.
3. If any three of the primary factors (A through G) are positive response, this indicates the fire situation is or is predicted to be Type I.
4. Factor H should be considered after all above steps. If more than two of these items are answered yes, and three or more of the other primary factors are positive responses, a Type I team should be considered. If the composites of H are negative, and there are fewer than three positive responses in the primary factors (A-G) a Type II team should be considered. If the answers to all questions in H are negative, it may be advisable to allow the existing overhead to continue action on the Fire.

Guide for Assessing Fire Complexity Glossary of Terms

Potential for blow-up conditions - **Any combination of fuel, weather and topography excessively endangering personnel.**

Threatened and endangered species - **Threat to habitat of such species, or in the case of flora, threat to the species itself.**

Smoke Management - **Any situation which creates a significant public response, such as smoke in a metropolitan area or visual pollution in high-use scenic areas.**

Extended exposure to unusually hazardous line conditions - **Extended burnout or backfire situations, rock slides, cliffs extremely steep terrain, abnormal fuel situations such as frost killed foliage, etc.**

Disputed Fire Management responsibility - **Any wildland fire where responsibility for management is not agreed upon due to lack of agreements or different interpretations, etc.**

Disputed fire policy - **Differing fire policies between suppression agencies when the fire involves multiple ownership is an example.**

Pre-existing controversies - **These may or may not be fire management related. Any controversy drawing public attention to an area may present unusual problems to the fire overhead and local management.**

Have overhead overextended themselves mentally or physically - **This is a critical item that requires judgment by the responsible agency. It is difficult to write guidelines for this judgment because of the wide differences between individuals. If, however, the Agency Administrator feels the existing overhead cannot continue to function efficiently and take safe and aggressive action due to mental or physical reasons, assistance is mandatory.**

FIRE COMPLEXITY ANALYSIS

	Yes/No
A. FIRE BEHAVIOR: Observed or Predicted	
1. Burning Index (from on-site measurement of weather conditions). Predicted to be above the 90% level using the major fuel model in which the fire is burning.	-- --
2. Potential exists for "blowup" conditions (fuel moisture, winds, etc).	-- --
3. Crowning, profuse or long-range spotting.	-- --
4. Weather forecast indicating no significant relief or worsening conditions.	-- --
Total	-- --
 B. RESOURCES COMMITTED:	
1. 200 or more personnel assigned.	-- --
2. Three or more divisions.	-- --
3. Wide variety of special support personnel.	-- --
4. Substantial air operation which is not properly staffed.	-- --
5. Majority of initial attack resources committed.	-- --
Total	-- --
 C. RESOURCES THREATENED:	
1. Urban interface.	-- --
2. Developments and facilities.	-- --
3. Restricted, threatened or endangered species habitat.	-- --
4. Cultural sites.	-- --
5. Unique natural resources, special designation zones or wilderness.	-- --
6. Other special resources.	-- --
Total	-- --
 D. SAFETY:	
1. Unusually hazardous fire line conditions.	-- --
2. Serious accidents or fatalities.	-- --
3. Threat to safety of visitors from fire and related operations.	-- --
4. Restrictions and/or closures in effect or being considered.	-- --
5. No night operations in place for safety reasons.	-- --
Total	-- --

E. OWNERSHIP:	Yes/No
1. Fire burning or threatening more than one jurisdiction.	___ --
2. Potential for claims (damages).	___ --
3. Different or conflicting management objectives.	___ --
4. Dispute over fire management responsibility.	___ --
5. Potential for unified command.	___ --
Total	___ --

F. EXTERNAL INFLUENCES:	
1. Controversial wildland fire management policy.	___ --
2. Pre-existing controversies/relationships.	___ --
3. Sensitive media relationships.	___ --
4. Smoke management problems.	-- ___
5. Sensitive political interests.	___ --
6. Other external influences.	___ --
Total	___ --

G. CHANGE IN STRATEGY	
1. Change in strategy (from lower to higher intensity management).	___ --
2. Large amounts of unburned fuel within planned perimeter.	-- ___
3. WFSA invalid or requires updating.	___ --
Total	___ --

H. EXISTING OVERHEAD:	
1. Worked two operational periods without achieving initial objectives.	___ --
2. Existing management organization ineffective.	___ --
3. Overhead/IMT overextended mentally and/or physically.	___ --
4. Incident actions plans, briefings, etc., missing or poorly prepared.	___ --
Total	___ --

Signature	
Date	Time

Appendix U.

AGENCY ADMINISTRATOR'S BRIEFING FORM

GENERAL

Name of fire _____

Fire start: date _____ time _____

cause _____

Approximate size of fire _____

Location _____

Land status _____

Local fire policy _____

Resource values threatened _____

Private property or structures threatened _____

Capability of Unit to support team (suppression and support resources) _____

COMMAND

Written Delegation of Authority: _____

Agency _____

Agency Administrator's representative _____

Resource Advisor _____

Transition:

Name of current Incident Commander _____

Proposed time when team will assume command:

date _____ time _____

Recommended local participation in fire team organization _____

Other Command Organizations (Unified/Area/MAC) _____

Legal considerations (investigations in process) _____

Known political considerations _____

Local social / economic considerations _____

Incident Information

IIO Organization reports to: __ Incident Commander ___ Agency Administrator

Provide regular updates to: __ Unit FMO _____
Expanded Dispatch

Safety

Accidents/injuries to date _____

Condition of local personnel _____

Known hazards _____

PLANNING SECTION

General

Access to Fax and Copier _____

Pre-attack plans ___ Yes ___ No

Other nearby incidents influencing strategy/tactics/resources ___

Training specialist assigned or ordered _____

Training considerations _____

Rehabilitation policies _____

Situation Unit

General weather conditions/forecast _____

Fire behavior _____

Local unusual fire behavior and fire history in area of fire _____

Fuel types: at fire _____
ahead of fire _____

ICS off-incident reporting requirements _____

Resources Unit

Refer to attached Resource Orders.

Personnel on fire (general) _____

Equipment on fire (general) _____

Unit demobilization procedures _____

OPERATIONS SECTION

Priorities for control, Escaped Fire Analysis approved _____

Current tactics _____

Ground Operations

Accessibility by engines _____

Accessibility by ground support _____

Air Operations Branch

Airtankers assigned _____

Effectiveness of airtankers _____

Air Attack Supervisor _____

Air base _____

Telephone _____

Helicopters assigned _____

Helibase location _____

Crash / rescue at helibase _____

FAR 91.137 assigned (describe) _____

Flight hazard map available / known hazards in area _____

Smoke/visibility conditions _____

Aviation Safety Team assigned or ordered _____

LOGISTICS SECTION

Facilities Unit

ICP/Base location _____

ICP/Base Pre-plans: ___ Yes ___ No

Catering services/meals provided _____

Shower facilities _____

Security considerations _____

Incident Recycling _____

Supply Unit

Expanded dispatch organization _____

Supply system to be used (local supply cache, ordering procedures) _____

Communications Unit

Communications system(s)

NFRC System on order ___ Yes ___ No

Type ___

Local Network available ___ Yes ___ No ___ Temporary

Cell phone cache available ___ Yes ___ No

Landline access to ICP ___ Yes ___ No ___ Unknown

Local Telecom technical support _____

Ground Support Unit

Route to ICP/Base _____

Route ICP to Fire _____

Medical Unit

Nearest hospital _____

Nearest burn center _____

Nearest air ambulance _____

FINANCE SECTION

Cost Unit

Fiscal considerations _____

Cost sharing (on multi-agency fires) _____

Comptroller assigned? (name) _____

Procurement Unit

Buying unit in place or ordered _____

Procurement unit leader assigned _____

Contracting officer assigned _____

Copy of local Service and Supply plan provided__ Yes ___ No

Is all equipment inspected and under agreement? _____

Compensations/Claims Unit

Potential for claims _____

Status of claims/accident reports _____

Time Unit

Payroll procedure established for T&A transmittal _____

Appendix V.

LOCAL INCIDENT COMMANDER BRIEFING FORM

ICS 201:

Map of fire (best available) _____

Time of start _____

Spread - fire behavior _____

Fuel - at fire _____

Anchor points _____

Line held (on map) _____

Natural barriers _____

Weather forecast _____

ICP and Base/Campsites

 Established _____

 Possible _____

Airtanker effectiveness to date _____

Hazards (aircraft and people) _____

Access from base to line _____

Personnel and equipment on line _____

Personnel and equipment ordered (confirm information received
at Agency Administrator briefing) _____

Aerial photos _____Yes _____No

Helibase/helispot locations (use map) _____

Communication system in use: Radio _____

 Telephone _____

 Mobile Phone _____

Water availability _____

Facility fire protection _____

 Crash fire protection at helibase _____

Medivac arrangement _____
Review of existing plans for control in effect; copy of
approved Escaped Fire Analysis.
Smoke conditions _____
Local political issues _____
Any security problems? _____
Overhead on line (names and location - put on map).
Copy machine in Incident Command Post ____Yes ____No

Appendix W.

GUIDELINES FOR DETERMINING NEED FOR PARK CLOSURE/EVACUATIONS

The following questions are presented as a guideline to assist park fire managers in determining the present or predicted necessity for evacuation of all or part of the park. The superintendent will make the final decision for closure/evacuation. Because of the critical time elements involved in closure and evacuation, this checklist should be completed at any time two or more elements in primary factor A are positive and should be kept as part of the park's fire records. The analysis should be based on predictions to allow adequate time for implementing the appropriate action.

For purpose of this guideline, key terms are defined as follows:

- 1. Partial closure: Park closure to visitors in specified areas.
- 2. Full closure: Park closure to visitors at entrances.
- 3. Evacuation: Removal of employees' families and/or visitors from the park.

The following steps are to be taken to make determinations:

- 1. Analyze each element and check the response "yes" or "no."
- 2. If positive responses equal or exceed negative responses within primary factors A through D; the primary factor should be considered a positive response.
- 3. Primary factor E is considered as a separate determinant.
- 4. Employee the following criteria to determine action:
 - a. If factor E is "no" and one or more primary factors are "yes," consider full or partial closure.
 - b. If factor E is "no" and two or more primary factors are "yes," consider partial or full closure and evacuation of visitors.
 - c. If factor E is "no" and three or more primary factors are "yes," consider evacuation of visitors and employees' families.
 - d. If factor E is "yes," evacuate visitors and employees' families regardless of responses to other primary factors.

A. Fire Behavior (observed or predicted)	YES	NO
1. Energy Release Component (ERC), Fuel Model L (grass), 90 th percentile level or above.	_____	_____
2. Crowning or spotting observed.	_____	_____
3. Rate-of-spread 12 chains per hour or greater.	_____	_____
4. Fire size: 1 acre or more.	_____	_____
5. More than one Class B size fire burning concurrently.	_____	_____
Total	_____	_____

B. Personnel Committed Parkwide		YES	NO
1. Unusual initial attack forces committed.		_____	_____
2. Park cooperative agreement crews committed.		_____	_____
3. Park incidental firefighters committed.		_____	_____
4. Fires remaining unstaffed after commitment of above park forces.		_____	_____
5. Relief forces more than two hours away.		_____	_____
	Total	_____	_____

C. Operations		YES	NO
1. Access/egress route likely to be heavily used by suppression traffic.		_____	_____
2. Extensive air operations in vicinity of developed areas.		_____	_____
3. potential incident base location in area which conflicts with routine visitor activities.		_____	_____
	Total	_____	_____

D. Location and Direction of Spread		YES	NO
1. Fire north of developed areas, proceeding south.		_____	_____
2. Fire south of developed areas, proceeding north.		_____	_____
	Total	_____	_____

E. E. Exit		YES	NO
1. Any vehicular egress route directly threatened for extended period (i.e., to point where no traffic could safely get through).		_____	_____