

Staff Ride

Resources



Wildland Fire Leadership Development Program

Bar Harbor Fire – Facilitators Field Reference, November 2005

STAFF RIDE DIFFICULTY RATING:

Physical

Light - All points of the staff ride are accessible by vehicle.

Logistics

Moderate - The majority of this staff ride is within Acadia National Park. For groups conducting an official staff ride prior coordination with the park fire management staff is required to waive the park entrance fee. Contact park dispatch at 207-288-3338 and ask for the fire management program. Ample lodging and meal accommodations are available in Ellsworth and Bar Harbor, ME. Access to all stands is not possible during winter months. Parking may be difficult during peak tourist season, which is July and August.

Acadia National Park is located approximately six hours north of Boston. From Boston take I-95 north to Augusta, Maine; from Augusta take Route 3 east to Ellsworth and on to Mount Desert Island; follow the signs to the Acadia National Park (Hulls Cove) Visitor Center. The Visitor Center has a 3D map and film about the fire. For this reason, it is recommended that a Staff Ride begin from the Visitor Center. For current visitor center hours of operation, visit the following website: <https://www.nps.gov/acad/planyourvisit/index.htm>.

Hazards

Other users: Access roads within the park are used by other park visitors and public transportation buses. Care should be taken while driving within the park.

Weather: On a daily and annual basis, Mount Desert Island temperatures are more moderate than those of inland Maine. The Maine coastal climate has been ranked second only to the Pacific Northwest in annual precipitation. This moisture occurs in every form at Acadia. Ice storms are regular in winter and early spring, and rain is frequent in every month. Fog is common during June, July, and August.

NOTE TO FACILITATORS: This is a suggested format. Do not feel limited by the identified stands or discussion items. It is provided as a word document so that users may adapt and revise it to fit their specific audience and time demands.

Stand 1 – Point of Origin

Maps

Topographic map

Access

DMDD NAD 27 Conus GPS Coordinates: N 44.40677 x W 068.31324

Starting at the Hull's Cove Visitors Center:

Proceed out of the parking lot and make an immediate left. At the junction of Route 3 turn left again and proceed 0.4 miles and turn left onto Crooked Road. Proceed straight on Crooked Road 3.1 miles. Parking is on your left on Betsy's Road (limited). Stand 1 is across the street.

Terrain Orientation

Point of origin (marsh/Dolliver's dump looking west)

Direction of fire spread

Events to Describe

Weather and fire situation in 1947

Fire organization in 1947

Initial report and response October 17th to 20th

Discussion Topics

1947 began as a rather uneventful year for wildfire activity. The spring and early summer had been normal with above average rainfall for May. However, August brought only 0.56 inches of rain; the monthly average being 3.25. September saw 2.38 inches, the average being 3.97, but it fell early in the month. October brought 0.08 inches. In effect there occurred a 65 day period of no perceivable rainfall for the area.

Historically, Maine's wildfire season opens when the snow leaves the ground in late March to early April, burning grasses, brush and slash. It slows usually through June and returns with drying conditions in July and August at which time fires tend to burn slash and softwood stands. The Atlantic Ocean typically keeps the relative humidity high at night and tends to produce more moderate conditions than are experienced in the western states. The late summer and fall of 1947 was a rare exception.

The dry conditions resulted in numerous wildfires statewide with many structures being destroyed and thousands of acres of forestland going up in smoke. As a result, burning bans had been put in effect with a number of national and state forests being effectively closed by October 17th and ultimately a National Emergency Declaration by President Truman on October 24th.

The towns on Mount Desert Island are relatively small with limited year round populations. Although quite used to wildfires, their main orientation was structure firefighting with no more than a few trucks and almost all their personnel being volunteers. At the time no county wide mutual aid agreement existed.

Acadia National Park had 1 truck, 5 portable pumps, and hand tools for 200 personnel. Although fuel reduction projects by the Civilian Conservation Corps had been discontinued during the war, wildfire suppression classes had continued with a three-day course having been presented in May of 1947.

Bar Harbor fire department received a call at 1605 on Friday, October 17th reporting a fire at Dolliver's dump on the Crooked Road. They responded with one truck, a pumper and 4 personnel. Arriving at 1618, they found a rapidly spreading one-acre fire on the edge of Fresh Meadow. A direct attack was made and an additional 16 men arrived. Fire Chief David Sleeper called Acadia National Park for additional resources at 1645; they responded with a fire truck, a dump truck, 2 portable pumps and 5 men. Winds at the time were southwest at 8 mph. The fire was burning across the bog and into the adjoining forestland. With these additional resources, crews worked through the night and by noon on the 18th, the fire had been generally contained at about 100 acres. Mop-up and active patrolling continued through the 20th.

The cause of the fire, although never officially established, is listed on the final report as debris (refuse) burning. The dump owner had denied any recent burning on site.

Handout Strategic Discussion Point #1 prior to leaving Stand 1.

Tell participants to have their responses ready when they arrive at Stand 2.

Stand 2 – 1947 Fire Overlook

Maps

Fire progression map

Access

DMDD NAD 27 GPS Coordinates N 44.38433 X W 068.22987

Reverse your steps and return to the Visitor's Center. Rather than enter the parking lot enter the Paradise Hill Road (this becomes Park Loop Road just past stand two) which proceeds directly from the parking lot. Continue south on this road for 2.3 miles. There will be a pullout to your left for the vista entitled "Fire of 47". This is stand two.

Terrain Orientation

Bar Harbor

Cadillac Mountain

Direction of fire spread

Events to describe

Vegetation indicators of the fire footprint

Fire progression and control efforts October 21-22

Discussion Topics

Conduct Strategic Discussion Point #1

Although the first French explorers in the 1600's named this island "Mount Desert" due to the barren desert like mountaintops, prior to the '47 fire, much of what now appears to be bare granite ledges with scattered thin scrub growth was in fact forested. Conifer and mixed growth covered 90% of the island. This basically was white and red spruce, balsam fir, and eastern white pine with predominate hardwoods being American beech, yellow birch, red oak, and sugar maple with some birch and aspen family trees.

Although over 55 years have passed and forest recovery is well under way, one can see extensive areas of younger growth, especially dominated by pioneer species such as white and gray birches and red maples with occasional islands or isolated white pines or large oaks.

A strong northeast wind picked up early in the morning of October 21st. The fire of the 18th, which was still under patrol, escaped its control lines crossing the Crooked Road at about 0745. A general alarm was sounded at 0800 for resources to fight the rapidly spreading flames. By 1000 Bar Harbor Fire Chief Sleeper called Dow Army Air Base requesting manpower; they were able to send 225 officers and soldiers to support the suppression efforts.

By 1600 the fire had swept southeasterly, crossing the Eagle Lake Road to the shore of Eagle Lake, and was burning on national park lands. By the evening when the winds abated somewhat an additional 1000 acres burned.

Resource reinforcement and adjustments were made and line construction efforts were progressing reasonably well until October 22nd when northwest winds increased around noon. The fire crowned inside the control line and escaped.

Handout Strategic Discussion Point #2 prior to leaving Stand 2

Tell participants to have their responses ready when they arrive at Stand 3.

Stand 3 – Bar Harbor Overlook

Maps

Topographic map

Fire progression map

Access

DMDD NAD 27 GPS Coordinates N 44.36142 X W 068.23025

Continue south on Park Loop Road for 1.1 miles, bearing right at the intersection, until you come to the entrance of Cadillac Mountain Road on your left. Turn left on this road and climb 2.1 miles to a pullout on your left. This is Stand 3.

Terrain Orientation

Bar Harbor

Direction of fire spread

Events to Describe

Bar Harbor interface areas

Evacuation efforts

Fire progression and control efforts

Discussion Topics

Conduct Strategic Discussion Point #2

October 23rd was the day when southwesterly winds switched around again to the Northeast and increased to gale force.

By this point personnel and equipment resources from all over the northeastern United States were being brought in to fight this fire. Stiff southwesterly winds pushed the fire towards the community of Hulls Cove and Northern portions of Bar Harbor. Structures were being lost and major evacuation efforts were underway when at about 1500 a frontal passage earlier and stronger than predicted brought 40 to 50 mile per hour northwest winds.

The fire escaped all control in all sectors. The community of Hulls Cove was spared the worst but flames swept towards the village of Bar Harbor. Roaring from the northwest, fire rolled over the low shoulder hills and the western residential areas where numerous million dollar hotels and mansions had been built. These summer homes and recreational facilities, built by and for the wealthy families of the northeast, were almost exclusively built of wood. They were almost impossible to protect. Even today's equipment probably wouldn't have helped.

Surprisingly, the town center and waterfront were spared destruction. The fire swept through and past the village, consuming the Jackson Laboratory and ran basically unchecked to the sea along the area called Ocean Drive. 300 dwellings were lost in Bar Harbor that day.

Evacuation efforts began early when the control lines failed on the 23rd. About 2000 residents of Bar Harbor had been collected at the town's athletic field by noon on the 23rd but were moved to the town dock once the fire advanced to the edge of town. Unfortunately, evacuation by boat was very limited due to the small number of boats available because of high wind and rough seas.

Fortunately, as the fire swept past and spared the downtown and dock area, evacuation by sea became unnecessary. Vehicle convoys were able to move evacuees to the mainland once the main threat passed.

Despite all the structures destroyed and all the panic and displacement only two lives were lost in the fire. The story of "The Bar Harbor Fire" made national headlines and elicited national sympathy, support, and relief efforts.

Control of the fire along the northeast side, near Hulls Cove, began to be lost with the southwesterly wind in the late morning. Despite large numbers of firefighters, soldiers from Dow Airfield, volunteers from neighboring towns, the University of Maine, and even Bangor Theological Seminary, the strong winds and extremely dry fuels resulted in extreme fire behavior which defied all containment efforts. Once the winds shifted and reached gale force the evacuation of civilians and firefighters became the only priority.

On the Southwest side of the fire, located in the national park, containment efforts were progressing well throughout the day until the major wind shift caused the fire to blow up. Here also the priority shifted to firefighter safety and evacuation.

Handout Strategic Discussion Point #3 prior to leaving Stand 3

Tell participants to have their responses ready when they arrive at Stand 4.

Stand #4 – Jordan Pond

Maps

Topographic map

Fire progression map

Access

DMDD NAD 27 GPS Coordinates N 44.31996 X W 068.25372

Return back down the mountain to the junction of the Park Loop Road and turn left at the intersection. Proceed 3.9 miles south to the Jordan Pond access road on your right. Park along this road. The Nature Trail is at the end of the road. This is Stand 4.

Terrain Orientation

Jordan Pond

The Bubbles

Direction of fire spread

Events to Describe

Long-term natural resources impacts

Pre-1947 fuel condition examples

Terrain considerations

Discussion Topics

Conduct Strategic Discussion Point #3

The extremely dry conditions in the fall of 1947 and the resulting Bar Harbor Fire had a significant impact on the natural resources of this area. First, the fire destroyed the trees in the burn area. Unlike tree types in some parts of the country, the trees here in New England have poor fire resistance and resilience. Most of the trees in the burn area, whether conifers or deciduous, died or were significantly damaged. Second, the dry conditions resulted in extensive ground fire. This resulted in additional tree mortality, severe wind throw in subsequent years, and severe erosion of the already thin soils and duff, which existed in this area prior to the fire.

The coastal areas of Maine are no stranger to wildfire. The underlying granite that dominates this area is slow to produce soil and what is produced is poor in quality when compared to soils in areas which are predominately sedimentary. Fires, which have occurred naturally or have a human cause frequently have resulted in duff and soil degradation and erosion. This, when coupled with climatological and environmental conditions such as harsh winters with high winds and frequent ice storms, results in slowed tree recovery after a fire event.

In this area, because it did not burn in 1947, one can see the size and type of fuels that existed on much of the island prior to the fire. Low areas tend to be dominated by large spruce, cedar, fir, and white pine. Where soil and weather conditions permit, hardwood trees figure into the mix. At higher elevations, the trees show weather stress as sub-alpine conditions are reached.

In most of the area, especially where the softwoods are dominant, there exists a duff layer, which can extend deep into the ground in the gaps and cracks between rocks and ledges. This figured heavily in the extensive mop-up required after the fire moved through an area.

Unlike much of the western regions of this country, coastal Maine has a lot of available water. Unfortunately, most fires are uphill from the water and many times the lakes, ponds, and bogs are as much a barrier to transport as they are to fire spread. This is especially important when one considers that everything and everyone that arrives or departs Mount Desert Island crosses the two-lane causeway bridge in Trenton.

The steep hills in this area also limit access and proved to be hazardous to navigate especially after the fire burned away most of the trees roots and duff which helped hold rocks and ledges in place. The area of the fire within the national park had the benefit, however, of a well-established road and trail system which aided access and suppression efforts.

Handout Strategic Discussion Point #4

Tell participants to have their responses ready when they arrive at Stand 5.

Stand #5 – Seal Harbor

Maps

Topographic map

Fire progression map

Access

DMDD NAD 27 GPS Coordinates N 44.29640 X W 068.21089

Proceed back out to the Park Loop Road and turn right. Traveling south again, go 1.4 miles to the junction of Stanley Brook Road. This is the end of the two-way road. Turn right onto Stanley Brook Road and proceed 1.1 miles to its terminus. At the entrance, turn left and there is a parking lot 100 meters east. This is Stand 5.

Terrain Orientation

Atlantic Ocean

Seal Harbor

Southern terminus of fire

Events to Describe

Final fire perimeter and control efforts October 24th to 27th

Long-term organizational responses

Public memory and awareness

Discussion Topics

Conduct Strategic Discussion Point #4

By October 24th the gale force winds had subsided. The fire managers of the National Park Service met to collect, assess, and reorganize their equipment and personnel. Wilbur Savage was designated as fire boss and subsequent organizational and tactical assignments were made. Supplies and personnel poured in from all over the United States as the evacuation of residents continued. Control lines in the form of hose line, dozer lines, and hand lines were established and defended. The fire made no rapid advances after the morning of the 24th. By 1630 on the 24th the fire was declared under control. Relative humidity levels improved and rains returned to the area as reinforcement of control lines and mop-up operations continued until the fire was declared out at 1600 on November 14th. The fire had burned a total of 17,333 acres, 8,750 of which was on Acadia National Park lands.

The Mount Desert Island Fire, along with the other wildfires which burned over 200,000 acres across the state of Maine that fall resulted in a major reassessment of the needs, threats, hazards, and costs of fighting wildfires locally, statewide, and nationally.

Locally, recovery from fire would take years; however, it became the number one priority. Fire departments quickly replaced lost or destroyed equipment and immediately began upgrading their ability to tackle wildland fires so that the '47 fire would never be repeated. Policies, standards, and cooperative agreements were developed at all levels and are still in force today in order to effect a more rapid, coordinated and ultimately effective response to any wildland emergency. Wildland fire prevention and suppression is taken very seriously in coastal Maine to this day.