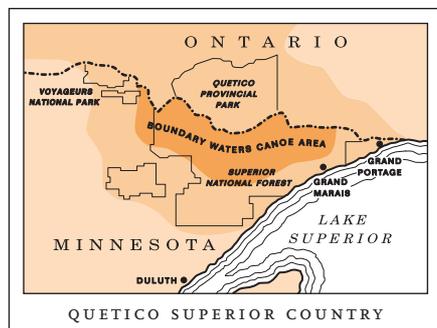


Wilderness News

FROM THE QUETICO SUPERIOR FOUNDATION FALL-WINTER 2011



The Quetico Superior Foundation, established in 1946, encourages and supports the protection of the ecological, cultural and historical resources of the Quetico-Superior region.

Fire has been mankind's companion and foe since the dawn of time. It's a fundamental element of the planet, like air, shaping the patterns of life. Our opinion of fire has changed often, but fire itself is the same. The real challenge from fire is to understand it and the earth we live on.

Fire presents opportunities for new life that don't exist until a burn. Each place responds in its own way and its own time. While forests and grasslands of today are products of earlier fires, they're also setting the stage for fires to come.

— Jack de Golia, *Fire—A Force of Nature*

Wilderness News

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Lake Insula, September 12, 3:00 p.m. photo by Bob Anderson.

Special Issue: Fire in the BWCAW

By Charlie Mahler

In the heat of summer, with the Boundary Waters Canoe Area Wilderness peppered with campers, U.S. Forest Service officials charged with managing the million-acre wilderness and the surrounding Superior National Forest faced a decision. A lightning-caused fire was burning to the southwest of Lakes One, Two, and Three near Ely, MN. Should they put it out or should they allow it to burn?

On the one hand, the forest in the path of the fire was ready for burning. The last major fire in the area had flamed nearly a century before and the regrowth of trees after much of the area was logged in the middle of the last century provided a rich source of fuels. In an ecosystem where wildfire has always played a vital role in forest succession and health, the burgeoning fire could be seen as a welcome event.

On the other hand, the fire had the potential to char acres of the forest decorating some of the most popular camping destinations in the BWCAW and close down the busy 'Number Lakes' travel corridor during the height of the canoe/camping season. If the fire ran, there was also the possibility that it would leave the wilderness area and threaten property and lives. Or, the fire might reach the trees toppled in

the July 4, 1999 blowdown, creating a conflagration in the wilderness that could spread into the populated areas along the Gunflint Trail.

If the needs of the forest were for a fire, the wants of the people argued for fire suppression.

In the end, the Forest Service chose to put out that fire – the Turtle Lake Fire of 2006. Aircraft doused its flames with water, firefighters met it on the ground, and the blaze was contained to just 2,085 acres. The fire only blackened the area east of Turtle Lake and the fingers of land between Clearwater, Pietro, and Gull Lakes.

Computer projections of what the fire might have done had it not been stopped in its tracks suggest it would have burned north to the shore of Lake Three, east to Pose and Fallen Arch lakes on the Pow Wow Hiking Trail, south to the Isabella River and Quadga Lake near the wilderness boundary, and west to the shores of Bald Eagle Lake.

In 2006, fire suppression around Turtle Lake kept the forest green, kept the Number Lakes route open for the season, and assured that neither lives nor property were lost to those flames. South of Lakes One, Two, and Three, however, and south of a little waterway flowing out of Clearwater Lake, listed on maps as Pagami Creek, the forest fuels that might have burned in 2006 remained in place.

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Photo courtesy USDA Forest Service-Superior National Forest.

Five summers later, a lightning strike to one of the trees lining Pagami Creek would initiate what ultimately grew into the largest wildfire in Minnesota in more than a century – one that grew, in part, thanks to the fuel-rich forests that remained unburned in the summer of 2006.

For a fire that ended up burning nearly 93,000 acres of forest to the south and east of its ignition point, the Pagami Creek Fire initially prompted concern over what lay to its north, and, that, only after the fire burned slowly and largely in place more than a week. Soil conditions and forecast weather suggested to Forest Service officials that the fire, like many in 2011, posed little threat to the wilderness.

“All of those factors pretty much told us that there wasn’t any indication that this fire was going to get real large,” Mark Van Every, the Superior National Forest’s Kawishiwi District Ranger, told *Wilderness News* in October. “It showed that the fire would grow over time, but not that it would get anywhere close to what it did. We had a number of fires that we handled similarly to this one, starting as early as May and June, that we managed as a natural fire.”

On August 26, however, as conditions on the ground got drier and predicted rains failed to fall, the fire made a run that expanded its footprint to the southeast. Concern for what lay to the north prompted Van Every and the Forest Service to mobilize a team to contain the fire.

“From August 26, when the fire made its first run to 130 acres, we took immediate action to suppress the fire and had been doing so ever since,” Van Every emphasized.

Pagami Creek, located southeast of the South Kawishiwi River, is a mere three miles, as the crow flies, from the Fernberg Trail which connects Ely with a constellation of BWCAW entry points on the west side of the wilderness and which is populated with resorts and vacation homes. Concern mounted that prevailing autumn winds could drive the fire north, putting property and lives at risk.

On Labor Day weekend, September 3, 4, and 5, firefighters took the bold – and ultimately controversial step – of burning approximately 2,000 acres of forest mostly to the northeast of the Pagami Creek ignition point, in an effort to protect the Fernburg Road corridor. Using planes that dropped jellied gasoline on the wilderness forest, the ‘burn out’ operation torched the forest southwest of Lake One and west of Lake Two.

On September 9, however, from the southern edge of the original fire and the burn out operation, the fire nearly doubled in size, pushing southeast of the paddle-and-portage route between Clearwater Lake and Lake Two. The next day the fire front pushed further south, consuming nearly 4,000 acres as it blazed through the forest between Lake Three and Pietro Lake.

Van Every acknowledges that the burn-out operation to protect against a northward run by the fire may have contributed to the southern advance.

“We’re looking at a lot of that,” he said in October. There’s probably no question that some of the fire spread that came [south] came out of [the burn-out area], but as near as we can tell most of it came out of this original 130-acre burn.”

The southern advances on September 9 and 10 consumed forest that was spared in 2006 when the officials decided to snuff out the Turtle Lake Fire. When the flames of the Pagami Creek Fire met the forest burned in 2006 – in the fingers of

land between Clearwater, Pietro, and Gull Lakes – the fire was stopped dead.

Fire suppression five years ago helped set the stage for the Pagami Creek Fire’s two signature days – September 11 and 12 – when the fire tore south and then exploded east, torching a grand total of 92,682 acres of forest inside and outside the wilderness, threatening lives and property, and making Pagami Creek synonymous with a raging wildfire rather than a sleepy little creek meandering through the Boundary Waters.

September 10th

When the sun set on the northwoods on Saturday, September 10, the Pagami Creek Fire had left a black footprint of charred forest from Lake One in the north to an arc running from Pietro Lake to Horseshoe Lake in the south. Twenty-two days into the fire, 4,500 acres had burned, and an active fire front on the south edge of the fire had firefighters increasingly nervous.

The fire had burned 1,750 acres during the day on that Saturday. Surface moisture values, which firefighters use to forecast the likelihood of fire spread, were nearing the peak of a month-long climb from levels below the seasonal average (and well below those needed to propagate a wildfire) to near-record levels for early fall.

On the first of what would be the two defining days for the Pagami Creek Fire, the fire front burned a tongue of forest for six miles to the south, advancing from north of Gull Lake, over the western section of the Pow Wow Hiking Trails, through Quadga Lake, across the Isabella River, to within a mile of the wilderness’ southern boundary.

The flames consumed more than 10,000 acres, nearly quadrupling the size of the fire in a single day. Disconcertingly, the fire’s dash to the south opened wide fire fronts to the east and west, ominous developments, if wind direction changed. Firefighters continued attempts to clear endangered people from within a widening circle of forest.

“Every day we would sit and draw a line around the fire and say, how far do we think it could get tomorrow, based on the predicted weather, the current fire indicators, and all that,” Van Every recalled. “We’d double that, and then go out that far and move people out of the way. [After September 11], we thought it might, possibly, make Insula Lake in two days. It did it in less than two hours.”

September 12th

Fanned by strong southwesterly winds, on Monday morning, September 12, the newly-opened eastern front to the fire sprinted to the east at a pace unprecedented for a Boundary Waters fire, according to Van Every. Pushing from a fireline that extended from below Horseshoe Lake to Diana Lake on the Pow Wow Hiking Trail, the front advanced five miles in one hour. Landsat satellite imagery taken at 11:45 a.m. that day showed winds blowing huge orange flames and smoke toward the northeast. At noon, six wilderness rangers, who were clearing campers from Insula Lake, were forced to deploy their fire shelters as hot embers rained on them.



Above: Firefighters. At left: aerial photo by Kari Greer. CL215 scooping water at Snowbank Lake, photo by Kristi Marshall. Photos courtesy USDA Forest Service-Superior National Forest.

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Photos by Norma Christianson

Abandon Camp!

By Larry Christianson

“Abandon Camp” and “Pagami Creek Fire” entered our boundary waters lingo in a sudden and dramatic escape from a fast spreading forest fire.

But first . . . the rest of the story, beginning with extra care in planning for what was to be our longest canoe trip yet. Pushing beyond our usual five to seven day journey with a ten day adventure in the wilderness.

We headed for Ely on an early autumn “don’t have to start school” retirement time of relaxation, and paddled in from Lake One landing on Labor Day with morning fog and smoke disorientation on a very familiar route – along with two canoes of Forest Service guys just as confused as us. Their GPS finally led the way to Kawishiwi channel. And a beautiful day of sunshine and warmth burned off the fog and diminished the smoke from a smoldering, small forest fire nearby on Pagami Creek that had been ignited two weeks before by a lightning strike.

Fire management crews involved in a back burning operation off the portages between Lakes One and Two enthusiastically carried our packs as part of a strategy to keep the well used portages open and moving – very helpful to us older folks! Lots of noise with gas powered generators operating water pumps and sprinklers, plus helicopters and small planes overhead. We camped on the small island site marked #10 in the far south of Lake Three and settled in for a long stay – trying to answer the question of “how many days do you have to stay before losing track of what day it is?” And the even more important follow up: “how many more days before you don’t care what day it is?”

We were content to sit and relax – enjoying the incredible beauty of wilderness landscape and appreciating the simplicity of the setting. The easy going pace of days matched my aging abilities and flagging motivation. Weariness is for real. Reading and fishing, hanging around camp and paddling on the lake were nicely balanced – along with the companionship of my best friend Norma, and the interesting meals we prepare and happy hours enjoyed together.

A rewarding day trip to the east end of Lake Four – with flat water paddling and sharing a simple lunch while revisiting a special place I long ago named “Picnic Rapids.” Now a trickle as the Kawishiwi River finds a way through huge boulders, rock rubble and remnants of trees reduced to driftwood through erosion and time passing. Still a beautiful spot holding many cherished memories. Dead calm water and a light rain of ashes and partially burned leaves accompanied our paddle back to our campsite – gently signaling what felt like a subtle change in fire status, but no alarm yet.

The Pagami Creek Fire continued through all our days with trails of smoke in the distance, and sometimes settling near enough to smell and see as a gray haze mixed with morning mists to create spooky scenes. Daytime airplane activity let us know the fire was still smoldering. Rain was needed more than anything in this season of a long, hot, dry spell. Extremely low water levels. Swimming every day – nearly unbelievable for September in the boundary waters.

Warm days and mild nights brought the best of summer and only a few hints of autumn unfolding. Refreshing swims and hardly any mosquitoes at twilight. Warm water and birch trees beginning to show yellow leaves. Delicious fish meals began with a dandy smallmouth bass worthy of steaming with dried cranberries and sliced almonds. And continued with lemon sizzled fried walleye before our abrupt early evening escape from camp shortly before sunset on what was day six of our canoe trip due to the rapidly deteriorating fire situation –with the smoldering forest fire sending giant plumbs of smoke reaching high in the clear blue sky and flaming up and spreading fast in our direction on a sudden, rising west wind.

A Forest Service crew arrived out of nowhere, paddling fast to our camp, and telling us to pack everything up and evacuate out to Lake Four – immediately! Our campsite was now considered to be in the fire hot spot area, with ashes falling like a heavy rain and smoke thickening and billowing high overhead. It was a colorful yet haunting sight with the setting sun shining behind and through the ever changing smoke clouds.

So – with about two hours of daylight and twilight remaining, we scurried around and quickly tossed our equipment and food in the Duluth packs in a haphazard mess. And less than an hour later, we launched the canoe while listening to what sounded like the ear splitting roar of a jet plane never ending and watching towering flames consume the forest right to the south shore of Lake Three – barely more than a half mile from our then abandoned campsite. A sight never before seen by either of us, and incredibly sobering. An awesome display of the overwhelming destructive power of nature and everything captured in its path.

With adrenalin running big time, we paddled away from the flames and around a few small islands out into the open lake and two miles north in the wind and smoky twilight, before arriving at the Forest Service recommended overnight area on a small peninsula where Lake Three gives way to Lake Four very near the well known “Diamond Rock” landmark.

We settled in for a long night of windblown smoke on fire watch from our little red camp chairs snuggled into a cozy, sheltered area of small pine and cedar trees overlooking the water of both lakes. A double escape route – either east onto Lake Four or west onto Lake Three if the wind shifted and drove the flames northward. And we were both well aware of the worst case scenario being that of getting into the water with our life jackets on and wet towels strung over our heads – eerily reminiscent of my long ago great-great grandparents spending a similar night with their three young children in the Peshtigo River way back in 1871 during a massive forest fire in northern Wisconsin. They all survived to tell the story in a way that lives on through the generations of our family lore – which I don’t want to repeat for the sake of poetic symmetry!

Snacks and wine, talking and togetherness helped settle our rattled nerves and pass the time along with some writing and reading by head lamp. A nearly full moon shrouded in a smoky, burnt orange color accompanied by a few stars held off the pitch black of night as it so often can be in the wilderness. A very spooky scene – and all a good reminder about how very long a night can really be. No tent.

FIRE MOON

*Orange fire moon
rising full,
pulsating in smoky haze
through forest fire
burning.*

*Wildly.
Out of control
on a hot September
evening –
All around Lake Three
wilderness country.*

*Escaping camp
in the first wave
of evacuations,
in the frightening face
of advancing fiery
sounding.*

*Like an ear splitting roar
of a jet plane,
accompanied by flames
towering.*

*And racing rapidly
through the woods
nearby.*

*While paddling off,
through ashes raining,
toward darkness
and safety.*

*Up Lake Three
on a cozy peninsula
of comfort.*

*And hope
shining through smoke
and fire moon.*

– Larry Christianson

No sleeping bags. No bugs. No sleep beyond a little uneasy dozing. Lying on the ground during portions of the night with a hooded sweatshirt pulled up over my face helped me breathe better, and hopefully minimized potential harmful effects on my health issues related to arterial aneurysms awaiting surgical repair. And no flames – for which we both continued to be eternally grateful. No extra drama is a very good thing sometimes!

We had the canoe all loaded up and on the water before sunrise, and paddled out of the wilderness in the wind to Lake One landing on a very smoky, sunny, surreal Sunday morning – September 11 oddly enough. Forest Service crews and firefighters were everywhere, and all very helpful in clearing the entire Lake One route area, as well as providing updated information on what was becoming an ever increasing, dangerous forest fire spreading deeper into the boundary waters.

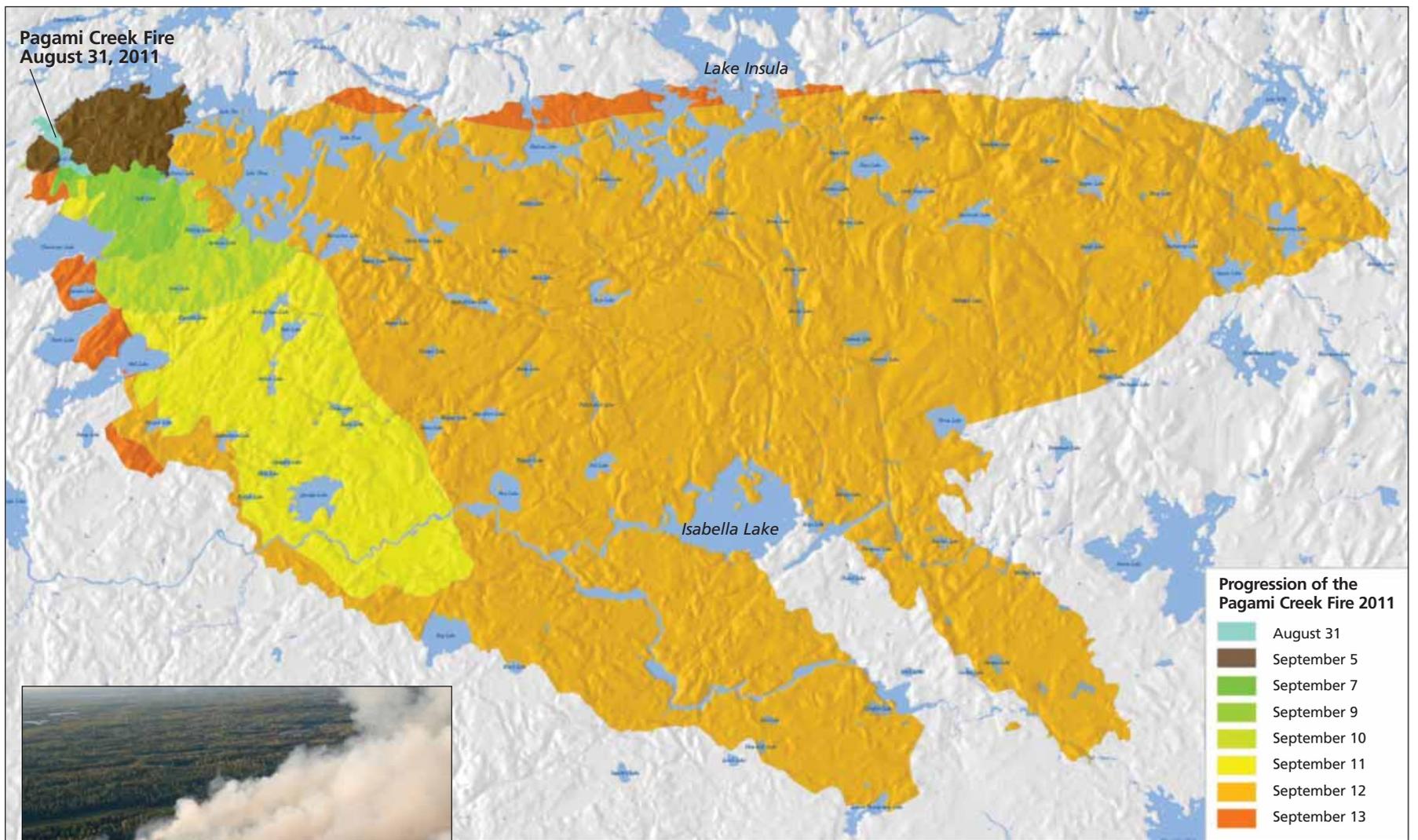
At the landing we learned that the fire was burning the islands on the south part of Lake Three – which hit us very hard. And shook us up even more than we imagined. It was very emotional to think that out of a one million acre wilderness area, the forest fire encompassed the exact place where we were camping, including our little island paradise of the north country. It was then we realized that we were in the first wave of evacuations, and that our hasty departure was not merely a precaution – it was a critical matter of personal safety and survival. For the presence, expertise and diligence of the Forest Service crews, we are deeply appreciative.

And we well know that fire is a natural event in the wilderness – good and healthy for the forest. Especially in this area of the boundary waters which has not seen a major forest fire since before the old logging era of a century ago. And who knows how many decades or centuries before all that human activity. Renewal in the form of fire as an essential part of the fabric of forest culture.

So – we wonder if we are the last campers to enjoy the small island site #10 in the far south of Lake Three, and we are curious about how it will regenerate and what it will look like in the future. A very unique canoe trip with a gripping story to tell the grandchildren about when grandpa and grandma escaped the big forest fire on Lake Three in the boundary waters canoe area. Next year a full 10 days in the wilderness – hopefully!

Larry Christianson is a retired chaplain and Norma is a retired teacher living in the Twin Cities. Both are longtime Boundary Waters paddlers. Larry is a poet whose books are published by North Star Press of St. Cloud. www.larrychristianson.com

Pagami Creek Fire, view from Lake Polly, photo by Hans Martin



Fire progression map courtesy USDA Forest Service-Superior National Forest.

Photo by Kari Greer, courtesy USDA Forest Service-Superior National Forest.

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“No one ever expected the fire to go that far in a single day, let alone as fast as it did in a single day,” Van Every said. “We’ve never seen that happen before, ever. The Ham Lake Fire and the Cavity Lake Fire, which moved pretty rapidly, I think the most that either of those fires moved in a single day was five miles. This was 16 miles in basically a matter of hours.”

The raging fire caused smoke to billow high into the atmosphere, producing its own weather that included thunder, lightning, hail, and high winds. Residents of homes north of Isabella were evacuated, while residents of Isabella proper were told to be ready to evacuate on short notice. By the end of that fateful day, the footprint of the fire had marked its chicken-shaped burn on the landscape.

The area blackened on September 12 ran on a fairly straight line from above Hudson Lake, across half of Insula Lake, and to the southern shore of Lake Polly to the north. Its southeastern edge ran from Lake Polly, through Kawasachong Lake to Ferne Lake. Two long legs of burned area scarred the forest starting at Isabella Lake and running to the Island River, west of Perent Lake in one case, and to Section 29 Lake in the other. From Section 29 Lake, the southwestern edge of the burn ran south of the Island River to Bog Lake and to the west of Quadga, Superstition, and Phospor Lakes.

More than 80% of the fire’s total acreage burned on September 12 alone. A total of 114 campsites

were affected by the fire, 51 of which received “severe” effects, according to the Forest Service. Van Every was quick to note that only 5% of the campsites in the wilderness were impacted by the fire. Still, 20% of the campsites in the Lake One to Insula Lake travel corridor did receive severe damage. Recreational travel in the area remains closed until spring.

The frontiers of the fire advanced only slightly after September 12, thanks to helpful weather and the firefighting efforts that mobilized nearly 900 firefighters to the area at the height of the effort and ultimately ended up costing more than \$22 million.

In the weeks after September 12, as cooler, wetter autumn weather came to the Boundary Waters region, firefighters slowly tightened the fire containment noose around the Pagami Creek Fire. By September 19, the fire was described as 23% contained. By October 2, the fire was deemed 71% contained, and on October 22, as firefighting efforts wound down, the fire was deemed 94% contained.

In the aftermath of the fire, critics have questioned Forest Service decision-making at critical stages in the incident. Should the fire have been snuffed immediately? Did the “burn-out” operation, designed to protect the Fernburg Road corridor to the north of the original fire, contribute significantly to the ultimate advance of the fire to the south? Why were fire behavior projections so far off the mark? Was the balance between the ecological and human values related to the fire tipped in the wrong direction?

“Do we have it wrong, do we need to put every fire out?” Van Every asked himself during the interview for this story. He pointed to a map on his computer screen. “This is the Turtle Lake

Fire; we stopped it right here. We used aircraft, we used firefighters. Based on the actual weather we had during that 10-day period in 2006, this is what that fire would have done if we hadn’t stopped it.”

Van Every’s map of the projected fire showed a burned area running through the land between Clearwater, Pietro, and Gull Lakes, up to Lake Three and down to Bald Eagle Lake and the Isabella River in the south, and spreading west into the Pow Wow Hiking Trail country to Pose Lake – the forest where the Pagami Creek Fire began to run in early September of 2011.

“It would have provided an effective barrier to this fire,” Van Every contended. “So the decisions that we make today – not that that was a wrong decision in 2006 – affect what happens in the future. If we had put Pagami Creek out, sooner or later we’d have had a large fire.”

“Our whole reason for allowing fires to burn in the wilderness,” Van Every continued, “is to create that mosaic pattern so, if we did get a fire, there are some things for that fire to work around, and there’s the opportunity for us to have some suppression where needed.” □



Photo by Cody Nelson, courtesy USDA Forest Service-Superior National Forest.

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The 1999 Blowdown and Forest Management Practices Impacts the Pagami Creek Fire

By Charlie Mahler

Natural fires in the Boundary Waters Canoe Area Wilderness – those started by lightning rather than, say, by careless campers – provide opportunities and risks for the managers of the BWCAW and the surrounding Superior National Forest. Since the Forest Service doesn't set fires in the wilderness for ecological purposes, natural fires provide singular opportunities for forest administrators to let fire – the main natural disturbance in the region and the catalyst for regeneration and secession in the forest – help them manage the ecosystem.

Contrarily, managers of the Superior National Forest do set fires in the wilderness for safety reasons. The 1999 Blowdown prompted a still-ongoing prescribed burning regime intended to reduce the risk of wildfire to property and lives outside the wilderness, mainly along the Gunflint Trail.

But, while natural fire offers managers the prospect of resetting the forest's succession timetable in managing the forest's mosaic of tree species and ages, the fires don't typically ignite in optimal locations to meet all the Forest Service's ecological goals. Some fires (like the Turtle Lake Fire in 2006) burn near busy wilderness travel corridors. Others start close to the wilderness boundaries, threatening people, property, and harvestable timber, and others flare near the 1999 Blowdown and its heavy fuels.

Managers, then, attempt to balance the needs of nature versus the needs of society when fires appear in the forest stressing that human safety takes precedent over the needs of the ecosystem. Indeed, prior to the Pagami Creek Fire, none of the 435 natural fires that burned in the BWCAW since 1987 grew beyond the wilderness boundaries.

The wilderness forest southeast of Pagami Creek hadn't experienced a major fire since 1910, when, according to the research of pioneering Boundary Waters forest ecologist Miron Heinselman, fires burned a swath of forest from Disappointment Lake in the north, through the area east of Lake Four, and down to the south of Wilder Lakes. Heinselman found evidence of fires in that area dating back to 1796. The most recent disturbances to the forests impacted by the Pagami Creek Fire, however, were logging operations in the area prior to its being designated a wilderness in 1978.

"This entire country was really heavily logged in the early 1900s and as late as the 1970s they were still pulling timber out of some of this country," Bruce Giersdorf, a Fire Behavior Analyst on the Pagami Creek Fire, explained. "So, the actual mosaic of the entire fire is quite diverse."

The mosaic included unlogged riparian forests, where the fire ignited, and was comprised of a lot of "dead-and-down" trees. Where logging was most intensive, less "dead-and-down" fuel remained, but thick stands of 50 to 70 year-old regenerated timber populated the forest.

Ironically, the 1999 Blowdown has been an on-going fire concern in the Boundary Waters for more than a decade, and was instrumental in fueling the 31,830 acre Cavity Lake Fire in 2006 and the 36,443 acre Ham Lake Fire in 2007 near the Gunflint Trail. Those fuels did not play a significant role in the Pagami Creek Fire, according to Giersdorf.

"The pockets [of 1999 blowdown] were quite small, we're not talking tens of thousands of acres, we're not even talking thousands of acres, probably more in the terms of hundreds."

Still, a raging fire consuming nearly 100,000 acres of forest – the sort of fire managers have feared the blowdown could produce – was what the Pagami Creek Fire metamorphosed into on September 11 and 12. □

INSIDE THE FIRE



The Pagami Creek Fire edge, October 7, 2011.



CI 215 Aircraft, photo by Greg Volhabber. Photos courtesy of USDA Forest Service-Superior National Forest.



Firefighter. Photo courtesy of USDA Forest Service-Superior National Forest.



Jack pine cones opening up. Photo courtesy of USDA Forest Service-Superior National Forest.