

Rapid Lesson Sharing

Event Type: Entrapment

Date: March 18, 2025

Location: West Beach Rx Unit
Indiana Dunes National Park
Porter, Indiana

The Story and Lessons from the West Beach Rx IWI

Pre-Burn Conditions

Generally favorable spring burn conditions, completed preparation work, and available resources for holding and ignitions put the West Beach Prescribed Fire (Rx) Unit in prescription. This burn entry targeted reducing leaf accumulation in grass and timber litter fuel models (GR5, GR6, and TL9) in this popular recreation area. While the entire West Beach Rx Unit consists of 346 acres, it can be divided into smaller segments to take advantage of narrow prescription windows.

Initial ignitions and a test fire were conducted on small, vegetated islands in the West Beach parking lot. Due to winds at the upper end of the wind prescription, it was decided to not burn the entire unit but, rather, target the sheltered area just north of Long Lake.

All resources were briefed and the 10-acre segment (circled in yellow on map – Figure 1) just north of Long Lake and south of the West Beach Road was lined out to be burned.

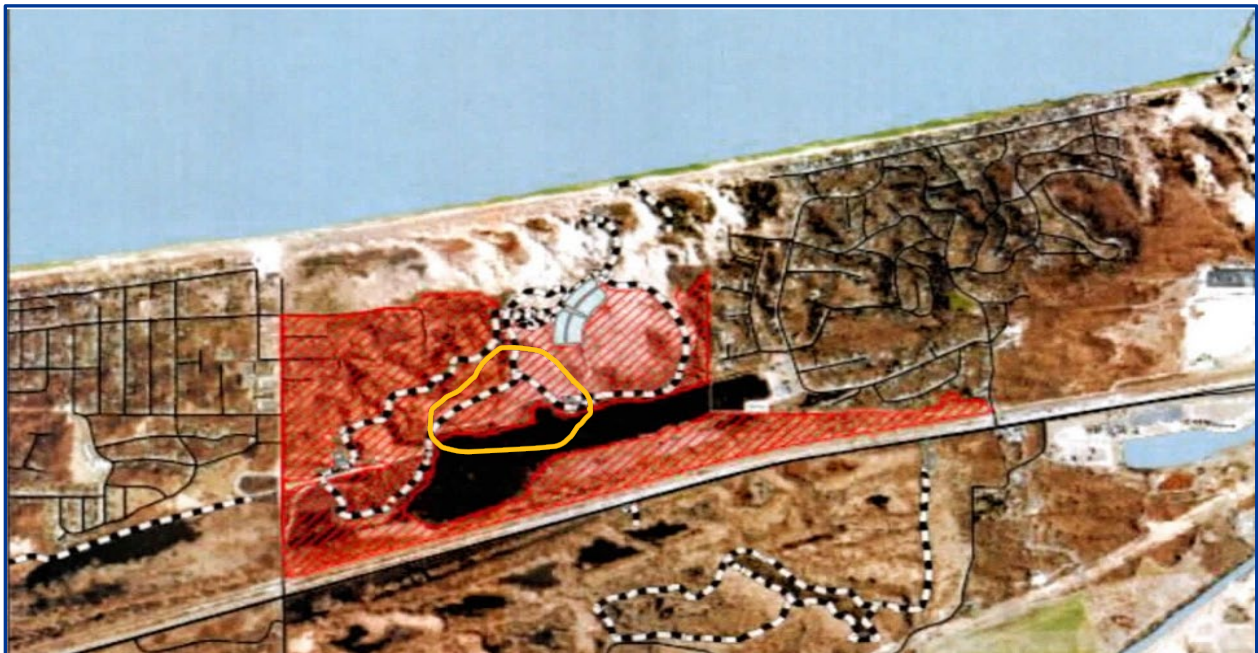


Figure 1 – Vicinity map, including the burn segment (circled by yellow line).

Briefings/Test Fire

A briefing was given prior to ignition that highlighted the operational, communication and safety plans. Weather was taken and a test fire was conducted, specifically for the Long Lake area.

Spot Weather Forecast for March 18, 2025 – 1300

Temp – 60

Rh – 49%

20 ft. wind – 13 mph (mid-flame 6.5 mph)

[It is known that forecasting close to Lake Michigan is difficult due to lake effect weather.]

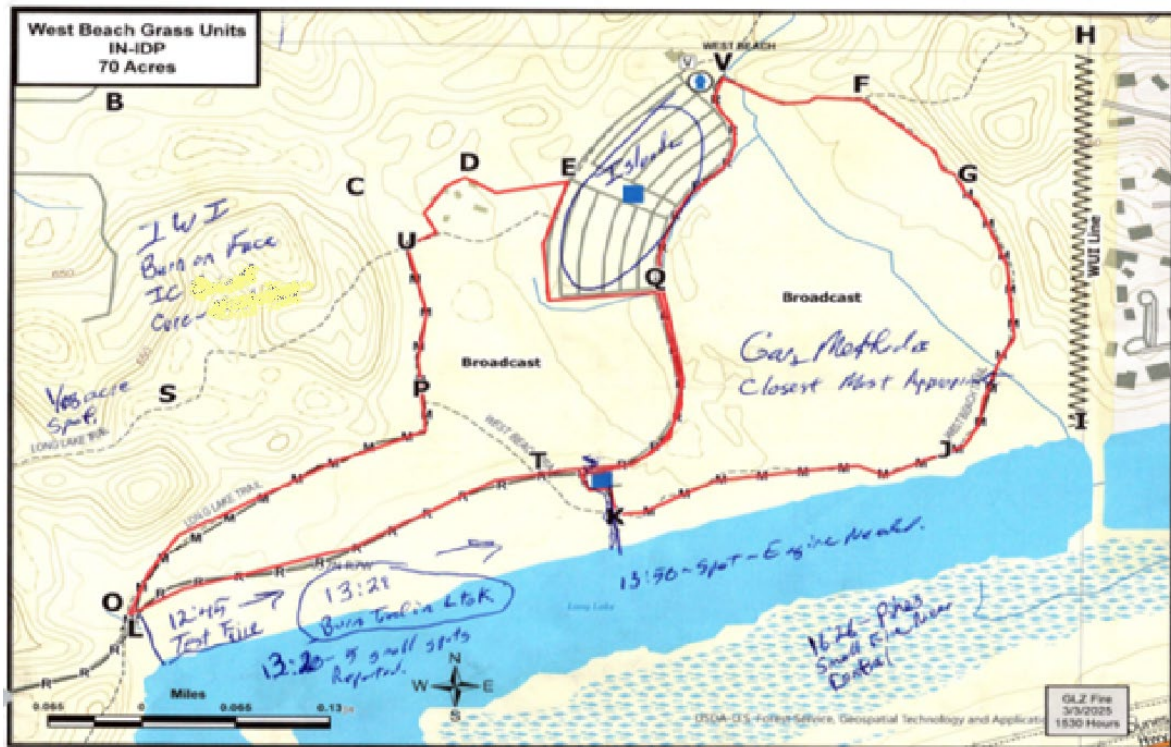


Figure 2 – Map of burn segment with notes.

Actual Onsite 1300 Observations

Temp – 68

Rh – 40%

Wind (mid-flame) – 3-5mph

The Incident Within the Incident

Operations were normal across the burn area with only 4-5 small spot fires (softball size to 2x2 feet) crossing the West Beach Road. All were immediately caught and easily extinguished. After perimeter ignitions were complete, personnel switched to patrol status while interior fuels slowly backed and burned out. A new spot was identified across West Beach Road shortly afterwards.



Figure 3 – Smoke across the road that caused the spot fire.

Holding resources were requested. They included: 4 ATVs, 1 UTV and available engines. The spot was approximately 10x10 feet, progressing north. Multiple ATVs, 1 UTV and 1 Type 6 Engine immediately responded. During the gust of wind, flame lengths were 6 feet, flame height was 2 feet, and rates of spread were moderate to high for this fuel type.

Three ATVs were first on scene. Their three personnel anchored to the road and began working both flanks with pumps and water.

UTV and Type 6 Engine Engage with Spot Fire

Within 30 seconds of the spot being detected, a pump and tank-equipped UTV and the Type 6 Engine arrived on scene. The UTV navigated off the road toward the west (left) flank/head of the fire while the Type 6 Engine plugged into the anchor point beginning at the road, on the east (right) flank.

The UTV responded with an operator and passenger. The UTV operator positioned the UTV on the spot fire's west flank in front of the head, near the side of a small dune. The operator exited the UTV and started pulling hose off the reel to begin suppression operations on the left flank/head. The passenger grabbed a hand tool and began installing handline from the anchor.

One of the ATV operators took control of the nozzle from the UTV and started spraying water on the spot fire. It was noted that pump pressure/water volume was inadequate to adequately suppress the fire.

The spot fire was now 20x20 feet and growing to the north with a good anchor point and effective suppression progressing along the flanks.

Head Fire Impacts UTV

Shortly after the UTV started suppression operations, nearby personnel noticed the head fire burning under and impacting the UTV. Calls were made over the radio and by direct voice for the operator to vacate and get out of the area—with or without the UTV.

The UTV operator returned from the pump and hose reel area to the driver's seat of the idling UTV to move it out of the fire. While making this attempt, the operator was exposed to intense heat from both the head fire and the now burning UTV which had tires and a portion of the bed on fire.

The operator was able to mount the UTV but was not able to get it into gear, likely due to depressing the accelerator and increasing RPMs therefore impeding transmission engagement. Next, the UTV operator abandoned the vehicle and walked out to the road.

The ATV operator dropped the UTV's hose line, retreated, and assisted the engine crew with pulling hose to contain the spot and extinguish the UTV. After the spot was contained and the UTV was extinguished, it was driven out of the black to the road.

UTV Operator is Burned – IWI is Initiated

At this time, fire personnel noticed that the UTV operator had received burns on their face while trying to reposition the UTV away from the head of the fire. Incident Within an Incident (IWI) and medical protocols were initiated.

The burned firefighter was taken by ambulance to a local hospital, then later transferred to a burn center that specializes in facial burns and plastic surgery. It was determined the firefighter had received first and second degree burns to their face and was subsequently treated and released from the burn center that evening.



Figure 4 – Spot fire after extinguishment.



Figure 5 – UTV post incident, showing fire damage.

Timeline

Long Lake Segment

- 12:45** – Test fire
 - 13:20** – Small spots called in. All were picked up.
 - 13:29** – Firing operations tied in.
 - 13:50** – Spot fire that produced IWI called in.
 - 13:55 +/-** – Spot contained, UTV extinguished, burn injuries noted and medical response ensued.
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Lessons

- ❖ Deceptively light flashy fuels burn hot and move quickly. Frontal assault on a fire is a “Watch Out” and is a tactic to be utilized in limited situations. Attack from the black or keeping one foot in the black is the safest tactic.
- ❖ Working from a safe anchor point would have prevented direct head fire flame impingement on the UTV, provided easier access to the black, and potentially prevented the burn injury.
- ❖ Know firefighting apparatus capabilities and suitability for the task. Ensure pump pressures and volume is adequate to suppress the head fire.
- ❖ This model UTV (Polaris Ranger XP 1000) has a safety feature that will not allow the transmission to shift out of park under high RPMs. Familiarity of safety features and practice mounting and moving the UTV should be part of pre-burn checks.
- ❖ Incidents often occur on smaller fires or isolated portions of larger fires. Diligence must be paid even when fires are in mop-up or patrol status.
- ❖ Protective safety glasses worn by the burned firefighter prevented their eyes from receiving burn injuries.

Medical Response

- ❖ The pre-burn briefing included identifying EMTs and a complete Medical Plan, which assisted in the quick initial care of the burn victim. The medical plan also identified medical transport contacts and information about the nearest medical facility.
- ❖ Clear, concise communications allowed for medical responders to quickly locate, assess, and provide transport for the victim to higher qualified medical providers.
- ❖ Use of past scenarios and exercises enabled responders to implement tasks that they were familiar with and expedited the response.
- ❖ EMS personnel remained vigilant and focused on the task of patient care regardless of internal and external distractions.

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