Nighttime Aquatic Invasive Species Watercraft Inspection and Decontamination Stations: A Review
Acknowledgements
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EXECUTIVE SUMMARY

Since 2017, two states, two provinces, and one tribe in the Columbia River Basin geography have conducted nighttime watercraft inspection and decontamination stations. Although there are differences among operating schedules, all prioritize resources targeting high-risk watercraft traveling during busy months, days, and hours.

Costs to operate nighttime inspection stations vary based on existing infrastructure. Those facilities lacking adequate infrastructure, such as lighting and electrical power, required initial one-time capital costs prior to operation. Costs ranged from $700 for lighting to $25,000 for electronic message boards. Some nighttime inspectors receive additional compensation for working weekends and evenings.

Challenges to operating nighttime inspection stations include hiring additional inspectors (accessing an adequate local work force can be challenging) and additional law enforcement officers. Other challenges include boredom experienced by inspectors, safety concerns for those inspectors that work alone (some entities require at least two people on each nighttime shift), limited enforcement officers in the evening (which prevents immediate access to individuals that drive by stations without stopping), and adequate signage.

Nighttime inspections have been successful based on the number of mussel-fouled boats intercepted, raised awareness by the public regarding the importance entities place on transporting clean watercraft, success inspecting watercraft being transported long distances, the percentage of high-risk boats inspected during evening hours compared to daylight hours, use of canines to supplement human inspectors, and identifying the need for increased funding to support nighttime inspections because of the value they provide.
ALBERTA

Background
Watercraft inspections and decontaminations are mandatory in Alberta. The two highest risk stations (out of eight total stations) operate 24 hours per day, seven months per year, and have done so since 2017. Both nighttime stations are located at commercial vehicle weigh scales, where the parking lots are well lit and there is a secure building. Alberta highways have large signs with yellow flashing lights indicating the station is open, making it highly visible to motorists after dark. Because of staff shortages, sometimes the stations are open 20 hours per day, closing only between 2am–6am. Canada Border Services officers notify Alberta staff when boats enter Canada and stations are closed so that staff can conduct inspections. Only one staff is scheduled per graveyard shift, and all inspectors rotate this shift on the schedule. Inspectors have the authority to quarantine a boat if they cannot conduct a full inspection during the night. If this happens, program staff follow-up with the boater to conduct an inspection during daylight hours.

Costs
In addition to the parking lot flood lights, Alberta staff use 2x Glow Bugs ($3,700 USD each) and 2x Pelican Lights ($700 USD each) for an additional $9,000 USD cost per station. In Alberta, inspectors receive shift premium for working weekends and for working the night shift, adding to the overall cost of running the station.

Challenges
Enforcement during the night is non-existent as officers tend not to work past midnight. A member of the leadership team must be on call 24/7 in case any issues arise during the night. Some staff have expressed safety concerns about working alone at what effectively becomes a truck stop during the night. All Inspectors (when working alone) have a safety link app on their phone, and check in/ out with the Provincial Control Centre every time they exit the building to conduct an inspection. (there is also a panic button as part of this app).

Successes
Although the frequency of boats is minimal after 22:00 hrs, Alberta has intercepted two mussel–fouled boats after dark. Since 2017, Alberta has conducted 6,696 inspects between 1900 hrs–22:00 hours, and 384 inspections between 22:00 hrs and 0600. Staffing inspection stations during evening hours is good for public perception. Almost all boats traveling during the night are not local resident boaters, but rather long distance travelers. Inspectors report that evening boats are always high risk, and they perform a hot wash for almost every boat traveling during the night. Having canines are a great addition for night inspections (human vision and canine olfaction are used to complement each other when inspecting a high-risk boat).

BRITISH COLUMBIA

Background
Since 2017, British Columbia has been operating one inspection station 24hrs at the Golden station on Hwy 1 (Trans Canada). During the 2019 season, the Golden station operated 24hrs from mid-May to end of August. the Golden station operates 10 hr. days in the spring (April–early May and fall Sep–Oct). During the 2019 season, British Columbia piloted nighttime inspections at the Olsen inspection station on Hwy 3 on the southeastern border with Alberta. The pilot included 24hr operations on Thursdays and Fridays and up to 9pm on Saturdays on July and August long weekends.

Costs
Costs to conduct a 24hr station is primarily increased number of staff; at the Golden station, 12 inspectors work from May to September. All staff must work in pairs; there are no lone worker shifts. In British Columbia, the inspectors receive an afternoon shift premium (hours worked between 2pm–9pm) and night shift premium (from
9pm–5am), which is an additional $1.49/hour. The costs to run the pilot program were at OT rates (1.5x for the first 2 hours and 2x pay thereafter as these shifts were above and beyond the regular scheduled hours). The costs for lighting and safety equipment depends on the existing infrastructure at the site. The Golden station is located at a site with existing street lighting, which helps reduce the amount of required lighting. In terms of one-time capital purchases, the Golden station has three balloon lights (~$5,000 each), 1 generator ($1700) and two electronic message boards (~$25,000 each) along the highway to improve visibility. The pilot at the Olsen inspection station required similar capital equipment. Please note that costs are in CDN.

Challenges

Enforcement capacity limits the ability to respond to individuals that drive by stations at night; evening enforcement requires paying full-time enforcement officers overtime. Staff face a variety of challenges, including boredom (our statistics illustrate a significant drop in watercraft through the night stations occurs between midnight and 5am). All staff are equipped with satellite messengers and required to check in every four hours. In 2019, we hired an additional Sergeant based out of Golden to assist with staff oversight and supervision (12 inspectors operate at the Golden station). In 2017, 24hr operations operating through mid-November presented significant safety concerns because of snow and icy conditions, and very few boats were traveling during that time.

Successes

There is value in operating stations until midnight and opening at 5–6am; significantly fewer boats are intercepted between midnight and 5am. Operating a station at key strategic locations with high-risk volume at 20hrs/day would intercept the majority of the watercraft traffic. In 2018, two mussel-fouled boats were intercepted at midnight and 5am at the Golden inspection station; one had previously been inspected by Alberta (we received advance notification) and the other was transporting dead mussels (it had been out of the water over a year). During the 2018 season, between 10pm and 7am, a total of 24 high-risk watercraft were intercepted at the Golden inspection station during the nighttime operation. This represents a slight decrease from 27 high-risk inspections during the 2017 season.

IDAHO

Background

In 2017, Idaho conducted a pilot project at the Cotterell I-84 West station operating 24 hours from July 1–October 1. In 2018 and 2019, Idaho conducted an 18-hour operation (6am–midnight) at Malad I-15 North, Highway 93 Jackpot, and Cedars I-90 West for the duration of the season as well as a 24-hour operation at Cotterell I-84 West.

Costs

One-time costs included site improvement projects that varied depending on existing infrastructure. Improvements included electrical power installation ($1–$8,000), lighting ($1,000), and other enhancements.

Challenges

Staffing inspection stations at night have a variety of challenges, depending on the site and the local available work force. Law enforcement is needed at night for safety, security, and boater compliance. Adequate signage and electronic message reader boards are necessary for night inspection stations.

WASHINGTON

Background

In 2019, Washington conducted nighttime operations at MCS Spokane from Sunset to 10pm since May 18th, resulting in excess of 100 hours of nighttime.
Costs
Worker salary is the primary cost to operate nighttime stations.

Challenges
The primary challenges are crew safety, lighting, boater awareness that the check station is active, drive-by increases after sunset (which increase in the evening).

Successes
Increasing the hours of our nighttime inspection stations increase the potential to intercept infested watercraft. Washington has been successful in identifying the need for more funding for increasing staff to cover nighttime operations.
CONFEDERATED SALISH AND KOOTENAI TRIBES

Background
The Confederated Salish and Kootenai Tribes (CSKT) conducted nighttime inspection stations on Highway 93, headed north into the Flathead Basin. This location is the busiest watercraft inspection and decontamination station in Montana. The station was operated May 15th–September 15th in 2018 and 2019 seven days a week.

Costs
Inspectors are paid an additional $2/hour to staff nighttime stations. Minimal capital investments were needed to conduct nighttime stations: Four construction lights at $140 each, power cords ($250), drive over power cord protector ($150), generator ($250) and gasoline. Once power was connected to the station, the generator was no longer used.

Challenges
Challenges included ensuring seven day per week coverage and finding people to fill night shifts at with late notice. Otherwise, nighttime operations are easier to conduct than daytime operations because there are fewer watercraft and fewer disgruntled boaters.

Successes
Each week, we inspected multiple high-risk watercraft from mussel-fouled states that had been previously inspected. There is increased awareness and perception among the public that we are taking this issue seriously.

MONTANA AND OREGON

Neither Montana nor Oregon have operated nighttime inspection stations.