

WILDFIRE SPRINKLER SYSTEMS

FREQUENTLY ASKED QUESTIONS (FAQs)

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Many homeowners have installed wildfire sprinkler systems in areas around their structures and surrounding woodland to mitigate the risk of loss when wildfires move through their area. The purpose of these systems is to increase the humidity level in critical areas and thus prevent the initiation of fire at/on or near their property. In past fires, these systems have proven effective in preventing property loss during wildfires. The systems typically consist of a water pump located near a water source (lake) and powered by a propane and/or gasoline engine, an intake pipe/hose that pulls from the lake, and a distribution system of pipes that move the water through pipes to sprinklers located around the property.

The following are frequently asked questions relating to these systems, their maintenance and their use:

- ***When, how long and who should run my sprinkler system?***

There are three situations when sprinkler systems should be run:

1. **Testing** – Systems should be run monthly during the fire season to ensure that all components are working properly. Testing should ensure that:
 - there is adequate oil in the engine.
 - the system will start consistently and stay running.
 - the water inlet hose is adequately submerged in the lake.
 - there are no breaks on the main lines or hoses
 - water lines leading to the sprinkler heads are not leaking, heads are not clogged, and all connections are tight.
 - sprinkler heads are putting out enough flow and are rotating as needed to cover the intended area.
 - branches are not impeding the functioning of the sprinkler heads.
 - there is adequate coverage (watering) around structures, propane tanks and the wildfire pump itself.
 - propane cylinders are not next to pump engine exhaust but instead are located at the max distance allowed by the cylinder to engine hose.
 - hydrants are cleared of branches and the hydrant sign is visible for responders so that they can use the hydrant as necessary.

The system only need be run long enough to test these aspects. The owner should perform this testing. If problems are discovered, they should be corrected either by the owner or by the sprinkler system provider.

2. **Heightened Wildfire Threat** – When wildfires present a threat to the area, owners (or their designates) should run their system to raise the moisture and humidity level of the sprinkled area. Run the system for 2-6 hours every 1-3 days depending on weather conditions and the current moisture level in the soil. It is best to run the systems in the evening to minimize loss of moisture through evaporation, however, run them whenever possible.
3. **Immediate Wildfire Threat/Evacuation**- When asked to evacuate, systems should be started by the owner or their designate. Systems should be left running on the fuel source that will provide the maximum amount of runtime (the 50 lb propane cylinder - see fuel question below).

- ***Will my system be run and after I evacuate?***

Pending availability of resources and accessibility to the system, and if safety of personnel is not compromised, the fire department may run systems if needed to provide further mitigation after the owner has evacuated. However, fire situations are very dynamic and unpredictable. Thus there are no guarantees that personnel will be able to get to your system even when best efforts are made to do so.

- ***How much fuel should be maintained at my system pump and how should it be used.***

Systems should have the following filled propane cylinders stored at the system engine/pump unit:

1. 2- 20 lb cylinders – This is the cylinder typically used for gas grills. Each cylinder will provide up to 6 hours of runtime depending on the size and RPMs of the pump engine. Use of these cylinders should be for testing and in times of heightened wildfire threat. Most systems are initially setup with 1- 20 lb cylinder, but 2 cylinders are recommended to always ensure availability of one full cylinder.
2. 1- 50 lb cylinder – These larger cylinders will provide up to 24 hours of runtime. These should be used when there is an immediate wildfire threat (i.e. when fire is expected in the next few hours) and owners are requested to evacuate

- ***Where can I buy propane fuel for my system?***

Cylinders can be re-filled (or swapped out) at hardware stores and gas stations in Grand Marais as well as Voyager Canoe Outfitters (on Sag Lake Trail) or Golden Eagle Lodge (on Clearwater Rd) .

- ***When should I change the oil in my system?***

Oil level and clarity should be checked regularly. Oil should be changed if the oil appears dark, milky and/or after 24 hours of continuous run-time. Refer to your operating manual for proper oil grade.

- ***How do I know if there is a current wildfire threat that would dictate running my system?***

Cook County maintains an emergency management system for notification of residents. Residents can determine the status of their location online by accessing Cook County Wildfire Update on the Cook County website (<https://cookcountymn.gov/>). Residents can sign up for notifications of status changes for their location through the Cook County **Code Red** system. Information on how to signup is available at: <https://cookcountymn.gov/government/departments/sheriff/codered.php>

Other sources of information on current wildfires can also be found at:

Watch Duty - <https://app.watchduty.org/> or by downloading the Watch Duty app.

US Forest Service Incident Information System - <https://inciweb.nwcg.gov/>

Superior National Forest Facebook page - <https://www.facebook.com/SuperiorNF>

- ***What action should be taken when a pre-evacuation (“Ready” or “Set”) is ordered?***

Systems should be run as indicated in the Heightened Wildfire Threat circumstance described above.

- ***Who are system providers in the area that can provide repair/maintenance services for my sprinkler system?***

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