

## Wildland Fire Operations Research Group Project Proposal Form

This proposal form is designed to encourage innovative ideas directly from wildland fire staff.

Please complete and submit this form to:

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**Project Title: Sprinkler Design**

**Applicant** (*list basic contact information i.e. name, agency, address, email and ph #'s*).

Alberta Sustainable Resource Development  
Brian Orum, Wildfire Ranger  
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**Operational Issue** (*summarize your issue and, or idea in a few short sentences*).

Sprinkler systems are commonly used in wildland firefighting for structural protection and fireline re-enforcement. The sprinklers used are generally the garden variety type which can be purchased at the local hardware store. Sprinklers are typically mounted on the ground or they are elevated using a simple method e.g. pole or roof mount. These systems are effective in many situations, but water dispersal is generally restricted by water pressure, mounting apparatus used and sprinkler design.

During operations firefighters were noted to be using an improvised sprinkler mount which was used to change the orientation of the sprinkler to allow for increased vertical water delivery. Their objective was to adjust sprinkler arch to propel water higher into the tree canopy to increase the wetting action along the fireline. This study is geared towards sprinkler design improvements to provide for increased vertical spray.

**Potential Benefits** (*expand on the benefits this work could bring to Wildland Fire Operations e.g. improved safety, operational efficiency, cost reduction, etc.*).

Development of a sprinkler which provides a increased vertical spray is believed to provide firefighters with more overall deployment flexibility.

**Proposed Technology Development** *(briefly describe what end products are desired from this research e.g. data, report, handbook, video, poster, new equipment, etc.).*

Report and video