

# Proposal for new research into the cost of fire suppression in Montana's Wildland Urban Interface.

## Overview

Headwaters Economics and Montana Department of Natural Resources (DNRC) propose a new partnership to study future development trends in the Wildland Urban Interface (WUI) and associated increases in fire suppression costs for high-growth areas in Montana.

## Background

The increasing cost of fire suppression represents a major policy issue: fire fighting costs for the USDA Forest Service and the Department of Interior exceeded \$1 billion nation-wide and \$50 million (net) for the State of Montana in 2007. Separate research studies recently conducted by the DNRC and Headwaters Economics make it clear that development in the WUI is exacerbating the problem of mounting fire-fighting costs: DNRC's study found that WUI fires cost about 50% more to suppress than non-interface fires and Headwaters Economics' research shows that 91% of privately owned, fire-prone land in the state remains ripe for development.

Headwaters Economics and DNRC propose a new, jointly-managed case study in Montana designed to project the state's future fire suppression costs if development in fire-prone areas continues at its current pace. Combining the research skills and expertise in each entity will contribute to a robust and cost efficient study. We are requesting funds from the Fire Suppression Interim Committee to support the project.

## Methods

1. A research consultant will examine six case studies of recent wildland fires in the state's jurisdiction at fine-scale to determine the portions of fire suppression costs directly associated with the WUI. DNRC will oversee this portion of the research.
2. Headwaters Economics will adapt an existing model of residential build-out scenarios to predict the potential for future development in high-growth areas in Montana to 2025 if current development trends continue.
3. Headwaters Economics will work directly with the research consultant to integrate the incident-specific cost analysis gathered from the six fire-fighting case studies with the build-out model to predict the cost of wildfire protection given forecasted development in fire-prone and high-growth areas of Montana.

## Product

Headwaters Economics will deliver maps, tables and a report to the Fire Suppression Interim Committee illustrating the results of the fire suppression cost determination and residential build-out research by May 30. The products will detail the projected future costs of fire suppression activities in high-growth areas in Montana if current development trends continue to 2025. GIS analysis will also determine the agencies responsible for these costs as first responders to wildland fires.

All results and products will be jointly owned by DNRC and Headwaters Economics, and freely available to the public.

## Roles

Headwaters Economics and DNRC will sign an Memorandum of Understanding (MOU) that will clearly articulate roles and responsibilities of each entity. The general outline of the agreed upon roles and responsibilities follow:

- Headwaters Economics agrees to hire and manage a contract research position for the duration of the research and provide all resources necessary for completion of the research including salary, travel expenses, office space and computer if required.
- DNRC agrees to provide the contract researcher access to all required data and computer systems, help train and mentor the contract researcher on use of I-Suite and daily fire reports, and provide temporary office space and computer access during the data collection phase of the research.
- DNRC and Headwaters Economics will each have full ownership of the fire suppression cost data and agree to make the results of the research freely available to the general public.

## Budget

Headwaters Economics requests \$10,000 to complete all aspects of the work. The budget was arrived at through conversations with DNRC regarding the accessibility of data, estimate of time, travel costs, and publication and dissemination costs.

## About Headwaters Economics

Headwaters Economics is an independent, nonprofit research group. Our mission is to improve community development and land management decisions in the West. We are a group of dedicated economists, geographers, ecologists, and educators who care deeply about the West. More than just sophisticated analysts, we have extensive on-the-ground experience. Our staff has been working for over 20 years with communities, landowners, public land managers, and elected officials in the region.

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