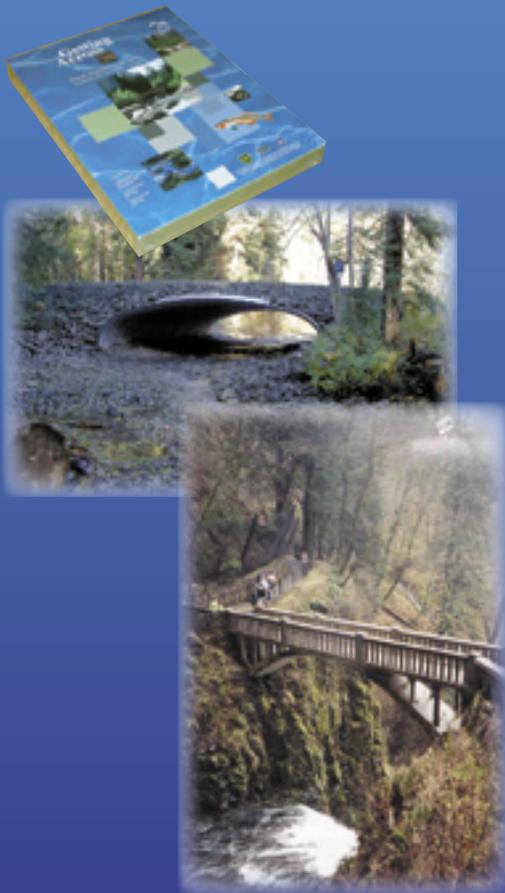
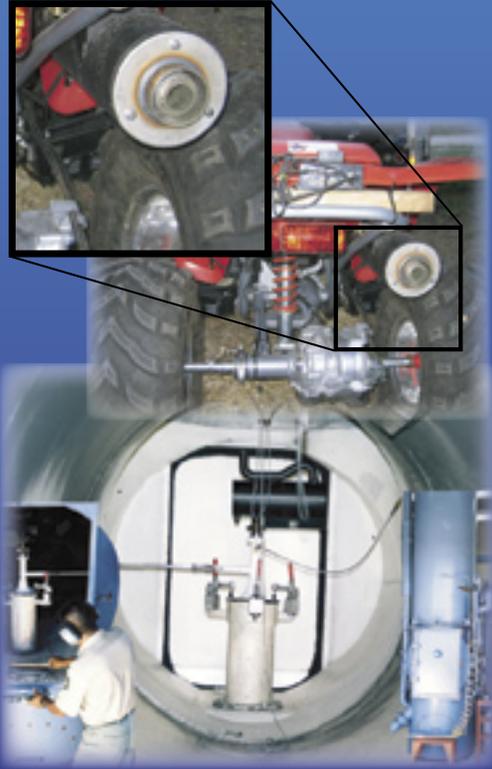




**Tools To Reduce Road Impacts**



**Water/Road Tools**



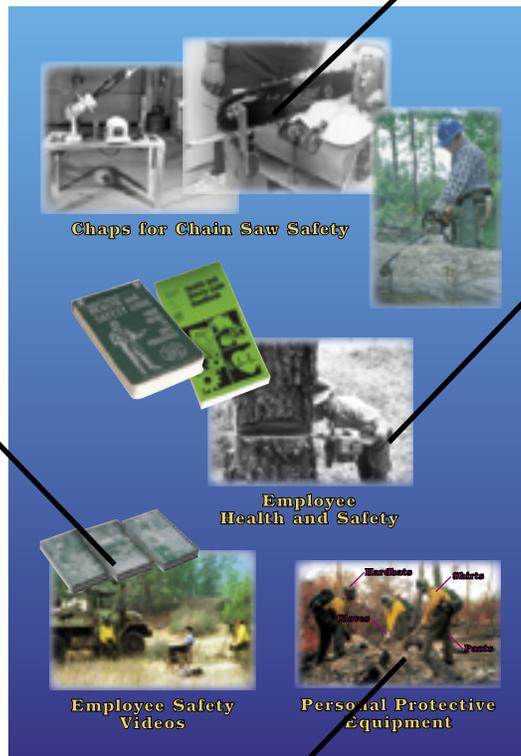
**Spark Arrester Testing**

## Chaps for Chain Saw Safety

Kevlar fabric in chain saw chaps protects users from injuries. The chaps were developed during the 1960s. Testing allows the Technology and Development Program to ensure that the chaps continue to work even as chain saws are modified to run faster.

## Employee Safety Videos

Sociologists and videographers collaborate to produce videos on employee safety. Sociologists interview employees to determine the most important issues. In these videos, employees use their own words as they describe solutions to common problems.



## Employee Health and Safety

The USDA Forest Service's Health and Safety Code Handbook was completely revised in 1999 with the help of the Technology and Development Program. The program also has produced an accident investigation guide that helps agency officials investigate accidents properly, reducing the chance that mistakes will be repeated.

## Personal Protective Equipment

One way employees can reduce the risk of injury on the job is to use the proper personal protective equipment, such as hardhats, chain saw chaps, or special clothing that does not continue burning after the heat source is removed. The Technology and Development Program tests, and in some cases, designs the personal protective equipment used by employees of the USDA Forest Service and other Federal and State agencies.

The program also maintains the specifications for personal protective equipment, handtools, and other equipment used by all Federal and State agencies that fight wildland fires. Large-volume purchases from contractors who produce that equipment to the program's specifications save enough money to pay the cost of the Technology and Development Program several times over.



**Chaps for Chain Saw Safety**



**Employee Health and Safety**

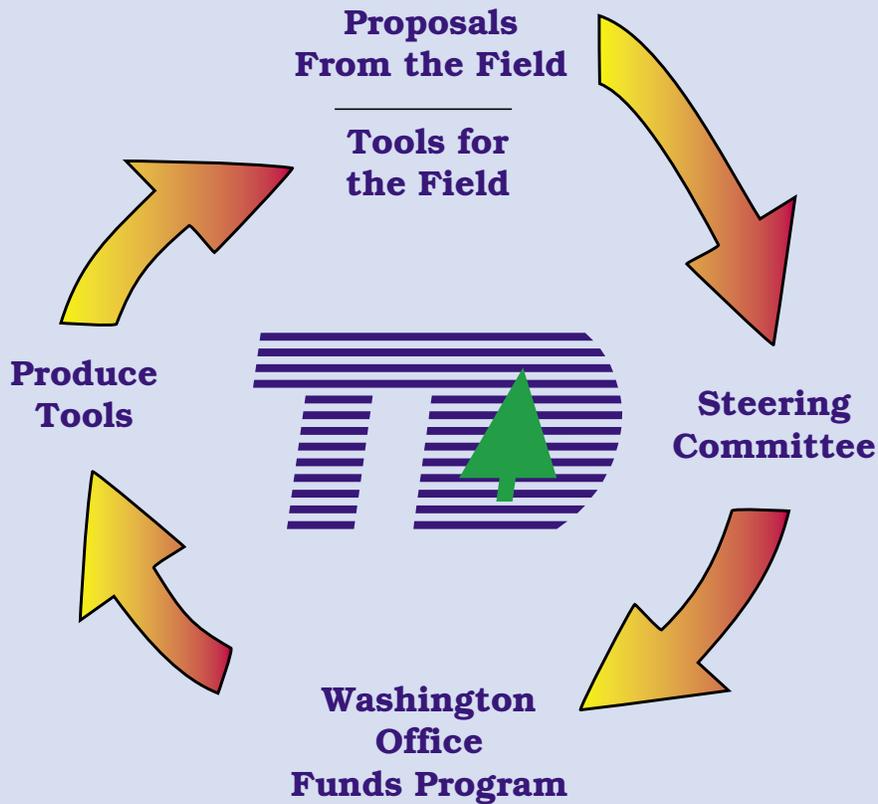


**Employee Safety Videos**



**Personal Protective Equipment**

# How Proposals Become Tools



## Solving Problems Identified by Proposals

### Identify the Problems

USDA Forest Service employees submit project proposals.

### Rank the Problems

National steering committees select the most important projects.

### Build a Project Team

Project leaders tap resources within the Technology and Development Program, the USDA Forest Service, and outside.

### Consider Alternative Solutions

Most problems have more than one solution. Finding solutions requires thorough analysis and imagination.

### Test the Solutions

Compare the potential solutions.

### If Everything Else is Equal, Choose the Simplest, Least-Expensive Solution

Simple solutions are usually better than complex solutions that aren't affordable or don't get used.

### Implement the Solution

Find ways to produce the product, or share the knowledge through field trips, reports, videos, CDs, or Web sites.

# Project Proposal Form

Forest Service Technology & Development Program

## PROJECT PROPOSAL

Project Name/Title:

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Date: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Unit: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

**OVERALL PROBLEM/OBJECTIVE STATEMENT** *(Describe the problem, how the work is currently being done, and why improvement is needed):*

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**PROPOSED TECHNOLOGY & DEVELOPMENT WORK** *(Describe your concept of the end product, such as a new equipment design, a PowerPoint presentation, a video, a handbook, Web site, CD, etc.):*

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**POTENTIAL BENEFITS** *(Describe how this project will reduce cost, save time, improve safety, increase efficiency, or improve resource management):*

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San Dimas, CA 91773-3198  
Phone: 909-599-1267  
Fax: 909-592-2309*



*Center Manager  
Missoula Technology & Development Center  
5785 Hwy. 10 West  
Missoula, MT 59808-9361  
Phone: 406-329-3900  
Fax: 406-329-3719*

# Contacting the Technology and Development Program

## Technology and Development Program Web Site

<http://www.fs.fed.us/t-d> (Username: t-d, Password: t-d)

USDA Forest Service and U.S. Department of the Interior Bureau of Land Management employees can search a more complete collection of the Technology and Development Program's documents, videos, and CDs at the centers' internal Web sites:

Missoula Technology and Development Center

<http://fsweb.mtdc.wo.fs.fed.us>

San Dimas Technology and Development Center

<http://fsweb.sdtc.wo.fs.fed.us>

## Technology and Development Program Offices

### Washington Office Engineering

Web Site: <http://www.fs.fed.us/eng>

Lou Leibbrand

T&D Program Coordinator

Phone: 703-605-4525

### San Dimas Technology and Development Center

444 East Bonita Ave.

San Dimas, CA 91773-3198

Phone: 909-599-1267

TDD: 909-599-2357

Fax: 909-592-2309

E-mail: [mailroom\\_wo\\_sdtc@fs.fed.us](mailto:mailroom_wo_sdtc@fs.fed.us)

### Missoula Technology and Development Center

5785 Hwy. 10 West

Missoula, MT 59808-9361

Phone: 406-329-3978

Fax: 406-329-3719

E-mail: [wo\\_mtdc\\_pubs@fs.fed.us](mailto:wo_mtdc_pubs@fs.fed.us)



**San Dimas Technology and Development Center**



**Missoula Technology and Development Center**

# USDA FOREST SERVICE

Caring for the *land* and serving *people*



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We welcome your feedback about service you received in order to improve our customer service.



**USDA Forest Service**  
1400 Independence Ave SW  
Washington, D.C.  
20250-0003

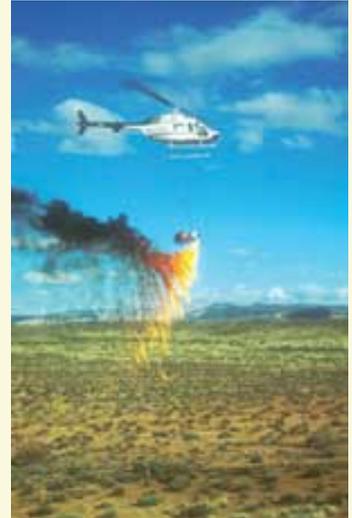
(202) 205-8333

## Technology and Development

### Shaping Solutions for the Forest Service

The Forest Service's Technology and Development program provides practical solutions to problems identified by USDA Forest Service employees and cooperators. The solutions help the Forest Service do its work more efficiently and more safely.

- [T&D Pubs](#)
- [T&D News](#)
- [Program Areas](#) (Resource Topics)
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*This Web site contains administrative documents prepared by the Forest Service Technology and Development Program for the Forest Service and its cooperators.*

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## Library Card

Lindler, Bert. 2005. Sixty years of innovation and problem solving: technology and development in the USDA Forest Service. Tech. Rep. 0571-2804-MTDC. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 18 p.

Provides a brief summary of the history of the Technology and Development Program in the U.S. Department of Agriculture Forest Service. This booklet was prepared as a companion to a panel display highlighting the program's accomplishments for the Forest Service Centennial in 2005. Reduced versions of the six panels in the display show some of the projects completed by the program. A project proposal form is included, along with the addresses and phone numbers of the USDA Forest Service Washington Office of Engineering and the technology and development centers in Missoula, MT, and San Dimas, CA.

Keywords: displays, histories, pictures, T&D