

Organization Learning in Wildland Fire: Moving Toward a Learning Culture

Paula Nasiatka and Dave Christenson

Introduction

The Wildland Fire Lessons Learned Center is a knowledge resource center that serves the entire wildland fire community. The interagency wildland fire community includes the federal land management agencies, the states and local/rural wildland fire departments in the United States. The Center's objectives are to improve safe work performance, improve organizational learning, share knowledge, and promote organizational change

Background

The Lessons Learned Center got its start in 2002 because of three primary reasons. First the interagency wildland fire community is a diverse community since it involves hundreds of wildland fire organizations at field and management levels. Secondly, the Tri-Data study that was completed after the 1994 South Canyon Fire fatalities recommended that the wildland fire community create a program where lessons learned could be shared widely with wildland fire professionals. Lastly, a recommendation from the re-engineering plan for the National Advanced Fire and Resource Institute (NAFRI) recommended incorporating lessons learned and best practices into the fire training curriculum.

Organizational Learning

For the wildland fire community to successfully and safely perform its missions it needs to be a learning organization. A learning organization is skilled in creating, acquiring, interpreting, transferring, and retaining knowledge, and purposefully modifying its behavior to reflect new knowledge and insights (David Garvin, 2000). The Lessons Learned Center is assisting the wildland fire community in becoming more of a learning organization by performing six critical tasks. These tasks are:

1. Collect intelligence about the environment.
2. Learn from the best practices of other organizations.
3. Learn from its own experiences and past history.
4. Experiment with new approaches.
5. Encourage systematic problem solving.
6. Transfer knowledge throughout the organization.

Learning Culture

The wildland fire community must first be open to a learning culture before it can fully become a learning organization. Otherwise, learning remains isolated, short lived

Paula Nasiatka and Dave Christenson, Wildland Fire Lessons Learned Center 3265 East Universal Way
Tucson, AZ 85706 520-799-8760 520-799-8785 Fax <http://www.wildfirelessons.net>
<http://www.myfirecommunity.net>

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and trapped in the memories of individuals or separate units. Does the interagency wildland fire community pass the litmus test for being a learning organization?

- ✓ Does our wildland fire organization have a defined learning agenda?
- ✓ Is our organization open to discordant information?
- ✓ Does our organization avoid repeated mistakes?
- ✓ Does our organization lose critical knowledge when key people leave?
- ✓ Does our fire organization act on what it knows?

To assist in organizational learning, the Lessons Learned Center is organized in three Focus Areas – Collection and Analysis, Knowledge Retention and Knowledge Transfer.

Collection and Analysis

After Action Reviews and Information Collection Teams are the primary tools used to collect pertinent wildland fire information. Case studies and surveys are also important collection tools.

After Action Reviews (AAR)

AARs are an inexpensive, simple, systematic process that has the power to change an entire work culture. The AAR is the cornerstone of organizational learning. The four questions asked in this learning after doing tool are:

1. What did we set out to do?
2. What actually happened?
3. Why was there a difference?
4. What are we going to do next time?

AARs begin the knowledge transfer process. Most of the AAR results are used to enhance or sustain the performance of a unit or team. “Gems and nuggets” will surface from the AAR that will be valuable to others, but only if they can have access to the knowledge. This is where the AAR Rollup tool comes into play. This tool collects the gems and nuggets from your AAR by asking:

1. Describe one or more of your successes that others can learn from?
2. What was one of the challenges you faced and how did you overcome it?
3. How can training be improved?
4. What are your recommendations for any unresolved issues?

AARs and AAR Rollups are collected and analyzed by the Lessons Learned Center for wildfire, prescribed burns, wildland fire use events, fuels projects and all risk events. The lessons learned and best practices are then shared with the wildland fire community through newsletter publications and the Lessons Learned Center Web site.

Information Collection Teams (ICT)

ICTs are another key tool for collecting wildland fire information. A collection plan is developed before a team is formed which is comprised of subject matter experts and a member of the center staff. ICTs collect tactics, techniques, procedures, and processes at an event for 5-12 days. An Initial Impressions Report is then developed and shared with

the wildland fire community. The purpose of an ICT is to collect lessons and practices. The team does not investigate or review.

Collection Team Efforts in 2004 included:

- ✓ States – Southern Fire Chiefs and Northeast Fire Supervisors
- ✓ Alaska Wildland Fires
- ✓ Wildland Fire Use Event in Pacific Northwest
- ✓ Hurricane Response in Georgia, Alabama, and Florida

Knowledge Retention

Communities of practice are key components to how the wildland fire community learns. A community of practice is an *informal* group of people with similar work-related activities and interests. Members can belong to multiple agencies or reporting structures. Community members regularly transfer and retain knowledge.

In the interest of serving the various communities of practice within the wildland fire community, the Lessons Learned Center developed an online community center at <http://www.myfirecommunity.net>. Launched in the summer of 2004, the focus is on learning and sharing knowledge because sometimes life's lessons are too easily lost. This online community center is here to assist wildland fire communities of practice to identify one another, share learning opportunities, discuss issues and concerns, and exchange knowledge.

MyFireCommunity contains four features:

Community Directory - "Yellow pages" of people who work in wildland fire. Learn about other members' current projects and interests. Add yourself so others can learn what you are up to.

Learning Opportunities - Includes a calendar of seminars, conferences, and other events related to your wildland fire community of practice. Also available are online informal training presentations to view or download.

Discussion Center - Pose questions, and get answers. Read or join in a discussion. All discussions are moderated for content.

Knowledge Exchange - Add a lesson you have learned, share a useful tool or process, publish After Action Review results that others can learn from, or browse submissions from others.

Knowledge Transfer

The primary way to share wildland fire knowledge is through network of professional wildland firefighters working in communities of practice. Workshops such as *Achieving the Learning Organization: Facilitating After Action Reviews* and *Managing the Unexpected: High Reliability Organizing* have laid the groundwork on the importance of organizational learning. Video products of these workshops are available through the Lessons Learned Center.

Other knowledge transfer mechanisms are:

Web Sites

The www.wildfirelessons.net Web site contains wildland fire knowledge arranged in a format where the user can get to what they are interested in. The Web site also has significant interaction with safety, training and leadership development sites on both wildland fire and non-fire incidents. The www.myfirecommunity.net is the wildland fire online community center that includes a Community Directory, Learning Opportunities, a Discussion Center and a Knowledge Exchange.

Scratchline Newsletter

The Center publishes a quarterly newsletter as new tactics, techniques, procedures and processes are identified and lessons learned or best practices are received from the field. Scratchline's main purpose is to inform and educate the reader in a fast and simple format. Articles come from the entire wildland fire community as lessons are learned everywhere.

The Learning Curve

The Center publishes a short lessons learned summary from AAR Rollups received and reviewed. It is published periodically for immediate use in the field.

Conclusion

It is all about organizational learning. As a knowledge resource center, the Wildland Fire Lessons Learned Center is striving to help the wildland fire community be a fully developed and dynamic learning organization. The Center acquires, interprets, transfers and retains wildland fire knowledge.

Behavior modification must then occur because we must act on what we know. As the community becomes more involved and embraces these concepts, positive organizational change will take place.

References

- Etienne Wenger, Richard McDermott and William Snyder, Cultivating Communities of Practice (Harvard Business School Press, 2002).
- David Garvin, Learning in Action (Harvard Business School Press, 2000).
- Karl E. Weick and Kathleen M. Sutcliffe, Managing the Unexpected - Assuring High Performance in an Age of Complexity (University of Michigan Business School Management Series, Jossey-Bass Publishers, 2001).