

ON-SITE INTERPRETATION—A TOOL FOR INCREASING AVALANCHE AWARENESS

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ABSTRACT: On-site interpretation is recognized as a useful tool for increasing people's awareness of environmental processes. Interpretation of the 1995 avalanche event at Mt. Shasta, California, is being used to illustrate the powerful force of avalanches. In 1996, members of the American Association of Avalanche Professionals seized the opportunity and formed a partnership with the Shasta-Trinity National Forest. The goal of the partnership is to provide on-site interpretation of the 1995 event for thousands who visit the area each year, with hopes of increasing visitors' appreciation of the powerful forces of snow avalanches.

The first step of the project involved recognizing the significance of the event and the unique opportunity that the site's accessibility provided for reaching visitors. The next step required finding someone willing to lead the project and steer it toward completion. Roland Emetaz, a retired Forest Service professional and associate of the Northwest Avalanche Center, rose to the challenge of leading the project. Interpretive methods were evaluated, and the team determined that an interpretive trail and viewpoint would be most effective in conveying the message. Visitors would learn about the awesome power of a snow avalanche event and gain understanding of its formation and movement through a forest landscape.

The potential audience was considered and the site location was selected based on the observable changes in the landscape due to the avalanche. The interpretive mood, "being within or being part of the event," will provoke the visitors' thoughts toward the power of the event. The theme: "Forces of Nature," was identified, and finally the objective was articulated: visitors will leave the site with a new appreciation for the forces of a snow avalanche.

KEY WORDS: avalanche awareness, interpretation, avalanche interpretive writing, avalanche education

1. INTRODUCTION

"Avalanche marks history—broken trees reveal 300-year tale on Mt. Shasta." This was the headline in a February 1995, edition of the Southern Siskiyou News. Record snowfall, followed by several days of heavy rains, caused the release of a massive snow avalanche on the south side of Mt. Shasta sometime between January 9 and January 13, 1995. It was estimated that the event originated at about the 3353-meter (11,000 foot) -level on Mt. Shasta's Sargent's Ridge and tumbled across the popular Everitt Memorial Highway before running out of steam at 2072 m. (6800ft.) elevation near the Panther Meadow picnic ground. The force of the event snapped off and uprooted 300-year-old Shasta red fir trees with diameters exceeding 152 cm (60 in.) and piled them 4.2 m. (14 ft.) to 7.6 m. (25 ft.) deep in the run-out zone.



Figure 1. Looking up 1995 avalanche track towards starting zone on Mt. Shasta from Everitt Memorial Highway

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Figure 2. Looking down 1995 avalanche track. Debris left by the event includes 300 year old Shasta red fir.

Several months later, on August 3, 1995, Don Bachman, secretary of the American Association of Avalanche Professionals, by chance was passing through Shasta City, California and stopped at the Mt. Shasta Ranger Station for information. It was only then that he found out about the past winter's avalanche. As would be expected, he was interested and immediately went to the site to take a look. After viewing the results of the event, Bachman wrote, "It is known that avalanches on some paths, especially in maritime climates on big mountains, under certain conditions may attain maximum run-out distances on the order of 300-500 years. This extraordinary Panther Meadow avalanche on Mt. Shasta is that kind of rare event." This observation led Bachman to conclude that there was an excellent opportunity to preserve, study and interpret one of the dynamic natural landscaping forces of Mt. Shasta.

After some discussion, the Forest Service and the American Association of Avalanche Professionals agreed to form a partnership to establish some level of visitor interpretation at the site.

2. RECOGNIZING THE SIGNIFICANCE

Bachman, Forest Service employees and the local press recognized the significance of the Mt. Shasta event immediately. People visiting the

area the following summer, however, perceived the devastation left in the wake of the avalanche to be the result of a poorly executed timber harvest. In order to correct those perceptions and take advantage of the opportunity to illustrate this example of the powerful forces of snow avalanches, the Forest Service was open to the idea of developing an on-site interpretive project.

3. WHOSE JOB IS IT?

These days of dwindling funding for management of public lands require that managers be innovative in finding ways to transform creative ideas into realities. Most state and federal agencies are supportive of partnerships with other agencies, non-profit organizations, universities, interpretive associations and outdoor clubs, retailers, etc. Early in the process, potential partners must be identified and ways developed in which interpretation can serve as a bridge between managers and site visitors. In some cases, agencies have personnel with the necessary experience and skills to lead a project from concept to completion. In other situations, innovation may be the best course. Retired agency people, volunteers, non-profits organizations and others may possess the skills and enthusiasm to lead the project planning, development and implementation.

4. INTERPRETIVE METHODS

In order to effectively reach people with an interpretive message, consider the following principles prior to beginning the planning process.

4.1 Make the Interpretive Product Barrier-Free

Eliminate language, cultural, physical and sensory barriers.

4.2 Information and Orientation Differ from Interpretation

Information and orientation media can be made more appealing and useful by employing interpretive techniques, but information and interpretation are not synonymous.

4.3 Interpretive Products Need to be Flexible

Interpretive opportunities should be retained or enhanced, while considering potential changes in the interpretive setting. For example, an

avalanche path may gradually become obscured by vegetation. The interpretive message should either address this eventuality or the display should be designed to incorporate these changes in the future.

4.4 Clearly Identify the Audience

Objectives should be developed that identify specific desired outcomes for a specific audience. Interpretive messages are then designed to reach the target audience.

4.5 Exhibits Should Attract, Not Detract

Interpretive displays should attract attention, yet not detract from the interpretive setting. Use of colors, graphics and text can enhance the message delivery.

5. LEVELS OF RECEPTIVITY

The focus of interpretation is to describe unfamiliar concepts or events to visitors in such a way that the unknown becomes known, by making connections and analogies to common experiences. In order for interpretation to succeed, one must understand the levels of receptivity visitors are likely to have when they arrive at an interpretive facility.

5.1 Level I: Orientation

Physical Comforts and Needs -- Questions like "Where is the bathroom, water, coffee?" etc. fall under this category. These questions are nearly the same everywhere. The answers to these questions are not interpretation, but visitors are not open to other input until these basic needs are satisfied.

5.2 Level II: Information

Mental Involvement -- Once their physical needs are met, visitors are ready to ask questions about the area, physical features, and points of interest. At this point the questions will be specific to the area and they will be receptive to new ideas and concepts. Responses to these questions can build the groundwork for interpretation.

5.3 Level III: Appreciation

Emotional Involvement -- As the preliminary questions are answered and the interpretive messages are shared, visitors begin to gain an

understanding of the subject and appreciation develops. This, in turn, is the basis for the next level.

5.4 Level IV: Commitment

Personal Involvement -- This is the level interpretation is designed to attain. As Freeman Tilden stated, "The chief aim of interpretation is not instruction, but provocation" (Tilden 1977). With physical needs met, questions answered and feelings of appreciation aroused, visitors are ready to be guided toward commitment...involvement in the event, activity or feature being interpreted.

6. INITIATING THE PROJECT

The project team should only include those who are essential for the specific project. Members may include writers, artists, editors, scientists, landscape architects, technical experts and individuals responsible for approval of the interpretive effort. Team members must make a commitment to be available throughout the interpretive development process.

Subjects and features to be interpreted must be determined prior to any writing and should be compatible with agency plans and philosophies.

7. SITE VISITS

It is essential to have site visits during the determination phase. This will establish a "common vision" among team members. Common vision is critical to a successful interpretive development process.

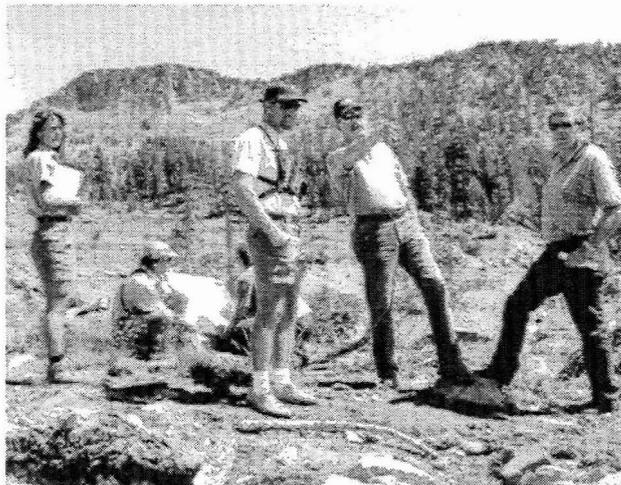


Figure 3. Before any writing, sites must be visited by all team members.

Sites must be visited by team members prior to beginning writing. Reference materials such as photographs, articles and reprints should be brought along and shared with team members to insure common knowledge.

On-site brainstorming is a “must” to record impressions and thoughts concerning the site and possible interpretation of the features. Use a flipchart to record team input so all can visually see what others have said. The focus of this exercise is to establish goals, objectives and themes for the particular site, and explore initial conceptual ideas. All ideas are recorded without judgement or evaluation – the wildest ideas may not seem so wild later!

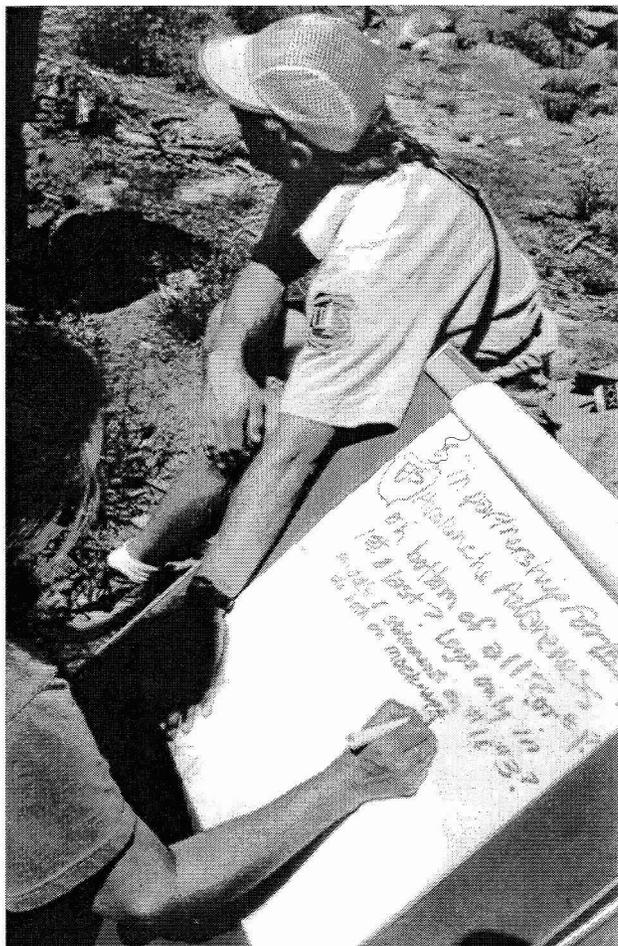


Figure 4. It is important to record, without judgment or evaluation, the team's impressions and thoughts on-site, so all can visually see what others have said.

Before leaving the site, a summary of the goals, objectives and themes needs to be written and reviewed to insure a common vision. Afterward, copies of the summary should be distributed to team members. Document the site visit with photographs. This is especially valuable if the site cannot be visited later and can be an inspiration for writers and artists. Assign a writer and establish timelines for completion of phases.

8. INVENTORY and RESEARCH

Interpretive media must be “user-friendly” and accurate. The search for accuracy is an ongoing process. First, inventory facts and assumptions. Establish good rapport with witnesses, knowledgeable people, scientists and researchers. Listen carefully for metaphors, analogies and phrases your resource specialists use. Document these, and research aspects that require clarification or additional information. Provide writers and artists access to all written material, witness reports/statements, photographs and illustrations.

Once the information inventory and research is completed, writers need to share findings with the full team to reaffirm common vision. If the findings have not redirected the common vision, then goals, objectives and themes for the project should be finalized. If findings significantly change the common vision, the team must meet to establish a new common vision.

9. DEVELOPMENT

9.1 *First Draft*

Once the common vision has been confirmed, the writing or “wordsmithing” can begin in earnest. The writer, in consultation with artists, needs to consider how graphic artwork or photographs will be integrated into the text. The writer then drafts and revises text until ready for conceptual approval from the team.

When reviewing the text, team members should look at the content and organization and whether the goals, objectives and themes established earlier are met. Document suggestions and comments so the writer can incorporate changes. Artists should discuss graphics options with the team and plan on developing thumbnail sketches for the next meeting.

Figure 5. **ESSENTIAL ELEMENTS of DEVELOPING ON-SITE INTERPRETATION, 1995 MT. SHASTA EVENT.**

Goal of Interpretive Trail: to allow visitors the opportunity to explore the changed landscape due to the 1995 avalanche event.

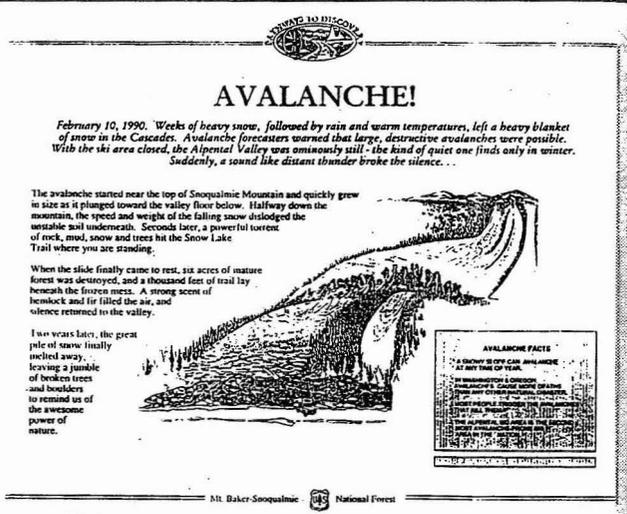
Structure: A short barrier-free trail of packed gravel will lead from a small (3-5 car) parking lot just off the Everitt Memorial Highway at the 2316 meter (7642-foot) elevation level. The trail will terminate at a viewpoint where the starting point, path of travel, and run-out zone of the avalanche can easily be viewed. There will be three .6x.9 meter (2x3 feet) interpretive signs at this location.

Audience: The site was selected based on the observable change in the landscape due to the avalanche. Visitors traveling through the area may notice this and stop when they see signing for the site, or others may come specifically because they are aware of the site and the event represented.

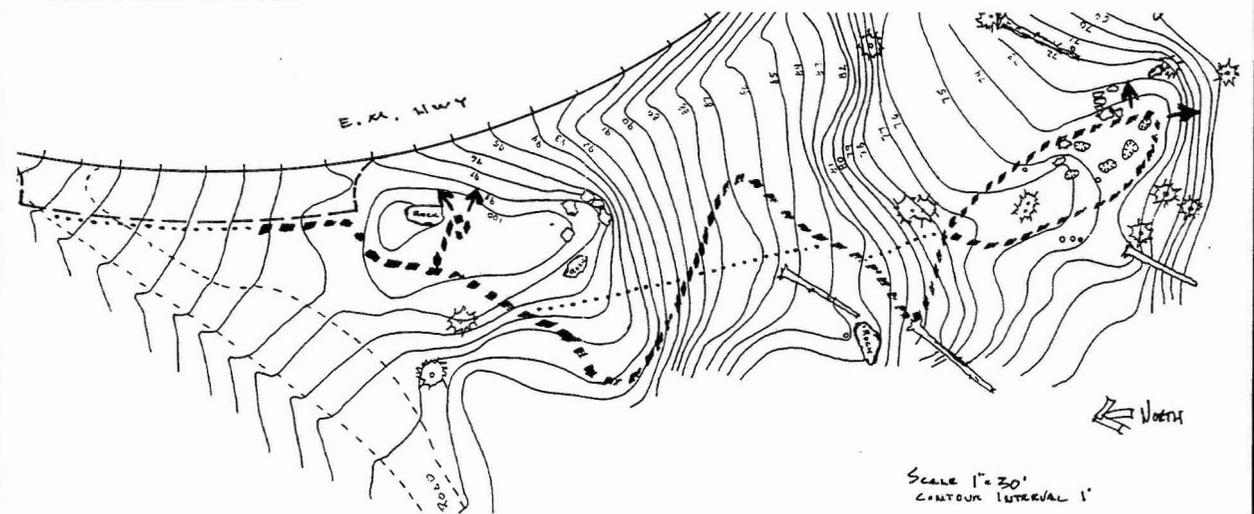
Interpretive Mood: Being within the area where the event occurred will facilitate influencing the visitors' thoughts toward the power of the event.

Theme: Forces of Nature

Objective: Visitors will leave the site with a new appreciation for the forces of a snow avalanche as well as having some basic concepts on the ingredients necessary for such events to occur.



Examples of finished products where artwork and text are incorporated. The "Avalanche" sign has a bit too much text while the "Winter Storm Watching Not Recommended" has a good balance between text and art work.



Proposed site plan for 1995 Mt. Shasta Avalanche on-site interpretation.

9.2 Second Draft

Suggestions from the first review are incorporated into a revised copy, including thumbnail sketches, for review by the team. Again, the team must ask: are the combined text and graphics meeting the goals, objectives and themes for the project?

9.3 Final Draft

During this phase, adjust the graphics and text according to the second review comments. Perfect the text and graphics until writers and artists are satisfied that the product is ready for final review. Reviewers then make final comments which writer and artist incorporate.

9.4 Editing

The final copy is edited for spelling and punctuation. The finished text is then ready for final layout with the artwork.

10. CONCLUSION

A superior interpretive product can be achieved by team effort. Even though a single qualified individual may complete the project with relative ease and in a cost-effective manner, the result will never have the potential richness and quality of that of a team effort guided by common vision. The focus of interpretation is to describe unfamiliar concepts and events to people in such a manner the unknown become known.

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