

## Use of Web-based Communication for Mounting an Expedition and the Amchitka Independent Assessment Science Plan

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### SUMMARY.

The execution of the Amchitka Independent Assessment Science Plan by CRESP involved multiple disciplines, multiple tasks, multiple expeditions, and multiple universities. The complexity of administering and conducting the planning, procedures, processing and publishing of such a large project necessitated a rigorous communication and information infrastructure. We used a web-based approach with different levels of entry to allow communication among and within discipline and university subgroups of investigators, administrators, and technicians. A similar web-based series of pages were available from the CRESP consortium to the general public to ensure communication throughout the project, from inception to completion. The CRESP office served as the conduit for the web-based communication, so that all parties could obtain the most up-to-date information.

### INTRODUCTION

The CRESP Amchitka Independent Assessment Science Plan included projects developed by many different disciplines, in several different universities, under the direction of a PI (C.W. Powers) at the Institute for Responsible Management. While the development of the *Science Plan* itself was complex because of the number of projects, disciplines, and universities, the execution of the plan was facilitated by a well-developed method of communication among and between personnel in the different projects and with the public. Given the geographical separation of scientists (from New Jersey and Tennessee to Alaska), it became clear that the group needed a reliable method of communication for developing the plan and posting the protocols. We thus developed a web-based communication system for the Amchitka Project.

### DEVELOPMENT OF WEB-BASED COMMUNICATION

The complexity of the project required a communication system that could fulfill a number of requirements:

1. Provision of one centralized forum for communication
2. Provision of different levels of accessibility (from within research groups to the general public).
3. Ability to be regularly updated (by designated personnel only)
4. Always available, regardless of time zone

5. Able to include multiple reports, with high resolution photographs
6. Cost-effective and time-effective.
7. Able to accommodate multiple users simultaneously.

We used a web-based method of communication throughout the project that had the following elements:

1. POSTING OF PUBLIC DOCUMENTS, available to all at the CRESP website ([www.cresp.org](http://www.cresp.org)). This included: 1) release of *Amchitka Independent Science Plan* including approvals from advisory agencies, 2) progress reports and photographs from the expedition, available to the public to track the progress of the project, 3) public updates on the laboratory analysis phase of the project and 4) final reporting of both geophysical and biological results.

2. INTERNAL COMMUNICATION, available to designated parties. As internal protocols and procedure documents were being developed, documents were posted on a secure site for review. This allowed central management of documents and immediate availability to all relevant personnel that allowed scientists, technicians and administrators to track changes in protocols and procedures.

When documents were finally accepted by the relevant research group, they were then available to the wider CRESP team for discussion and modification. This allowed for consistency among and between protocols.

In addition to the use of web-based communication, project personnel used email, conference calls, and video conferencing to communicate among small groups. While email was a useful method of communication, conference calls allowed all relevant project personnel to discuss issues or problems in real-time.

## Conclusion

Web-based communication systems can be used for both public and internal communication. The sharing of documents is simplified by the posting of documents to the web instead of using email, or regular mail services. Participants can access multiple documents at their convenience and large documents can be shared in a cost effective manner. Centralized management of the system assures that all documents are up-to-date. Although this task can be time-consuming and continuous there is also an advantage since one person can serve as the gate-keeper.

The web-based system for document distribution is ideal for a large project that includes a wide range of users, working at different times, and from multiple universities. It is faster than relying on the US mail system to exchange documents, allows simultaneous transmissions to many universities and personnel, and can be accessed by many people at one time during conference calls or meetings.