RECLAMATION

Managing Water in the West

Visitor Center

Policy, Directive and Standard, and Guidelines

U.S. Department of the Interior
Bureau of Reclamation
Denver, Colorado

August 2007

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POLICY

Reclamation Manual

Policy

Subject: Visitor Centers

Purpose: Establishes Bureau of Reclamation policy for planning, developing, interpreting, managing, and operating visitor centers at Reclamation projects. The benefit of this Policy is to ensure that visitor centers are planned and developed according to the geographic location and the anticipated visitation. In addition, through interpretation, visitor centers will provide Reclamation an opportunity to educate the public about Reclamation's mission.

Authority: Reclamation Act of 1902, as amended and supplemented; Randolph Sheppard Act of 1936 (Public Law 74-732); Land and Water Conservation Fund Act of 1964 (Public Law 88-578); Federal Water Project Recreation Act of 1965, as amended (Public Law 89-72); National Historic Preservation Act of 1966 (Public Law 89-665); Architectural Barriers Act of 1968; Rehabilitation Act of 1973 (Public Law 93-112); National and Community Service Act of 1990 (Public Law 101-610); Energy and Water Development Appropriations Act of 1990 (Public Law 101-101-Volunteer Program); American's with Disabilities Act of 1990 (Public Law 101-336); Sundry Civil Appropriations Act of 1992 (Public Law 66-389); Reclamation Projects Authorization Act of 1992 (Public Law 102-575); Educate America Act of 1994 (Public Law 103-227); Hoover Dam Miscellaneous Sales Act of 2000 (Public Law 106-461); Federal Lands Recreation Enhancement Act of 2004 (Public Law 108-477); Department of the Interior Volunteer Recruitment Act of 2005 (Public Law 109-125); 43 Code of Federal Regulations 17, subparts B and E; Department of the Interior Manual, Part 471 (Audiovisual Media and Publications), Chapter 3 (Production and Use of Exhibits).

Approving Official: Commissioner

Contact: Office of Program and Policy Services; Land Resources Office, 84-53000

1. **Visitor Center Goals and Objectives**. Reclamation and, where applicable, its managing partners (including nonprofit organizations) will ensure that visitor centers are planned, developed, interpreted, managed, and operated in an appropriate and cost-effective manner. As authorized by the authorities listed above, and based on the principles contained in this Policy, Reclamation may develop visitor centers with appropriate facilities, services, and programs for the purposes of:

   A. Informing the public about Reclamation and water projects;

   B. Enhancing the quality of recreation and tourism opportunities for all visitors, including those with physical, sensory, and cognitive impairments;

C. Describing other opportunities and facilities that are available within the project;

D. Providing information and interpretation on the recreational, natural, cultural, and historical resources within the project area and regionally;

E. Helping to provide for visitor safety and enjoyment; and

F. Educating the public about water resources, water conservation, and water safety.

2. **Definitions**.

A. **Visitor Center**. A visitor center is a public educational facility or dedicated space within a building for interpretive displays, programs, services, and information. Visitor centers generally have support facilities and conveniences for the traveling public.

B. **Interpretation**. Interpretation is a combination of educational activities designed to reveal meanings and relationships through the use of presentations, original objects, firsthand experience, graphic illustrations, activities, or media designed to help people understand, appreciate, and care for the natural and cultural environment.

3. **Visitor Center Principles**. The following principles must be considered prior to planning, developing, upgrading, managing, and operating visitor centers:

A. Through information, education, and interpretation, Reclamation has an opportunity to protect, conserve, and enhance recreational, natural, historical, and cultural resources. Visitor centers enhance the public's awareness and understanding of Reclamation's mission and stewardship responsibilities.

B. The appropriateness and suitability of a visitor center and the type of visitor center at a project will be assessed through a systematic and comprehensive interpretive planning process that defines the visitor center's messages, interpretive themes, interpretive tools and techniques, displays, programs, and services, consistent with Reclamation's Visual Identity Program Online Manual and inclusive of all potential visitor needs, including those with disabilities.

C. Visitor center design, construction, and maintenance will strive to integrate the principles of universal and sustainable design and energy conservation as appropriate and feasible.

D. Reclamation will strive to integrate authorized income-generating programs and services for the purposes of sustaining and enhancing the visitor center's programs, educational and interpretive activities, and operations, where authorized.

E. Reclamation and its partners, where appropriate, will strive to implement donation activities and a volunteer program for the purposes of developing and maintaining a visitor center and its program and services.

F. Reclamation will follow current professional interpretive practices, Federal accessibility regulations, and Reclamation's Visual Identity Program Online Manual in the design, fabrication, installation, and maintenance of interpretive displays, programs, and services.

G. Visitor centers will comply with the requirements and Accessibility Standards as set forth in the Architectural Barriers Act of 1968, which provides for minimum access for visitors with disabilities.

H. Where feasible, visitor centers will be coordinated or integrated with those of Federal, state, or local agencies in the same geographic area.

I. Visitor centers will implement a periodic evaluation process to measure the effectiveness of the visitor center and its displays, programs, and services.

J. Reclamation will incorporate security into the design and operation of the visitor center. Visitor center staff will work with their regional security officers to ensure security of the site, employees, the visiting public, and any sensitive Reclamation information or property.

4. **Visitor Center Planning and Administration**.

A. Reclamation and its managing partners will assess the current and potential recreation opportunities in the region through a formal planning process. The level of planning will be commensurate with the potential size, location, regional significance, anticipated visitation, or a combination of factors. This assessment must determine the availability of existing visitor centers and related facilities and programs (including fee systems) managed by local communities, state, and Federal agencies, and the private sector and consider alternatives to collaborate, where mutually beneficial. Where appropriate, Reclamation will partner with Federal and non-Federal entities, nonprofit cooperating associations, local community and civic groups, individual volunteers, and the private sector.

B. Reclamation's level of approval authority and oversight for the planning and administration of visitor centers with Federal and non-Federal partners will be addressed in a management agreement. The partnership arrangement will be defined in writing and include, at a minimum:

(1) performance specifications for the roles, responsibilities, and activities for all entities;

(2) the requirements for an annual program review, independent financial audits, and annual financial reports; and

(3) the means and timetable to modify or end the partnership arrangement.

5. **Supporting Laws, Regulations, Rules, Policies, and Directives and Standards**. This Policy is supported by the following:

A. Accessibility Standards as set forth in the Architectural Barriers Act of 1968;

B. Randolph Shepard Act of 1936, as amended;

C. Concession Management Policy, LND P02;

D. Concession Management by Reclamation, LND 04-01;

E. Concession Management by Non-Federal Partners, LND 04-02;

F. Cultural Resources Management Policy, LND P01;

G. Cultural Resources Management Directives and Standards, LND 02-01;

H. Recreation Management Policy, LND P04;

I. Implementation of the Cost-Sharing Authorities for Recreation and Fish and Wildlife Enhancement, LND 01-01;

J. Visitor Center Directives and Standards, LND 13-01;

K. Visual Identity Policy, ADM P05;

L. Visual Identity Directives and Standards, ADM 02-01; ADM 02-02; ADM 02-05; ADM 03-01; ADM 05-01; ADM 05-02; ADM 05-03; ADM 05-04; CMP 03-01;

M. Occupational Safety and Health Program Policy, SAF P01;

N. Occupational Safety and Health Program Directives and Standards, SAF 01-01;

O. Visual Identity Program Online Manual; and

P. Departmental Manual, Museum Property Manual 411.

6. **Supporting Guidelines**. This Policy is supported by the following:

A. Accessibility Program Guidance Manual;

B. Concession Management Guidelines;

C. Recreation Facility Design Guidelines;

D. Sign Guidelines; and

E. Visitor Center Guidelines.

DIRECTIVE AND STANDARD

Reclamation Manual

Directives and Standards

Subject: Visitor Centers

Purpose: Prescribes requirements and responsibilities for the Bureau of Reclamation. The benefits of this Directive and Standard (D&S) are that everyone will know who is responsible for interpretation and education responsibilities within Reclamation, the goals of interpretation are established, and approval requirements for new visitor centers are clearly specified.

Authority: Reclamation Act of 1902, as amended and supplemented; Randolph Sheppard Act of 1936 (Public Law 74-732); Land and Water Conservation Fund Act of 1964 (Public Law 88-578); Federal Water Project Recreation Act of 1965, as amended (Public Law 89-72); National Historic Preservation Act of 1966 (Public Law 89-665); Architectural Barriers Act of 1968; Rehabilitation Act of 1973 (Public Law 93-112); National and Community Service Act of 1990 (Public Law 101-610); Energy and Water Development Appropriations Act of 1990 (Public Law 101-101-Volunteer Program); American's with Disabilities Act of 1990 (Public Law 101-336); Sundry Civil Appropriations Act of 1992 (Public Law 66-389); Reclamation Projects Authorization Act of 1992 (Public Law 102-575); Educate America Act of 1994 (Public Law 103-227); Hoover Dam Miscellaneous Sales Act of 2000 (Public Law 106-461); Federal Lands Recreation Enhancement Act of 2004 (Public Law 108-477); Department of the Interior Volunteer Recruitment Act of 2005 (Public Law 109-125); 43 Code of Federal Regulations 17, subparts B and E; Department of the Interior Manual, Part 471 (Audiovisual Media and Publications), Chapter 3 (Production and Use of Exhibits).

Approving Official: Director, Office of Program and Policy Services

Contact: Land Resources Office, 84-53000

1. **Scope**. This D&S applies to all Reclamation-managed visitor centers, regardless of their source of funding, size, location, regional significance, or anticipated visitation; and includes exhibits, displays, signage, and supporting material such as publications and videos.

2. **Definitions**.

   A. **Visitor Center**. A visitor center is a public educational facility or dedicated space within a building for interpretive displays, programs, services, and information. Visitor centers generally have support facilities and conveniences for the traveling public.

B. **Interpretation**. Interpretation is a combination of educational activities designed to reveal meanings and relationships through the use of presentations, original objects, firsthand experience, graphic illustrations, activities, or media designed to help people understand, appreciate, and care for the natural and cultural environment.

C. **Donations**.

(1) For purposes of this D&S, the term "donation" includes gifts and refers to something of value received from an outside source without consideration or an exchange of value. Funds or other items received as a result of a competitively awarded grant from a foundation are also covered by the term "donation."

(2) The following is not considered a donation and, therefore, not included in the definition: in-kind services or contributions in which the entity providing the service or contribution is receiving a benefit in exchange for the service or contribution, or is required pursuant to a cost-share or other agreement or requirement to provide the service or contribution.

3. **Responsibilities.**

A. **Chief of Public Affairs**. The Chief of Public Affairs has oversight responsibility for the coordination and approval of exhibits, publications, audiovisual materials, and other materials throughout Reclamation. See Reclamation Manual Directives and Standards, Audiovisual, Multimedia, Still Photography, and Related Equipment (ADM 05-01). The Chief of Public Affairs will:

(1) Ensure that all messages in the visitor center are consistent with Reclamation and the Department of the Interior policy.

(2) Review the master plan; other supporting documentation; DI-551 (Audiovisual Authorization Request), if needed; and DI-552 (Exhibit Production Authorization Request) for each visitor center to ensure it meets the goals and objectives of Reclamation identified in Reclamation Manual Policy, Visitor Centers (LND P13). If it does meet these goals and objectives, the Chief of Public Affairs will sign the DI-551 and DI-552.

(3) Maintain a file of the DI-551s and DI-552s throughout Reclamation.

B. **Regional Public Affairs Officers**. The regional public affairs officers have oversight responsibility for the coordination and approval of exhibits, publications, and other materials throughout their region. They will:

(1) Ensure that the provisions contained within this D&S are followed.

(2) Review the master plan, other supporting documentation, DI-551, and DI-552 for each visitor center to ensure it meets the goals and objectives identified in LND P13. If approved, forward the materials to the Chief of Public Affairs.

(3) Maintain a file of all the visitor center master plans and DI-551 and DI-552 of visitor centers throughout their region.

C. **Reclamation Directors, Area Office Managers, and Supervisors**. All Reclamation directors, area office managers, and supervisors are responsible for ensuring that all offices and personnel are familiar with and follow the provisions of this D&S and Reclamation's Visual Identity Program Online Manual.

4. **Planning.**

A. Each visitor center must have a master plan that addresses the visitor center facilities and program requirements, including compliance with accessibility standards. The master plan must address each of the items listed below and be approved by the regional security officer, regional public affairs officer, and the Chief of Public Affairs.

(1) An inventory and analysis of current visitors and projected visitation levels;

(2) An inventory and analysis of existing resources to be interpreted in the visitor center;

(3) The layout of the visitor center;

(4) Interpretive themes and goals and a description of the method that will be used to achieve effective communication;

(5) Detailed recommendations for proposed interpretive exhibits and programs (universally accessible for persons with mobility, hearing, speech, sight, or cognitive disabilities);

(6) A staffing plan to operate the visitor center, taking into consideration whether, and how, volunteers will be used;

(7) Equipment needed to support exhibits and programs;

(8) Budget required for operation and management;

(9) Use of fees, if authorized;

(10) Any partnerships supporting the visitor center;

(11) Visitor center review schedules; and

(12) Security measures and procedures at the visitor center, including any necessary physical and technical upgrades.

B. During the planning process for developing or renovating a visitor center, compliance with the National Historic Preservation Act (NHPA), the National Environmental Policy Act, and other applicable environmental laws and regulations is required, as applicable. NHPA compliance will include consideration of effects to any archaeological sites and effects to existing buildings and structures.

C. The design of all elements for visitor centers will comply with Reclamation's Visual Identity Program Online Manual.

D. Museum property used in visitor center operations, interpretation, and outreach must be managed according to standards promulgated in Departmental Manual Part 411, and 36 Code of Federal Regulations Part 79.

5. **Visitor Center Information**.

A. **Objectives**.

(1) A visitor center operation can be a necessary and integral part of total project management. The primary purpose of a visitor center is to provide interpretive and educational information to the visiting public (including those with physical, sensory, and cognitive impairments) about the mission of Reclamation, the project and its facilities, visitor security and safety, the geographic area where the project is located, and the cultural and natural resources of the area. Visitor centers provide the necessary information for visitors to have a safe and enjoyable visit. Exhibits and other interpretive communications must be designed to stimulate interest and convey information. The interpretive objectives of visitor centers are to:

(a) Enhance the public's understanding of Reclamation and its contribution to the Nation;

(b) Enhance the public's understanding of the history, purpose, and operation of the project and its archaeological, historical, humanmade, natural, and cultural features;

(c) Develop public appreciation for the proper and safe use of project resources;

(d) Foster the spirit of personal stewardship of public lands;

(e) Orient the visitor to the project and its recreational opportunities; and

(f) Aid project personnel in accomplishing management objectives.

B. **Presentation of Information**.

(1) Reclamation will provide routine, non-sensitive information regarding its projects, recreation opportunities, and cultural and natural resources to the public at visitor centers located at dams and other projects in the western United States. If available, this information will be provided to visitors in alternative formats to accommodate the needs of persons with disabilities. Consideration will be given to the information being communicated when determining effective formats to be developed and used to communicate with the public.

(2) The visitor center and equipment used in relation to it, both inside the visitor center and on the surrounding grounds, are subject to the highest standards of maintenance. All equipment used in visitor centers must be selected for dependability, ease of maintenance, accessibility, longevity, and low operating cost. For equipment that is critical to the visitor's experience, a backup must be on hand, if possible.

(3) Audio and visual equipment purchased or upgraded must be highly dependable, fully accessible, off-the-shelf equipment that can be easily and cost effectively maintained, repaired, or replaced. See Reclamation Manual Directives and Standards, Audiovisual, Multimedia, Still Photography, and Related Equipment (ADM 05-01). All such equipment procured with Federal funds must meet the technical requirements of section 508 of the Rehabilitation Act of 1973, as amended, to provide for the needs of persons with disabilities.

C. **Approvals.**

(1) Before updating or developing a visitor center and before committing any public funds, a DI-552, will be submitted through the regional public affairs officer to the Chief of Public Affairs. The master plan and any other supporting documentation and approval forms will be submitted along with the DI-552.

(2) The Chief of Public Affairs will review the DI-552 and coordinate with the Department of the Interior on any necessary approvals.

(3) If approved, work will proceed on developing a design, including the use of graphics and text.

(4) Before the construction of any display panels, the proposed text and graphics will be submitted through the regional public affairs officer to the Chief of Public Affairs. The Chief of Public Affairs will review the proposed text and graphics and coordinate with the Department of the Interior on any necessary approvals.

(5) If the proposed text and graphics are approved, development and construction of the necessary elements may proceed.

6. **Reviews.**

   A. Visitor centers and their exhibits will be formally reviewed once every 5 years. The regional director or delegate will form an external team to conduct this formal review. The external review will be conducted and documented by an interdisciplinary team of technical specialists who are not employees of the office directly responsible for managing the visitor center and who have the appropriate qualifications to conduct such a review. Using contract employees is encouraged for the interpretation part of the inspection.

   B. The purpose of the review is to ensure that all facilities are safe, secure, accessible, and adequate; equipment is in operating condition; and audiovisual presentations, photographs, taped messages, and other interpretive materials are accurate, current, and communicated effectively. The review team will prepare a report that details its findings, including any recommendations for facility improvements or repairs or for updating exhibits. A copy of this report will be provided to the visitor center manager, area manager, regional director, regional public affairs officer, Chief of Public Affairs, regional security officer, and other appropriate individuals within Reclamation.

   C. The official directly responsible for managing the visitor center will be responsible for determining what actions to take, in consultation with the regional office and review team, as a result of the review.

   D. If the external review identifies operational or administrative deficiencies, a timetable in which to correct these deficiencies will be established by the office directly responsible for the visitor center and will be approved by the regional director or delegate.

7. **Fees.** Fees will be charged, if appropriate and authorized, for use and entry into the visitor center.

8. **Items for Sale to the Public**. Items made available to the public may be sold, where authorized. Examples of appropriate sale items include project memorabilia, educational materials, maps, food and beverages, film, and other customary supplies to support a safe and enjoyable recreation visit.

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INTRODUCTION

Visitor centers are a primary type of recreation development that the Bureau of Reclamation (Reclamation) defines as a publicly recognized educational facility or dedicated space for appropriate interpretive displays and programs. Visitor centers generally have support facilities (e.g., parking lots, attractive grounds, outdoor seating, walkways, and vistas) and conveniences for the traveling public (e.g., toilets, water, maps, literature, telephones, and vending machines).

Visitor centers (including their associated facilities, services, and programs) serve to:

- Effectively communicate and inform the public about Reclamation and water projects.
- Enhance the quality of recreation and tourism opportunities for all visitors, including those visitors with disabilities.
- Describe other opportunities and facilities that are available within the project.
- Provide information on the natural, cultural, and historical resources in the project area.
- Help provide visitor safety and enjoyment.
- Educate and promote water conservation and water safety.

Reclamation and its partners can use these guidelines to ensure that visitor centers are planned, developed, upgraded, managed, and operated in accordance with the philosophy, goals, methods, approach, and considerations of sustainable development and in an appropriate and cost-effective manner. Reclamation's Visual Identity Program Online Manual; Museum Property Manual and Standards; and other Reclamation manuals will apply when planning, developing, and managing visitor centers.

These guidelines will be re-evaluated and revised as new information, technology, and materials are developed. Designers and engineers should note that site-specific architectural and engineering specifications are beyond the scope of this manual. This manual should be shared with all other Federal, State, Tribal, and local public agencies and cooperating associations that are helping to manage visitor centers on Reclamation project lands.

PLANNING

There are several tiers of guidance that may influence the planning, development, management, and operation of visitor center facilities at Reclamation projects. Figure 1 displays the hierarchy of documents that can be referenced for visitor center planning purposes.

Authorizing legislation is the legal foundation for all project operations, facilities, programs, and services. Authorizing legislation provides justification and guidance for visitor centers. Planning and operating within the authorization is a legal responsibility of Reclamation managers.

The **Resource Management Plan** is the next level of guidance for planning and managing visitor centers. This plan provides comprehensive goals and objectives for project resources and can serve as a decision document to determine if a visitor center is appropriate and suitable.

A visitor center may (or may not) be an appropriate tool to achieve the project's interpretive goals and objectives. **Interpretive master planning** is the primary process for assessing if a visitor center is appropriate at a project. If a visitor center is deemed appropriate, the interpretive planning process should also suggest what type of center would be suitable. Interpretive master planning is a process that enables managers to develop a systematic and comprehensive approach to interpretation for the project or site.

If a visitor center is deemed appropriate and suitable, the interpretive master planning process can also serve to define the visitor center messages, niche, uniqueness, accessibility, interpretive themes, interpretive tools and techniques, displays, programs, and services. These guidelines briefly describe the interpretive planning process but do not address the development of specific interpretive media (e.g., exhibits, signs, or brochures).

Visitor center **architectural and engineering design** is the next level of analysis. Detailed guidance and specifications would be provided by the designer and are beyond the scope of this manual.[1]

[1] The principles of Crime Prevention Through Environmental Design (CPTED) and Terrorism Prevention Through Environmental Design (TPTED), as outlined in the "Visitor Center Security" chapter of these guidelines, should be incorporated in the design.

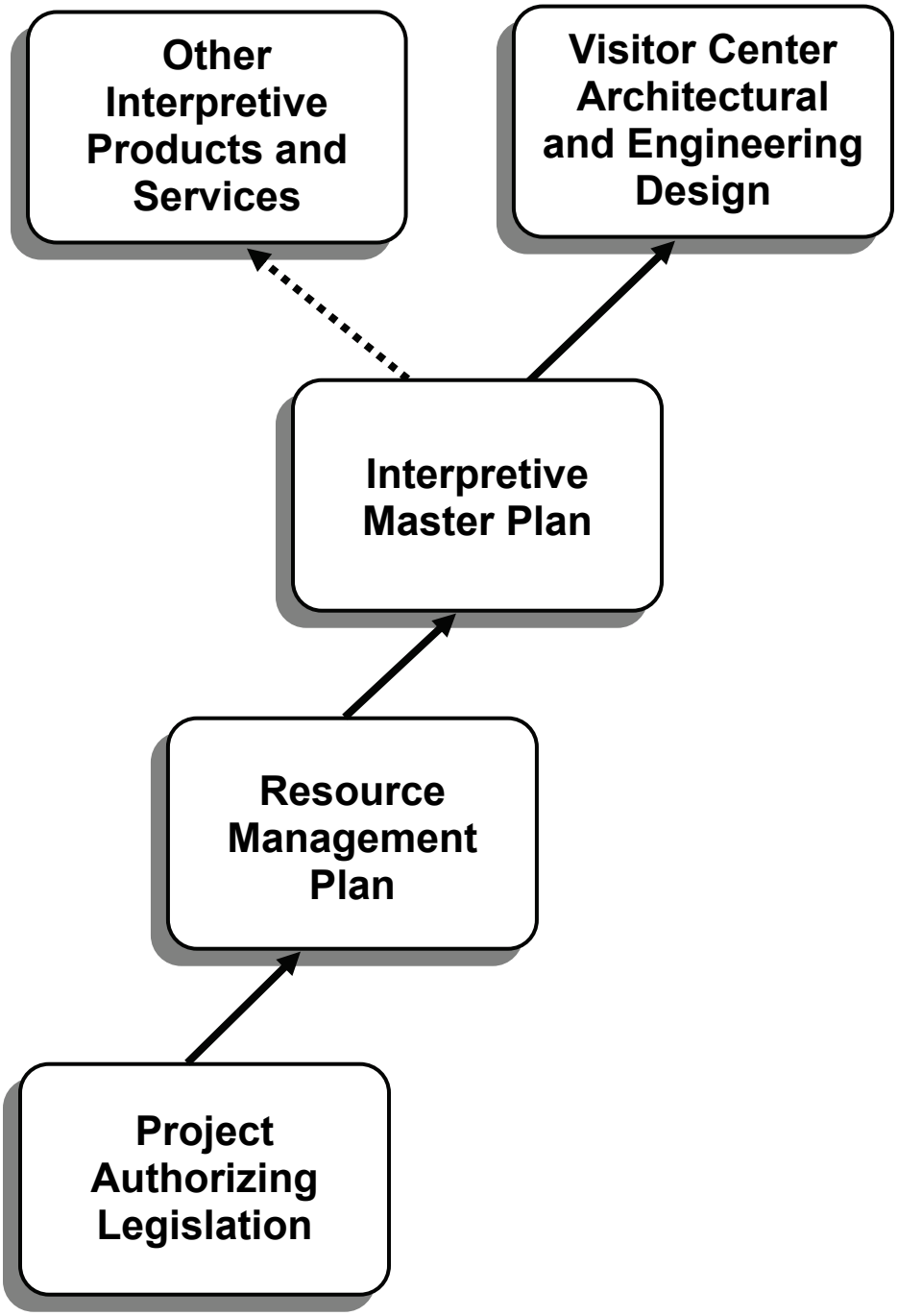

Figure 1.—Visitor center planning.

TO BUILD OR NOT TO BUILD: CRITERIA FOR SUPPORTING VISITOR CENTER PROPOSALS

Introduction

Constructing visitor centers is one method of providing an interpretive program. Developing interpretive programs and products is limited only by one's imagination. Some examples of common interpretive media are: wayside exhibits, kiosks, brochures, audiotapes, videos, displays, guided hikes, nature centers, living history programs, presentations, and visitor participatory projects. Choosing the right interpretive medium depends on the goals of the interpretive program, the needs of the agency, the needs and types of visitors, and the resources to be interpreted.

Visitor centers are often recommended as the desired interpretive approach before proper consideration is given to other interpretive options. In the proper environment, a visitor center can be a very effective interpretive approach. However, good interpretive planning is needed to determine if and when a visitor center should be used.

Below are questions that should be answered before a decision can be made as to whether a visitor center is the best interpretive option.

1. **Is a visitor center the most effective interpretive medium to use for the specific location, audience, resources, and purpose of the interpretive program?**

    a. Has an interpretive plan been completed that identifies the interpretive program goals, objectives, and themes?

        (1) A visitor center is an expensive interpretive tool and should be chosen only after it is determined to be the most cost-effective means of accomplishing the educational objectives of the project. This decision should be obtained through the development of an interpretive master plan that will help identify the interpretive goals, objectives, and themes for the overall interpretive program. The interpretive master plan should also identify areas, in addition to a visitor center, where interpretive media will be used to accomplish the program's objectives.

(2) Before any design work is started on a visitor center, there should be clear goals, objectives, and themes developed for the purpose of the visitor center and the entire interpretive program. A facilities planning session should be held that includes all the involved resource and accessibility specialists and potential partners. Everyone should be clear about the purpose of the overall interpretive program and any proposed visitor center as part of that overall program.

(3) Interpretive themes should be coordinated between agencies and other local facilities so that the information is not repeated in each facility. Many regions of our country interpret unique topics, such as desert ecology, Lewis and Clark, Southwest Indian culture, the gold rush, and western settlement. Coordination with regional providers will help each facility complement the overall theme so the visitor has a more holistic understanding of the area.

(4) A visitor center can help implement an interpretive program. Visitor centers are very effective in providing a focus for the interpretive programs. Tours and special events are often easier to organize when there is a visitor center. Interpreters can use many of the visitor center exhibits to help explain concepts and ideas before going out on the trail or taking visitors on a tour. Visitor centers, however, should not be viewed as the interpretive program. They are only one of many strategies for reaching the public with information and education about the project and the agency's mission.

(5) Large visitor center projects often result from a proposal growing beyond its original intent or from an economic development project for a local community. The success of a visitor center as an economic development effort depends on many factors, such as proximity to major travel routes, promotional efforts, the quality of the exhibits and interpretive program, and the potential market for the topics in the visitor center. A market evaluation and cost-benefit analysis should be completed before design work starts on a visitor center that is to serve as an economic development project.

b. Has the Interpretive Master Plan analyzed the potential audiences?

(1) A market analysis or audience analysis regarding the types and diversity of potential visitors is critical to determining the need for a visitor center. (See Haas and Wells, 2006.) Information may be collected using approved visitor survey instruments.

(a) Demographics: Demographics provide descriptive information about current and potential visitors (e.g., ages, genders, nationalities, incomes, disabilities, group sizes, how far they travel, as well as the social, physical, cultural, and economic factors of the area).

(b) Psychographics (interests, opinions, and expectations): Psychographics data are used to determine why visitors come to your site and what specific experiences are they seeking (e.g., being with friends and family, getting away from daily stresses, and seeking challenge in outdoor recreation).

(2) Type, placement, and design of a visitor center also depend on the interests, expectations, and abilities of visitors. Visitor centers serve both an orientation function and an education function. Therefore, decisions about the best proportion of each function should be made during interpretive planning.

(a) Orientation: Visitor centers are very effective at orienting first-time visitors who are unfamiliar with an area and who wish to learn information about facilities, recreation opportunities, and the cultural and natural resources of an area. They are also very effective for repeat or recreational users who travel to an area for a specific recreation activity, such as rafting, fishing, or boating. These users typically have their equipment and are ready to start their recreation activity. Their main interest is to gain information on conditions related to their chosen recreation activity, such as where the fish are biting or the current river flows and conditions.

(b) Education: Visitor centers are also effective in reaching visitors with specific interests. Beyond orientation to a location, visitors are often interested in supplemental educational information about the site, its resources, or its functions. This information can include natural or cultural history, but at Reclamation sites it most often includes specific history of the area, specific functions of a dam (e.g., hydroelectric energy at Hoover Dam), special provisions at the site (e.g., fish ladders at Red Bluff), and so forth. Specific goals and objectives for this level of education should be addressed in an interpretive planning process.

c. Are visitor and Reclamation goals and objectives already being served by another facility in the area? Before a visitor center proposal is approved, there should be a thorough survey of other visitor centers and interpretive efforts in the region. This survey should identify whether visitor needs are already being met by other facilities and if Reclamation could more easily accomplish its mission by entering into a partnership with the existing facility managers. Whenever possible, visitor centers should be interagency centers. Visitors do not generally know or care about different agencies and boundaries. They usually go to a visitor center for orientation information about an area or resource that interests them.

d. Has the interpretive plan analyzed the best location for a visitor center? The purpose of the interpretive program and visitor center is the main criteria for deciding the best location of a visitor center. Orientation and information visitor centers are best located at places visitors encounter before deciding where to go. If the visitor center was built to reflect a specific regional theme, the best location will probably be near the main access road. Visitors should be able to find the visitor center easily and shortly after they enter the area. In general, poor locations for visitor centers include the end of long dirt roads, more than a few miles off the main road, deep inside the area of interest, or away from the main entrance to a resource.

2. **Does the proposed visitor center relate to Reclamation's mission and management objectives?**

a. There should be a direct relationship between Reclamation's mission, the management objectives of Reclamation and the project, and the interpretive program.

b. An effective visitor center is supported by a resource management plan and is not a separate part of the overall visitor services effort. The goals and objectives of building a visitor center should be clearly identified in planning documents related to the site and interpretive program. These goals include addressing some of the challenges visitor centers bring to an area, such as the potential to concentrate or coordinate visitor use.

c. An important objective of any Reclamation visitor center is to help the public appreciate and discover the resource diversity and recreation opportunities on Reclamation lands. In addition, helping visitors feel a sense of ownership and involvement in protecting the resources is appropriate. The visitor center should be supported by an appropriate array of accessible current publications, exhibits, and programs to help visitors discover and appreciate resources on nearby Reclamation lands.

3. **Are there documents showing clear commitment of partners and State and Federal congressional support for the visitor center?**

a. A cost analysis should be done showing how the partners will share predicted costs. Cost sharing should be realistic, reflecting the true ability of partners to live up to their promises. For instance, if the project will be staffed by a private group, such as a cooperative association, it should be shown that the association is truly prepared and able to take on this responsibility. These partnerships and economic commitments can be used to explain the project to the Department of the Interior (Interior), the Office of Management and Budget, and the Congress.

b. The agreement should also clearly identify the responsibilities of each partner, including who is responsible for accessibility retrofits on identified deficiencies and expected in-kind services and procedures for maintaining and canceling the agreement.

c. Congressional members and State legislators should be able to show support for the project, including operations and maintenance funding. However, all congressional support should be consistent with the project management goals and should consider sound fiscal commitment.

d. The scope and magnitude of the project should be clear, so that it does not expand beyond fiscal reach. Often, as more partners get involved, more ideas are adopted and, as a result, the facilities grow bigger to accommodate these ideas. The interpretive plan should include discussion about the specific purpose and scope

of the project and should include criteria for making decisions that might affect the scope of the project. The proposed construction project should also be divided into phases to maximize funding options and accountability.

4. **Is Reclamation prepared to accept the long-term commitment that a visitor center requires? Has a cost analysis been prepared that shows the following:**

   a. Have staffing needs been met?

      (1) Visitor centers should be open when public demands are highest. Usually, this means weekends and late hours on Friday and Saturday. It is poor customer service to have the doors closed when visitors expect them open.

      (2) Interpretive programs should be developed. These are needed especially by students. Teachers and students are better served when the ratio of students to interpreter does not exceed 10 to 1.

      (3) Presentations should be given to the general public. Visitors enjoy personal presentations that go beyond the materials in the exhibits and enable them to ask questions. People also have different learning strategies and preferences. Some people learn best by reading the materials, others by listening, others through sign language or alternative formats, and others by experimental involvement. A successful program will use several different interpretive techniques, including those that take into account the needs of persons with sensory and cognitive impairments.

      (4) Staff should help in scheduling interpretive events, managing volunteer programs, and coordinating special exhibits and events. Staff should be experienced and prepared to create temporary exhibits on the latest issues.

   b. Is the operation and maintenance budget for the visitor center complete?

      (1) Repairs are needed occasionally for all exhibits, and exhibits should generally be replaced every 10–12 years. This means future funding commitments.

(2) Printed posters, brochures, and other supplies are needed for the interpretive program, tours, and other activities. If there is a cultural theme to the interpretive program, there should be funds for purchasing sample artifact replicas and period dress.

(3) Additional funds are needed for electronic, technological, and mechanical equipment for the exhibits and interpretive programs that may wear out, become damaged, or break. A future funding commitment will be required.

(4) Maintenance is needed for the building and internal facilities, such as lights, heat, audiovisual equipment, assistive listening systems, and special lighting equipment.

c. Should fee collection facilities be considered in the design? Almost all visitor centers collect revenues, whether they are in the form of donations, program fees, vending machine revenues, or sales.

d. Are there steps for a value engineering review of the project? Value engineering should be done on all visitor centers to ensure that the proposed design of the building best serves the established goals and objectives of the facility. A value engineering study should address important issues, such as the location of the restrooms and any potential sales area.

e. Has a cost-benefit analysis been completed to show the long-term cost per visitor? During the first 5 years, there should be only minor repair and maintenance costs for the visitor center. After 5 years, many of the exhibits will need updating, and major repairs may be needed for some of the exhibits and for the building itself.

Decision Criteria for Proposing a Visitor Center

Arbitrary decisions are those made without principle and reason. A list of explicit decision criteria can serve several important functions in proposing and planning a visitor center, such as helping to (a) make the decision process transparent and trackable; (b) develop a full set of reasonable alternatives; (c) ensure a full, fair, adequate, and deliberate evaluation of consequences of alternatives; (d) improve communication and increase meaningful public participation; and (e) create an administrative record.

The decision criteria should fully reflect the circumstances at hand and be commensurate with the potential consequences of the decision to be made. The number of criteria needed to adequately assess development of a visitor center increases as the potential consequences of that decision increase. The following criteria are commonly used when proposing a visitor center.

1. **Is a visitor center the most effective interpretive medium for the specific location, audience, and purpose of the interpretive program?**

    a. Does an interpretive plan or similar document provide specific rationale for why a visitor center is the best interpretive technique for the type of visitor interest and type of use in the area?

    High – The interpretive plan provides sound rationale for why a visitor center is appropriate.

    Medium – The interpretive plan provides some rationale for why a visitor center is one of many techniques that could be used to reach the intended audience, but other media may also be appropriate.

    Low – No interpretive plan was completed; no proper visitor analysis of the intended audience was conducted; or a plan was completed, and other techniques are more appropriate.

    b. Are the visitors' and agency's public information needs being served by other means (e.g., other regional visitor centers or visitor contact stations)?

    High – Other centers and stations do not exist.

    Medium – Other centers or stations are more than a day's drive away.

    Low – Other centers or stations are within a day's drive.

2. **Does the proposed visitor center relate to Reclamation's mission and management objectives?**

   a. Does the visitor center's purpose relate directly to the mission of Reclamation, its programs, or its legislative mandates?

      High – The proposed center strongly relates to Reclamation's mission.

      Medium – The proposed center generally relates to Reclamation's mission.

      Low – The proposed center relates only slightly to Reclamation's mission.

   b. Does a publicly reviewed resource management plan, plan amendment, or other planning document identify a visitor center as part of the preferred management strategy?

      High – Plan(s) recommend building a visitor center.

      Medium – Plan(s) list a visitor center as a possible approach.

      Low – Plan(s) state that a visitor center is not necessary or do not consider a visitor center.

3. **Is there clear legislative authority and valid commitments from partners showing clear economic and congressional support for the visitor center?**

   a. Is there support from the congressional, State, and local representatives?

      High – Documentation shows appropriate support from Congressional offices, State legislature, and local governmental entities.

      Medium – Documentation shows some support from Congressional offices, State legislature, and local governmental entities.

      Low – There is no clear commitment to the visitor center.

b. Is there a partnership agreement for operation and maintenance if partners are proposed?

High – A partnership agreement for more than 10 years contains clearly stated responsibilities for staffing and operation and maintenance costs. There are clear provisions for regular review and updating of the agreement.

Medium – A partnership agreement for more than 5 years contains stated responsibilities for staffing and operation and maintenance costs. There are some provisions for regular review and updating of the agreement.

Low – A partnership agreement for no more than 3 years states general responsibilities for staffing and operation and maintenance costs. There are poorly stated or nonexistent provisions for regular review and updating of the agreement.

c. Is there construction cost sharing with partners, including private, State, or Federal entities?

High – A cost-sharing agreement of 25 percent Federal and 75 percent partner(s) with procedures for regular review.

Medium – A cost-sharing agreement of 50 percent Federal and 50 percent partner(s) with procedures for regular review.

Low – A cost-sharing agreement of 75 percent Federal and 25 percent partner(s) with procedures for regular review.

4. **Has Reclamation determined the long-term staffing, maintenance, and funding commitment required to support the visitor center?**

a. Was a cost analysis completed that considered proper staffing and the operational and maintenance costs related to a visitor center?

High – A cost analysis was conducted. No problems are evident.

Medium – A cost analysis was conducted. Possible problems are evident.

Low – No cost analysis was conducted, or a cost analysis was conducted and problems are certain.

b. Is there a process for conducting a value engineering review?

High – Funding for a value engineering review is available, and a review will be conducted.

Medium – A value engineering review is planned, but funding is not yet available.

Low – There is no plan for a value engineering review.

c. Has consideration been given to the benefits of contracting specific services such as maintenance and security?

High – A cost analysis was conducted. Benefits such as cost savings are evident.

Medium – A cost analysis was conducted. Benefits such as cost savings are limited.

Low – A cost analysis was conducted. Benefits such as cost savings do not exist.

INTERPRETIVE MASTER PLANNING

Interpretive master planning is a strategic process that, in its implementation, provides a plan for achieving management objectives through interpretive media and education. Interpretive planning analyzes all needs and existing resources and recommends a wide array of interpretive services, facilities, products, and programs to communicate, in the most efficient and effective way, the purpose, significance, themes, and values of Reclamation resources.

Principles of Interpretive Planning

Interpretive planning defines how an organization will handle the task of facilitating interpretive visitor experiences, enjoyment, and learning. Interpretive planning:

- Considers the client (user, visitor, public, audience, customer, tourist, recreationist, family, child, senior, person with disabilities, local school or youth group, etc.) and describes the desired visitor experiences at the site or project.
- Defines the special value, significance, or purpose of a place.
- Sets up key goals for facilitating visitor learning in concert with management goals.
- Recommends and outlines appropriate approaches and strategies for orienting and educating the visitor in ways that communicate the resource's most significant and compelling stories while protecting and preserving the integrity of the natural and cultural resources.
- Prescribes the best mix of methods, media, and messages based on current research and reflects knowledge about visitor expectations, demographics, and changing social trends and needs.
- Is flexible, ongoing, interdisciplinary, and responsive to client needs.
- Sets a style for interpretive media.
- Considers timing and financing of programs or project development.
- Is facilitated by a person or team of people who have an understanding of, and have demonstrated competence in, interpretive planning.
- Ensures universal accessibility.

INTERPRETIVE PLANNING PROCESS

Interpretive planning is a process of describing an existing situation and need, inventorying and analyzing current resources, identifying major stories or themes, recommending a set of specific interpretive approaches and media, and implementing and evaluating products and services. It is essential for guiding the development of a visitor center that then considers the following processes.

Purpose of Planning

Why is this plan being done? This stage is often referred to as scoping and can include, but is not limited to, the following:

- Existing situation, vision, or mission of the area, resource, site, or project – What does the enabling legislation suggest about the purpose of the project? What is the mission of Reclamation in terms of resource management and visitor services? What is the existing situation that creates a demand for a visitor center or interpretive projects or both?
- Site or project goals – Why do interpretation at this site? Why is a visitor center considered for this site or facility? What specific goals will the interpretation at this site or visitor center help achieve?
- Background or history of the area, resource, or project – What is the historic, cultural, social, and political context for planning interpretation at this place?
- Context for planning – Are there funding, staffing, or political considerations that might influence resource management? Are there new or unusual forces exerted on the resource that necessitate interpretive planning?

Inventory and Analysis

This part of the plan inventories all the resources, issues, and audiences of the area, resource, or park. Each of the following sections should include both an inventory of the resources and an analysis of those resources. The inventory describes what exists, and the analysis describes why that inventory is important or relevant to planning for interpretation.

Resource Inventory and Analysis

- Biophysical – outstanding natural and biological features.
- Socio-cultural – outstanding cultural features or phenomenon.
- Recreational resources or facilities – marinas, boat ramps, campgrounds, picnic areas, trails, etc.

Facilities and Programs Inventory and Analysis

- Existing infrastructure – roads, bridges, buildings, dams, powerplants, canals, fish hatcheries, etc.
- Existing interpretation or education – interpretive exhibits and publications and/or educational collections such as skins, skulls, rocks, artifacts, and plants; library resources; and visitor orientation materials such as kiosks, bulletin boards, and orientation signs.
- Existing accommodations – provisions made for effective communication and equal opportunity to experience for persons with disabilities.

Management Inventory and Analysis

- Resource management summaries.
- Security issues and requirements.
- Existing plans that will affect visitor services and education.
- Any existing and relevant resource management issues (urban-wild land interface and conflicts, user conflicts between personal watercraft and anglers, sensitive natural or cultural areas, etc.) that affect the visitor experience and that should be interpreted for the visiting public.

Audience and Stakeholder Inventory and Analysis

- Current visitors – number of visitors, demographics, motivations, interests, market segments, etc. (NOTE: This is perhaps the most underdeveloped section of most interpretive plans.)
- Stakeholders of the area, resource, or site – partners, funders, and interest groups that might have a stake in either the management of the resources of the area or in the education of visitors to the area.

Again, it is not sufficient to just collect this information or data. Analysis involves deliberate thought, discussion, deliberation, reflection, and judgment. Consider why and how this information is useful for the project, and how this information is helpful for making decisions about this project.

Significant Themes and Visitor Experiences

This section of an interpretive plan summarizes the essence of the project's importance and its relevance to the visitor experience.

Statements of significance, compelling stories, and site-wide themes are all used to describe the distinct qualities of resources at the site, including natural, cultural, scientific, recreational, and inspirational resources. Statements of significance are based on the site's specific legislation and general management plan, and they answer the question: *"What are the major stories, issues, ideas, or characteristics that make this area distinctive and should be conveyed to the visitors?"* Statements of significance can be a line, a paragraph, or a page.

EXAMPLE Statements of Significance:

From the Interpretive Addendum to the Poudre-North Park Scenic and Historic Byway Corridor Management Plan, 1998:

Water/Poudre River: From tundra to plains, the Poudre River reflects the story of water law in the West. The river's water storage and diversion projects are vital to industry, wildlife, agriculture, and recreation. Understanding the river's management and recognizing its uses are important to preserving this natural treasure.

Scenery: The Byway is a significant "Gateway to the Rockies," providing travelers a first-hand look at narrow canyons, wild rivers, great gorges, piedmont, high peaks, cirques, and sweeping parks. The Byway's geological richness and scenic beauty should be an integral part of visitor education.

From the North Park Watchable Wildlife Plan, Colorado Division of Wildlife, 1995:

Partnerships: Nearly 75 percent of North Park is publicly owned, requiring a unique partnership between Federal, State, and private landowners to manage and protect its abundant natural resources of wildlife, range, water, forests, minerals, and recreation opportunities.

Lifestyle preservation: The current lifestyles of the citizens of North Park are an integral part of the area's overall natural and cultural heritage. As such, past and present lifestyles and values should be infused into watchable wildlife interpretation.

Visitor-experience opportunities or desired visitor experiences describe how the interpretive program facilitates physical, social, intellectual, inspirational, and emotional experiences for visitors. These statements include the activities we hope visitors engage in, the facts we hope they learn, the feelings we hope they experience, and the scenery we hope they appreciate. In an interpretive plan, these opportunities are expressed as broad, recreation-related goals that suggest desired visitor experiences. Visitor-experience opportunities can be written as bullets or as narrative descriptions.

EXAMPLE Visitor-Experience Opportunities:

From the Blue Ridge Music Center Interpretive Plan, National Park Service

The park will provide opportunities for visitors to:

- Listen to a wide variety of traditional music of the Blue Ridge, including both live and recorded music.
- Become acquainted with musicians from the region whose backgrounds, life histories, and artistry illustrate important themes in history.
- Participate in informal music and dance activities at the site.
- Have an enjoyable recreational experience without impairing the natural and cultural values of the site.

From the Lakota Tatanka Heritage Plan, National Park Service

As visitors travel through the park, they are exposed to the vastness of the prairie with an occasional but exciting glimpse of buffalo, elk, and perhaps even a band of Lakota people crossing the prairie. When they arrive at the visitor center, they are exposed to enjoyable learning experiences designed to enrich the minds of all ages and cultural backgrounds. These learning experiences focus on three elements that form the management objectives of the park . . . first, the prairie that nurtures a vast array of plants and animals, second, the Sioux Indians, and last, the park management program itself.

Program, Product, and Service Recommendations

This part of the plan recommends specific programs, products, and services as they relate to the existing resource inventory, statements of significance, and visitor experience opportunities. The recommendations are a strategy or prescription for the best set of programs and services to meet the visitors' needs, while at the same time preserving the site's resource integrity. Often, the best set of programs and services is selected from a set of recommended alternatives using criteria such as those described in the "Decision Criteria for Proposing a Visitor Center" section.

In an interpretive master plan, recommendations are made concerning a variety of accessible media that best meet site or park goals for visitor education. The objective is to select the most appropriate media based on available resources (time, money, personnel, and expertise) and the purposes of the plan. Choices for media recommendations, which have either section 504 or 508 of the Rehabilitation Act of 1973 implications, can include any of the following:

Facilities

- Visitor centers.
- Kiosks.
- Waysides.
- Visitor contact stations.

Personal Programs

- Guided walks and talks.
- Campfire programs.
- Storytelling.
- Living history programs.
- Oral histories.
- Demonstrations.
- Environmental education activities.
- Puppet shows and dramatic presentations.
- Roving interpretations.
- Visitor information stations.

Manufactured or Printed Products

- Publications, including Grade II Braille, audio recordings, and computer disk of text.
- Kits and adventure packs.
- Discovery boxes and traveling exhibits.

- Exhibits, including tactile features, and audio recording or computer disk of feature exhibits.
- Signs, including tactile features, and audio recording or computer disk of feature exhibits.
- Maps and brochures for self-guided activities, including Grade II Braille, audio recording, or computer disk.

Electronic Technology Products

- Web pages with audio description of slides provided (section 508 compliant).
- Audiotape tours with printed script.
- Video programs (open or closed caption).
- PowerPoint slide programs.
- High-tech programming (animatronics, augmented reality, computer interactive programs, video-equipped microscopes, virtual reality, etc.).

The section of the interpretive plan that specifies final recommendations should also include resources for the successful design, fabrication, and installation of the recommendations, including all personnel, materials and equipment, money, and time.

SITE DESIGN

The development of a visitor center design is the process of integrating structure(s), utilities, and visitor circulation at a specific location. The process includes initial site inventory and assessment, alternative analysis, detailed design development, and construction procedures and services. This chapter begins with an overview of general site design considerations, followed by guidance for site selection, site access, and utilities and waste systems. A brief note about construction methods and materials and a brief list of sustainable design considerations conclude the chapter. The following chapter continues this discussion related to building design. An excellent source for additional visitor center design discussion is *Interpretive Centers: The History, Design, and Development of Nature and Visitor Centers* (Gross and Zimmerman, 2002).

Overall Site Design Considerations

Regardless of cost or size, contemporary visitor center development should strive to address a number of site design concerns:

- Achieving harmony with, and ethical responsibility for, the existing surroundings, both cultural and natural.
- Maintaining both economic viability and ecological integrity throughout the entire process to the extent possible.
- Allowing simplicity of functions to prevail, while respecting basic human needs of comfort, safety, and access for persons with disabilities.
- Balancing both long- and short-term social and environmental benefits and costs.
- Minimizing disturbance of cultural resources, vegetation, geology, and natural water systems.
- Identifying, as appropriate, any environmentally safe means of onsite energy production and storage in the early stages of site planning.
- Locating and orienting structures to maximize passive energy technologies.
- Providing space for processing all wastes created onsite (collection and recycling facilities, digesters, lagoons, etc.) so that reusable and recyclable resources will not be lost and hazardous or destructive wastes are considered.

- Reusing previously disturbed areas where built areas have been abandoned.
- Developing facilities to anticipate integration of energy conservation, waste reduction, recycling, and resource conservation into the visitor experience.
- Incorporating local materials and crafts into structures, native plants into landscaping, and local customs into programs and operations.

Site Selection

Selecting a visitor center site for Reclamation may include any of the following: reservoir, lake, beach, river, marine areas, compelling landform, scenic view, cultural resource, canal, dam, and so forth. When siting visitor facilities, consideration should be given to both natural and cultural features of an area. The site inventory and analysis should clearly identify the quality and extent of these features, possible impacts to the existing environment, and potential mitigation measures that might be necessary.

The characteristics that make an area attractive to visitors may also pose problems. Some attractive areas may be very sensitive to disturbance and unable to withstand impacts of human activity. Other attractive areas may be too remote to justify development for direct visitor use. Some areas may be too close to safety hazards or too developed to be appropriate for visitor center development. Conversely, some degraded areas may, in fact, provide opportunities for development, allowing more options for site preservation and ecological restoration. Some areas may have terrain issues that will increase the cost of compliance with accessibility standards. The site selection process must address the following questions:

- Will anticipated development impacts on a site be acceptable?
- What inputs (energy, materials, labor, and products) are necessary to support a development option, and are required inputs available?
- Can waste outputs (solid waste, sewage effluent, exhaust emissions) be dealt with at acceptable environmental costs?
- Will the terrain increase costs for compliance with accessibility standards (i.e., additional earthwork to meet the slope and cross slope requirements of parking spaces, accessible routes, wheelchair seating spaces in outdoor areas, required clear space at telephones, drinking fountains, waste receptacles, and other facilities)?

The process of site selection for a visitor center is one of identifying, weighing, and balancing the attractiveness (e.g., compelling natural and cultural features, access, and sense of place) of a site against the costs inherent in its development. The characteristics of a region or site should be described spatially (using either conventional or computer-generated maps) to provide a precise geographic inventory. Spatial zones meeting programmatic objectives within acceptable environmental parameters are likely development sites.

The programmatic requirements and environmental characteristics of site development vary greatly, but the following factors should be considered in site selection:

Site compatibility:

When siting a visitor center, consider (a) *visual compatibility* (will the visitor center look like it belongs in that location), (b) *cultural compatibility* (will the visitor center respect local social and cultural history of the site), and (c) *ecological compatibility* (will the visitor center honor and/or complement the surrounding geology, vegetation, and waterforms).

Visitor capacity:

Every site and/or facility has a capacity for human activity. A detailed site analysis should determine this capacity based on the sensitivity of site resources, the ability of the land to regenerate, and the desired visitor experiences.

Density:

When siting facilities, carefully weigh the relative merits of concentration versus dispersal. Natural landscape values may be easier to maintain if facilities are carefully dispersed. Conversely, concentration of structures leaves more undisturbed natural areas.

Climate:

The characteristics of a specific climate should be considered when locating facilities so that human comfort can be maximized, while protecting the facility from climate extremes such as heat or cold, dryness, or volatile or unpredictable weather.

Slopes:

In many environments, steep slopes predominate, requiring special siting of structures and costly construction practices. Building on steep slopes can lead to soil erosion, loss of hillside vegetation, inaccessible walkways and routes, damage to ecosystems, and costly ground surface impacts to provide

access to persons with disabilities. Generally, appropriate site selection should locate more intense development on gentle slopes, dispersed development on moderate slopes, and no development on steep slopes.

Vegetation:

It is important to retain as much existing native vegetation as possible to secure the integrity of the site. Natural vegetation can be an important aspect of the visitor experience and should be preserved to the degree possible.

Views:

Views are critical and reinforce a visitor experience. Site location should maximize desired views of natural features and desired views of facilities that support all visitor experiences.

Natural hazards:

When considering site locations, avoid naturally hazardous situations, such as precipitous topography, animals and plants, and hazardous water areas. Site layout should allow controlled access to these features.

Access to natural and cultural features:

Good siting practices can maximize pedestrian access to the wide variety of onsite and offsite resources and recreational activities. Low-impact development is the key to protecting vital resource areas.

Landscape considerations:

Consideration of the natural landscape is important during site selection and planning. It is generally less expensive to care for landscape during construction than to restore a badly degraded landscape after construction. These efforts include carefully defining the construction zone and not "clearing and grubbing" soil areas unnecessarily. Placement of vegetation requires careful planning to allow growth to maturity that will not infringe on an accessible route without costly maintenance. Using native plant species and avoiding or controlling exotic or invasive species in landscape and site design are highly recommended.

Support facilities and public use areas:

Safety, visual quality, accessibility, noise, and odor are all factors that need to be considered when siting support services and facilities. These areas need to be separated from public use and circulation areas. In certain

circumstances, utilities, energy systems, and waste systems areas can be a positive part of the visitor experience. For more information, see the "Utilities and Waste Systems" section below.

Proximity of goods, services, and housing:

Visitor center developments require the input and delivery of numerous goods and services, as well as staffing for normal operation. Siting facilities should consider the frequency, availability, and nature of these elements and the costs involved in providing them.

Site Access

Site access refers to not only the means of physically entering a development, but also the enroute visitor experience. For example, the enroute experience can dramatize the transitions between origin and destination with obvious sequential gateways and can provide opportunities for interpretation or education along the way. Other considerations for enhancing the experience of accessing a developed area include:

- Selecting corridors to limit environmental and cultural resource impacts and to control development along the corridor leading to the facility.
- Providing anticipation and drama by framing views or directing attention to landscape features along the access route.
- Providing a sense of arrival at the destination.
- Ensuring that all visitors can have the same or similar opportunities and experiences.

Site access can be achieved by various means of travel, such as by foot, private vehicles, off-highway vehicles, boats, and aircraft. Transportation means that are the least polluting, least noisy, and least intrusive in the natural environment are the most appropriate for a sustainable development. Where environmental or other constraints make physical access impossible, remote video presentation may be the only way for people to access a site.

Utilities and Waste Systems

Utilities:

With the development of a site comes the need for some level of utilities (e.g., water, waste, energy). Developments that are more elaborate have more extensive systems to provide water, waste treatment, and energy for lighting, heating, cooling, ventilating, etc. The provision of these services

and the appurtenances associated with them may adversely impact the landscape and the functioning of the natural ecosystem. Early in the planning process, utility systems must be identified that will not adversely affect the environment and will work within established natural systems. After appropriate systems are selected, careful site planning and design are required to address secondary impacts such as soil disturbance and intrusion on the visual setting.

Utility siting:

When siting utilities, consider dispersing the facilities or using existing terrain and vegetative features to visually screen intrusive structures. In addition, aim to buffer the noise associated with mechanical equipment and the odors associated with waste treatment by manipulating the landscape through the placement of trees and shrubs. An alternative may be to feature environment-friendly utility systems for the purpose of educating the visitor.

Utility corridors:

Because of the impacts created by utility transmission lines, onsite generation and wireless microwave receivers are preferable alternatives in many cases. When utility lines are necessary, they should be buried near other corridor areas that are already disturbed, such as roads and pedestrian paths. Where possible, locate overhead lines away from desirable view sheds and landform crests.

Night lighting:

The nighttime sky can be dramatic and contribute to the visitor experience. Light intrusion and over-lighting glare can obscure night sky viewing and may disorient migratory birds. Care is required to keep night lighting to the minimum necessary for safety and security. Urban lighting standards do not apply. Low-voltage lighting with photovoltaic collectors should be considered as an energy-efficient alternative. Light fixtures should remain close to the ground to minimize eye level glare. Fixtures should be of a type that directs light downward rather than outward or upward.

Storm drainage:

In a modified landscape, consideration must be given to the impacts of storm drainage on the existing drainage system and the resulting structures and systems that will be necessary to handle the new drainage pattern. The main principles in storm drainage control are to regulate runoff to provide protection from soil erosion and to avoid directing water into unmanageable channels. Removal of natural vegetation, topsoil, and natural channels that

provide drainage control should be avoided to the extent practicable. An alternative is to stabilize soils, capture runoff in depressions (to help recharge groundwater supply), and revegetate areas to replicate natural drainage systems.

Irrigation systems:

Low-volume irrigation systems are appropriate in most areas as a temporary method to help restore previously disturbed areas. Irrigation piping can be reused on other restoration areas or incorporated into future domestic hydraulic systems. Captured rainwater, recycled gray water, or treated effluent should also be considered for use as irrigation water.

Waste treatment:

In modified landscapes, it is often appropriate to attach waste treatment systems to existing municipal systems; however, if it is not possible to attach to a municipal system, it is important to consider treatment technologies that are biological and nonmechanical and that do not involve soil leaching or major soil disturbance. While a septic system can be considered, treatment methods that result in useful products, such as fertilizer and fuels, should be investigated. Constructed biological systems are increasingly being put to use to purify wastewater. They offer the benefits of being environmentally responsive, nonpolluting, and cost effective.

Construction Methods and Materials

Construction methods and materials should be considered during the site selection process. The complexity of construction will be determined by the value of the resource, physical remoteness, and the availability of craftsmen and materials. The goal is to minimize harm to the surrounding area while, at the same time, developing a visitor facility that helps create a cohesive, meaningful, and comfortable visitor experience. The methods and techniques used should ensure that there will not be unnecessary environmental damage or residual signs of construction when the project is completed. To the degree possible, the products and materials specified should be nontoxic, renewable or recyclable, and environmentally compatible with the selected site.

BUILDING DESIGN

Visitor center building design considers the process of facility location, design, materials, and construction. In this process, visitor access and site entry; orientation, information, and visitor comfort needs; and programmatic needs such as educational, interpretive, and sales should all be considered. This chapter begins with an overview of general building design considerations, which is followed by guidance for visitor flow and floor planning. Finally, a series of environmental, cultural, and sensory considerations are provided as they relate to building design.

Overall Building Design Considerations

Once a site is selected for a visitor center, the design of the visitor facility should:

- Enhance appreciation of the area (natural and cultural) and encourage or establish rules of conduct.
- Use efficient and cost-effectives technologies appropriate to the functional needs of the visitor center (e.g., lighting, heating, and cooling, waste).
- Consider cost-efficient, perhaps renewable, and compatible building materials.
- Employ a cradle-to-grave analysis in decisionmaking about construction materials and techniques (see end of chapter for more detail).
- Strive to create efficient, flexible spaces so overall building size and the resources necessary for construction and operation are minimized.
- Plan for future expansion and adaptive uses.
- Comply with all required accessibility standards for persons with disabilities.

Designing for Visitor Flow

First Impressions

Visitors form initial impressions at the first encounters with the site and related facilities. Their initial reactions can influence their overall visitor experience. Gross and Zimmerman (2002) suggest the following for entry areas, parking, and walkways.

Entry

- Road design should follow natural contours and respect topography and landscapes.
- Design should help slow entering vehicles and heighten awareness of surroundings.
- Road and entrance signs should be unified with those onsite, reflect the visitor center's overall theme(s), and must comply with Reclamation's Visual Identity Program Online Manual.

Parking

- Parking lot placement should not impinge on the visitor center building and should allow for transitional passage to the center.
- A drop-off loop is often appropriate and should be provided for buses and visitors with mobility impairments.
- Service and emergency entrances and drives should be screened or routed to minimize visual impacts.
- Main parking lots should provide natural shading and landscaping that is consistent with landscaping throughout the rest of the site.
- Lighting should be modest; it should provide for safety but avoid light spillover. Lighting should be sufficient to light trails or walkways to and from visitor center and parking areas.
- Accessible parking should be positioned to provide the shortest accessible route to the accessible entrance. Multiple groupings of accessible parking to serve various features are permitted.

Walkways

- Walkways from the parking areas to the visitor center should be visible or clearly indicated. A view of the visitor center is desirable.
- Walkways to the visitor center and around the site need to consider visitor capacity, scale, and other design elements and should meet requirements under the Architectural Barriers Act of 1968 Accessibility Standards.
- A view of the visitor center entry should be clear from major walkways.

Basic Needs

- Visitors will expect to find facilities and services to meet their basic needs for information, orientation, and personal comfort. These can be provided in a number of ways.
- Each facility should meet minimum scoping and design criteria for accessibility and ensure that no services purposely or inadvertently exclude or segregate visitors in any discriminatory way.

Orientation and Wayfinding

- After-hours information that is easy to find, well lit, and comprehensive should be provided.
- Telephones should be provided for emergency use. Public telephones should be clearly signed and meet the technical standards for persons with hearing impairments.
- Orientation maps and instructions for site use should be provided.
- Bench seating, bathrooms, and shelter in staging areas where visitors are expected to gather or wait should be provided. These staging areas should also include secure and protected areas for storing program equipment and supplies.
- Wayfinding signs should be placed near the entrance to an area and should be on an accessible route for persons with mobility impairments. Wayfinding signs should incorporate features that aid persons with visual and cognitive impairments, such as the use of tactile characters and symbols, color to separate and clarify themes, pictographs, and pictograms.
- Accessible features of the site should be marked with the International Symbol of Accessibility (wheelchair symbol) on the wayfinding sign.

Information Area or Lobby

- A porch or patio should be provided as an informal or formal meeting place outside the main lobby area.
- The visitor lobby should be large, open, and well lit and should provide a barrier-free entry with grates and floor mats.
- Floors, walls, and ceiling surfaces should be designed to minimize noise. Different and creative floor surfaces, colors, and materials can be used to direct visitors to different areas.

- Directional signs should be large enough to be seen and should be placed where they can be seen. Use international symbols to direct visitors.
- The information desk should be brightly illuminated and barrier free (i.e., include access for wheelchairs and children).
- Visitors prefer both personal (a person at a desk) and nonpersonal (brochures, maps, interactive computers) forms of information.

Comfort Areas

- Restrooms and drinking fountains should be easy for visitors to access upon entering the visitor center.
- Benches or appropriate seating areas should be provided around the building so visitors have several places to rest.
- Food and drink services may be considered and, if offered, should be provided in safe, comfortable, and appropriately designed areas.

Interpretive Media and Program Areas

If the visitor center is large enough to include exhibit room(s), classroom(s), or meeting room(s), consider the following:

- Exhibit room(s) should be visible and invite entry.
- Exhibits should be spaced to accommodate peak or capacity crowds.
- Exhibit space should allow for random movement rather than only directed, sequential viewing.
- Auditoriums with fixed seating are preferable for visitor centers where delivery of programs is routine and scheduled. Multipurpose rooms with flexible seating are more appropriate for visitor centers that are used for diverse and spontaneous programming.
- Carefully consider the amount of internal space needed for circulation and how temporary seating arrangements impact occupancy loads. Maneuverability with minimum widths for accessibility is required even in temporary seating arrangements.
- The amount of space devoted to sales items should not be underestimated. Visitors value items related to their experiences. Sales and information functions, however, can often be combined for efficiency.

Outdoor or Onsite Areas

In almost all cases, the visitor experience extends beyond the visitor center. Providing transition areas outdoors to enhance the visitor experiences is essential.

- Provide physical transition zones between buildings, sites, and facilities. These zones may include viewing areas, trails, interpretive waysides, or information hubs.
- Promise adventure with outdoor site design.
- Provide outdoor activity areas and/or exhibits near the visitor center. Create a network of opportunities or loop trails for exploring the site.
- It is important to offer the same experience and opportunities to all visitors. In the absence of accessibility guidance for trails, consider providing an accessible loop on a trail for visitors with mobility impairments that might be shorter but equally interesting. Sensory considerations and the provision of auxiliary aids are especially beneficial to provide an equally interesting experience to visitors with visual or hearing impairments.

Accessible Design Considerations

The Architectural Barriers Act of 1968, the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990 make physical access to facilities and programmatic access to services a civil right. Minimum accessibility requirements address the lowest level of access for features allowed by law and design criteria. It should be made clear that minimum requirements have a basis in law and are mandated, while Universal Design Principles are a design philosophy and are optional.

Since the Architectural Barriers Act of 1968, all buildings and facilities leased, constructed, or altered partially or fully by Federal funds have been required to be accessible. In 1990, the Americans with Disabilities Act was enacted for those outside of the Federal sector. The purpose of accessibility legislation is to address human diversity and should, therefore, be incorporated into the visitor center design to create facilities and programs that are usable by visitors with mobility, vision, hearing, and cognitive disabilities. The standards developed to address the needs of these groups include criteria for signage, color, text, fonts, exhibits, hierarchical text, interactive kiosks, parking, building entries, toilet rooms, slopes, cross slopes, accessible routes connecting all features, and many other considerations.

As Gross and Zimmerman (2002) suggest, keys to achieving universal design include:

- Integrate all visitors regardless of abilities. Do not segregate people with disabilities.
- Provide multisensory experiences throughout the site and within the facilities to effectively communicate the information to all visitors, including those with hearing, visual, and learning impairments.
- Be flexible and creative. Consider the spirit of the accessibility laws, as well as adhering to the "letter of the law."
- Involve a diverse range of users and subject area specialists when designing and evaluating accessible facilities.

An excellent source for incorporating universal design into visitor center planning and design is, *Everyone's Nature: Designing Interpretation to Include All,* (Hunter, 1994). The *Smithsonian Guidelines for Accessible Exhibit Design* (Smithsonian Institution, 1996) provide creative solutions to accessible exhibition dilemmas. The accessibility standards should be kept close at hand for reference and application to the exhibits and overall site and building design.

Environmental Considerations

Reclamation visitor centers may be developed in remote or urban areas. As such, the following environmental factors should be considered in building design. Management of environmental factors is important when museum property is either displayed and/or stored in a visitor center. Visitor center operations must comply with Interior environmental management standards when museum properties are present.

Temperature

Temperature is a liability in climates where it is consistently too hot or too cold. Where temperatures are predominantly *too hot*, building for comfortable interior temperatures may include the following suggestions:

- Maximize roof ventilation.
- Use elongated or segmented floor plans to minimize internal heat gain and maximize exposure for ventilation.
- Connect separate rooms and functions with covered breezeways.
- Maximize wall shading and induce ventilation.

- Provide shaded outdoor living areas such as porches, patios, and decks.
- Capitalize on cool nighttime temperatures, breezes, or ground temperatures.
- Avoid negative building pressurization to reduce pounds of force required to open the door.

Where area temperatures are predominantly *cold*, building for comfortable interior temperatures may include the following suggestions:

- Consolidate functions into the most compact configuration.
- Insulate thoroughly to minimize heat loss.
- Minimize air infiltration with barrier sheeting, weatherstripping, sealants, and airlock entries.
- Minimize openings not oriented toward sun exposure.
- Avoid negative building pressurization to reduce pounds of force required to open the door.

Sun

Direct sunshine can be a significant liability in hot climates but is rarely a liability in cold climates. Sun can be an asset in cool and cold climates to provide passive heating. In either case, building design should take into account seasonal variations in solar intensity, incidence angle, cloud cover, and storm influences.

When solar gain causes conditions *too hot* for comfort:

- Use overhangs to shade walls and openings.
- Use site features and vegetation to provide shading to walls with eastern and western exposure.
- Use shading devices such as louvers, covered patios, and trellises with natural vines to block the sun's rays without blocking out breezes and natural light.
- Orient broad building surfaces away from the hot, late day, western sun (only northern and southern exposures are easily shaded).
- Use light-colored wall and roofing material to reflect solar radiation (be sensitive to resulting glare and impact on natural and cultural settings).

When solar gain is to be used to offset conditions that are *too cold* for comfort:

- Maximize south-facing building exposure and openings.
- Increase thermal mass and envelope insulation.
- Use dark-colored building exteriors to absorb solar radiation and promote heat gain.

Wind

Wind is a liability in cold climates because it strips heat away, but wind can also be a liability in hot, dry climates when it causes the human body to dehydrate and overheat. Wind can be an asset in hot, humid climates by providing natural ventilation.

In designing visitor centers, use natural ventilation wherever feasible; limit air-conditioning to areas requiring special humidity or temperature control such as artifact storage and computer rooms. Maximize or minimize exposure to wind through plan orientation and configuration, the number and position of wall and roof openings, and the relationship to grade and vegetation.

Moisture

Humidity can be a liability if, during extreme hot weather, it causes stickiness and cannot be easily evaporated away (cooling by perspiring). Strategies to reduce the discomfort of high humidity include maximizing ventilation, inducing airflow around facilities, and venting or moving moisture-producing functions, such as kitchens and shower rooms, to outdoor areas.

Moisture can be an asset in hot, dry climates. Evaporation can be used to cool and humidify the air (natural air-conditioning).

Techniques for evaporative cooling include placing facilities where breezes will pass over water features before reaching the facility and providing fountains, pools, and plants.

Storms/Hurricanes/Tornadoes

- Develop an emergency management and evacuation plan.
- Provide or make arrangements for emergency storm shelters that must also take into consideration the needs of persons with disabilities.
- Avoid development in flood plain and storm surge areas. Must be developed above the 100-year flood zone.

- Consider wind effects on walls and roofs.
- Provide storm shutters for openings.
- Use appropriate wind bracing and tiedowns.
- Design facilities to be safe from large storms by constructing them of light, readily available, renewable materials or design them to be constructed of sufficient mass and detail to prevent loss of life and material.

Rainfall

Rainfall can be a liability if concentrated runoff from developed surfaces is not managed to avoid erosion and flooding. It can be an asset if it is collected from roofs for irrigation water.

Topography

Consider the building and land interface to minimize disturbance to site character, skyline, vegetation, hydrology, and soils. Consolidate functions or segment facilities to reduce the footprint of individual structures to allow sensitive placement within existing landforms. Use landforms and the arrangement of buildings to:

- Help diminish the visual impact of facilities.
- Enhance visual quality by creating a rhythm of open spaces and framed views.
- Orient visitors to building entrances.
- Accentuate key landmarks, vistas, and facilities.
- Facilitate intuitive use of the site through well-planned pedestrian access routes, which help prevent visitors from damaging areas by creating their own routes.

Water Bodies

Capture views and consider the advantages and disadvantages of off-water breezes. Minimize the visual impact of development on waterfront zones (also consider views from the water back to the shoreline). Use building setbacks and buffer zones and consider building orientation and materials. Safeguard water from pollutants, from the development itself, and from users.

Hydrology

Locate and design facilities to minimize erosion and impacts on natural hydrologic systems. Safeguard hydrologic systems against contamination by development and other related activities and allow precipitation to naturally recharge groundwater.

Seismic

Determine soil substrate and potential seismic risk. Use shear walls and appropriate building anchorage and bracing details.

Pests

Design facilities to minimize intrusion by nuisance insects, reptiles, and rodents. Ensure that facility operators use natural means for pest control whenever possible.

Wildlife

Respect the importance of biodiversity. Avoid disruption of wildlife travel or nesting patterns when siting the development and try to limit construction activity as much as possible. Allow opportunities for users to observe and enjoy indigenous wildlife.

Cultural Considerations

Archeological Resources

Preserve and interpret archeological features to provide insight into the successes and failures of previous cultural responses to the environment.

Local Architecture

Analyze local historic building styles, systems, and the materials used to find time-tested approaches in harmony with natural systems. Use local building material, craftsmen, and techniques to the greatest extent practicable in the development of new facilities.

Historic Resources

Reuse historic buildings, whenever possible, to assist in their preservation and to contribute to the special quality of the place.

Anthropology/Ethnic Background/Religion/Sociology

Understand the local culture and the need to avoid the introduction of socially unacceptable or morally offensive practices. Seek the views of the local population, as well as local, federally recognized Indian Tribes and Native American groups for design input, as well as to foster a sense of ownership and acceptance. Include local construction techniques, materials, and cultural considerations (that are environmentally sound) in the development of new facilities.

Arts and Crafts

Incorporate local expressions of art, handiwork, detailing, and, when appropriate, technology into new facility design and interior design. Provide opportunities and space for the demonstration of local crafts and performing arts.

Sensory Considerations

Sensory considerations not only make the visit more interesting and memorable, but they will determine the success or failure of effectively communicating information to visitors (especially those with disabilities). The most effective interpretive methods employ as many of the senses as possible. Increasing the number of senses used in communication dramatically increases the effectiveness of the learning experience.

Visual

Provide visitors, including those with disabilities, with ready access to educational materials to enhance their understanding and appreciation of the local environment and the threats to it. Incorporate views of natural and cultural resources into even routine activities to provide opportunities for contemplation, relaxation, and appreciation. Use design principles of scale, rhythm, proportion, balance, and composition to enhance the complementary integration of facilities into the environmental context. Provide visual surprises within the design of facilities to stimulate the educational experience. Limit the height of development to preserve the visual quality of the natural and cultural landscape. Use muted colors that blend with the natural context unless environmental considerations (reflection/absorption), cultural values (customs/taboos), or safety (needed contrast for persons with visual impairment) dictate otherwise.

Sound

Locate service and maintenance functions away from public areas. Space interpretive stops so that natural or site-specific sounds dominate. Use vegetation to baffle sound between public and private activities, and orient openings toward natural sounds such as the lapping of waves, babbling of streams, and rustling of leaves. Limit the use or audio level of unnatural sounds such as radios and televisions.

Touch

Allow visitors to touch and be in touch with the natural and cultural resources of the site. Tactile models, built to scale, offer a full experience to many visitors, including persons with visual disabilities. Vary walking surfaces to give different qualities to different spaces. Use contrasting textures to direct attention to interpretive opportunities.

Smell

Allow natural fragrances of vegetation to be enjoyed. Direct air exhausted from utility areas away from public areas.

Taste

Provide opportunities to sample local produce and cuisine.

Sustainable Design Considerations

Sustainable design is future oriented. The goal of sustainable buildings is to use less material, energy, and resources; produce less waste; and create healthy environments for the people who occupy them (Gross and Zimmerman, 2002). Sustainable design is important because half of the material resources used today are used in building and half of all waste production comes from construction.

Some relevant sustainable considerations for siting and planning Reclamation visitor centers include the following (Gross and Zimmerman, 2002):

- Consider the larger context. Is the planned facility compatible with adjacent or nearby areas?
- Build on already disturbed areas when possible; avoid sites with easily erodible soils, fragile wetland areas, or marine ecosystems; and minimize disturbance to the surrounding landscapes.

- Landscape with native materials.
- Choose sites sheltered from climatic extremes and to maximize natural cooling and heating; locate building sites to take advantage of passive solar energy.
- Use systems that channel, store, and absorb rainwater.
- Create multipurpose access corridors for construction and eventual use by visitors and staff after the visitor center is built.
- Use erosion barriers and tree protectors during construction.

Cradle-to-Grave Analysis

Sustainable design also considers building materials. The complete life cycle of resources, energy, and waste implications of possible building materials can be analyzed before building construction. A cradle-to-grave analysis traces a material or product (and its byproducts) from original, raw material sources (plant, animal, or mineral) through extraction, refinement, fabrication, treatment, transportation, use, and eventual reuse or disposal. This analysis includes the tabulation of energy consumed and the environmental impacts of each action and material. Two good sources of information on the cradle-to-grave implications of commonly used building materials are the American Institute of Architects' Environmental Resource Guides (1992-present) and the National Park Service's (NPS) Environmentally Responsible Building Product Guide (1992).

Questions that guide a cradle-to-grave analysis include:

- What is the source of the raw material? Is it renewable? Sustainable? Locally available? Nontoxic?
- How is the raw material extracted? What energy is used in that extraction process? What other impacts result from the extraction (e.g., habitat destruction, erosion, siltation, pollution)?
- How is the material transported? How far does it have to be transported? How much fuel is consumed? How much air is polluted?
- What is involved in processing and manufacturing the material? How much energy is required; what air, water, and/or noise pollution will result from the processing? What type of waste, and how much, is generated in processing and manufacture?
- Are any treatments or additives used in the manufacture of the material? What types of treatments are necessary? Are those treatments hazardous?

- How is the final product used? What type of energy does it require? How long will it last? How does its use affect the environment? How much waste does it generate?

- When the product is obsolete, how is it disposed of? Can it be recycled? Does it contain solid or toxic wastes?

Selection of building materials should consider local materials when possible and materials that require less energy to manufacture, transport, operate, and maintain. Prioritizing materials by source can be helpful for making building material decisions.

- **Primary materials** are materials found in nature such as stone, earth, and flora (cotton, hemp, jute, reed, wood, and wool). If new lumber is used, consider using only lumber from certified sustainable forests or certified naturally felled trees. Use caution with any associated treatments, additives, or adhesives that may contain toxins or with materials that off-gas volatile organic compounds and thus may contribute to indoor air pollution or atmospheric pollution.

- **Secondary materials** are materials made from recycled products such as wood, aluminum, cellulose, and plastics. Verify that production of the material does not involve high levels of energy, pollution, or waste. Verify that materials and products salvaged from old buildings are functional and safe to use. Look closely at the composition of recycled products; toxins may still be present. Consider cellulose insulation; ensure that it is fireproof and provides a greater R-value per inch thickness than fiberglass. Specify aluminum from recycled material; recycling aluminum uses 80 percent less energy to produce than initial production. Evaluate the use of products containing recycled hydrocarbon-based products; they may help keep used plastics out of landfills but may do little to reduce production and use of plastic from original resources. Keep alert for new developments; new, environmentally sound materials from recycled goods are appearing on the market every week.

- **Tertiary materials** are manmade materials (artificial, synthetic, and nonrenewable) such as plywood, plastics, and aluminum that vary in the degrees of their environmental impact. Avoid use of materials and products containing or produced with chlorofluorocarbons or hydrochlorofluorocarbons because these chemicals deplete the ozone layer. Avoid materials that off-gas volatile organic compounds because they contribute to indoor air pollution and atmospheric pollution. Minimize use of products made from new aluminum or other materials that are resource disruptive during extraction and high energy consumers during refinement.

VISITOR CENTER AND TOUR SECURITY

Our tourism programs should reflect the realities of today's threats and environment. Certain individuals and groups, if present in a Reclamation visitor center or on a tour, have the potential to cause detriment to our facilities, employees, and other visitors. In addition, these visitors could use visitor centers and tours to gather information that might be used in a future attack or other criminal activity.

The purpose of this chapter is to provide guidelines for integrating security designs, procedures, and best practices into Reclamation visitor centers and tours to ensure the safety and security of visitors, employees, and Reclamation facilities. While these guidelines apply primarily to public tours, the information should also be used for non-public tours, as applicable. Requirements for non-public tours can be found in Reclamation's Facility Security Directives and Standards (SLE 03-02), Section 8.B.

Measures that are implemented based on these guidelines should be documented in the Site Security Plan, Standing Operating Procedure, or other related documents readily available to staff.

Management Roles

Area managers should:

- Take part in an entire tour and walk the visitor center to observe the facility from the perspective of the visitor, and from the perspective of the Reclamation employee whose job includes contact with visitors.
- Observe and be able to attest that security hazards and risk vulnerabilities have not been overlooked; and, that well-designed routine and emergency response procedures are implemented throughout the visitor center and on tours to provide for the safety and security of visitors.
- Appoint and train a responsible tour manager.
- Develop and approve local procedures, as needed, for visitor safety, security, and well-being.
- Convene an annual tourism security meeting and training to review tourism-related procedures and provide periodic tourism security and visitor services training for all employees who come in contact with visitors on a regular basis.

- Share these guidelines with managing partners that operate visitor centers or tours at Reclamation facilities and ensure these partners are part of the overall facility security strategy.
- Review visitor center and tour programs of our managing partners to ensure adequate security and safety practices are in place.
- Maintain an ongoing security awareness process.

Tour managers should:

- Be fully familiar with emergency and day-to-day security response measures and provide annual training to all staff.
- Practice, review, and update visitor-related security procedures with tour and visitor center staff.
- Review medical equipment and supplies and develop emergency triage plans.
- Establish and sustain recurring contact with local emergency first responders.
- Promote security awareness and good Operations Security, also known as OPSEC.
- Maintain a security culture that minimizes visitor exposure to overt risks. For example, in the winter the tour schedule might be adjusted so that visitors and employees are not unnecessarily exposed to additional risks due to darkness.
- Consult with security and medical staff as appropriate to provide input into these processes.

Visitor Centers

Design Considerations

Building designs should reflect basic tourism security principles along with the principles of Crime Prevention through Environmental Design, also known as CPTED. These principles utilize landscaping and architectural designs to make buildings functional, aesthetically pleasing, and tourism and security friendly. (For more information on these principles, contact your Regional Security Officer or the Reclamation Security Office.) For example, rather than using highway-

type barriers, properly constructed and placed plant containers can be used to provide ecologically friendly stand-off distances between visitor parking areas and visitor centers.

- Plant materials should be chosen that do not provide cover for terrorists or other criminals.
- Where appropriate, monitored security cameras should be able to observe the public clearly without blockage from foliage or other visual impairments, such as blind corners or boulders.
- Windows should be architecturally pleasing, while at the same time providing protection from small flying objects, such as a thrown rock or projectile.
- Visitor centers should be designed in such a way that the public does not wait in line in areas exposed to inclement weather or potential hazardous activities.
- Public access areas should be properly illuminated. When properly implemented, lighting works both as a protective device and a method of reassurance.
- Visitor centers should include a quiet, cool, and well-lighted place that can function, if needed, as a first aid or nurse's station.
- Hallways should be designed with consideration for both rescue and evacuation needs, along with minimum accessibility requirements.
- Primary consideration should be given to how groups and individuals will be evacuated from the visitor center and the site.
- Visitor centers should be built in such a way that non-public areas are separated as much as possible from public tourist areas.
- All non-public areas—including employee work areas, storage rooms, or any area that is not intended for public access—should be separated from public access areas through application of a hard-line physical security strategy. Visitors should not be able to roam freely through the site's offices or facilities. Employees, contractors, volunteers, and managing partners should advise the Area Office Security Coordinator of any issues regarding visitor access to restricted areas.
- Doors leading to non-public access areas should be of solid-construction, locked, access-controlled, and monitored.
- Ingress and egress areas for the staff should be separated as much as possible from those for the public.

- Restrooms and public telephones should be made available for public use within public access areas only.

- Special consideration should be given to ensure there is no place for a visitor to hide or stay behind on a tour or within the visitor center without being detected.

Security Measures

- As a deterrent, security measures and, where considered necessary, security forces should be readily visible to the public.

- Security forces should strive to be vigilant and engaged, but friendly and not overbearing.

- A "No Large Bag, Backpack, or Briefcase" policy for visitors should be implemented. Small personal bags, purses, and small camera cases may be allowed on tours.

- Employees and contractors who come in regular contact with visitors should wear visible identification.

- Where access control screening has been deemed necessary, it should be performed by trained personnel, with proper access screening equipment, and supported by written procedures.

- A contingency communications system should be available. If telephone is the primary communication means, a radio, cellular phone, or similar system should be available as an alternate emergency communication system.

- Visitor centers, tour routes, and other public access areas should be periodically assessed for security-related risks. This should be accomplished as part of the formal Comprehensive Security Review and/or Periodic Security Review conducted at the host facility. However, if vulnerabilities are noted prior to the established review, they should be brought to the attention of the Area Office Security Coordinator for more immediate attention. At a minimum, the security risk assessment should address:

    - Public and non-public access areas and applicable physical security measures to separate those areas.

    - Tour and evacuation routes and assembly points.

    - Parking areas/structures.

    - Lighting and signage.

- ◊ The type of information that is presented to the public.
- ◊ Security and standard operating procedures for visitor management.
- ◊ Facility Security Plan coverage of visitor security.
- ◊ Integration of security procedures with the Emergency Action Plan.
- ◊ Tour guide and security officers familiarity of emergency procedures.
- ◊ Threat information applicable to the facility or general area.

Visitor Parking Areas

Tourists tend to leave valuables in their cars. When not properly managed, parking areas can become a crime magnet.

- ♦ Visitor parking should be in clearly designated parking areas only and away from places where visitors congregate or where they form lines.
- ♦ Where feasible, designated visitor parking areas should be far enough to be removed from pedestrian traffic, but close enough to be accessible to visitor center buildings.
- ♦ Where visitors use parking areas during hours of darkness, adequate security lighting should be provided.
- ♦ Where viable, visitor-parking areas should be electronically monitored and actively patrolled by security officers.
- ♦ Evacuation routes to safe areas should be posted in parking areas.
- ♦ At a minimum, in addition to any informational signage, the following security signs should be posted and should be visible to arriving tourists:
  - ◊ Signs that explain what items are not allowed to be brought into the visitor center.
  - ◊ Signs that remind tourists not to leave valuables behind, whenever possible.
  - ◊ Signs that forbid overnight parking.
  - ◊ Reclamation-approved crime witness signs.

Tours

Public tours of Reclamation facilities serve to educate and enhance the appreciation of water management while promoting the public image of Reclamation. Tours of a water or power facility are the principal means by which Reclamation can present its story to the public. Public tours are the heart of the visitor program, but present the challenge of sharing with the public what Reclamation does and how we do it, while at the same time protecting sensitive information, Reclamation facilities, and employees.

- Tour designs should attempt to avoid an "egg-shell" security approach. This approach creates a strong outer protection unit with almost no protection once inside the shell. Employees, contractors, volunteers, and managing partners should be trained in the art of listening, observing, and realizing that security is a continual process.
- Tours should be periodically reviewed for content.
- Tour guides should not discuss security or emergency response measures, perceived vulnerabilities or consequences of the facility, or information regarding communications, information technology, or control systems. Tour guides should only provide standardized and approved answers to sensitive questions. Tour guides are not required to answer every question in specificity and should attempt to reply in generality when a sensitive question is asked. Tour guides should not enter into an argument/debate with visitors and should refer determined seekers of sensitive technical data to management officials or security officers.
- Tour guides should not discuss operational working hours, procedures, or guard and employee practices. Tour participants requesting a Reclamation phone number should be given a public affairs phone number or directed to the Reclamation website.
- Employees, contractors, and volunteers should review and be trained on emergency procedures, such as evacuation routes, on a regular basis.
- Employees, contractors, and volunteers should be periodically trained on security procedures, where to call for help, evacuation routes, basic first aid, CPR, blood borne pathogen certifications, and other life safety issues.
- Tours should be limited to a manageable size based on facility design, staffing, and security plan, generally no more than 20 visitors to one guide (2 guides for 20-40 visitors) with a maximum of 40 people allowed on a specific tour. It is recommended that the second guide be placed at the tail end of a larger tour group.

- No matter what the stated reason, visitors should not be allowed to wander away from the tour group, or return to the tour starting or end point unescorted.
- Photographic cameras, both still and video, while not openly encouraged, may be permitted on tours without large accompanying camera bags.
- Cellular phones may be permitted on tours.
- Visitors should not be allowed access into sensitive or restricted areas such as control rooms, security dispatch centers, Supervisory Control and Data Acquisition, also know as SCADA, system control rooms, or other controlled access areas. This also includes offices, labs, control centers and equipment rooms. These areas should be physically locked and controlled during tour hours.
- Use of temporary nametags for visitors is optional. If used, tag color or design may be changed on an alternate tour or daily basis, as needed.
- Tours should start at a designated location. Prior to the tour, groups should assemble at the visitor center; or, for facilities without a visitor center in a designated public area as they arrive by bus or other transportation. A uniformed Reclamation guide should accompany the tour until all tour participants return to the visitor center or designated public area.
- When visitors depart by bus, the Reclamation tour guide should wait until the bus departs before leaving the group.
- Tours should follow established tour routes only.
- If special groups or visitors (such as technical groups) are allowed to access critical areas within a dam or powerplant, there should be an active approval process, visitor security screening system, and sign-in and out process. At minimum, the local facility should consult with the Regional Security Officer prior to making the decision to allow this level of access.
- Unsupervised access or movement for unauthorized individuals within non-public or sensitive areas within the facility should not be permitted. Doors to connected offices, labs, control centers, or equipment rooms should be physically locked and controlled during tour hours.
- Public access to computer equipment should not be allowed, except for "stand-alone" computers used for interpretive or educational purposes.

- A "Lost and Found" should be established in an appropriate location and all articles recovered during a tour should be taken there.
- Tour guides should have communication available with security, law enforcement, or dispatchers while conducting public tours.
- Tour guides should be constantly aware of security breaches and any suspicious behavior. Guides should stay constantly vigilant and in case of irregular activities should attempt to recall/record the conditions of the activity (e.g. what the suspicious activity was, the time the activity was observed, what the individual said, and how the individual was dressed). If applicable, vehicle information (license plate and description) should be recorded as well. Any incident or suspicious activity outside of normal operations should be reported to the local Area Office Security Coordinator, Regional Security Officer, and, when appropriate, the Regional Special Agent.
- Tour guides should not allow people on a tour who act intoxicated, act in an odd or suspicious manner, or in a way that may prove to be dangerous to themselves, other visitors, or the facility. Such individuals should be reported immediately to security personnel.
- If a tour needs to be halted, tour guides should inform the tour group that the tour is being terminated "due to a potentially unsafe situation," or the tour is being changed "due to maintenance work on the tour route."
- Tour guides should be trained on what to look for and allowed to halt a tour for any safety or security reason, without prior approval. If this occurs it should be immediately reported to security personnel.
- Properly trained and designated service dogs should be allowed on tours.

Annual Meetings and Training

An annual security-focused meeting should be conducted with all employees who come in contact with visitors on regular basis.

- Annual meeting objectives should include a review and/or exercise of existing procedures, Site Security Plans, Emergency Action Plans, Standing Operating Procedures, and other plans that pertain to the operations, security, and safeguarding of visitors.

- Meeting participants should discuss risk reduction strategies, procedural enhancements, and local emergency response measures that might directly impact visitors during an incident or emergency at the visitor center or any support facilities.
- At a minimum, the meeting should be attended by those personnel who are responsible for public relations, visitor services, tour operations, security, first aid, and emergency planning and response activities at the facility.
- Where appropriate, the area or facility manager has the discretion to invite outside partners from the local emergency response community; this may be particularly useful when discussing planning for emergencies where external response may be needed.
- The agenda and meeting outcomes, such as action items, should be documented and Site Security Plans and Emergency Actions Plans should be updated as appropriate.

Employees, contractors, and volunteers who work with tourists and visitors should have periodic tourism training. The following is a list of the types of topics that should be covered in such training.

- Tourism as a form of community policing/security.
- Tourism's economic/political realities.
- Security's role in being hospitable to tourists.
- Issues of terrorism and tourism.
- Special needs and issues of people with disabilities or in need of other special assistance, and international tourists.
- Philosophical and cultural orientation of different cultural groups.
- How cultural differences impact on security and tourism.
- Psychological strategies for dealing with tourists.
- Violence in the workplace.
- Establishing positive patterns between security officers and visitors.
- Security professionals' role in tourism and racial/cultural issues.
- How to manage travel and tourism rage.
- How age differences impact security and tourism.
- How security officers can successfully handle complaints.

- Insights into the sociology of visitors.
- Dos and Don'ts in tourism crises.
- Crowd control methods.
- Understanding different religious and ethnic groups.
- Listening skills development.
- How to communicate with a non-English speaker.
- Basic first aid.
- Facility security and emergency response measures.

International Visitors

International visitors may participate on standard public tours without any special requirements, in the same fashion as any other member of the visiting public.

Reclamation's Facility Security Directives and Standards (SLE 03-02) require notification of the International Affairs Office in Denver before visitors are allowed to participate on any non-public tours. The exact notification procedures and coordination requirements can be found in Section 8.B.

International visitors who show up at any time without the above approval who inquire about a "behind-the-scene" visit, are added to an international visitor group "at the last minute," or show up announced at a facility and request a non-public tour should be directed to the International Affairs Office in Denver or Washington, prior to being allowed in the facility.

Additional Information

For additional information or assistance in the application of this chapter, please contact the appropriate Regional Security Officer or the Reclamation Security Office.

INTERPRETIVE MEDIA

A number of choices can be made about the types of interpretive media to include in or associate with a visitor center. In this section, several of the most common types of interpretive media are briefly discussed.

Interpretation and Education

Interpretation and education (IE) include the communication strategies employed by Reclamation to enhance public experiences with the agency and its facilities. IE efforts relate to both natural and cultural resources, as well as agency mission and policy. Numerous principles exist to guide the development of interpretive and educational media for visitor centers. The following are perhaps the most helpful.

Visitors' Bill of Rights[2]

Comfort:

"Meet my basic needs."

Visitors need fast, easy, obvious access to clean, safe, accessible restrooms, fountains, food, baby-changing tables, and plenty of seating. They also need full access to exhibits.

Orientation:

"Make it easy for me to find my way around."

Visitors need to make sense of their surroundings. Clear signs and well-planned spaces help them know what to expect, where to go, how to get there, and what it is about. Intuitive site design helps to reduce the need for signage.

Welcome/belonging:

"Make me feel welcome."

Friendly staff help visitors feel more at ease. If visitors feel comfortable and are treated well by the staff, they will feel more like they belong.

[2] See Rand (1996).

Enjoyment:

"I want to have fun!"

Visitors want to have a good time. If they run into barriers (like broken exhibits, activities they cannot relate to, inaccessible features, and intimidating labels), they can feel frustrated, bored, or confused.

Socializing:

"I came to spend time with my family and friends."

Visitors come for a social outing with family or friends (or to connect with society at large). They expect to talk, interact, and share the experience; exhibits can set the stage for this.

Respect:

"Accept me for who I am and what I know."

Visitors want to be accepted at their own level of knowledge and interest. They do not want exhibits, labels, or staff to exclude them, patronize them, or make them feel dumb.

Communication:

"Help me understand, and let me talk too."

Visitors need accuracy, honesty, and clear communication from labels, programs, and staff members. They want to ask questions and hear and express differing points of view.

Learning:

"I want to learn something new."

Visitors come (and bring the kids) "to learn something new," but they learn in different ways. It is important to know how visitors learn and assess their knowledge and interests. Controlling distractions (like crowds, noise, and information overload) also helps them. Consider individuals with learning impairments when developing programs and exhibits.

Choice and control:

"Let me choose; give me some control."

Visitors need some autonomy: freedom to choose and exert some control, touching and getting close to whatever they can. They need to use their bodies and move around freely. Exhibits should allow independent use, especially for individuals with disabilities. Assistance from staff should be an added benefit, not a necessity to experience the exhibit or program.

Challenge and confidence:

"Give me a challenge I know I can handle."

Visitors want to succeed. A task that is too easy bores them; a task that is too hard makes them anxious. Providing a wide variety of experiences will match their wide range of skills.

Revitalization:

"Help me leave refreshed and restored."

When visitors are focused, fully engaged, and enjoying themselves, time flies and they feel refreshed. Exhibits should attempt to create a "flow" experience.[3]

Interpretive and Educational Media[4]

Interpretive media are typically divided into two categories: personal and nonpersonal. Personal interpretation employs a person or staff member in the dissemination of the educational message: for example, storytelling, living history, roving interpretation, and interpretive walks and talks. Nonpersonal interpretation does not need a person or staff member to convey the educational message. Nonpersonal interpretation uses publications, exhibits, signs, etc. For Reclamation visitor centers, a fully accessible selection from both types of media may be appropriate. Programs carry a mandated responsibility to effectively communicate the information for interpretation, whether it is personal or nonpersonal. Methods of effective communication with disabled visitors may necessitate providing alternative formats (large print, audio and video versions, computer disk), auxiliary aid and assistive technology (assistive listening systems, computer-aided real-time transcription), or sign language interpretation. Technology and contacts should be in place to meet visitor needs in a timely and respectful manner. Training and education of visitor center staff are essential to this element of providing an accessible interpretive program.[5]

This section briefly defines several types of personal and nonpersonal interpretive and educational media.

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[3] Flow experiences are those personal experiences in which a person's level of skill and level of challenge are commensurate and that person feels at one in the experience; the person is neither overly challenged nor overly skilled. See M. Csikszentmihlyi, *Flow: The Psychology of Optimal Experience* (1991) for a more thorough discussion.

[4] For accessibility considerations for all interpretive media, consult *Everyone's Nature: Designing Interpretation to Include All* (Hunter, 1994) and the *Smithsonian Guidelines for Accessible Exhibition Design* (Smithsonian Institution, 1996).

[5] Technology assistance is available from the Department of Defense Computer/Electronic Accommodations Program (CAP) for some assistance including, but not limited to, closed circuit televisions, telecommunication devices for the deaf, assistive listening systems, and closed/open captioning of internally produced videos.

Personal Interpretive Media

Personal interpretive media include all forms of interpretation delivered by a person. Personal interpretation should consider both the process or method of delivery and the content or substance of the message being conveyed. For personal interpretation, the "process" relates to how the presentation is delivered by a person. Consideration should be given to speaking ability; body language; enthusiasm; eye contact, especially for communicating with sign language; presentation organization; and confidence. The "content" relates to the specific message of the interpretation and should consider such things as depth of knowledge, accuracy of information, authenticity, and substantial and interesting support for the theme. The intent of personal interpretation is to focus more on what the visitor wants to hear than on what the interpreter wants to say.

Specific examples of personal interpretation include:

- Guided walks.
- Interpretive talks and interpretive theater.
- Guided tours.
- Roving interpretation.
- Storytelling.
- Living history.
- Interpretive demonstrations.
- Environmental education activities.

Nonpersonal Interpretive Media

Nonpersonal interpretive media include all forms of interpretation not delivered by a person. Nonpersonal forms of interpretation also must consider the method of delivery and the content of the message. For nonpersonal interpretation, however, the "process" includes consideration of design, layout, color, font, readability, transference to alternate formats such as audio tape and Braille, and overall presentation. Like personal media, the "content" relates to the specific message(s) of the interpretation and should consider such things as accuracy of information, authenticity, and interest to visitors.

Specific examples of nonpersonal interpretation include:

- Printed material such as brochures, pamphlets, booklets, newsletters, posters, maps, postcards, flyers, and bookmarks.
- Exhibits.
- Signs.
- Self-guided trails.
- Technology interpretation such as computer interactive devices and computer simulation programs or games that have both visual and audible features.

In creating a positive and substantial visitor experience, planners for Reclamation visitor centers should consider a full spectrum of interpretive and educational media and then make strategic and informed decisions about the most appropriate media choices. Understanding the user(s) of a visitor center can help with these decisions.

Visitor Studies and Audience Analysis

Understanding visitor center audiences can be very useful in making decisions throughout the process of developing a visitor center. Typically, "visitor studies" are categorized in three evaluation stages that relate to the planning process. These three evaluation stages are termed: (a) front end, (b) formative, and (c) summative. They are described briefly below.

Front End Evaluation

Front-end evaluation is an inventory and analysis of audiences and their perceptions during the beginning stages of planning a visitor center. Information gathered using front-end studies is used to make major conceptual decisions in the project development phase. Front-end evaluation can also be used to gauge audience interest levels and prior knowledge about potential subject matter. It is used to develop themes, audiences, goals, messages, and interpretive strategies. Front-end evaluation also helps answer the following questions and can be particularly useful during scoping:

- Who are the visitors who come to this place (demographic descriptions)?
- Why do they come (expectations and motivations)?
- What do they know (or not know) about an issue or topic (knowledge, lack of knowledge, and misperceptions)?

- How do they feel about an issue or topic (interest, feelings, and opinions)?

Typically, front-end evaluators conduct face-to-face interviews asking open-ended questions. Open-ended questions allow visitors to describe their experiences in their own words, as opposed to having them fit their experiences into the predetermined responses that usually appear on standardized questionnaires. Standardized questionnaires are very useful for some kinds of visitor studies, but at these early stages of visitor center development, it is useful to ask open-ended questions to encourage visitors to think and speak freely about a topic.

Other commonly utilized methods to conduct front-end evaluation include:

- Focus groups.
- Unstructured and semistructured interviews.
- Informal conversations and feedback.
- Computer surveys and online surveys.
- Community days/workshops.

Other resources that may be considered include:

- Existing market research studies.
- Literature reviews.
- Evaluation reports for similar projects.

Formative Evaluation

Formative evaluation involves testing and evaluating an interpretive project during the process of design and construction. Formative evaluation is used to test exhibition components, such as text, labels, graphics, and interactives. It usually takes place during the development stage of the project, so that the findings can be incorporated into the finished product. Mockups of proposed exhibits, texts, and other communication tools are often used. Formative evaluation is typically an iterative process that helps answer the questions:

- How are we doing (visitor reactions to the topic, themes, text, and presentation format)?
- Do all the parts work (practical and logistical problems or issues)?

- Are visitors interested (conceptual issues of communicating messages and themes)?
- Is the exhibit or program being used as designed (effectiveness)?

Formative evaluation is less formal than some of the other evaluation types in that it often is not necessary to generate written reports, since changes to the exhibit could happen through a design or construction change. This does not mean, however, that formative evaluation is not thoughtful or systematic. Data collection for formative evaluation, like all evaluation types, is systematic and unbiased.

Formative evaluation can uncover quickly what is not working quite right in terms of accessibility, visitor comfort, and visitor comprehension.

Formative evaluation data can be collected by observing and/or interviewing visitors. Observations provide an objective account of visitors' experiences, while interviews provide constructive feedback from the users of the exhibit.

In interactive galleries, observation can determine which components attract visitors and which do not by simply recording how many visitors approach the displays and how many bypass them. Informal visitor interviews can then inform planners as to the reasons behind visitors' behaviors. If visitors' remarks suggest that there is a design or installation problem (as opposed to visitors' personal preferences), changes can be made to the prototype to alleviate the problem. Changing a prototype does not automatically ensure success. The process of retesting and changing prototypes should be repeated until desired results have been achieved by once again using the goals and objectives as the measure of success.

Methods commonly used to conduct formative evaluation may include:

- Small-scale samples of visitors and/or others (a minimum of 15 to 20 visitors is optimal at each stage of testing).
- Semistructured interviews.
- Cued and noncued observations.
- Workshopping with staff and/or special interest groups.

Other resources include:

- Literature searches.
- Previous evaluations conducted by other institutions.
- Consultants and peers.

Summative or Postinstallation Evaluation

Summative or postinstallation evaluation takes place following implementation. Summative evaluation is carried out on real, finished programs or exhibits under real conditions, and it almost always involves real visitors. It is an attempt to determine the value of the project or to summarize the way it all worked. Summative evaluation uses a variety of methods to check whether the interpretive media delivered the messages that were intended and to determine what learning occurred, how satisfied people were with the program, and how well the marketing strategy worked. It is conducted on the finished exhibit or program and its components, using a combination of internal sources (project team, other staff) and external feedback (visitors, special interest groups, others).

Summative evaluation helps answer the questions:

- Did the visitors learn anything from the material presented?
- Did visitors change their behavior as a result of their encounter with the program or products?
- Did they enjoy their visit?
- What would we do differently next time?

Summative evaluation is the most formal of the three main types of evaluation. Larger sample sizes are sought and a variety of instruments are used, to collect the range of visitors' experiences. Outside consultants are often contracted to conduct summative evaluations because objectivity is very important. The objective of a summative evaluation is to determine the overall effectiveness of the exhibit, as well as the effectiveness of individual components. Visitors' behaviors and experiences in the exhibit are typically compared to the exhibit's goals and objectives stated at the onset of the project.

The questions that are asked usually determine the evaluation instruments. For example, tracking visitors through an exhibit will determine which components attracted the most/least attention and how much time visitors spent at each component and in the hall. Tracking visitors means that visitors' behaviors are observed and recorded, usually onto a map representing the gallery space. A stopwatch is often used to time how long visitors stay at individual components as well as in the whole exhibit area. Tracking is a labor-intensive procedure but is worthwhile because it provides an objective account of visitors' behaviors.

Visitor interviews determine the meaning visitors created from the exhibit and which parts were understandable and/or confusing. Visitors' descriptions of their experience are compared to the exhibit's goals and objectives to determine the effectiveness of the visitor experience from the visitor center's perspective and quality of the visitor experience from the visitor's perspective. Visitors'

experiences often include outcomes that the visitor center did not expect or plan. These experiences are not less important, however. They suggest the complexity and diversity of the visitor experience and demonstrate how difficult it is to anticipate what happens when visitors interact with an exhibit. Front end and formative evaluation minimizes, to a certain extent, some of the surprise results found in a summative evaluation.

Methods used to conduct summative or postinstallation evaluation include:

- Large-scale visitor surveys.
- Structured observations to gauge visitor interest and the effectiveness of the program for attracting visitors and holding their attention.
- Formal "testing" with visitors or groups.
- Indepth interviews.
- Critical appraisal.
- Media/critical reviews.
- Visitor numbers/counts.

Other resources include:

- Comment books.
- Public feedback (e.g., letters).
- Revenue reports.
- Statistics, such as visitor numbers, bookings, etc.

COOPERATING PARTNERSHIPS

Reclamation should partner, where appropriate and desired, with Federal and non-Federal entities, federally recognized Indian Tribes and Native American groups, nonprofit cooperating associations, local community and civic groups, individual volunteers, and the private sector.

This section contains **two examples** of cooperating agreements to illustrate the type of document and details sufficient to form a cooperating partnership. Cooperating agreements are numerous among other Federal and State natural resource agencies, and other examples are undoubtedly available.

Memorandums of Understanding or Memorandums of Agreement may also be used for establishing a relationship with potential partners.

Example 1

This is an example only. It is not to be used as a template.

Partnership of Cooperating Agreement

This Partnership of Cooperating Agreement (Agreement), made this _____ day of _____, 1998, by and between the State of Colorado for the use and benefit of the Department of Natural Resources, Division of Parks and Outdoor Recreation, 1313 Sherman St., Room 618, Denver, Colorado 80203, hereinafter referred to as the "Division," and Rocky Mountain Nature Association, Rocky Mountain National Park, Estes Park, Colorado 80517, hereinafter referred to as the "Association," acting through the chairman of its Board of Directors or the Board's designee.

Witness

Whereas, the Division is directed to develop State park areas suitable for environmental education as provided in 33-10-101 (2) (a) C.R.S., as amended; and

Whereas, it is the policy of the Division to provide the general public with interpretation and interpretive programming to explain and establish a sound recognition of man's relationship to his natural and manmade surroundings, as provided in Administrative Policy B-126; and

Whereas, the Division, through the Department of Natural Resources, is authorized to cooperate with and assist any donor or foundation or similar organization intending to make donations to the Division as provided in 24-33-108, C.R.S., as amended; and

Whereas, it is the policy of the Division to encourage the donation of gifts from the general public, individuals, and public or private organizations for the use and benefit of the Division as provided for in Administrative Policy C-175, as amended; and

Whereas, the Association has the education, historical, scientific, and nonprofit purpose of assisting historical, scientific, educational, and interpretive activities; and

Whereas, the Division wishes to cooperate with the Association to provide facilities and services for the sale of materials of interpretive and educational value and for the presentation of programs as may be specified relating to the interpretive themes of areas of the State park system to further the Division's interpretive goals; and

Whereas, the Association wishes to cooperate with the Division for the sale of interpretive and educational materials and the presentation of programs, as may be specified, which will enable the Association to make donations to the Division;

Now, therefore, in consideration of the mutual benefits, which accrue to the Division and Association, the parties agree as follows:

A. The Rocky Mountain Nature Association shall:

1. Secure and hold a sum of money to be agreed upon annually, in advance, with an appropriate Division employee as approved by the Director of the Division. Such sum will be expended by the Association as requested by the Division to procure for the Division donations of materials or services for interpretive and educational purposes. The sum will not be less than 10 percent of gross sales from each outlet.

2. Provide for sale interpretive and educational items, such as publications, maps, visual aids, handicrafts, and other objects directly related to the interpretive and educational themes of the parks as approved by the Regional Manager, or an appropriate Division employee as designated by the Division director.

3. Not, by this Agreement, be granted the right to sell items, the sale of which would infringe upon the applicable contract rights of a concessionaire.

4. Offer items at fair market value.

5. Be solely responsible for the financial arrangements for work under this Agreement, including the cost of obtaining stocks of materials and for the receipt and disposition of monies from sales, and not to hold the Division or its officers responsible for any loss of publications or money from sales, or for any other financial loss incurred as the result of this Agreement.

6. Keep appropriate financial books, records, and accounts pertaining to this Agreement.

7. Authorize officials or agents of the Division to examine such financial books, records, and accounts of the Association as deemed necessary by the Division during the term of this agreement and that these records and accounts will be retained by the Association and kept available for 3 years after the termination of this Agreement, unless disposition is otherwise authorized in writing by the Division. Such books, records, and accounts may be examined at any reasonable and convenient time during such period.

8. Prepare and submit to the Division, within 90 days following the end of each fiscal year, a complete financial report. The report shall be accompanied by a written summary of Association activities for the year.

9. Shall indemnify, save, and hold harmless and defend the State of Colorado against all fines, claims, damages, losses, judgments, and expenses arising out of or from any omission or activity of the Association in connection with activities under this Agreement.

10. Conduct all activities in accordance with all applicable laws and regulations, both State and Federal. Specifically, the Association shall comply with the requirements of the Colorado Anti-discrimination Act of 1957, as amended, and other applicable laws respecting discrimination and unfair employment practices (24-34-402. C.R.S., as amended), and as required by Executive Order, Equal Opportunity and Affirming Action, dated April 16, 1975.

11. Provide a separate allocation of funds directly to each park manager operating a sales outlet for use as follows:

    a. Funds to be used as a petty cash fund for purchase of postage, envelopes, and other such uses connected with the permitted activities. A detailed accounting of such expenditures will be maintained by each Park Manager and invoices submitted to the Association for replenishment of the petty cash fund.

    b. Funds to be used in making change for sales connected with this Agreement. The change fund shall be reconciled daily, May through September, and at least weekly, October through April, by the Park Manager (or designee) from sales receipts.

B. The Division shall:

1. Provide space and other facilities within Division buildings to the extent available, as determined by the Park Manager, for display of publications and other material made available by the Association.

2. Authorize Division employees to care for, distribute, sell, and keep records relative to dissemination of materials provided by the Association, where requested by the Association, and approved by the Regional Manager as service to recreation users.

3. Annually submit a request to the Board of Directors of the Association for an amount to be donated to the Division to help cover the cost of selling and handling material.

4. Deposit all sales receipts at least once a month or as agreed to between the Association and the Division.

5. Conduct and reconcile an inventory, as directed by the Association, of all sales materials provided by the Association at least twice a year or as agreed to between the Association and the Division.

C. It is mutually agreed by both parties that:

1. This Agreement shall be terminated by either party upon 30 days' written notice to the other party: provided that the Agreement may be terminated immediately by the Division if it considers the action necessary in the public interest, and provided that any funds on deposit will be available for expenses incidental to closing out the work beyond the period of written notice.

2. This Agreement can be amended by mutual agreement between the Association and Division.

3. Any unexpected balances of sums deposited by the Association over and above the cost of work shall, upon termination of the Agreement, be refunded to the Association by the Division.

4. This Agreement shall be effective upon execution of parties thereto.

5. At any time this Agreement is terminated, any information material belonging to the Association will be returned to them.

6. Unless terminated by written notice, this Agreement shall remain in force for a period of 1 year following the date of execution. This agreement will automatically renew each year, for 5 consecutive years, unless terminated by written notice by one of the parties.

Rocky Mountain Nature Association		State of Colorado Division of Parks and Outdoor Recreation, on behalf of the Board of Parks and Outdoor Recreation	
Executive Director	Date	Director	Date

Example 2

This is an example only. It is not to be used as a template.

Cooperative Agreement

Between the Bureau of Reclamation and the Yosemite Association for Interpretive and Educational Services at the New Melones Lake Visitor Center.

1. Authority

   This Cooperative Agreement (Agreement) made this _____ day of _____ 2000, between the Bureau of Reclamation (Reclamation) and the Yosemite Association (hereinafter referred to as Association), a not-for-profit organization organized under the laws of the State of California, acting through the Chairperson of its Board of Directors or the Board's designee. Pursuant to the authority and discretion of Reclamation and the Association, this Agreement is made in accordance with the Act of June 17, 1902 (32 Stat. 388) amended acts collectively referred to as Federal Reclamation Law and Title 43, Code of Federal Regulations, part 429.4, request for nonprofit organizational right-of-use.

   Whereas, Reclamation desires to provide facilities and cooperating services for the sale of materials of interpretive and educational value and for the presentation of specified programs relating to the interpretive themes of the New Melones Lake and the surrounding areas; and

   Whereas, the Association has the educational, historic, scientific, and nonprofit purposes of assisting historical, scientific, educational, and interpretive activities of Reclamation:

   Now, therefore, in consideration of the mutual benefits, which will accrue to Reclamation and the Association, the parties agree as follows:

2. Purpose

   The purpose of this Agreement is to authorize the Association to provide, and the Association agrees to provide, the described interpretive and educational services to the visiting public.

3. Association Responsibilities

   The Association may use the visitor center within the resource management area for sale of educational and interpretive items and for the presentation

of a wide variety of items of interest to New Melones visitors, such as publications, maps, audio/visual products, handicrafts, clothing, and storage bags.

a. Sales Activities

(1) The Association is hereby authorized to sell interpretive and educational items directly related to the interpretive and educational themes of New Melones Lake. This does not prohibit the granting of a concession permit to an Association authorizing the sale of visitor conference items. Any concession permit must follow Reclamation guidelines for granting concession agreements.

(2) The Association shall display a sign at the sales outlet, identifying the sales facility as a nonprofit activity of the officially approved cooperating Association for the lake.

(3) The Association shall not sell artifacts protected by the Antiquities Act of 1906 (Public Law [P.L.] 59-209), the Archeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95), and the Alaska Historic Preservation Act of 1971, as amended. The sale of original prehistoric or historic artifacts or paleontological specimens is prohibited. Clearly labeled replicas of such artifacts and specimens may be sold.

(4) The Association may sell only those items, which have been approved in advance for accuracy, design quality, interpretive value, and fair market price by Reclamation, New Melones Resource Manager, or his representative.

(5) The Association shall display the sale items in good taste and in keeping with general design and decor of Reclamation facilities at New Melones Lake. The Association shall provide furnishings necessary to support, store, or display sale items; such furnishings shall be approved by the Resource Manager or his representative at New Melones Lake.

(6) The Association and Reclamation shall prepare an annual operating plan that will delineate hours of operations, rates and prices, standards of service, merchandise to be sold, and other items needing clarification during the year.

b. Facilities

(1) The Association shall keep the facilities designated for its use safe, clean, and presentable at all times.

(2) The Association shall exercise reasonable care to prevent damage to any Government property used by it during its operation and shall, insofar as possible, protect all such property.

c. Accounting

(1) The Association shall be solely responsible for the financial arrangements for work under this Agreement. The Association shall conduct its fiscal operations in accordance with accepted business practices.

(2) The Association shall submit to the Resource Manager at New Melones Lake, with a copy to the Central California Area Office, Folsom, a complete financial report. The report shall consist of a written summary of the Association's activities for the year and a copy of the years audited or reviewed financial statements. The report is due annually on September 15.

(3) The Association shall keep appropriate financial books, records, and accounts pertaining to this Agreement and will allow authorized officials or agents of Reclamation to examine said financial records. These records and accounts will be retained by the Association and kept available for 5 years after the termination of this Agreement, unless disposition is otherwise authorized in writing by Reclamation. Such books, records, and accounts may be examined at any reasonable and convenient time during such periods.

Any revenues generated above operational expenses shall be returned to the facility in the form of enhancement, additional materials, or services as agreed upon by Reclamation Lake Management and Association Board members.

d. Personnel

(1) The Association shall designate an Association member or employee to serve as a liaison to Reclamation. The role of the Association liaison is to represent the interests of the Association and to provide assistance to Reclamation. His or her scope of Association responsibility shall be limited to ensuring that the spirit and intent of this Agreement are fulfilled and to provide expertise to Reclamation.

(2) A district separation, evident to the public, shall be maintained between the activities and management of the Association and those of Reclamation. Association personnel are not Government employees and are not authorized to undertake any Government function or activity on behalf of Reclamation.

e. Approvals

(1) Hours of operation, fees and prices, standards of service, and merchandise to be sold shall be subject to the approval of Reclamation and stated in the operating plan. Publications and other sales items will be approved by the Resource Manager or his representative.

(2) The Association may, at any time, make a written request for such necessary approvals.

4. Reclamation Responsibilities

Reclamation agrees to allow the Association to use the visitor center at New Melones Lake for the sale of a wide variety of items for the benefit of the visiting public. Reclamation shall designate an employee who shall act as liaison with the Association, to be known as the Cooperating Association Coordinator.

a. Sales Activities

(1) Reclamation shall cooperate with the Association in the planning and design of merchandise for which Reclamation approval is required.

(2) Reclamation shall provide the Association with shelving and other facilities as may hereafter be deemed necessary or desirable by Reclamation, provided that Reclamation reserves the right to relocate or withdraw any such facilities in order to meet needs of Reclamation upon reasonable notice. Reclamation shall have emergency access to all facilities and may make such surveys and inspections as Reclamation deems necessary.

(3) Reclamation shall provide the Association with incidental utility services at the visitor center, including water, electricity, heat, and air conditioning, to the extent these utilities are required for the operation of the building for Government purposes. Additionally, Reclamation shall provide all routine maintenance and repair services for the Government-owned buildings.

b. Personnel

(1) Reclamation shall designate an employee as Association Coordinator. This person will serve as a liaison to the Association. The role of the Association Coordinator is to represent the interests of Reclamation and to provide assistance to the Association; hence, he or she shall not be a member of the Association. His or her scope of Association responsibility shall be limited to ensuring that the spirit and intent of this Agreement are fulfilled and providing expertise.

(2) An evident and distinct separation shall be maintained between the activities of the Association and those of Reclamation. All steps shall be taken to avoid even an appearance that Reclamation controls the management or decisionmaking process of the Association.

5. Indemnification and Insurance

a. The Association shall indemnify, save and hold harmless, and defend the United States against all fines, claims, damages, losses, judgments, and expenses arising out of or from any omission or activity of the Association in connection with activities under this Agreement.

b. The Association's Articles of Incorporation and bylaws shall comply with the requirements of the State in which the Association is incorporated. Nonprofit, tax-exempt status must be maintained in accordance with Federal and State laws, and the Association will make available for inspection at the request of Reclamation, documents demonstrating nonprofit, tax-exempt status. This contract will automatically terminate if nonprofit, tax-exempt status is lost.

c. The Association shall procure public liability insurance with a minimum coverage of $500,000 for any number of claims from any one incident, with respect to the activities of the Association. The United States of America shall be named as an additional insured on all such policies. All such policies shall specify that the insurer shall not hold the United States liable or in any way responsible for payment of any premiums or deductibles thereunder, and such insurance policies shall be assumed by, credited to the account of, and undertaken at the Association's sole risk.

6. Association Organization

a. No member of the board or officer of the Association shall be a Reclamation employee.

b. Reclamation employees shall not represent the Association in any matter between the Association and Reclamation. A Reclamation employee shall not participate in any Association decision concerning the relationship of the Association to Reclamation, including, but not limited to, executing or negotiating contracts, signing checks, or hiring or firing Association employees.

7. Assignment

No transfer or assignment of this Agreement or any part thereof or interest therein, directly or indirectly, voluntary or involuntary, shall be made.

8. Special Use Authorization

This Agreement shall constitute authorization by Reclamation for the Association to enter upon, occupy, and use Reclamation lands for all lawful purposes in connection with the provisions of this Agreement. The following terms and conditions apply to the authorization to occupy and use Reclamation lands:

a. Area of Use. This authorization shall apply to the New Melones Lake Visitor Center.

b. Operation and Maintenance. As provided in Article 3 of this Agreement, "Association Responsibilities."

c. Resource Protection. The Association's use of Reclamation lands shall at all times be done in a manner to minimize damage to scenic, esthetic values, fish, and wildlife resources; and uses will comply with all Federal, State, and local procedural and substantive requirements for the abatement of air and water pollution and for solid waste disposal, as well as all other regulations pertaining to health and safety.

d. Damages to Federal Property. The Association will be liable for any damage to Federal property caused by the negligence of its officers, employees, and agents. It is the intent of Reclamation and the Association that the insurance provisions of Article 5 shall be required to protect the United States and the Association from losses from damages.

e. Valid Existing Rights. The Agreement and the land use authorization herein shall be subject to all valid existing rights.

9. Terms of Agreement

This authorization shall run and terminate at the same time as the Agreement. This Agreement will be effective on the date when both parties have signed the Agreement and will be in effect until terminated. The parties reserve the right to terminate or amend the Agreement upon 60 days' written notice. The parties agree to meet prior to the termination notice setting forth the reasons for such actions. This Agreement shall be in effect for a period of 5 years from the date of signing of this Agreement by Reclamation. While Reclamation reserves the right to terminate the Agreement, or any part thereof, for the convenience of the Government of for cause, at any time upon reasonable notice without the necessity of any legal process, Reclamation will hold a meeting with the Association prior to the termination setting forth the reasons for termination.

10. Miscellaneous

a. The rights and benefits conferred by this Agreement shall be subject to the laws of the United States governing Reclamation and to the rules and regulations promulgated thereunder, whether not in force or hereafter enacted or provided; and the mention of specific restrictions, conditions, and stipulations herein shall not be construed as in any way impairing the general powers of supervision, regulation, and control by Reclamation.

b. No member of, or delegate to, Congress or resident commissioner shall be admitted to any share or part of this Agreement or any benefit that may arise therefrom, but this restriction shall not be construed to extend to this Agreement if made with a corporation or company for its general benefit.

c. The Association agrees that all of its activities shall be conducted in accordance with all applicable laws and regulations, both State and Federal.

d. In all cases where rights or privileges are granted herein in general or indefinite terms, the extent of the use of such rights or privileges by the Association shall be determined by further written agreement.

e. Monies from Association sales will be transferred to the Association according to the procedures agreed upon by Reclamation and the Association.

f. This instrument in no way restricts Reclamation or the Association from participating in similar activities with other public or private agencies, organizations, or individuals.

In witness hereof, the parties have executed this Agreement on the _____ day of _____, 2000.

Bureau of Reclamation

By _____

Area Manager

Yosemite Association

By _____

President

HELPFUL RESOURCES

References

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Suggested Web Sites

U.S. Architectural and Transportation Barriers Compliance Board (Access Board)
<http://www.access-board.gov>

Computer/Electronic Accommodations Program (CAP)
<http://www.tricare.osd.mil/cap/>

Smithsonian Institution <http://www.si.edu/opa/accessibility/start.htm>

Professional Associations

Association of Nature Center Administrators (ANCA)

ANCA is an organization of approximately 400 members who represent nature center directors, staff, volunteers, and boards. Its mission is to support professional development and networking for nature center administration. ANCA sponsors an annual meeting and distributes professional literature related to nature center administration.

Home Office: Dayton, Ohio
Web site: <http://www.natcrt.org>

Association of Science-Technology Centers (ASTC)

ASTC is an organization of science centers and museums dedicated to furthering the public understanding of science. It has over 550 members in 40 countries who represent science-technology centers, science museums, nature centers, aquariums, planetariums, zoos, botanical gardens, and natural history and children's museums. ASTC encourages excellence and innovation in informal science education by serving and linking its members worldwide and advancing their common goals. It sponsors an annual conference and professional development workshops, a bimonthly journal, technical assistance for informal learning organizations, and a system of circulating hands-on science exhibits.

Home Office: Washington, D.C.
Web site: <http://www.astc.org>

National Association for Interpretation (NAI)

NAI is dedicated to the advancement of the profession of interpretation (onsite informal education programs at parks, zoos, nature centers, museums, and aquariums). NAI currently serves 4,200 members in the U.S., Canada, and

20 other nations. NAI sponsors national and regional workshops; a certification program for interpretive planners, guides, and heritage interpreters; a peer-reviewed research journal, the Journal of Interpretation Research; a bimonthly magazine, Legacy; a quarterly newsletter; and a scholarship program.

Home Office: Fort Collins, Colorado
Web site: <http://www.interpnet.com>