WORKING EFFECTIVELY THROUGH THE PROCESS

Decision Process Guidebook

U.S. Department of the Interior
Bureau of Reclamation

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# Decision Process Steps Contents

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Take Stock

Problem solving is really aiming at a moving target: re-group and re-aim every so often. This may be anything from a weekly to annual review, depending on the timing of meaningful events in your process. Taking stock will help find any missing gaps and make sure you are on top of changes. Use the answers from your review to re-plan your process and change your approach to be more effective.

WHAT’S THE PROBLEM?

Throughout the study, check to ensure that everyone understands the problem and that the problem definition is in line with the current scope and detail. Ask:

- What are the boundaries of the problem (problemshed)?

- Have we listed all the concerns of the core team and participants? Has anything changed?

- Do participants, including affected publics, understand what we are addressing?

- Are associated national interests identified? Have they changed?

- Have all issues been identified? Have we listed everything we will address and explained why we are not addressing the other issues?

WHERE IS YOUR ACTION PLAN?

A thorough, updated action plan can serve as a reality check for decisionmakers and participants. This is a go/no go question—do you have a serious problem that falls within Reclamation's role to solve? If not, either quit, regroup, or reformulate actions. If so, find out if your foundation is still solid.

Because there can be significant delays between developing objectives and developing alternatives, revisit the action plan and determine if all the information is still valid and complete. Update the plan where necessary and share the updates with all participants. Check your action plan. Does it cover purpose, authority and funding, roles and

PITFALL:

Don't build the house before laying the foundation!

Technological obstacles are often easier to overcome than public opposition. Participant trust, participation, and confidence are essential to a strong foundation.
relationships among participants, schedules, actions to take, and decision points? The following questions can focus your check:

- Does the action fit the authority and level of funding?
- Does it still fall within our role?
- Does everyone understand the purpose, funding and authority, and existing relationships and constraints?
- What are the expectations?
- Who is participating? Who will do what, when, and why?
- What is the timeframe?
- How will we communicate and document actions?
- What agreements will be reached?
- What decisions will be made and who will make them? Are the decisionmakers involved in the process?
- What level of detail will be necessary to make these decisions?
- Are we still addressing the problem in a reasonable manner given these changes?

WHAT IS THE SITUATION NOW?

Circumstances keep changing. Look around at what is happening now and make sure you are still on track. In light of these changes, ask yourself and other participants:

✓ Is the problem still serious and significant?

✓ Should we be involved? Is this something that participants feel we should be doing, given our constraints, priorities, contexts, other actions, etc?
✓ What steps do we need to revisit (e.g., adding more needs, changing the screening criteria, creating more options)?

✓ Do participants, including all interested and affected publics, understand the changes?

CHECK WITH PARTICIPANTS

Create breathing spaces within the program to assess involvement. These could be between phases, between developing and evaluating alternatives, etc. Ask participants about others you may need to involve. Participants who no longer wish to be involved can bow out gracefully at this point. Are there any overlooked affected publics or interested individuals? Do you need more technical expertise? Are the proper decisionmakers involved? Keep relations cordial—you may still need to borrow help!

Figure out where participants stand in the process. Where are everyone’s perceptions and levels of awareness about the process? What is everyone’s level of participation? How committed are people? Why? Understanding the background of human interactions will help shape actions and enable you to focus your resources effectively. Now is a good time to check on your communication network (see "Communication" in the Overview). Is there effective two-way communication between all participants? Talk with participants and find out:

✓ Does everyone feel you have listened? Are communication lines and strategies fully in place and understood?

✓ Does everyone understand the process (how they participate, when and how decisions will be made, etc.)? Does everyone know why this plan is necessary?

✓ Does everyone understand the timeframe, milestones, and action plan?

✓ How much support is there for the process? Have problems, conflicts, and changes been addressed to build a basis for consent?

SUCCESS:

With more participants, you increase your chances of getting and supporting a successful solution!
Decision Process Steps

✓ Does everyone understand the expectations? Do they know what will be addressed—and why?

✓ Does everyone know who will make what decisions?

✓ Does a strong opposition exist (either internally or externally)? If so, try to figure out why. Either re-examine your role or find ways to work with the opposition so they will not veto your process.

Find out what participants think of the process, environmental values and interrelationships, purpose, needs, objectives, and resources. Document and address comments.
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Step 1
Identify Needs

Help define

Needs

Must be responsive to

- Objectives
- Resources
- Options
- Screening criteria
- Alternatives
- Evaluation
- Selection
- Implementation
- Follow up
Step 1: Identify Needs

PURPOSE

• To determine underlying “root” needs

• To decide whether these needs are within the purview of the process and Reclamation

• To find a common ground—allowing everyone to help solve the problem

• To reduce conflicts by focusing on actual needs

WHY?

Clearly articulated needs help frame the range of potential solutions and measure the conditions and impacts of no action. Needs also help determine the appropriateness of everyone’s involvement.

What participants think is the problem may not actually be the problem (e.g., you think you need more filing cabinets but when you get them, you find you really needed a more effective method of managing your information). Rather than tilting at windmills, uncover the underlying needs for a more accurate and realistic target.

HOW?

Review the definition of the problem in your action plan. To quantify needs within complex situations, look at what values may be threatened. Ask participants to list the benefits that derive from resources, practices, and physical structures. Then try to categorize these benefits (necessary, nice to have, unnecessary). This pinpoints issues and concerns.
**Step 1: Needs**

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**Review the Purpose**

Review the problem and purpose (*Foundation*, Part 2). Do a reality check to confirm that it is still relevant. (If you need to modify it, explain your rationale to the decisionmakers and participants and ensure that everyone approves the changes.) Make sure everyone understands and consents to the purpose. (You may need to do some educating and reformulating.) Clearly explain this. For example:

**Problem:** People are becoming ill from pollutants in the water

**Need:** A safe drinking water supply

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**Continue Scoping**

The level of scoping has probably been limited to a few key contacts. Based on these early results, it may be important to expand on these publics in a more formal and wider scoping effort. Make sure everyone is involved. (See “Scoping” in the *Overview*).

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**Lay Out Issues and Concerns**

You will only get reasonable decisions when EVERYBODY (decisionmakers, team members, and participants) has identified and understood key issues.

Together, **issues and concerns** delineate the problems that clamor to be addressed and drive your actions. Providing opportunities now for participants to discuss these issues and to agree on what will be addressed will help prevent hassles and court fights later.

Listing and defining these will:

- Provide a context for the problem and solution.

- Promote participation in the decision process and commitment in the solution. Participants will not commit to a solution if they perceive that you have not listened to their concerns or that the process tramples their values.

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**ISSUES AND CONCERNS:**

*Issues* are conditions or situations perceived as a threat to long-held values.

*Concerns* are matters of importance to one or more individuals and groups.

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Paying attention to someone’s issue (no matter how crazy) is the best investment in credibility you can make.
• Avoid surprises later.

• Conserve participants' resources by concentrating on relevant issues and concerns.

Ask everyone involved what they think the issues really are. Doing this one-on-one and in small groups may help provide some honest answers about underlying interests and needs. Armed with this list, bring diverse groups together to examine their issues in the light of the whole process and problemshed.

Gather participants to determine which issues are significant and relevant to your process. Tests for significance include:

• Does the issue affect the decision?

• Will participants support the solution if it does not address that issue?

Showing issues with an influence diagram or issue map will help show interrelationships, identify areas of influence, and measure significance. Examine the context of the process and what you are authorized to address to identify the significant, relevant issues.

Categorize issues to get a picture of how things hook together. This will make it easier to determine their significance and prioritize them. Tools such as affinity grouping and issue maps help show groups and relationships in new ways. Categories will change according to your action, but some general categories may be:

• The process itself
• Supplying resources
• Demand for resources
• Safety
• Cost/economic
• Environmental
• Institutional/administrative
• Organizational

Form a priority stack for the issues by determining which issues take precedence. Review your purpose and authority to show what you can and cannot address.

**Step 1: Needs**

**Priority Stack:**

A flexible list of priorities that your solution will address.
Make sure that everyone understands the rationale behind this determination. Present your findings and recommendations on priority to the agreed-upon decisionmaker and verify the order of your priority stack. (See Foundation, Part 2, Action 2, for more details on establishing priority.)

**Define the Study Boundaries**

Understanding where the problem is operating is crucial to understanding what needs the problem generates. If you can’t address the entire area, ensure that you address enough of the area to effectively solve the problem where you want to solve it. The "area of influence" is determined by both the source and the impacts of the problem. This area may be administrative, economic, geographic, hydrologic, social, biological, etc.

Describe the study boundaries and develop graphic displays or base maps. These show what really is and is not there, enhancing participants’ understanding of real needs and interrelationships. As you move through the process, this definition of the problem shed will become more and more detailed.

Depending on the complexity of your study, you may need to:

- Ask other agencies about relevant actions and find relevant reports

- Determine constraints (What are the water rights? Are there any Indian Trust Assets? What are the relevant Federal, State, and local laws?)

- Explore the physical locations of resources (e.g., maps with overlays of distributions for people, species, and habitat will provide a pretty good picture of the problem shed)

- Determine demands (What are the existing and projected uses for water—both kind and amount? What are existing and potential land uses?)

- Review the history (What has been tried in the past? What are the important interactions and interrelationships?)

**STUDY BOUNDARIES:**

The study boundaries should be wide enough to encompass the problem shed (where the problem or solution is created or impacted) and yet narrow enough to effectively solve the problem.

**PITFALL:**

Don’t put more effort into the study area detail than you need at this level. This should not be a full-scale assessment of resources.
Trace Cause and Effect

Not identifying the underlying causes will lead to a superficial, unsuccessful solution. Yet people start hollering about the effects of a problem long before the actual cause shows up. Examine the physical and institutional processes to "debug" the process and find the cause.

The cause itself may have several different sources in widely scattered areas. For example, if salinity is causing the problem in a lower basin, the sources of salinity may be in an upper basin. Thus, the entire basin becomes an area of influence—even though the upper basin isn't going to benefit directly from the solution.

Define the Needs

Translate the issues, concerns, causes, and interactions into needs. Specify and quantify what would be needed to solve the problem, alleviate the threat (issue), and restore (or add) values. Be as specific as possible. For example, if the issue is discharge from old mine tailings in Settler's Creek, needs might be a clean water supply for municipal, rural, and agriculture use; wetlands; and clean flows for fish.

Determine the scope and magnitude of existing and projected problems and needs by examining the issues and the problem. Quantify these needs: How much water is needed for trout? At what time? What water quality standards would need to be met?

Have team members communicate with their counterparts in other organizations and Federal, State, and local agencies. Let counterparts know what you have identified and ask if they can help identify further relationships. This will more fully define the needs.

TOOLS

Tailor the following tools to the complexity and scope of your study. They will each contribute important perspectives about your study to help you identify real needs, the geographic area related to those needs, and public support for your needs identification.
Common Ground

Common ground is probably the most powerful tool for agreeing on what needs should be addressed. Once participants can agree on something (no matter how trivial), you can expand from that.

Trouble Spots

A small number of causes contribute a large percentage of the effects—usually a 20- to 80-percent ratio. For example, concentrate on the two sources of selenium that contribute 80 percent of the problem rather than addressing all eight sources. Likewise, why spend 80 percent of your resources on fixing the fish ladder if the fish ladder only contributes to 20 percent of the problem? Mapping out these trouble spots can help quantify contributions and define priorities.

Communication

Provide, share, and receive information. Make sure that people who are relevant to the process become involved in the process: decisionmakers, interested and affected publics, and other Reclamation employees. Newsletters, updates, open meetings, informal chats, and interviews help keep everyone connected.

Two-way education and communication at this juncture is critical to promote participation and to identify interrelationships among resources and needs. The core team and people "in the know" need to educate potential participants about the concerns and issues. Outline the purpose of the program and what you can and can't do. Do a little bit of groundwork to see that participants understand the basic interactions involved (ecosystems, physical resources, etc.)

In turn, ask participants about issues, causes, and interrelationships. It may take a lot of patience and perseverance to get people to contribute their ideas and perspectives—but this early input will pay off well later in the process.
The people in the area may not know there is a problem, may not see it as relevant, may not care. Explain matters from their viewpoints. (See “Communication” in the Overview.)

**Affinity Grouping**

Affinity grouping is a group brainstorming method that helps generate, then organize ideas or concerns that are numerous, complex, or not easily organized. This tool works best with a small group. Clearly define the topic (for example, water supply needs in the Crystal River Basin). Pass out yellow stickies and ask participants to write down one idea per sticky. Then post the ideas on a board and have people group ideas to show common themes. If you notice a sticky gets moved back and forth a lot, duplicate the idea so you can place it in more than one category. Then develop specific themes for the various categories. Grouping various needs can often lead to categories for options and alternatives in steps 4 and 6 (for example, water quality needs can generate options to address specific water quality problems).

**Issue or Process Maps**

To show how parameters and issues affect each other, identify and chart needs on a map. This can be a map of a geographical area or a linear process. Maps can be highly stylized—spatial accuracy is not required for this overview. Showing needs on a map can highlight relationships, focus efforts, and foster a wider understanding of the problems.

**LOOK FORWARD**

**Go/No Go**

Being willing to say there is no need when you determine that needs don’t exist will save time, money, and resources and will add to your credibility. Summarize the work to date in a concluding report and stop the project.
Step 1: Needs

SUCCESS:
Question your assumptions—you may uncover some surprising answers!

Don't try to reinvent the wheel. Go to someone who already has the information you need.

Review what you have gathered so far to make sure you haven't overlooked anything vital. Ask:

- Have the concerns of the team been identified?
- Have the affected publics been identified?
- Have the known concerns, problems, or issues been categorized and prioritized?
- Are associated national interests identified?

Analyze the needs assessment to answer the following questions:

- Are the needs significant enough to address?
- Are these needs within Reclamation's purview and the scope of our mission?
- Have we ensured that Reclamation is not competing with private industry?
- Have we built a foundation of trust that will lead to future cooperation among the various stakeholders?
- Is there enough support from the public and participants to continue?

A negative response indicates that either you need to end the study here or change your participation. If some needs are not within Reclamation's purview, you may want to suggest limiting our activities. Or if the foundation of trust does not exist, you may want to stop actions and go back to build that foundation.

Get a decision from the agreed-upon decisionmaker(s) whether to proceed, stop, or change course.

Document

Definitions may differ! Don't assume that one way of defining the need is the way everyone will define it. Clearly communicate these definitions and agree on how the study will define needs. Use this documentation as a touchstone for existing and new participants.
Documenting what you have uncovered (in a fact sheet, brochure, or update to the action plan) will ensure that everyone understands the interactions, needs, and study boundaries.

Ensure that no one's issue is overlooked (people understand how the issue will be addressed or the reasons behind not addressing the issue). New players can then more easily decide if the process was valid and if they should support the solution—even though it may be too late to address their particular needs.

Provide management, affected publics, or other interested parties with appropriate documentation that describes the effort, the contributions, the conclusions, and the justification for proceeding to the next step.

An effective paper trail allows new players and others to understand what has been done.
Step 2
*Develop Objectives*

Find out which dragons are important

... then slay those
Step 2: Develop Objectives

PURPOSE

- To define, categorize, and quantify objectives
- To agree on priorities for objectives

WHY?

The objectives that you set here will drive the action—and the solution. As such, they will define limits, help establish priorities, and identify time schedules and funding requirements. Overall, they will enhance the efficiency of your efforts. Objectives become a test of accomplishment as you compare them to actions taken throughout the decision process. In addition, once formed, objectives anchor the course of the study. They help each specialist evaluate what needs to be done, how much time may be required, and what funding may be needed to accomplish the work.

HOW?

Objectives should be a natural outgrowth of Step 1. Roundtable reviews can hammer out objectives in actions which are driven by a few key individuals. Other processes may require numerous contacts, meetings, data gathering, and consent building.

Develop Objectives

Decide which needs this action will try to meet. Examine each of these needs carefully and craft objectives to meet these needs. Make the objectives as specific as possible—word the objective so that specific measurements and timeframes can be added. Consider amount, timing, temperature, water quality, etc.

Some of the objectives may be outside the scope of Reclamation's authority. Showing interrelationships, importance, and responsibility can invite action and partnerships from other groups.
Step 2: Objectives

Sample:

Need: Water for Old Holler Wetlands

Objective: Provide 1,500 acre-feet of water between April 1 and November 15. Water quality will be sufficient for waterfowl (will not contain more than 1,000 milligrams per liter of total dissolved solids).

Try to develop as many different objectives that would meet the need as you can. This will also force participants to re-examine underlying needs. (Do you need water at Old Holler Wetlands or do you need wetlands within a 10-mile radius of Settler’s Creek?)

Choose and Prioritize Objectives

Once you have a list of objectives, you need to decide which ones will drive your action. Which objectives will best meet your purpose and prioritized needs? Which will be more cost effective? Which are more timely? Which could create the largest base of support and participation? Often, the more complex the objective, the more bogged down the process gets.

Winnow down the objectives to a reasonable number. This is by no means the final cut.

Prioritize the objectives by asking:

- How much does that particular problem contribute to the overall problem? Focus on the largest contributors for the biggest results.

- Will solving the problem in one area simply move the problem to another area? If providing a water supply to one area robs the water supply from another area, you have not solved the overall problem.

- What kind of funding do we have? If funding is limited and inflexible, the objectives may be limited.

Present this data to the decisionmakers, who will make the final cut on which objectives have what priority.
Pull It Together

Once you know what objectives you will be concentrating on, determine how much effort it will take to realize these objectives. The data and views obtained from this effort should enable the team to:

- Determine the level of effort (detail) needed to meet the objectives
- Verify an appropriate level of funding and probable schedule for achieving the objectives
- Agree on what milestones will be used to measure progress in meeting objectives (see “Milestones” in the Overview)
- Identify a product for reporting the achievement of the objectives

TOOLS

Both formal and informal meeting and communication techniques help gather input and shape objectives. Public involvement and scoping techniques provide information and perspectives. Input from everyone, affected publics, technical disciplines, decisionmakers, and management are all important.

Ranking Tools

To decide what is most important to address, find a fair, open way to rank items and apply it consistently. Do a reality check with decisionmakers to ensure that priorities match what is needed and doable. You’ll need to tailor tools and uses to your process. Techniques include:

- **Multivoting.**—Everyone "spends" the same number of points to vote on various objectives. The objective with the highest value thus becomes the most important item, and so on.

- **Focus groups.**—Let small groups negotiate priorities. Report each group’s answers. If results differ, you may need to analyze the reasons for rankings before hammering out an agreement.

GET TO THE ROOT OF THE MATTER:

If objectives address the symptom (fix the fish ladder flows) but don’t deal with the root causes (buildup of debris), then the problem will occur again.
Focus Tools

Focusing on the largest part of the problem that can be addressed with the smallest amount of effort will help ensure that objectives are effective. To analyze these areas and communicate the rationale for your objectives, use display techniques including:

- **Pie charts.**—Pie charts show relationships between parts of a whole. This can provide a quick overview to determine what is important within a single area (e.g., how much water does each town use?).

- **Bar charts.**—Bar charts show relationships of wholes to wholes. When you want to compare a number of objects or show the same object over a period of time, bar charts are particularly useful (e.g., how have annual water amounts changed?).

- **Frequency charts.**—Marking down how often an event, problem, action, or comment occurs can help determine its importance and relative significance. A frequency chart records sample observations to help you detect patterns.

Tools such as issue maps and influence diagrams can show interactions within needs and objectives. Considering these interactions may help build consent and participation.

LOOK FORWARD

Go/No Go

Consider the issues below carefully. Answering "no" to any of these questions indicates a need to revise either our level of participation, objectives, or allocated resources. Document findings, conclusions, and recommendation to either continue the process or terminate it. Share these with management and the public as appropriate.

**Effectiveness:** Do the objectives meet the identified needs?

**Conflicts:** Do the objectives conflict with any other Federal, State, local, or Native American activity? Can these conflicts be resolved?

PITFALL:

“Jumping to the solution frequently leads to incomplete diagnosis and limited alternatives for solving the problem.”

Fordice and Well, 1979, page 79
Federal role: Do the objectives justify a Federal/Reclamation role? (Do they contribute to national interests? Will we manage, develop, or protect water and related resources?)

Schedule and funding: Is the schedule still appropriate? Is the funding adequate for the scope of projected activity—for each team member and participant's projected involvement?
Step 3: Identify Resources and Constraints
Step 3

**Step 3. Identify Resources and Constraints**

**PURPOSE**

To identify:

- Physical and information resources that are likely to be needed
- Resources that are likely to be affected (either directly or indirectly)
- Constraints that may affect the process and solutions

**WHY?**

Without an accurate assessment of resources and constraints, developing solutions is pure speculation. Without a resource assessment, you don't know if the solution is even possible.

A comprehensive resource assessment will help establish historic, current, and projected resource trends. This provides a baseline condition to develop the no action alternative. The merit of all Federal actions is determined by comparing alternatives with a no action alternative—or how the future would be without any Federal action. (See Step 6.)

**HOW?**

*Determine What You Need*

List resources and constraints that need to be investigated. Examples in the sidebar may help you get started.

- **Resources**—Look at what affects and is affected by the problem and potential solutions. Look well beyond physical and biological resources to data, participants, and decisionmakers.

**RESOURCES:**

What are needed to solve the problem and what the problem affects.

- Examples of resources and constraints include:
  - Time
  - Funding
  - Authority/legal
  - Political
  - Ecosystems
  - Technical expertise
  - Communication systems
  - Personnel
  - Equipment
  - Materials
- **Constraints.**—Figure out what constraints drive the study. Legal influences, regulations, authority, the goals and missions of all participants, and the overall purpose of the action will shape the focus of the study. Staff and funding will dictate how much can be done. Possible competition for resources and your action's priority will determine how many resources can be used.

**Examine Existing Information**

Get existing information to save time and money. Survey partners, universities, community groups, and other agencies. Find out what studies have been done and are being done. Map this information to figure out the missing gaps.

When you get information, examine it to see if you can use it. Ask:

- Who is the source?
- What is their agenda?
- How does that influence the information?
- Are the research methods sufficient to provide the level of accuracy you need to make a decision?

**Define Data Needs**

What data are needed to reach a decision? Look beyond technical data to consider the political and social background of the problem: e.g., the urgency of problem, the public's levels of awareness, preferences, and participation. Also, place the action in a temporal context: what projections do you need to make? For example, if water quality is a known concern, you may need to project the influence of future actions on water quality—especially in the areas of salinity, heavy metals, and selenium.

**Establish Methods**

Establish the level of detail and data collection methods necessary to inventory or forecast changes in resources required to solve problems, resolve issues, meet future
needs, and achieve your identified objectives. Get decisionmakers’ buy-in. Determine who will sign off on the analysis, how you will resolve conflicts. Meet periodically to review the process. What changes have occurred? How are they integrated into the analysis? Ensure that everyone is on the same page—that data analysis is consistent across disciplines. Readjust studies to ensure that the level of detail is still appropriate. List what the analyses need to pay attention to. (Hint: The more times something comes up, the greater its significance.)

Consider Interrelationships

Interrelationships paint the picture of the area you’ll need to cover:

- Physical (What is the ecosystem? How do resources (biota, water, land, people) interact?)

- Participants (Who is concerned about what? How do these concerns interact?)

- Population (Where is the critical habitat? Where is the developed land? How will human and animal populations change over time?)

Once you have figured out what interacts with what, narrow that interaction by considering the timing (e.g., what is the relationship between spring flows and spawning?). This will show windows of opportunity as well as conflict. To figure out where problems may occur, project patterns of development. Population distributions, habitat needs, and physical interactions tend to follow predictable features (e.g., people tend to settle along rivers, precipitation tends to follow cycles). When you look at overlays, such as Geographic Information System (GIS) maps, you can readily identify potential problems.

Communicate

Document what you have accomplished and found so far in the process, either through a fact sheet, signed agreement, substantial update to the action plan, NEPA compliance document, policy document, or other agreed-upon format.
Depending on your process, you may need a report to justify approaching Congress for study authority and funding. The decision point here is to hand the report over to a study partner for their use or for Reclamation to pursue (for example, you may be at the point of seeking feasibility level from Congress).

SUCCESS:

Don't take constraints for granted! See if you can find resources, negotiate actions, change laws, convince politicians, etc.

This document should include:

- The study area and context
- The perception of needs from various participants
- The needs the action will address (and rationale)
- Agreed-upon objectives
- The order of priority for needs and objectives (and rationale)
- Significant resources
- Significant constraints

TOOLS

Tools include using existing data, professional judgment, literature searches, and secondary sources. When the level of detail requires more in-depth data, inventories might include field mapping, sampling, lab analysis, drilling, measuring, and statistical modeling. Tailor tools to match the complexity and level of detail needed. (If you need a broad overview, don't spend a lot of time on detailed maps.)

Relationships

The following tools are good ways to compare various factors and relationships. They can help participants understand spatial and temporal relationships and identify patterns.

- GIS.—Geographic information systems allow you to overlay various information tied to geographical locations. Thus, you can compare population characteristics with habitats or other kinds of communities throughout the watershed.

- Historical data.—Trends may appear through historical data such as State censuses and flow histories.

- Projections.—Related models may use this historic data to project future trends.

- Specialized maps and reports.—Maps from the U.S. Forest Service, U.S. Geological Survey (USGS), universities and other groups will show you locations of
physical resources (e.g., surface and groundwater) and distributions of population, habitat, species, etc.

- **Process maps and flow charts.**—Charting physical, social, biological, and other pertinent processes will help determine when events happen so you can see temporal relationships.

- **Influence diagrams.**—Drawing these in a small meeting will help brainstorm areas to examine. To be sure you cover all bases, develop one overall diagram and one for each resource.

- **Issue maps.**—Overlaying issues (e.g., endangered species, water demands) over a map of the area can provide an overall view of relationships between issues.

**Constraints Table**

A constraints table lists legal and institutional constraints that may apply. To help participants translate the legalese into reality, create a three column table showing authority, relevant language, and actions required or prohibited. Structure this table to reflect the needs of your process.

<table>
<thead>
<tr>
<th>Authority</th>
<th>What it does</th>
<th>What it means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paperwork</td>
<td>Minimizes the public burden of data gathering</td>
<td>Clear surveys of 10 or more people with OMB.</td>
</tr>
<tr>
<td>Reduction Act, 1995</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LOOK FORWARD**

**Go/No Go**

After completing the assessment of resources, the team must be able to document its work and answer:

- Is there a Reclamation role?

- Have we identified the resources needed to meet our objectives?
Step 3: Resources and Constraints

- Do we have enough resources to meet our objectives?
- Have we identified a solvable problem?
- Have we identified activities and trends that affect resources?

If any answer is "no," regroup and re-examine your efforts. Either something was missed—and you need a different approach, or there is no Reclamation role—and the study should be concluded.

The rationales for continuing now provide a picture of where you are going and what it will take to get there. Examine this picture to ensure it is consistent with the overall context of the action. Ask yourself and participants:

- Do we need to solve the problem?
- Can we solve the problem?

Show this overall picture and your recommendations to decisionmakers and get a documented, clear decision on whether to proceed on this course, remap the course, or close the effort.
Step 4
Identify Potential Options
Step 4: Identify Potential Options

PURPOSE

• To find as many options as possible

• To develop a broad set of options that cover all bases and avoid later surprises

WHY?

Options are the building blocks for future alternatives. A wide range of options now means a wider, more comprehensive range of alternatives later. Identifying the widest range of options possible will help build credibility and public trust throughout the process. Not identifying an option may foreclose opportunities and invite surprises. With this broad base, you can show that you were sensitive to all the needs and tried to meet every identified objective.

HOW?

The name of the game right now is quantity, rather than quality. Options which are silly on the surface may hold the key to brilliant, workable solutions. Look for options everywhere—leave no stone unturned at this point.

As you develop options, focus on meeting the needs. Decision process worksheets show the evolving relationships of an analytical decisionmaking process.

Here are some ways to develop options:

• Recycle ideas.—This helps to avoid reinventing the wheel. There are few issues that have not been examined at one time or another by someone else. Search out previous reports, documents, articles, and theses. Talk with those involved to gather solutions, insights, and data. While these options may have been discarded once, list them now to spark other options which may prove to be more viable.

Consider all solutions, no matter how wild.
Public values have been known to change over time—something previously unacceptable may be okay now (e.g., waste water recycling or reserving instream flows for fish).

- **Brainstorm options.**—Brainstorming is a no-holds barred, nonjudgmental explosion of ideas, concepts, policies, decisions, and strategies—structural as well as nonstructural—Federal as well as non-Federal. All contributions are valid. While the results are hodgepodge, the process allows uninhibited participation. Get everyone together (the team, other technical participants, partners, affected publics, etc.). Break into groups of three to five people and brainstorm options. Carefully document the brainstorming sessions to allow often surprising opportunities to emerge. Brainstorming can be used independently or in conjunction with other tools such as influence diagrams and public involvement.

- **Look at similar actions.**—Find out what others are doing on similar projects. What else did they consider? (What didn't work for them may work for you.)

- **Go outside the lines.**—Consider options that others could handle, that are outside your jurisdiction, etc. While you may not be able to incorporate these ideas, they can spark other, viable options or cooperative ventures that could solve the problem.

- **Look at timeframes.**—Look at options which can be put in place immediately or which can be phased in over time. What monitoring, adjustment, or other solutions might postpone or avoid a future crisis? What actions would have to be taken before other actions? Are there other time constraints (e.g., season, fiscal year)?

- **Look for opportunities by needs, objectives, and resources.**—Review the work done in Steps 1–3. Give each specialist on your team the opportunity to explore how they could use each resource to meet an objective. Let groups of various disciplines work together to do the same thing. Share the results with others on the team and explore other solutions together.

**SUCCESS:**

Looking at earlier attempts to solve the problem will yield a treasure trove of information. These attempts may not have fully addressed the problem because they did not take into account the entire context of the problem. They may have overlooked key players, changes in politics, vital influence, or fatal flaws. However, subsequent changes in participants, physical interrelationships, laws, politics, etc. can also mean a solution is no longer viable.
• **Look for troublemakers.**—A small number of causes is responsible for a large percentage of the effects—usually a 20-percent to 80-percent ratio. Thus, 80 percent of the problem can probably be solved by fixing 20 percent of the cause. Focusing your effort on this troublesome 20 percent can help find effective, efficient options.

• **Ask around.**—Ask not only local communities and organizations, but academic, technical, and resource management communities as well. You may have more disciplines represented on larger actions, but you can always ask technical experts in other areas for help during this stage. The Internet now brings an international array of experts to your doorstep—you can post notes on bulletin boards, newsgroups, and listservers that deal with specific topics to ask for ideas.

**Consider Resources and Demands**

To generate options, focus on resources and demands.

Possible ways to enhance resources include:

• Increase available resources

• Develop scarce resources

• Store resources

• Increase distribution system efficiency

• Reduce impact on fragile resources.

Possible ways to address needs include:

• Reduce demand for scarce or expensive resources

• Shift resource use over time and place to reduce peak demand

• Substitute other resources for the scarce resource

• Improve coordination between resource users

**RESOURCES:**

Resources are used to meet the demand. Don't forget about staff, decisionmakers, facilities, time, and funding!
**Categorize**

It may be useful to categorize all the solutions you have identified. Probably, all your options will fall into relatively few categories. Having them grouped will make it easier to communicate the results of this step to decisionmakers and the interested and affected publics (you may find it useful to have the publics assist in selecting categories and sorting solutions). Categorizing will also make it easier to establish screening criteria and screen options (Step 5).

The specific categories you choose will, of course, be determined by the nature of your study. Grouping options by location, size, and function helps show what actions could take place where. Grouping by categories such as structural, financial, educational, social, institutional, legal, political, and commercial helps to show what aspect of the problem options address. You may want to develop more than one way of cataloging options to highlight various aspects.

**TOOLS**

**Force Field Analysis**

To come up with options, examine the forces (groups, other activities, resources, relationships, etc.) that can help achieve or work against the objectives. Brainstorm and list all the forces that could help solve the problem. Write out various options that would use the force to meet the objective. Take a break and then list all the forces that would work against a solution. This time, write out options that could negate that force.

**Focusing**

Use previously generated or new issue maps, influence diagrams, flowcharts, or other tools that display the problem. Brainstorm options to address one cause or area at a time. Check off areas after you look at them. This helps ensure that major pieces aren’t overlooked.
Public Involvement

Public involvement is a two-way communication process. Focus most of your efforts on two groups:

- Those who can contribute the most (they will help you develop effective options)
- Those who could cause conflict or veto the process (seriously considering their ideas now may persuade them to go along with the alternatives you generate later)

Chart data from ongoing scoping and previous public involvement activities to identify these publics. Knowledge obtained from this involvement can diffuse or head off many conflicts.

Be aware that when dealing with the public, many suggestions or ideas may be packaged as alternatives, containing many components. Break these components into options now. Explain that this will provide much more flexibility for developing alternatives in Step 6.

These ideas will also likely contain a personal or institutional bias, such as fishery interests or wetlands preservation. (See “Agendas” in the Overview.) Whatever the contribution, you will be able to identify one or more options from it.

Keep track of how many times a specific option is mentioned, as this repetition can measure public priority or preference and may identify more acceptable options. Be sure to consider all options.

Decision Process Worksheets

Use a decision process worksheet and list results from each step to provide a comprehensive picture. Use the needs and resources columns to brainstorm ways to meet needs and use resources. These worksheets can be used for one aspect or for the overall problem.

Technical vs. Social/Political:

Research by Dr. Juran and many others has demonstrated that in decisions that really matter, about 80 percent of the issue is social and political while 20 percent is technical. This implies that it does little good to be technically excellent while ignoring public concerns and support.

Pitfall:

Putting all your eggs in one basket can be dangerous. Use influence diagrams and other methods of determining relationships to ensure that options do not all depend on the same factor or element.
Step 4: Options

A review brainstorming session may turn up new ideas and will help ensure you’ve thought of almost everything.

LOOK FORWARD

When you are confident that the range of options is sufficient within the confines of imposed constraints, share your vision with appropriate publics (including decisionmakers). Explain that these are options to examine and ask for other ideas. Identify any options proposed by others, especially those from private entities, states, or other Federal agencies. Ask for their response to help uncover any overlooked options and to identify some criteria to be used in the screening process (the next step). The following questions can help check your range of options:

✓ Do identified needs and stated objectives need to be adjusted?

✓ Are the identified needs stable or are they changing?

✓ Are there enough options to cover appropriate needs, concerns, or issues that have been identified?

✓ Do the options address the identified objectives?

✓ If there are options that fall within the purview of some other entity, are they recognized and duly noted?

✓ Do these options continue to justify your involvement?

You will also need to go over this list of options with all potential implementors. Explain that this is a broad, wild range of options at this point, and many will fall by the wayside. Ask if they have other options—they have the best vantage point to identify what could be done.

IMPLEMENTORS:

People who would actually carry out the solution. It may seem excessive to involve implementors now when you don’t know what options are workable. But involving key people who might be implementing a possible option will enhance your credibility, keep your options realistic, broaden your perspectives, and, most importantly, help ensure that the actual implementors support and carry out the selected solution.
Step 5
Establish and Apply Screening Criteria
**Step 5: Establish and Apply Screening Criteria**

**PURPOSE**

- To identify and eliminate options with fatal flaws
- To develop criteria that ensure options from Step 4:
  - Can be supported by various publics and participants
  - Can withstand the scrutiny of adversarial entities
  - Can respond to the needs and objectives identified in Steps 1 and 2
  - Can be accomplished within the resources and constraints identified in Step 3
- To retain workable options
- To document the results

**WHY?**

You need to focus on solutions which will work—by meeting the needs in environmentally acceptable, economically efficient, and politically implementable ways.

Carefully identifying and applying screening criteria is an indispensable step! A willy-nilly elimination of options will destroy credibility (Why wasn’t my option considered?), block workable solutions (x could have worked if only we had done y!), and let unworkable options continue (Why didn’t you consider that factor?). Document this step so participants understand the criteria and process.

Screening criteria are applied to identify fatal flaws of proposed actions or elements. Once you screen for these fatal flaws, you can then concentrate on the remaining viable options. You also need to be able to determine scales or thresholds for these criteria. This will ensure that you can apply the screening criteria objectively and consistently.

**FATAL FLAWS:**

At this point, you are really examining various sets of potential trains and figuring out what would cause a train wreck. If a train wreck or fatal flaw is unavoidable, drop that option at this point. If it can be avoided, incorporate those changes into the option. Either way, document what you do.

**SCREENING CRITERIA:**

Factors that determine whether an option or element of an option can solve a problem.
For example, a threshold might be that the option must ensure effluent meets a standard for concentration of a specific toxin. Any option not meeting this threshold would be considered fatally flawed.

HOW?

Right now, you are simply weeding out options that won’t work—for one reason or another. Participants must determine what criteria are appropriate. Involve sponsors, decisionmakers, partners, and selected publics to help establish some of the criteria that are particularly meaningful to them. Doing this can be an excellent way to establish trust and confidence in the Federal presence. Specialists need to contribute their expertise to the overall whole so that criteria are as comprehensive, consistent, and interactive as possible. For larger studies, work groups may be assigned to deal with specific values and disciplines, but groups must coordinate closely to avoid conflicts and Catch-22’s. Recognize that conflicts over criteria can happen without shooting down options now.

Technological, social, economic, and environmental analyses, as well as evaluations of public acceptability are performed and the results displayed for comparison. Applying the screening criteria is as much a documentation process as it is an analytical process. Documenting the process provides the paper trail that shows where and why some options were discarded and others were carried forward.

Search for Fatal Flaws

Use the constraints developed in Step 3 as a jumping off place to identify possible train wrecks. Ask:

- What can’t we do? (This will provide a list of fatal flaw triggers to work with.)
- At what level or under what conditions would this option be unacceptable? (This will provide a range of extremes that can become fatal flaw trigger.)
- Why can’t we do that? (This will explain why the action would trigger a fatal flaw.)
Talk to all potential implementors at this point. They can explain what factors you need to look at to ensure that options will be workable. This involvement will not only ensure that you look at the factors that count in the real world, but it will also enhance your credibility. These actions will help implementors conclude that you are serious and you do care about solving the problem in a realistic, responsible manner.

Each process will have its own fatal flaws. For example, implementation time may be a fatal factor in a court-mandated action, while it may not be in a long-term basin management plan. Fatal flaws may lurk in any facet of the solution: institutional, organizational, economic, social, physical, etc. Some factors to consider:

- **Workability**.—Will it meet the need and fulfill the objective? Are there enough resources to implement and support it?

- **Decision factors**.—What are the policy issues? What are the institutional judgments, laws, and philosophy?

- **Technical factors**.—How will this affect physical and biological interrelationships within the ecosystem? (Consider factors such as organizational, environmental, hydrology, social, or geology.) It may be necessary to repeat some of the methods used to assess resources.

- **Key variables**.—What are the key interrelationships and dependencies? How will they influence the different possible solutions?

- **Exclusion factors**.—What are the internal and external constraints? (Consider laws, endangered species, time, organizational policy, etc.)

The list of fatal flaws helps form your criteria. Examine this list to ensure that you have all the criteria you need—and no more. Ask:

- What will drive the decision? Do the criteria reflect this?

- What does each criterion add?

- **Why** must each component meet that criterion?
**Keep "too difficult" options:**
Don't lose a valuable option just because you see a difficulty at this point! Legislation can be enacted or changed, opposing parties can negotiate, technical and time obstacles can be overcome.

---

**Determine Thresholds and Scales**

Develop scales and thresholds for these criteria. Establishing criteria without establishing the limits on that criteria fashions too wide a screen—practically every option will fall through. For example, if water quality is a criteria, determine what standards options must meet. If time is a criteria, determine which timeframes are acceptable (implementable in 1 to 5 years or in 5 to 20)? Thresholds and scales will vary with each process. Ask:

- When would it violate a constraint?

Be as specific as possible, given the level of detail (e.g., At what flow level would flood damage occur? At what point would water supplies or flow demands fail to be met?)

---

**Do a Reality Check**

Relate the criteria back to the needs, objectives, and resources to ensure that they are on track. Potential implementors are in the best position to tell you what will and won't work. Ask them what factors will need to be considered and what thresholds are realistic. Do a preliminary analysis on the interrelationships of options—what would need to be done first? What actions depend on other actions? What actions depend on seasons or other time factors? Why?

While it is important and cost effective to limit options to those which only address the stated objectives, being too adamant at this time may create roadblocks by:

- Overlooking previously unidentified needs
- Not recognizing changes in identified needs
- Not considering all of the participants' input
- Losing credibility
- Losing support of publics
Determine Procedures

Participants should agree on a procedure to measure these scales or thresholds. How will the options be measured? What analyses will be used? Whatever criteria are selected by the team, consider several factors when settling on a procedure for applying the criteria:

- **Value measures**.—How will we measure values such as public acceptability, effectiveness, feasibility, efficiency, and completeness?

- **Accuracy**.—How accurate do measurements, analyses, and projections need to be? Are data adequate to support the selected criteria?

- **Reliability**.—What is needed to ensure that the solution will continue to work?

If you can't agree on procedures, redraft the criteria and scales.

Apply the Screen

Use the criteria you have decided upon to determine which option to keep. Make sure that you consider each option in the same way. Consider the priorities of your criteria before dropping an option (if the option meets the more important criteria but fails a lesser, nonfatal criteria, you may want to keep that option.) Keep options that meet the criteria—for now—and drop only those that clearly fail the criteria. Explain why you have (or have not) eliminated an option.

Document the Results

Your efforts will be meaningless if you don't clearly document the results so participants can determine for themselves if the process is fair and reasonable. Also, giving new participants this document when they enter the process can reduce the number of delays and queries because they will have a chance to review what you have done so far. A summary document with concise text and the graphic displays can be distributed to all participants to ensure that nothing has been overlooked. The idea is to
present factual information in a readily readable form supported by visual confirmation. The combination will help retention, understanding, and should make it easier to build consent for the decisions made.

You will need two kinds of documentation:

- **For viable options.**—Agree on the type of displays you intend to use and use similar approaches for each criteria. Displays must be simple, consistent, and easily understood. Graphs and tables help readers compare various aspects. Make sure that each graph, table, and text lists the components and criteria in the same order. This will help readers find information quickly. A brief explanation of the methodology used will help put the tables and graphs in context. Each discipline should maintain a working file of all the analysis for future backup and appendices. This working file is part of your personal work record. It is an official record and must be preserved.

- **For nonviable options.**—Whenever you eliminate an alternative, document that you considered it and the rationale behind eliminating it. The analysis for a nonviable option should go only as far as identifying the fatal flaw. Document the flaw and present the analysis in the report. (This may be as short as one sentence.)

**TOOLS**

Once again, all specialists should review previous decisions and agree on a congruent level of detail for this step. This detail must be appropriate to the type of action or study, the complexity, controversy, and data available. Useful tools may range from simple ratings to complex computer models. Display the screening results in a consistent manner: in tables, bar charts, pie charts, etc. Issue and process maps and influence diagrams focus attention on those parameters that affect or influence specific elements.

**Rating Tables**

Results of initial screening could be displayed in simple comparative tables for which specific criteria are stated or
displayed in a rating scale. For example, preliminary factors considered for geologic suitability of a structural site might include basic foundation geology, seismic risk, and availability of construction materials. Results of the rating could be displayed in a table similar to the following table.

<table>
<thead>
<tr>
<th>Sample rating display</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Rating table</td>
</tr>
<tr>
<td>Brine replacement reservoirs</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alternate sites</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Pine Valley</td>
</tr>
<tr>
<td>Quail Creek</td>
</tr>
<tr>
<td>Grasshopper Creek</td>
</tr>
<tr>
<td>East Fork</td>
</tr>
</tbody>
</table>

¹ Sites are rated on a scale of increasing risk from 1-10 for each criteria. Ranking criteria are discussed in section 8.1 of the Miner’s Creek Water Supply report.

Determine what an acceptable range is (e.g., less than a 5 risk) and then use the table to screen out options outside that range.

Another rating scale useful in communicating with the public is an evaluation summary similar to the following graph. This type of display could be used for any level of screening or evaluation process. You may not be able to precisely quantify something without further data. At this stage, merely identifying the level of concern ("none," "minor," "major," "unresolvable") will be enough—if you can justify that classification.

**Constraints Analysis**

Use constraints tables, force field analyses, or other tools that show what can and can’t be done. Using a variety of analyses will help ensure that nothing is overlooked. You may be able to develop strategies to eliminate or reduce restraining forces to retain the option as workable. Be sure to document any changes to the option.

**JUSTIFY THE CLASSIFICATION:**

Define, explain, and clearly document the classifications, ranking scales, and other measurements to show your thinking and build credibility.
Step 5: Screening

Sample Evaluation Summary
**Decision Process Worksheets**

Using the decision process worksheets to list your criteria will provide an overall view of the process so far. You can then take each option from Step 4, match it against the criteria, and eliminate ones with fatal flaws.

**Preliminary Cost Estimates**

Cost estimates should include capital costs, operation, maintenance, replacement, monitoring, administrative, institutional, interest, and power costs. Ranges or curves are acceptable at initial levels of detail. Be careful not to treat this estimate as a final price figure—many variables can change between now and implementation.

**Risk And Uncertainty**

Much of the kind of work Reclamation does carries a degree of uncertainty and risk. Future projections, measurement errors, and complex studies may make data uncertain. Sensitivity analyses, which adjust data to discover the allowable margin for error, help evaluate outcomes with uncertain data. Some ways to reduce risk and uncertainty include gathering more detailed and refined data, including more safety features, and committing fewer resources. Risk and uncertainty should be considered at all stages of the decisionmaking process as appropriate to the level of detail.

Where information is suspect, identify and clearly describe the reliability of the data or estimates being used in screening.

**Scatter Diagram Analysis**

Use a scatter diagram to spot possible fatal flaws. Determine two critical vectors that interact with each other, for example power output and redd survival. Graph each vector on the x and y axes. Plot results from each alternative. Draw a “safety region” where the results are ok. Anything falling outside of this region may be a fatal flaw. You may need to draw more than one scatter diagram to pinpoint various potential flaws.
Acceptability

At this point, acceptability will likely be limited to select publics, such as actual users of the resource and concerned environmental groups. A broader exposure will be applied when the various solutions are combined into alternatives. It may be best to focus public participation to those who helped identify the solutions. Use your public involvement specialist to help conduct an effective public participation program.

LOOK FORWARD

Carefully following and documenting this step should ensure that the options that remain are doable. Ensure that:

✓ The criteria focus on identified needs and stated objectives.

✓ The criteria are acceptable to the technical community.

✓ The important criteria provided by the public was included.

✓ The criteria thresholds and measurements were accurate and reliable for your detail level.

✓ All participants were invited to help develop the screening criteria.

✓ Potential implementors were consulted.

Go/No Go

By analyzing the results of the screening process, you should be able to report to decisionmakers and the affected public whether or not:

✓ There are workable options

✓ These options can be combined into implementable alternatives

IMPLEMENTORS:

Be sure to check back with potential implementors. Did you miss any key factors? Are the options that remain realistic and doable?
✓ There is still justification for a Federal/Reclamation role to develop alternatives

✓ There are options that will meet identified needs and help achieve stated objectives

This is a crucial go/no go decision point. If you have not identified options that work to meet the needs and fall within the Reclamation’s role, then you must either:

• **Work through Steps 1-5.**—Is there anything that was overlooked? Have needs, objectives, or circumstances changed? Can you go beyond the constraints to change the process and free up solutions?

• **Redefine your involvement.**—Are there aspects of the problem we can solve that do fall within Reclamation’s role?

• **Terminate your involvement.**—See if other entities can act to solve the problems and work with those groups and individuals. Keep in touch with other participants—there may be some part in the overall process that does fall within Reclamation’s role.
Step 6
Develop Alternatives
Step 6. Develop Alternatives

PURPOSE

- To combine options into implementable, comprehensive alternatives that will meet the identified needs
- To develop a full range of alternatives

WHY?

Steps 1 through 5 have laid a strong foundation, a basis for developing alternatives. Incremental combinations, summations, or subtractions of options allow us to create alternatives that respond to many different objectives and needs. These alternatives are not unsupported conjecture—they are based on sound supportable data and represent real possibilities. These have the potential not only to meet local and regional needs and objectives but also to achieve the primary purposes for Reclamation's involvement.

HOW?

Most likely, there will be pressure to limit the process of developing alternatives to those which are most "reasonable" or those which only satisfy the objectives of some special or local interest group. Differing views and considerable subjectivity on what constitutes the notion of reasonableness come into play here. While there may be some strong sentiments arising from the general public, the most likely source of pressure to limit alternatives will be from other government entities, organized special interest groups, and political interest groups. Work closely with these pressure groups to show this is a fair way of solving the problem. This may persuade them not to actively oppose you.

The political importance of such demands cannot be overlooked—and may well constitute some of evaluation criteria to be applied later. But limiting alternatives at this time may exclude valid and implementable alternatives which could contribute important aspects to the future

ALTERNATIVE:
An option or set of options grouped together as a proposed action to achieve one or more objectives.

FULL RANGE:
The widest range of nonstructural and structural options grouped into alternatives to address as many objectives as possible. Alternatives should span the continuum from no action at all to the maximum amount of action possible. Alternatives should also explore different types of actions.

DEVELOPING ALTERNATIVES:
The process of understanding human values and applying technical knowledge to solve unmet needs related to those values.
process of evaluation, tradeoff, and compromise leading to selecting an alternative. Affected publics need time for education, to weigh choices, view possible consequences, and participate in responsible judgment. Take this opportunity to demonstrate that you are listening and considering all views. This will help elicit future public support and help avoid potentially serious conflict.

**Combine Options Into Alternatives**

Combine the options remaining from the screening process. Add or subtract any options or ideas to form a range of alternatives that meet the broad range of identified needs and objectives. (Remember to put the new options through the same screening process as the original options!) Carefully name the alternatives so that participants can clearly talk about alternatives. In general, participants will associate with more descriptive names rather than some vague number or letter. For example, "Desalting and Wetlands" is easier to understand than "Alternative 1-A."

The process of developing alternatives is similar for both simple and complex projects. View options as a cafeteria line where you pick from your developed list of solutions and combine them to form alternatives. Numerous combinations are possible. You can use a decision process worksheet or other format to list the approved objectives. Compare this list with the alternatives to make sure that all objectives have been addressed and that identified needs have been met.

**Examine Interactions**

By examining the interaction of specific components or solutions, combinations can sometimes be found that enhance the overall effectiveness. This process can also reveal potential problems or adverse impacts which must either be avoided or mitigated. An influence diagram can examine interactions.
Consider Benefits

Benefits are a summary of public values and national interests. Considering these benefits as you assemble alternatives provides specific insights about:

- What concerns have the greatest value
- How to assemble solutions to create high value alternatives

Consider Costs and Constraints

No alternative is painless—solving problems for the long run requires upfront costs and sacrifices. Considering effects and constraints allows the development of equitable alternatives by illuminating important effects that should be considered during future evaluation. Ask who will implement the solution and how it will be paid for. Talk with potential implementors to get a rough idea of costs. Consider partnerships, reciprocal agreements, and other innovative, diverse sources of funding.

Consider the Environment

Both the Department of the Interior and Reclamation are committed to the policy of responsible environmental planning. Therefore, as you assemble alternatives, consider:

- Possible benefits
- Possible adverse impacts
- Potential mitigation requirements
- Habitat enhancement
- Ecosystem sustainability

Good groundwork here will help establish the evaluation criteria to be used later in detailed evaluation and selection activities and in NEPA/CEQ compliance. Remember, future resource conditions under the no action

At this point in the decision-making process, no alternative is the “best” one. Not all needs can be met to everyone’s satisfaction with one alternative. Evaluating alternatives involves tradeoffs and compromise.

Remember: Administrative decisions may also affect the environment.
alternative (not current conditions) are the basis for
determining project-related effects. Incorrect comparisons
can affect the level of mitigation and enhancement. Careful
attention to the details of these conditions now will save
considerable time and effort during evaluation, selection,
and implementation.

Develop the No Action Alternative

Don't forget to develop the concept of a no action
alternative. The no action alternative describes the most
likely future condition that could be expected if you don't
take action. It serves as a yardstick to compare other
alternatives to determine the magnitude of benefits and
adverse effects.

The no action alternative can be described as a condition
where no alternative is selected for implementation. The
without-project condition is the most likely condition
expected to exist in the future in the absence of any
developed alternative, including known changes in law or
public policy. The without-project condition includes water
projects or other actions that are under construction or
authorized and likely to be constructed during the forecast
period (this includes actions by all entities). Although the
no action alternative may contain a fatal flaw (violates a
law, does not meet the need, etc.) it is still developed as a
comparison. The no action alternative includes any actions
which are certain as well as changes that would occur
regardless of any proposed alternative. Usually,
participants estimate the no action alternative by projecting
current conditions, resource trends, and probable actions by
others through a period of time commensurate with the
anticipated lifespan of the action alternatives.

Determining the most likely future without any project can
best be accomplished by careful examination of different
scenarios. This will help bracket the probable range of
future conditions. Viewing a range of possible conditions
rather than a single set of premises will allow you to
address the future far more objectively.

Clearly describing the future without project condition
provides the frame of reference necessary to evaluate

NO ACTION ALTERNATIVE:

By examining the no action alternative, participants can
determine how serious the problem really is—and decide
whether or not to make the sacrifices necessary to
address it.

The future without condition is synonymous with the no
action alternative described in regulations of the Council on
Environmental Quality and the “future without project”
condition described in the Principles and Guidelines.

Remember that doing nothing may also meet some needs
and must be considered equally with other solutions.
changes caused by the alternatives. A clear definition of the future without condition allows you to form positive response alternatives.

**Document Alternatives**

Once you have defined these alternatives, describe them in a document (factsheet, newsletter, action plan update, etc.). Be sure to add a brief section on which options dropped out—and why. For an EIS or EA this document can become Chapter 2: Alternatives.

Disseminate this document to all participants for comment and review to avoid potential gaps and fatal flaws. Keep it on hand to share with new players so they can follow and judge your process. A summary table of alternatives showing basic components can help decisionmakers and other participants get an overview of the range of alternatives.

**TOOLS**

Options can be combined in many ways to form alternatives, so use tools that can show groups and relationships between options. Useful tools include:

- **Affinity grouping.**—Write each option on a separate yellow sticky and put them together into groups to form alternatives. You'll have to write some options on more than one sticky so they can be used in more than one alternative.

- **Matrix tables.**—Write objectives across the top and options along the sides. For each option, check what objectives it meets. This will make it easier to combine options to meet all objectives.

**People With Expertise**

Your team and participants should represent a variety of disciplines, or you should at least have access to and consult with those disciplines essential to your study. In some
cases, it may be appropriate to involve specialists from other agencies, contractors, or special interest groups. Specialists can interact to identify interrelationships among objectives.

LOOK FORWARD

Re-Examine Your Work

Having developed all potential alternatives, you should be able to:

✓ Examine a range of alternatives, including a no action alternative, that has been developed

✓ Show how the range responds to the objectives, issues, concerns, and needs previously identified

✓ Identify any continued need for a Reclamation role

✓ Report how public involvement was used and in what ways it contributed to developing your alternatives

Refine Alternatives

As you go through the decision process, these alternatives will become more and more defined. By the selection phase, these alternatives should have all the nitty-gritty details necessary to implement them. Keep asking: Who would do what with what money? How would the components work? How would the components interact? In what order would work need to be done? What preliminary steps and permits would be needed?
Step 7
Evaluate Alternatives
**Step 7. Evaluate Alternatives**

**PURPOSE**

- To evaluate and refine alternatives
- To present a clear analysis and comparison of alternatives for the decisionmakers and affected publics

**WHY?**

The evaluation process is not to justify what you are doing but to refine the alternatives so that they are workable. At this point, you can assume that the alternatives you have developed are workable. Evaluating alternatives is an evolutionary process. The "best" alternative cannot be developed in the first run. Rather, the alternative that best meets the needs and situation will evolve as a result of the evaluation process. As you gather more relevant information and analyze results, you can refine the alternatives.

**HOW?**

This is where most of the analytical work takes place. Disciplines work together to compare alternatives through various analytical techniques. Through analysis, the information needed for a decision is generated. At this stage, professional judgment is replaced with factual data as much as possible.

These analyses will vary, depending on what the decisionmakers need to make a decision. Sometimes, earlier work requires repeating at a higher level of detail; for instance, a quick drive-through survey may have been adequate for initial assessments, but detailed maps may be needed, and samples may need to be collected and analyzed to authoritatively evaluate and screen for higher levels of detail (accuracy).

**PITFALL:**

Preselecting an alternative before you evaluate all the alternatives is a big mistake.

Frequently unimplementable or extreme alternatives are evaluated along with workable alternatives to show why they won't work and to find some component or compromise that will work.

The four accounts under the *Principles and Guidelines* (see the “Bibliography”) and the alternatives analysis in the NEPA process are good examples of the type of comparison analyses done at this step.
Communicate with potential implementors throughout the evaluation process to ensure you are evaluating the factors that really count!

Level of decision = Level of detail
e.g. Build a house

To decide: Find out:

What city? City size, location

What neighborhood? Schools, access

What floor plan? Number, size of bedrooms

Context

Analyze the systems (e.g., physical, biological, social, economic, and organizational) to determine how alternatives will interact with other processes. Ask:

✔ What is the setting in which the decision will be made?

✔ How will the solution be implemented?

✔ How will it be monitored and followed up?

✔ How will it interact with other processes and actions?

Evaluation Criteria

Evaluation criteria reflect what drives the decision. The criteria applied here are based on a comparative analysis of alternatives to provide the information necessary to select the alternative. Talk with potential implementors to get their insights on what factors should be evaluated. The basic question here is: What do I need to know about the alternatives to choose one?

Carefully craft these criteria and weights so that you can develop a rationale behind your judgment—why one alternative outranks another. No matter what the alternative, no one will be totally satisfied. Tradeoffs among benefits and impacts will have to be made. Look
carefully at that last incremental benefit to determine if it is worthwhile. For example, you may have to settle for 90-percent solution if the 100-percent solution costs four times as much.

Criteria may conflict—high flows may be needed for an endangered species while stable flows are necessary for riparian habitat. Determine and agree upon which criteria are more important (Is meeting need x more important than meeting need y? Is speed more important than cost? Is easy maintenance more important than comprehensiveness?). These priorities should more or less mirror the priority stack of objectives developed in Step 2.

Relative weights assigned to the importance of the evaluation criteria provide a basis for evaluating the relative merits of these tradeoffs. Weights are what tell you what is more important: 85-percent fish flows with some power generation or 100-percent fish flows precluding any other uses.

**Identify Impacts**

Once you have alternatives that fit the evaluation criteria, you need to look at what effects they will have on the overall systems. It won't do any good to solve one problem if you are going to create larger problems elsewhere. For example, if providing a water supply to one area robs the water supply from another area, the overall problem isn't solved. Look at indirect effects as well by thinking through the process (If x happens, then y might occur, which would influence z). Examine the alternatives within the context of other actions to determine cumulative effects. One house on a mountain may not prove to be a problem, but many subdivisions on that mountain could be.

**Determine Data Needs**

Data needs will vary, depending on participants, solution requirements, and problems shed interactions. To find out what you need, ask:

"Are these data significant to the decision?"
"Do we need these data to make an effective decision?"

---

**If you push down in one place, the problem may pop up somewhere else.**

**Follow processes through to ensure you won't have unintended consequences. For example, what happens if the kudzu you plant to control erosion grows out of control?**

**SIGNIFICANT:**

If the decision can't be made without that particular data, then the data are significant.
If your answer is:

"Yes" then:

- Identify the data needed
- Identify and agree on the methodology you will use
- Collect only essential data germane to the level of detail

"No" then:

- Document and support your decision
- Don’t waste time or money with it

Don’t forget to get input from every participant—and from every interested public! If you miss something now, it will come haunt you later.

**Determine Analysis Methods**

Agree upon a procedure to analyze tradeoffs, evaluation criteria, and impacts for each alternative. Ensure that each alternative is treated in the same manner. Determine methodology, schedule, and priority. Laying out methodologies and analyses now will save money later. It will help ensure that disciplines work together so that results can be compared and the necessary data for each analysis is collected. (Don’t waste time finding out flow temperatures if the biologists need flow rates instead!) Also, schedules will show the interaction of analyses—e.g., the hydrology work must be done before the biology.

Determine level of detail needed for analyses by working backwards—figure out what level of detail is needed for an effective decision and for implementing the solution. This should be the level of analysis.

Reaching agreements on evaluation techniques and weights of objectives and criteria is essential. Unresolved disagreements at this stage can drive a wedge into the process, creating "splinter groups" with their own methodology and even counter-analyses. These counter-analyses may be equally valid, but they will cloud the overall issues and focus attention and energy away from the real problem onto relatively unimportant side issues.
For example, a counter-analysis may find that fish mortality is 14.9 percent, rather than 10.5 percent. This relatively small difference in analysis may not shed more light on the comparative merits of alternatives and may focus the conflict on numbers rather than solutions.

**Refine Alternatives and Re-iterate Analysis**

The first iteration will reduce the range of alternatives to those considered most reasonable (despite the ambiguity of the term) for further, more detailed study. Although there is no magic cutoff, costs and time usually limit alternatives carried through each further iteration to five or less.

Now that you have been able to compare and evaluate alternatives and recognize tradeoffs, you can then go through the decision process again to formulate alternatives which reflect the diversity of input from all technical disciplines, publics, agencies, etc. Keep decisionmakers in the loop to determine which alternatives to carry to the next iteration. A popular myth-conception, that the set of alternatives is locked in place, may rear up here. Showing the benefits of refining the alternatives may help avoid this. However, if the decisionmakers have reasons to narrow the alternatives under consideration, this should be clearly documented. The second iteration will lead to an even more detailed study and comparisons of the best alternatives. (Again, figure out the level of detail you really need.)

**Document the Analysis**

Showing the results of comparative analyses in a draft document gives everyone the overall picture. This helps form agreements—small compromises in content, wording, and presentation may bridge the gap in larger conflicts. The draft document can then be refined into a document for decisionmakers (e.g., a NEPA compliance document, initiative, resource management plan, or proposed guidance).

**When you cannot reach an agreement:**

- Identify areas where agreement has been reached and go on with those areas if possible.
- Identify areas where participants "agree to disagree" and leave those for another process.

**PITFALLS:**

Don't allow the word "baseline" or "existing" conditions to create confusion about the resource conditions which are to be compared in order to determine potential effects.

Effects of implementing alternatives are determined by comparing the resource conditions under each alternative to the projected resource conditions under the no action alternative.
TOOLS

A variety of analytical tools will be used at this point both to gather data and display information on comparisons.

Get together with the core team and determine what tools will be used to measure what. Be sure that measurements, comparisons, and evaluations use consistent assumptions and methods. While you are comparing apples to oranges, at least use the same properties and measurements to show how effective the alternatives will be to meet the objectives and evaluation criteria.

Indicators

You can't measure and analyze everything—and you don't need to. Find a particular indicator (a small resource or issue that can be measured) that generally reflects impacts to an entire resource. For example, the amount of flows at Hellfire Rapids may indicate rafting quality for the entire Jordan River—or levels of Cladophora may show the relative abundance of native fish.

Show why an indicator was chosen, how it interacts with the resource as a whole, and then measure impacts to it consistently under all alternatives. A matrix table showing all indicators and alternatives provides the public and decisionmakers with a quick way to determine which alternative will do what.

Measure what will be significant to the decision.

Tradeoff Analysis

A tradeoff analysis examines many components, factors, and criteria within the problem's context. This moves away from the simplistic emphasis on only one factor which a single discipline might apply.

In these analyses, factors (criteria, impacts, costs, etc.) are weighted to reflect their relative importance. Impacts on the factors are compared for each alternative to analyze benefits, costs, and tradeoffs. Participants can change weights or data to determine how much difference it would
make if the criteria or priority stack were changed. Sensitivity analysis provides room for comparisons and enables participants to:

- Set sideboards for minimum performance and point out fatal flaws (Even if you made the cost of the water as low as possible, you could not compensate for water quality below x standard.)

- Determine what is most important (What are the deciding factors in a preferred alternative: wetlands, benefit-cost ratio, amount of water delivered, etc.?)

- Build consent (Can participants agree on an 85-percent solution if the 100-percent solution takes twice as long?)

- Look beyond analytical differences (What would really happen if juvenile salmon mortality rates at the gates were 20 percent rather than 5 percent?)

Consider software programs, such as MATS (multi-attribute tradeoff system). MATS is designed to help decisionmakers (or publics) make choices among alternatives when many pieces of information must be considered. MATS provides a framework for decision analysis and documentation, with content provided by the user. The MATS process helps reduce the complexity of developing alternatives by tracking all assumptions, factors, weights, alternative comparisons, and tradeoffs. Sensitivity to changes in facts or values is easily displayed for evaluation during the decisionmaking process. MATS can be used to encourage tradeoff discussion among publics and technical disciplines.

**Pilot Studies**

Consider testing the waters first with a pilot study, phased implementation, or test market. For example, an administrative function might be tested within one group or division first. Participants in the test group can provide insights into what worked and why. Armed with this information, you can expand, modify, or drop the alternative. Draft documents can also serve to test ideas and analyses.

**MATS:**

Is a decision framework which:

- Incorporates facts and values

- Can use both objective data and/or subjective ratings to assess alternatives

- Clearly distinguishes between technical and value judgments

- Documents the decision-making process

- Can be used directly by decisionmakers or the public
**Interrelationships**

Analyses that examine interrelationships, such as GIS mapping systems, can help determine:

- How the components of alternatives would work together
- How alternatives would affect existing or future related projects.

**LOOK FORWARD**

**Review and Refine**

Based on what you know at this point, begin paving the way for selection and implementation. Most opposition or conflicts occurs because people feel either that their concerns were ignored or the process is unreasonable. This stage presents many opportunities to head off these conflicts. Make sure that everyone has a chance to review and ensure that potential implementors also have a chance to review the analysis. If they are not involved now, it will be very difficult to persuade them to implement the selected alternative.

**Communicate Your Decision**

The technical/partnership team can now recommend an alternative to the decisionmakers. If an alternative doesn't clearly stand out over the others, it may be necessary to select additional evaluation criteria and refine the evaluation process.

Present the results to the decisionmakers and the public in a final document. This usually concludes the activities of the technical team.

Final documents:

- Provide a reality check (Did participants hear and understand each other? Were the relevant factors, objectives, and tradeoffs evaluated?)
- Provide something concrete for representatives to take back to their members
Step 8
Select

Solving a problem is like getting married . . .

The real work starts after the wedding!
Step 8: Select

PURPOSE

- To decide on the course of action
- To set that action in motion

WHY?

The quality of the decision determines the quality of the solution. Participants have worked out tradeoffs and compromises to find solutions that will work and fit the situation and environment. Impacts and interrelationships have been evaluated. Now the decisionmaker can use this information to select a balanced, workable alternative.

HOW?

The difference between advice giving and decisionmaking is one of responsibility. Doctors or mechanics can give advice, but they are not ultimately responsible for your life or your car—you are. In the same way, technical experts can give advice, but they are not ultimately responsible for the decision. The decisionmakers should have been identified early on and kept informed throughout the process. Now they take the lead. If these decisionmakers have not yet been identified, find out who has the authority to make the decision and determine who the decisionmakers are. Contact them. Recognize the problems the delay has caused and get them up to date on the decision process.

Review the Political Climate

The political climate will determine how the decision will be made and the solution accomplished. Re-examine existing relations with politicians, agency and department heads, and influential people on a national, State, and local level. These relations will fall on a scale somewhere between proactive (working with groups to find a supportable, workable solution) and re-active (responding to requests and influences).
To determine the climate, ask:

- What is your credibility level?
- How free and confident do groups feel to contact you about issues?
- What is your level of contact with them?
- How accurate, relevant, and up-to-date is their information?
- How many sides have they heard from?

The more communication and credibility, the more pro-active the climate. See "Politics" in the Overview.

**A Pro-Active Climate**

In a pro-active climate, you can base the decision on what best fits the situation to effectively solve the problem. Keep everyone informed of your rationale and ask for their input. Continue to build working relationships with key publics and participants by ensuring that they hear from you (about both good and bad news) before they hear from anyone else. Make sure someone contacts them regularly throughout selection, implementation, and followup. This will:

- Get the information you need
- Gather support for this solution
- Build needed support in future actions

**A Re-Active Climate**

A re-active climate means that your decision will be made for you. Try to identify which influences will drive the decision and let people behind these influences know the facts. This is crucial, as they will probably have formed opinions without information. This misinformation will lead to selected actions that will not solve the problem and will lead to a morass of controversy and inaction. Help provide the answers they need for their constituents. Work to become a reliable, credible data source by providing all the information—both positive and negative. Highlighting
negative information will also show that you are aware of and are addressing the constituents' concerns.

Political people may not be willing to listen or understand, or they may have already chosen sides and are unwilling to change. In this case, focus on long-term objectives to build working relationships rather than being sidetracked by bumps in the system.

**Identify the Showstoppers**

Showstoppers are issues, concerns, needs, or values that—if triggered—will stop the process. Go back through the process and identify showstoppers to track these throughout the decision, implementation, and followup. Demonstrate how these showstoppers were addressed and resolved—and then document how you followed through on those resolutions. Sharing this with the affected publics, decisionmakers, and other participants can forestall or avoid court battles and build support for your solution.

To pinpoint showstoppers and gauge their strength, review the decision process and ask participants about:

- **Values** (Why are you involved? What do you care about so much that you are willing to invest your time?)

- **Needs** (What needs do you see being met by this process? Look back at the results of “Step 1: Identify Needs” and see if those needs are still valid.)

- **Issues** (What concerns give you heartburn? What are you losing sleep over?)

- **Warning signs** (What are the red flags in the process? What would mobilize your constituency—or other groups or organizations?)

Document these showstoppers. Set up procedures for dealing with specific potential showstoppers and consistently apply them. For example, if you know that existing water rights holders will not support your new actions unless their rights are secured, make it clear upfront each time that the new uses are not a threat to the
The political climate (pro-active or re-active) and the amount of conflict will determine the amount of control over the decision.

The recommended alternative should be the one resulting in the greatest number of old, established uses. Or, if you know that noise or dust is a concern, develop and publicize a contingency procedure for dealing with potential occurrences of excessive noise or dust.

Make the Decision

When making a decision, try to select the alternative that best accommodates the resource and solves the problem. Look at the results of the analyses to determine the most effective solution. These analyses will tell you the effectiveness of the solution, but this is not enough. Sometimes, the decision must strike a balance between support and effectiveness. (See “Analyses” in the Overview.) Consult with implementors to be certain that the decision you select is doable.

Document the Rationale

Document and share your reasons for the selection to show everyone what drove your decision and why. This should be presented in a decision document, such as the record of decision required under the NEPA process. This will:

- Help rally support needed to make the decision a reality
- Show participants in other decision processes what aspects are important now
- Demonstrate to supporters of other alternatives that your decision was a reasonable one
- Avoid active opposition by giving reasons to support or at least acquiesce to the decision
- Help prepare for active opposition if people do sue, veto, or delay the action

If the recommended alternative is selected, the rationales given in the recommendation can be used. If not, you will have to show why your reasons for choosing another alternative overshadowed the recommendation. For example, if the selection board determines the top three applicants for a position and explains why they were
selected, the selecting official can base the decision on their procedure. However, if someone other than the top three is selected, then the selecting official will have to explain not only the rationale but the entire process—including why the top three were rejected.

**Put the Plan in Motion**

Decisionmakers can do four basic things to help accomplish the solution:

- **Select a responsible implementor.**—You need to have a person who has authority but who is still close enough to the work to understand and coordinate the details of translating the plan into reality. To do this, appoint a responsible person who will be accountable for the implementation. If participants (both internal and external) agree on this person, it will be easier to focus on the real work and avoid sabotage. This will effectively and consistently help translate the solution into reality. Remember that this responsibility needs to be coupled with authority.

- **Provide a support team.**—The composition of the team will vary, depending on the action. When selecting this staff, include diverse styles (deep thinker, crazy innovator, precise planner, etc.) and technical expertise to get a complementary mix. Consider comfort levels and skills.

- **Communicate the plan.**—While most people may have been involved in the decision process, everyone needs to be at the same level of understanding. This helps ground implementors and shows the plan’s rationale.

- **Set up continuing communication.**—The decisionmaker and responsible implementor need to consult on a regular basis. The decisionmaker must explain overall developments in issues and priorities that might affect the action. The implementor must discuss current actions, changes, and potential problems and solutions.

The details are necessary to get the thing done.

**COMFORT LEVELS:**

The points where people feel comfortable and able to work—in political, technical, and other arenas.
Decisionmakers need to communicate with responsible implementors often, early, and too much! These two individuals must understand each other's expectations and actions.

**TOOLS**

**Decision Process Results**

Participants in the decision process have worked together to find the most effective solution to the problem. Use the knowledge, understandings, and agreements forged so far as a tool for taking action.

**Credibility**

Figure out who has credibility in the process. Work with these people to understand the issues and rationales as well as explain your decision to others.

Work with politicians to explain the issues. Don't be confrontational—strong-armed tactics are expensive in the long run.

**Issue Tables**

Tracking issues arising through the decision process through implementation is critical. People don't stop thinking about issues after the decision is made—they want to see what happens in real life. Participants will hold you accountable to keep all promises made and to abide by all agreements. When showing the rationale for your decision, also list all the issues and show how each was resolved. Add showstoppers to the issue list. You might keep this on a wall that everyone can visit. Continue to note what actually happened.
### Sample Issue Table

<table>
<thead>
<tr>
<th>Issue</th>
<th>Resolution/decision</th>
<th>Implementation plan</th>
<th>Implementation notes</th>
<th>Followup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Briefly discuss the issue</td>
<td>What you decided to do about it</td>
<td>Who will do what</td>
<td>Who did what, what happened</td>
<td>Was this satisfactory?</td>
</tr>
<tr>
<td>Sedimentation</td>
<td>Put in erosion control measures</td>
<td>Contractors will compact side slopes</td>
<td></td>
<td>What changes needed to be made?</td>
</tr>
<tr>
<td>Chemicals in the workplace</td>
<td>Measure levels of chemicals</td>
<td>Contractors will institute measures x and y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Safety training and drills</td>
<td>Each office will develop training and schedule drills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Downtime in a move</td>
<td>Provide for 3 days downtime</td>
<td>Schedule downtime. Notify leaders</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LOOK FORWARD

**Communicate Your Decision**

How you communicate the decision will determine if the problem gets solved or bogged down. Use the decision documents to explain your selection and rationale. Two groups really need to understand the decision, but from varying perspectives:

**Internal.**—Internal staff and managers need to understand how the decision relates to their jobs and missions. Clearly articulate how the decision relates to the work Reclamation needs to do. Focus on the future—how will this decision promote Reclamation's mission in the years to come. Caution: relating this decision to one or two instances where staff feels there were problems will surely backfire, as people will resent the implications and predict a negative result.
External.—Participants will have a wide variety of agendas and needs. This decision is sure to upset someone out there. If you can use open and honest communication to demonstrate that you are playing fairly, people who oppose the decision may go along with it. Clearly explain that there is a serious problem and show why you think that this is the most responsible way to deal with that problem.

If the process has not been fair (or if some participants feel it has not), address this before going any further. Otherwise, an active opposition will spring up.

Motivate People

Persuading people that the work has only just begun is a difficult—but vital task—now. First, let everyone know that you appreciate the work done so far. Little things, such as certificates of appreciation, tee-shirts with the program’s name, gym bags, or lunches mean a great deal. They will:

- Show participants that their efforts mattered. *(My name is on the poster by the Crystal River Bridge.)*
- Help strengthen the identity of the group. *(I worked on the Crystal River Basin Program—rather than I opposed the so and so’s who were going to ruin the river.)*
- Let people celebrate their accomplishments.
- Rally participants to focus on solving the problem.

Use lots of imagination and humor to find something that fits the situation.

Set the Solution Up to Succeed

Do this by documenting the decision in a report which tells everyone what they need to know so they can act on the decision. This includes:

- What the decision is
- How the solution will be put into place
• How it will be monitored and evaluated

• How changes will be decided on and made

Make certain that:

• People responsible for implementation, followup, and monitoring as well as affected publics have been contacted and support the decision.

• They have the resources to put it in place.

• Commitments to act and monitor are understood and agreed to.
Step 9
Implement

Keep the transition as smooth as possible—Communicate!
Step 9: Implement

PURPOSE

- To translate the plan into reality
- To continue the support and consent
- To maintain flexibility

WHY?

This is the bottom line for Reclamation’s existence—to accomplish its mission by solving serious problems. Without this step, every effort so far has been wasted.

An agency or organization has only one way to prove that it will follow through on promises and commitments—to actually do it. When a program is successfully implemented and promises are lived up to, then Reclamation gains the credibility it needs to effectively solve other problems. When promises are broken, the action is shown as one more reason why others can’t trust Reclamation.

HOW?

Implementation is the crucible for proving Reclamation’s effectiveness. This is the most challenging part of the decision process.

The responsible implementor should become familiar with the history to identify potential trouble spots and to understand the reasons behind the actions. No matter how hard participants worked so far, there are still potential conflicts and emotional charges—you may still need to develop support. Three basic parts of implementation are:

- Getting and keeping the trust and support needed to act
- Preparing the work
- Actually doing the work

Guard against wasting time and resources getting answers that are never used.

Keep your eyes on the long-term solution so that the day-to-day stuff doesn’t get you down.

Ideally, all the implementors have been involved in earlier steps. If not, start involving them yesterday.
Identify the Players

Identify who will be involved and to what extent. Develop a structure and communication process that is reasonable and doable. Figure out:

- How much input and what type of input is needed to solve the problem
- What community involvement and support is needed

Participants are glad the long, hard process is finally over—but the real work is still ahead. Now, more than ever, you need to make sure your resources are in place. Check the following:

- **Participants.**—Is the recommended solution supported? Is there effective communication?
- **Decisionmakers.**—Have the decisionmakers been involved in the process? Are they ready and able to act?
- **Funding.**—Is funding available? Have you checked out all the possible sources of funding, partnerships, cooperative ventures, etc.?
- **Time.**—Is there still time to solve the problem? Is our timing in sync with partners’ timing?

Without these commitments, you can’t take action. Putting these in place during the action is far more difficult than getting them in place before you start.

Gather Input

Make sure that all affected publics have had a chance to comment on the recommended solution as documented by the team. Categorize these comments so that the decisionmakers can consider them in their selection. Followup here is useful to pinpoint any potential unresolved problems.
Ask both active participants and those on the sidelines:

- Did you feel that you had a voice in the process?
- Do you understand the decision process, the boundaries of the decision, and the objectives of the solution?

Address problems before the decision is made. This will build credibility by demonstrating that you listen to concerns and will strengthen the decision.

**Review Partners**

Partners will change their participation as the process shifts from evaluating to doing. Partners primarily concerned with gathering information may lessen their participation. Partners concerned with actual implementation may be just beginning to really get involved. Providing them with an accurate history of what has happened will help everyone understand why you are solving the problem the way you are, rather than assuming hidden motives. See "Partnerships" in the Overview.

**Build the Support**

Simple procrastination or neglect can now kill an action, so implementors need to develop support just to get the process going. You'll need to work with both external and internal groups—but in different ways.

**internal**

The entire decision process, but especially this phase, must be built so that it does not demean (and is not perceived to demean) the implementors. The implementors must be confident that:

- They will not have to redo their effort or double back needlessly.
- They are not doomed to be on trial forever.

Under partnering, all parties agree to focus on turning creative, workable solutions into reality. To do this, work to avoid adversarial contention and "turf protection." Carefully and deliberately base workable relationships on mutual respect, trust, and integrity. Partnering fosters synergistic team work.

**SUCCESS:**

If trust is eroding, backtrack to stabilize the situation and then move forward. This may make you crazy, but it's better than spinning your wheels in place.
It is easy to feel that the level of communication and involvement can drop now that the decision has been made. Also, many implementors come with a high level of distrust. They have been involved with or have heard of actions that have failed—and this one may well do the same. Ways to help build internal support include:

- **Training.**—Determine what the implementation team needs to know to effectively do their jobs and to communicate with the affected or interested publics—and then set up a training program. Think about informal contacts too—the person lining the canal might chat with the jogger passing by. What does that person need to know to allay the jogger's fears of potential hazards?

- **Communication.**—In "Step 8, Selection," the decisionmaker and responsible implementor communicated with the implementation team to get everyone up to speed on the process, the action, and the rationales. Keep communication lines open so that the team can work together to anticipate problems and changes and find ways to solve these problems.

**External**

The solution may require a lot of active participation—or a very few key people. Document and publicize how you will keep the rest of the participants informed. Clearly explain your process for handling and monitoring unexpected changes.

Do not assume that you have already contacted every interested or affected public. People may have been more interested in fixing supper than in an action that was a distant possibility. People have lives that have nothing to do with your action—there will be factors you can't control. You will have a much better position if you go to them first. Meet with these publics to find out their concerns. (See "New Players" in the Overview.) Scoping and participation maps can help do this. (See "Tools" in this step.)
• **Tracking.**—Implementation brings along its own issues, which can be very different than those identified during earlier steps. Set up a procedure to identify these new issues. You might install a hotline, ask followup questions, etc. Issue tables can help track these new issues.

• **Training.**—Most participants do not set up water management programs or build projects for a living. Thus, they need to know the technical terms and the broader applications. Often, it will seem as though you are speaking ancient Sanskrit rather than plain English! Use analogies, simplified explanations, physical models, or other ways to get your point across. Efforts made here will allow participants to provide meaningful input and serve as informed watchdogs.

• **Communication.**—At this point, too much communication will drown out vital information and promote resentment and suspicion. (This is the fifth report I’ve gotten this month, and I don’t understand any of it. Are you deliberately trying to confuse me?!) But too little information will entice affected publics to go out of their way to sniff out “cover ups!” Maintain a balance by checking back with participants regularly.

**Communicate**

Structure your communication to be sensitive to the community’s needs, especially those who feel less empowered to gain access to information.

Make materials readily available at an easily accessible location in an understandable, friendly format. You might keep a log, update a report weekly, ask implementors to videotape the progress, etc. You could hire a recorder, writer, or journalist to document the process. Putting information in a data base accessible by Internet might be appropriate.

Briefly summarize what is being done and tell participants who to contact and where to go for more information. Don’t rely on just one source here—make it a goal to reach every

Training can help people understand that conflict is not the end of the world.

Responsible implementors are like symphony conductors. They use each player’s skill to create a cohesive, intricate whole.

People may never actually look at the material, but they want to know it is there.
potentially affected or interested person with your message at least three times. You may want to use newspapers, newsletters, radio, TV, Internet, billboards, tourist offices, utility stuffers, etc. Before you advertise, test the system. Dial the number or go to the location as if you knew nothing about the program. Was it easy to find? Were people available to help you if you had a question? The more accessible the information, the more support the solution will have.

**Prepare**

Carefully plan out the action with both internal implementors and external participants. Many problems can be avoided simply by thinking through what it will take to get the actions done. If you haven’t yet thought about how the solution will work, be prepared to do a LOT of backtracking!

Keep the psychological balance between all parties, agencies, and participants in mind. The more you understand the timing, requirements, and interrelationships of reaching the solution, the better you will be able to:

- Develop the roles of the external participants. When participants understand what needs to happen, they can identify their roles more effectively. This will help make their participation more meaningful.

- Communicate the plan to the implementors. This will help them understand how their expertise can be used to better orchestrate their actions.

- Integrate changes into the process. If you know the plan well, you can modify it to accommodate changes efficiently. You can also show clearly how and why things changed so managers, the team, and affected publics understand.

To plan out the details of an action, first break it down into manageable elements. List and categorize these elements. Categories will vary by activity, so put some thought into tailoring the categories to fit your needs. In a construction activity, they will probably be physical actions (e.g., dig the channels, put up erosion control measures, place turnouts). In an administrative action, they may be more institutional (create, test, and publicize the process). Once you have the
categories, meet with technical experts and implementors to list the elements under those categories. If everyone agrees that an action should take place, but no one person is responsible for making it happen, then it probably won’t happen. Plan actions by determining who will do what.

To schedule the work, you first need to know all of the details of the action. As this is what will actually be done, you need an on-the-ground level of detail. For example:

• **Construction.**—I need five bulldozers and their operators for 40 workdays to build the series of dikes at Hollow Ridge.

• **Administrative.**—I need three editorial assistants for 1 week to prepare the national mailing list, finalize the report, and stuff envelopes.

While this will be much more specific than anything done so far, most of the information should already be generated. Break the plan into the level of detail that you need. This may be as detailed as an hourly account of actions needed for a hazardous waste cleanup or as general as an annual account of activities needed to check that a form is being filled out correctly.

Determine who will do each element. Then get with that person and determine:

• What exactly you are going to do
• How long it will take
• What resources you will need
• Where you will do the task
• How you will get the resources to the task
• What are the constraints (e.g., transport, time, resource availability)

Ask:

• Do you have access to everything you will need?
• Do you have the necessary priorities?

With this information, you can draw graphs to visualize the duration and interdependencies of tasks. Check this with all of the implementors. Draw on their knowledge and
expertise to guarantee that the process is effective and doable. This will also help identify potential conflicts and gauge how much the system can handle at its weakest point.

Implementing in Stages

You may not have funding, room, or facilities to do the task at one time. Rather than trying to do everything at once, it is often more useful to break the implementation into groups of tasks to more efficiently use resources and accommodate funding. This is called staging, tiering, or phased implementation. When developing these phases, consider:

- Physical, funding, and resource constraints
- Relationship among tasks (what needs to be done first)
- Availability of information
- Gatekeepers and key points in the implementation decision process
- Necessary permits

Check with participants about the phases before you schedule them to ensure nothing is missing.

Schedule

After you know what needs to be done, you can figure out when to do it. People tend to work on things with the closest deadline. Thus, setting a tight schedule avoids procrastination and helps actually get things done. However, an impossible or a too tight schedule may invite risks of incomplete work or delays. Publics like to pounce on delays.

Now that you have the individual pieces in place, you can put them together by determining where each activity fits in the overall scheme:

- What can you do simultaneously?
- What depends on other actions? Why?
- What can be done independently of other actions?
Don't forget about external constraints, such as permits, timing of activities, and availability of resources. Knowing what the risks are ahead of time can add some flexibility. Think about contingencies: legal (who might sue and why), political, biological, climatic, social, physical, etc. What would happen if the action did not take place in the fiscal year budgeted? What changes are likely to occur, and what allowances can we make for them?

The schedule needs to account for technical and social factors. Merge the two by first putting together a technical schedule with implementors, then determining when reviews and comments are needed with key participants. Meet with both implementors and key participants to hammer out conflicts.

Then look at the action in relationship to other actions. This will help set both internal and external priorities. If you have a high priority, you may be able to twist the tails that need to be twisted. If it is a lower priority, you may need to figure out ways to squeeze it in on the edges of other actions. What are the priorities within Reclamation? For other participants? How does this solution fit in?

**Estimate**

Now that you know the actions needed and the timeframe, you can refine the estimates of the resources needed to complete the work (e.g., time, funds, materials, and staff). These estimates will help participants and decisionmakers understand the extent of the work involved and provide a basis for changing the scope of the work to fit the available resources.

A word of caution, however. Don't fall in love with these numbers! Preliminary financial estimates are usually based on physical or organizational requirements (it will take so many gauges to monitor this streamflow, so many mailings for this education effort, etc.). These estimates, however, do not consider the *functional* costs, the cost of elements needed for the solution to function properly. This is like estimating the costs of a three bedroom home by square feet, without including costs for functional items such as a stairway, driveway, or porch.

Unfortunately, people will grab onto the lower costs of the preliminary estimate and will be reluctant when costs rise.

Sometimes you just have to fire and fall back. Make the estimate and go with it.
As you go along, explain and document the cost changes and the need for the functional costs (e.g., if you don’t have a stairway, you can’t reach the upper story).

You will also need to refine estimates of impacts as well. This will help provide affected publics and participants a better view of what the impacts will actually be. Keeping them informed will help build your credibility and support when you need to make changes. Again, however, keep in mind that these are merely estimates. It is much better to be straightforward about high impacts and then show what changes you can make in the plan to avoid or lessen those impacts than to provide a low estimate and have to weasel word around when the impacts are higher than your estimate.

Permits, for example, may have certain threshold limits for air or water quality. If preliminary estimates come above those limits and you can rearrange or redesign to assure that the solution will come under those limits, show and document all the changes you plan to make. Clearly show the rationale for changing these numbers or you will be accused of playing fast and loose with the numbers.

Get Agreement

Now that you have a detailed plan, schedule, and estimate, go back to the decisionmakers and participants to make sure that this is what they want. You may need to rework some elements—but again, the more you know about the interrelationships and requirements of the actions, the more flexible your plan can be. Decide how much you can do and at what level. How much is the issue worth? Actual working details may be different than expectations built up earlier in the process. (I said you could put a side-walk in, but I didn't think you'd cut down my tree to do it!)

Do It

Doing the work in a carefully thought out way will amply repay the efforts made to plan it, but doing it haphazardly will destroy those efforts.

While you are doing the work, keep track of what has actually happened and map that against the original schedule. Conscientiously create an "as-built" schedule by marking off what happened when and noting changes.
Changes will crop up throughout the process. The way you handle those changes will make the difference between a cost-effective, timely solution and wasted effort. To incorporate these changes:

- **Identify changes early.**—The earlier you know about a change, the more options you have for dealing with it.

- **Define changes.**—Get the decisionmaker to pin down the change. What does it consist of? What does it directly affect? In what way?

- **Determine the cost.**—Figure out how you can deal with the change in the most effective, least expensive manner. Considering the costs of the change with the person who wants it will help determine its importance. Participants who want the change might do or fund the work themselves.

- **Determine the delay.**—Figure out how you can incorporate the change with the least delay to the schedule. Can you do another task first? Then determine how much delay there will be—and demonstrate why.

- **Sketch out the ripple effect.**—Use the defined interrelationships among tasks to determine what kind of indirect effects the change will have.

- **Document the effects.**—Show what the change is, how you will address it (and why) and what effects the change will have on the cost and the schedule.

Share the rationales for the changes and delays with decisionmakers as early as you can. Then determine when to share the changes with the implementors and participants. This will prove that you are indeed solving the problem in a fair and reasonable manner and trying to avoid cost overruns and delays. Keep in mind that it is easier to convince someone about the need for a 1-month delay six different times than a 6-month delay for six different reasons.

**Check for Problems**

Implementation is never smooth sailing, and you'll need to keep checking to see if there are any problems.
Re-examine the process. Get with implementors, participants, and affected publics to ask:

- How well are we doing?
- Are our goals realistic?
- What is working well?
- What isn't working? How can we fix that?

Areas to check include:

- **Personal conflicts.**—Are there any unresolved conflicts or issues? How well does the implementation team work together and with other participants? Is there an open, supportive, flexible environment? If not, discuss these issues at the earliest point so they don't get out of hand.

- **Gates.**—Often, you need permits and approvals from other agencies now. What permits do you need? From whom? Consider Federal, State, and local permitting and other authorizing bodies. Think about how these gatekeepers operate.

**TOOLS**

**The Decision Process**

Often, solutions will be "mini-versions" of the decision process—you can go back through the steps to focus on a problem area. This will help clarify issues, identify changes, and focus the solutions. It will also build support for and show the rationale behind these on-the-ground changes.

**Scoping**

Scoping is a vital part of implementation as well as the rest of the decision process. Continue to meet with groups and find out about others who are affected by or interested in the actions. This will:

- Help gather the necessary support
- Help gain credibility
- Enhance the value of the process
- Get support for future efforts
Participation Map

Participants' involvement and roles will probably change as the process shifts from planning to doing. Keeping track of who is involved to what level can help participants still feel like a part of the process. To do this, you might use a participation map. Draw a map showing outer and inner layers to represent levels of participation (from passively interested to actively involved). Then mark who is where on the map.

Roles may change during each phase of the implementation.

Issue Tables

Use the issue tables generated in Step 8 to continue to keep track of the progress.

Generalized Standards

Have design standards for a wide range of features. This:

- Demonstrates global expectations
- Creates an atmosphere where all the pieces work together
- Keeps track of various actions
- Develops cohesive, coherent solutions (e.g., record keeping procedures, architecture)
- Promotes understanding
Step 9: Implement

The Right Person for the Right Job

If the team and the responsible implementor are not working effectively, then the problem won’t be solved. Periodic reviews are absolutely essential. Is the job being done? Are problems being anticipated and solved? Is there effective communication among the decisionmaker, the implementor, the team, and affected publics? Acknowledge the efforts made and celebrate the successes.

If some people do not fit in the assigned roles, some shifting may be needed. Examine the qualities that led to their selection. What are their strong areas? They may be more comfortable and effective if they are placed in another role that more closely fits their skills and abilities. Involve them in their reassignment.

LOOK FORWARD

Solving the problem does not stop with doing an action. Throughout the life of the program, you will need to monitor and adapt. To do this, document everything so that others can readily understand what has been done—and what needs to be done.

Documenting the implementation process will:

- Help gather support
- Build a paper trail to help resolve future issues
- Help avoid or eliminate rumors and misinformation
- Keep new players and affected publics informed

You cannot please everyone all the time. The most you can do is explain what you are doing and why.

Hitting the problem straight on will be more effective than letting it slide and worsen.
Step 10
Monitor and Adapt

You can’t plan in an emergency
Step 10

**Step 10. Monitor and Adapt**

**PURPOSE**

- Monitor to ensure that the solution continues to work
- Adapt to changes

**WHY?**

Monitoring after solving the problem is Reclamation's best investment bet for future credibility and effectiveness. Monitoring focuses the attention on what does work and what continues to work. Participants will see that you can and do adapt the solution to fit the changing needs. They will thus be more willing to work with you again, increasing your effectiveness and ability to solve problems.

**HOW?**

The level of monitoring and followup will vary for each process. Examine how the solution works and interacts with other processes. Get with participants to determine the best procedures for monitoring your solution. Some questions to consider are:

- How often will you check the solution?
- How will you determine what changes and adaption need to be made?
- How will you make those changes?

Monitoring and adapting can become less and less frequent over time—but this decrease depends on the level of public trust that has been built and can be maintained.

**Scoping**

Now that the solution is a reality, people will see it in a very different light. Do some scoping to figure out whether the solution still meets the needs. Areas to consider include:

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Keep track of the solution so your investment pays off.

Do what you said you were going to do and continue to do it until someone gives you a good reason to stop.

If you've never had a process break down, then you won't know when it actually is working. (Think about the oil pressure light in your car.)
Long-term management is as much a part of the job as evaluating options, signing the record of decision, or driving the bulldozer into the channel.

- **Participants.**—Identify the decisionmakers you will need if anything changes. What will they decide? What do they need to know? How often do they need to be involved? Have participants (e.g., State legislators, water masters, environmental organizations, and political appointees) changed? Have agendas, priorities, or strategies changed?

- **Effectiveness.**—Do participants think the solution is working? What does work? What could be improved?

- **Related problems.**—Are there other problems in the area that keep the solution from being effective? Can you address these?

- **Effects.**—What are the solution’s effects on the community and area? Have any problems been created by the solution? Can you address these?

- **Commitments.**—Review the commitments made throughout the process. Are they still valid? Have you met these commitments?

The solution’s purpose and scope may be redefined due to changes in laws, court interpretations, funding and authorizations, etc.

**Documenting and Tracking**

Collect data and monitor progress to see if the solution is working. You may run into some resistance. (Documenting is a waste of time! We’ve already solved this!) These records, however, will help new players and be valuable resources in other solutions.

**Adapting and Changing**

The solution won’t work as depicted on the drawing boards—it will need to adapt to the real world. Keep track of what has changed. Can the solution work within the changed parameters? Can the solution address changes in needs and resources? Going through the decision steps to address these changes will help find balanced, effective methods of dealing with the changes. Include people who
can support and make the changes. You might expand your scope to work with new groups and organizations.

**Review**

Use the information you have gathered throughout the process and the latest scoping to develop flags for reviews. These may be formal or informal, depending on the solution. Flags may be linked to events or may occur at certain intervals. When a flag is triggered, review the process by asking:

- Who has jurisdiction now?
- Who are the players?
- Do they understand the solution?
- Do they understand the agreements?
- Has anything changed in the community that requires changes in the process?
- Does everyone have fair, open, and easy access to information?

Review cycles need to be tailored to the problem and goal. If things happen daily, a weekly review of daily results might be appropriate. With an annual cycle, a 5-year review might be useful. Schedule reviews far enough apart so you can have an overall perspective and yet close enough together to remedy any problems. Think about how long it will take before an identified problem can be remediated. How long can problems go without being addressed? How long will it take to address them? Keep decisionmakers in the loop—they need to be fully informed about monitoring results and to participate in adaptations.

Monitor your progress closely when there is time to address problems or when problems would matter most. For example, on a flood control project to contain spring runoff, you might meet regularly when snow accumulates,
much more frequently during the critical spring runoff period, and once during the year to review and plan. Holding meetings to review and plan when nothing is going on is critical—you need time when you can calmly review the program.

TOOLS

Workshops

Workshops at regular intervals provide an in-depth format to let newcomers know what is going on and remind participants. Particularly, invite staffs of newly elected officials, people who have moved into the community, and newly formed organizations. Review the problem, explain why (and how) the solution was developed and put in place, and go over changes that have occurred. Figure out if the solution is still working and determine what actions need to be taken so that it continues to be effective.

Issue Tables

Use the issue tables generated in Step 8 and updated in Step 9 to continue to keep track of the progress. Using the same tables throughout the process keeps a continuity so that new players can follow what has been done and all players can work with a familiar process.

LOOK FORWARD

Debrief

Now everyone has 20/20 hindsight. Use this knowledge to start developing a library of case studies and a treasure-hold of advice.

- Help people understand and analyze the decision process
- Show how the process worked—rather than keeping it shrouded in a black box
• Strengthen other actions

• Build credibility by focusing on solutions

You really need two separate debriefing processes:

• **Internal.**—This gives implementors a chance to honestly critique the process (you didn't protect us here; y could have worked more smoothly if we had done x). Using this information to help improve the process will show that you are serious about solving the problem and promote support for the next effort.

• **External.**—Debriefing participants helps forge support and credibility for the next process by providing vital insights into what works—and what doesn’t. Ask:

  > What happened in the process? (Various versions of the same events can help put the process into perspective.)

  > How were the most important concerns identified and tracked? Was this effective? Why or why not?

  > What materials and actions were most useful?

  > What was effective? Why?

  > What could have been done more effectively? How?

**Apply Elsewhere**

Share the findings with others and discover what others have done. Consciously apply what you have found to your next solution. Evaluate how it works.

Continually experimenting with new ideas and techniques will help:

• Adapt your processes to technical, social, and political changes

• Find effective methods of implementing workable solutions

• Keep solutions working
Celebrate Success
Congratulations—you have just survived one of the most difficult processes in today's world. Mark and recognize all of the successes along the way. As each phase of activities is completed, publicize and celebrate. Team members and participants need closure and recognition.

IF THE SOLUTION DIDN'T WORK:

Don't give up hope. Analyze what happened—maybe you can avoid some problems in the future. Also, can you agree on and address one part of the problem? A partial solution can often help build the credibility, cooperation, and support needed to solve the rest of the problem. Learn from the experience—and build on it.

IF THE SOLUTION WORKED:

Solving any problem in today's complex world is a major achievement. Recognize the planning, work, and sheer determination that went into the process. Let everyone know what happened—and why. Celebrate your success!!

Take the success into other problemsolving efforts—use what you have learned and let others know about it too. Remember, though, that every process is unique.

Leadership in organizations can identify and promote success—thus setting expectations for the organization.