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A synthesis: institutional and public policy analysis

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This synthesis draws mainly on chapters prepared by Woodward, Romm, and Langridge; Jaeger; and an appendix paper by Marbut. In addition, those chapters dealing with natural resources, as well as those concerned with economic and social matters, provide the reality with which institutions and policies must deal.

Institutions and policies reflect the formal and informal arrangements made by individuals for dealing with one another in groups. Formal institutional arrangements are the means by which obligations, responsibilities, rights, and entitlements are stated in the law and take form in policies, programs, and organizations. This synthesis is concerned mostly with formal institutional arrangements. Particular institutions, policies, and programs usually come into existence at a particular time to serve a specific purpose or purposes. Under our system of government, all three branches—legislative, judicial, executive—typically are involved in public policies. Additional complexity arises from divisions of power among Federal, state and local governments.

An institution may be effective in serving the purpose for which it was created at the time it was created, but social needs always change with the passage of time. New programs often come into existence to serve needs that were not apparent when an earlier policy was established. Conflicts, inconsistencies, unclear responsibilities, and fragmented authority may then develop. Such a result does not necessarily mean individual programs have failed, or are dysfunctional. Rather, it may indicate government activity, taken as a whole, is not performing effectively. In 2001 in the Klamath Basin, biological opinions, made under the Endangered Species Act, required that the Bureau of Reclamation not honor its contractual obligation to supply irrigation water to the Klamath Reclamation Project. No institutional provision existed or was made to provide for the payment of compensation for the failure of the Bureau to honor its contractual obligation, or to consider the needs of a wildlife refuge that held a water right for irrigation return flows. Few would argue such events provide evidence that government institutions were functioning properly from the standpoint of the total community.

Corrections or improvements in institutional performance to address difficulties may take one of two avenues. One avenue is to address the difficulty by treating it as an **exception**. This means the difficulty is considered sufficiently unique that institutional rules or guidelines can be suspended and a solution sought by other means. The other avenue is to **modify** one or more institutions. When this avenue is chosen, it means conditions either are different than they were when the institution was established, or something important was neglected at that time.

How should the 2001 water allocation problem in the Klamath be viewed? Woodward et al. consider the Klamath situation to be sufficiently unique that it should not serve as a legal precedent. This judgment is based largely on a comparison of institutions in the Klamath with

other California rivers. Uniqueness may also stem from the event that triggered the problem, in this case the 2001 drought conditions in the Klamath Basin. In addition, uniqueness may be judged as to whether a particular situation, such as the Klamath Basin in 2001, may occur elsewhere, or has elements that may be duplicated elsewhere. In other words, is it possible the Klamath Basin 2001 issues will arise elsewhere in the West?

Three alternative, highly preliminary, views are sketched here of how institutional change in the Klamath Basin might result from events in 2001. Alternative I considers the 2001 situation to be an anomaly, or highly unusual event, and treats it as an **exception** to events that established institutions were designed to address. Alternative II is labeled here as a **moderate modification** and will be described more fully subsequently. Alternative III pertains to a **major modification**. It will be discussed more fully later as well.

Alternative I proposes minimal institutional change, but delineates fundamental improvements in operating procedures that may be undertaken. Two suggestions made by Woodward et al. with respect to the Klamath are consistent with the exception avenue. One is for the Bureau of Reclamation to take leadership with water users in formulating plans consistent with objectives of the Endangered Species Act when water is in short supply. For example, the Jaeger chapter provides examples of biological flexibility that will permit practices to be followed under the Act that have not previously been used. Plans can be made to take advantage of such opportunities. They provide evidence progress is being made toward the accomplishment of, for example, Endangered Species Act objectives.

Additionally, Woodward et al. suggest that the court decision in *Tulare vs. United States* be tested to determine if compensation must be paid when the cost of a taking falls heavily on a particular group. This case involved water contractors, as plaintiffs, to claim against regulatory agencies that left water, normally diverted, in the water course for the protection species of fish in jeopardy. The issue was not whether the federal government has authority to protect endangered species, but whether it could impose the costs of doing so solely on the plaintiffs. As quoted in Woodward et al., Judge Wiese wrote in his decision “The federal government is certainly free to preserve the fish; it must simply pay for the water it takes to do so.” If the verdict is upheld, institutions would largely remain intact, but the way they are applied would be determined on a case-by-case basis. Presumably, the court would clarify the contractual obligation of the Bureau of Reclamation to supply irrigation water, should the verdict in *Tulare vs. United States* not be upheld. Again, the particular circumstances arising in the Klamath Basin would be considered within existing institutions, and would not require institutional modification.

The drought of 2001 may be considered by some as an event unlikely to be duplicated. In such a circumstance it would not be sensible to modify institutions to provide for an event unlikely to be repeated. There is considerable evidence presented in the report to assist judgments as to the uniqueness of the 2001 drought. Yet, the difference of opinion that remains on the subject suggests there are inadequate data to permit a definitive judgment on this matter. Regardless of what one believes the probability of another 2001 drought to be, it is clear that probability is important in deciding if it should be considered an exception under the law.

A third reason for considering whether the Klamath experience is an exception is whether such a situation may arise elsewhere. This was not discussed to any significant extent elsewhere in this report. Yet it needs to be considered if the lessons to be learned from the Klamath experience are to be developed thoroughly. It is unlikely the conflicting needs of endangered species, economic systems, communities, and government agencies will come together

elsewhere precisely as they did, and do, in the Klamath Basin. Yet such conflicting interests are present elsewhere, and the lessons of the Klamath may apply.

Consider next Alternative II, moderate institutional modification. The key assumption here is that certain institutions are considered more basic than others and are not changed in a fundamental way. Less basic institutions may be modified to make the more basic institutions perform better, or to remove inconsistencies between or among them. The Endangered Species Act, Reclamation legislation, and California and Oregon state water laws are considered to be more basic institutions. The relative legal standings of endangered species, Native American water rights, and out-of-stream water uses are not questioned. Possible changes in other institutions are the essence of this alternative. The strategy here is to create a more adaptable, flexible system for managing water in the Klamath Basin while leaving the basic institutional framework intact. Adaptability and flexibility are time-honored techniques for addressing uncertainty. One way of providing for adaptability and flexibility in water management in the Klamath Basin is to require, or permit, resource interdependencies in the basin to be incorporated in the institutional framework. By way of example, two such interdependences are described next:

- Land in the Klamath Reclamation Project is not the only land use in the basin that affects Upper Klamath Lake levels, water quality, or the amount of water that flows from the basin into the Klamath River. This interdependency among basin water uses and users is a source of adaptability and flexibility in decision-making as noted in the chapter by Jaeger. Institutions will need to be modified if this is to occur.
- Biological information presented in this report makes it clear that water quality, as well as quantity, is important for many in-stream water uses. Further, water quality varies geographically within the basin. So long as water requirements do not recognize qualitative considerations, the waters of the basin will not be put to their highest social use.

The chapter written by Bill Jaeger provides evidence that water could be used more effectively if a basin-wide perspective were employed in decision-making. It is not necessary to accept all of the numbers presented by Jaeger to conclude that the incremental value of water varies within the basin. This fact alone indicates that water could be used more effectively if it could be moved between and among locations within the basin. An elementary principle of economics states that if an economic system is to achieve its potential, the incremental value of a useful scarce resource must be equal in all alternative uses. It is clear this condition is not met in the Klamath Basin. In a similar vein, the fact that many public and private decisions are made with reference only to water quantity provides evidence that social gains would result from a consideration of water quality. For certain purposes, an entire acre-foot of water from one source may be needed to be as useful as only 0.8 acre-foot from another source that has (say) two degrees lower temperature.

Jaeger discusses institutional modifications that would be necessary to accommodate such interdependencies. In some cases the needed institutional modifications would be minor, but other modifications may be difficult to make. Water markets are one means for moving water rights among uses, users, and locations. Jaeger notes that Oregon water law probably can

accommodate permanent transfers of water rights, but short-run, or temporary, transfers may be another matter.

Water markets require that rights in water be specific with respect to place, quantity, and ownership. Such conditions do not exist in the Klamath Basin. Part of the reason lies in Oregon law, but part reflects conditions in the Klamath. Do water rights for the Klamath Reclamation Project reside with the Bureau of Reclamation, the reclamation district, or with individual farmers? Until such questions can be answered unambiguously it will be difficult for water markets to function well. Yet the fact that Basin-wide institutions and water markets exist elsewhere indicates moderate modifications of water institutions is a viable alternative for the Klamath Basin.

Alternative III, a major institutional modification, would involve consideration of significant change in basic water institutions. For example, some may believe significant acreages of irrigated agriculture are not compatible with ecological integrity in the Klamath Basin. Others maintain the Endangered Species Act does not provide the flexibility needed to reconcile conflicting interests in the Nation's natural resources. Significant institutional change may be required to accommodate these or other opinions about the direction that should be taken in the Klamath Basin. This report did not investigate changes of this nature to any great extent. The emphasis in this report was on the consequences of the 2001 water allocation decisions that took certain institutions as given. Even so, some of the findings have direct implications for institutional design. For example, the Jaeger chapter presents data that show the economic product of the basin likely would be the greatest from some combination of irrigated agriculture and recreational resource activity. This finding suggests the desirability of the co-existence of environmental preservation and natural resource use.

In the preparation of this synthesis, each of the three alternative approaches to institutional modification were examined from a local, state, and federal perspective. The examination made clear that improvement in performance, as well as institutional modification, should be considered at every level of government. A great deal can be said about the benefit that would come from the Klamath community achieving success with a few common undertakings. To that end two observations are made:

- The Klamath Basin Compact Commission is one of the few institutions that can assemble all, or most, of the major interests in the basin. While the commission, as such, may have limited powers to address some problems, it may have unrealized potential as a forum and as an incubator for ideas. Perhaps consideration should be given toward keeping the Commission robust and viable.
- Each of the alternatives considered directs attention to the fundamental importance of the adjudication process for water rights in the Klamath Basin. Clarity with respect to where water rights reside is necessary for the proper functioning of water institutions under all of the alternatives considered. All, or most, of the significant water interests in the basin could unite in an effort to bring this process to a prompt and reliable conclusion. Both Federal and local government might well emphasize the importance of this process and offer their assistance to that end. Such assistance might take various forms, including monetary assistance.

This report has emphasized, in one way or another, the allocation of water among competing uses. Much less attention has been given to the distribution of income that would result from different water allocations, or that might stem from an institutional imperative such as a judicial decree. Yet even if such matters were considered sufficiently, it would not be a simple matter to know how compensation should be paid for failure to deliver water when there is a contract to do so. In such matters the way water rights are defined and in whom they reside is of great importance. This demonstrates, once again, the fundamental importance of the adjudication process.

This synthesis was written under the assumption that institutions and public policies are our servants, rather than our masters. This assumption not only requires recognition of the importance of institutions, but also to the continuing importance of improvements in, and modifications of, those institutions.