FOR RELEASE TO PMs, AUGUST 10, 1973

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CORONADO, CALIFORNIA
AUGUST 10, 1973

RECLAMATION OVERVIEW OF THE NATIONAL WATER COMMISSION REPORT

Any organization, be it private or public, profit oriented or service oriented, must constantly monitor its programs to assure that it has well-defined goals that are responsive to the needs and wants of its clients and that it is following policies that foster those goals. This is particularly applicable, as well as difficult, for a Governmental agency where goals and objectives are often hard to define to the satisfaction of diverse, often conflicting, special interest groups which are concerned or affected.

The Bureau of Reclamation, along with other public water resources agencies, currently is updating its programs to assure that it is responsive to current national priorities. Such changes are not new to our agency. Except for periodic major updating of legislative authority, the changes are more evolutionary than revolutionary. The rate of change, however, is getting progressively more rapid as the future telescopes into the present.

I need not recount in detail to this organization the great history of Federal Reclamation accomplishment nor to defend the role water resources
development has played in the economic and social progress in the West. The Reclamation program was begun in 1902 to foster the settlement and economic development of the West through irrigated agriculture. The program has broadened over the years in response to popular needs, changing public preferences, and advances in technology. Functions added include hydropower, municipal and industrial water, flood control, recreation, fish and wildlife enhancement, and water quality.

Program accomplishments to benefit people ought to speak for themselves and not need defending. However, memories are short. We must recognize that past accomplishments resulted from recognition of priorities and values of the day—that has been the key to success. The program of any government or private entity must be dynamic, and responsive to currently popular needs if it is to survive the tests of time.

In 1968, partly in recognition of the fact that there appeared to be no clearly defined national water policy, the Congress directed the President to establish a National Water Commission. The Commission was to make a 5-year comprehensive study of the adequacy of water supplies to meet requirements and to make policy recommendations to assure that the Nation's water requirements could be met.

The final report of the National Water Commission was published in June. A review draft was released in November 1972, and it received intensive review and comment by both public and private groups and individuals.

Many of the reports' 232 numbered recommendations are sound and widely accepted; others are proving to be highly controversial. Regardless of your personal opinion on the merits of the report, one item is self-evident:
The Commission has poignantly concluded that substantial changes are needed in National water policy, and it has attempted to outline what such changes should be. Many of the Commission's recommendations would require Congressional and State legislation for adoption and implementation. The remainder depend on Executive approval and State and local cooperation.

I expect that not all the Commission's proposals will be accepted immediately and some are likely never to be accepted and implemented. Indeed, the sheer number and complexity of many of them would preclude early implementation. Nevertheless, just like the preceding 20 or 30 Congressional or Presidential Commissions that studied water administration over the past 70 years, many of the recommendations will eventually become law or policy. The Commission has "bitten the bullet" and established strong positions on most major water policy issues, many of which have been with us for years without definitive action.

This 5-year study can have a major impact upon the organization, financing, evaluation, and management of water programs. In my opinion, the Commission properly assessed the mood of the Nation and the need for (1) improvements in institutions, (2) increased non-Federal cost-sharing, (3) strengthening of local and State units of Government, (4) improvement in resource management, (5) recognition of greater environmental concerns, and (6) need for improvements in existing water law. These enumerated needs reflect desirable trends and as such no one can take exception. We may differ with the Commission as to the degree of change that is appropriate in these areas. We may disagree in several specific areas.

The Commission's recommendation for a strengthened independent Water
Resources Council is not consistent with President Nixon's Executive Reorganization Proposal that envisions a Department of Energy and Natural Resources with the WRC a part of it.

The NWC's proposal for recovery of all costs, including interest from direct beneficiaries, is controversial and is one with which I personally do not fully agree. It is my experience that the direct beneficiaries are not the only beneficiaries and may not even be the principal ones, therefore they should not bear the full cost. Manufacturers, processors, service industries, professional people all gain from economic spinoff from the multiple functions of water projects. One appropriate method of sharing costs among all beneficiaries is through conservancy districts, with ad valorem taxing authority. Accomplished in Central Arizona, Roger E. Keffer, Chairman, 5 man board, heading a 3-county

Even with the sharing of costs through ad valorem taxation, the need for increased repayment from direct beneficiaries is appropriate in many cases. The legislative policy for repayment is set forth primarily in the 1939 Reclamation Project Act which was enacted toward the end of the country's greatest economic depression. The 1939 Act reflects this. As our water resources become more scarce and therefore more precious, this scarcity should be reflected in pricing policies. With increasing deligence water must be managed to meet human needs in perpetuity.

The Administration intends to develop legislative proposals with respect to the Commission's recommendations on cost sharing. Secretary Morton, as Chairman of the Water Resources Council, recently set in motion a special interagency task force, formed under the direction of Assistant
Secretary Jack Horton, to develop policy proposals for greater cost-sharing. Assistant Commissioner Fairchild was assigned chairmanship of the task force and its recommendations are currently being considered in the Department.

The Commission's emphasis upon efficiency criteria for evaluation should be broadened to give greater recognition for social and environmental factors and regional and local goals. Environmental analysis needs greater precision. The Commission has made good proposals for improved management of existing water supplies. Further consideration needs to be given to the nature of Federal action programs which cannot be done at the State or local level.

If I read the National Water Commission Report correctly, it acknowledges that past water policies were adequate for needs and values when they were promulgated but they need updating to come in tune with the times. In other words, traditional programs—to be of enduring value—must be flexible and capable of serving evolutionary goals.

Flexibility in policies and programs is the planner's greatest challenge. Recognizing this, I am concerned because many of the National Water Commission's conclusions and proposals appear to be inflexible. They merely substitute new inflexibility for past inflexibility.

I agree with the Commission that we should not necessarily plan for the worst possible contingency—that is, to use a "crisis scenario" of accumulated worst possible conditions occurring simultaneously. However, our problem is to carry on a program of water resource development and management in a setting of uncertainty. Extension of lines on graph paper to show what would happen if past trends should continue into the future
is not enough--for the lines are changing unpredictably. There have been some indications for example, that electric power consumption may increase at a slower rate than the recent past. Proper evaluation of this short-term trend requires a look at not one but several sets of possible future conditions. With a declining birth rate, how should we evaluate the difference between the Census Bureau's high population projection of 300 million people in the United States for the year 2000 and its low projection of 250 million? The difference of 50 million people can profoundly affect future requirements for the use of water resources. Can we plan with enough flexibility to meet either condition?

The National Water Commission's report is not sufficiently flexible with respect to future requirements for food and fiber. It assumes that agricultural water shortage will not be a problem before the year 2000, that consumptive water use in agriculture will decrease, and that transfer of water from agriculture to other uses will not restrict food supplies or export possibilities. The Commission therefore concludes that there is no longer any need for federally assisted agricultural water development.

This conclusion is based on one computer model study of limited scope which predicted transfer of much of the agricultural production from the West to other areas of the Nation. It failed to identify where the lands to be converted to cropland are located nor the social, economic, and environmental consequences of such a shift. In my opinion, one of the major deficiencies in the Commission's Report is that it did not attempt to test the impact of its recommendations. This Nation's, and the world's, food and fiber situation in the mid- and long-term is not so clear cut that we can place all decision-making on the results of one computer model.
Even in the short period since completion of the model, the Nation's agriculture picture has changed dramatically. Of the approximately 61 million acres retired from production under various agricultural programs in 1972, it is estimated that only 12 million acres will remain idle for the 1973 growing season. And those acres are undoubtedly the most marginal in productivity. Moreover, opportunities in the export market may be a dominant factor in the future of U.S. agriculture. That entire impact was largely ignored by the Commission's studies. Devaluation of the dollar makes American products more attractive for export and this is particularly true of agricultural products.

 Everywhere we turn we find production pushing the limits of capacity. Agricultural markets are strange and complex phenomena. And I am not suggesting that we are entering into a permanent period where our agriculture production capacity is unequal to the demands to be placed upon it. However, we should not ignore the strong signals of events of the past two growing seasons. World demand for food and fiber is strong and likely to remain so. We are the leading and most efficient producer of food and fiber. For instance, foreign market experts have stated we could sell, for hard currency, as many soybeans as could be grown. Moreover, in a reversal of historic roles, other Nations which demand our raw foodstuffs have developed a competitive advantage in manufactured goods and in sources of energy. We may need our agriculture economic power to finance our increasing imports of manufactured goods.

 There are a few in high places who believe that these are not long-term trends, and that an early reversal back to more traditional world
market conditions will occur. However, even if a reversal were to occur it would be folly not to develop contingency plans for an expanded agriculture.

Water planning should place increased emphasis on the interrelationships between land use and water use. In the past, water planning has been based largely on projected economic and population trends. We have tended to use projections of population and economic activity as synonymous with public goals. As a result, planning decisions have tended to become when, where, and how a project can be built to meet future needs. Projections to some extent became self-fulfilling prophecies.

Such planning may have been appropriate in a period of territorial settlement, rapid population growth, and unquestioned economic expansion. However, we now need to plan for the possibility of a stable population and to consider issues such as wild and scenic river designations, preservation of ecological and historic sites, open spaces and housing, and flood plain and estuarine protection. Land use and water planning must be integrated. Planning should become a positive force for desirable change rather than a reaction to uncontrolled growth.

The Bureau of Reclamation's responses to emerging new priorities have been numerous. We have not been sitting idly by waiting for others, such as the National Water Commission, to determine relevant directions for our future programs.

A major redirection in the planning programs of the Bureau has been evident for sometime. Highest priority is being given to (1) meeting the near-term needs of people and (2) improved management of existing supplies. A few years ago, the irrigation function made up as much as two-thirds of the envisioned construction costs of projects being investigated. However, in fiscal year 1974, Reclamation's new planning starts will be for projects
where approximately 80 percent of the costs of implementation would be related to municipal and industrial water supply.

Meeting the Nation's energy requirements, enhancement of environmental quality, and assisting in the development of Indian land and water resources are also receiving high priority. Until we can assess the new trends of demand for food and fiber, investigations featuring the irrigation of new lands for near- and mid-term requirements have a relatively low priority. However, in selected areas, irrigation may be an extremely important objective in regional development.

Consistent with these priorities the Northern Great Plains, an area which consists of large segments of Montana, Wyoming, North Dakota and South Dakota, has been the focus of increasing attention because the area is a potential source for vast amounts of relatively low-sulfur coal. Interest in the development of the Northern Great Plains coal resources stems primarily from the continuing growth of the national energy consumption and increasing emphasis on improved urban air quality. The possibility of large-scale development of the coal reserves has, at the same time, heightened regional concern for effective land use and resource planning, including such issues as environmental quality, mined-area restoration, competition for scarce water resources, development of other mineral resources, and potential effects on the people and economies of the Northern Great Plains States.

Of obvious concern to Reclamation's program is the $6.2 billion backlog of authorized but unconstructed Reclamation projects. The level of annual funding for construction under current Administration budgetary policies and priorities is not sufficient even to match the increase in the dollar backlog due to escalating construction costs. Over the past 5 years,
the annual increase in construction costs due to rising construction cost indexes has been 7 percent. Applied to a $6.2 billion backlog, this represents an annual increase of over $420 million. With a $300 million annual construction program, the dollar backlog continues to rise.

To bring this backlog to manageable proportions without a significant increase in annual construction funding will require: (1) elimination of backlog projects or features of projects that, in light of current priorities, are unlikely ever to be constructed, (2) reformulation of projects to reduce costs and meet updated priorities where possible, (3) turn to the States and local interests for financial assistance in project funding either by non-Federal construction of projects or features or by contributions toward construction from whatever sources are available, and (4) postpone construction of project features through staging until such time as they can be accommodated under national budgetary constraints.

The backlog is being studied from two angles. One is an in-house review of every project in the backlog to evaluate the extent to which each might be delayed or modified pursuant to the guidelines outlined herein. The other is a policy review by an advisory team of non-Interior experts in appropriate fields of engineering, agriculture, and economics.

The key to the future water resources development lies with the Congress. The Congress will establish future policy through legislation, it will authorize new works pursuant thereto, and only the Congress can deauthorize the works it previously has authorized. The extent to which policy changes become revolutionary or merely evolutionary will depend on action of the Congress. Thus it behooves all us to give very thorough attention to delineation of the best future course for the maximum benefit of mankind and the nation. That course should be supported vigorously
Your organization will be especially interested in an important study we have underway on the Colorado River salinity problem. The objective of this 10-year program is to evolve plans to control the rise in salinity concentrations in the lower main stem of the river as the Upper Basin continues to develop uses for its compact-apportioned waters. The Bureau and Department are exploring other approaches to resolving the many interrelated problems of the Colorado River. Physical works to implement this program have not been recommended to or by the Secretary of the Interior or approved by the Executive Branch. These approaches will look at programs which emphasize environmental and economic objectives and relate to priority items of land use, energy, and municipal and industrial water supply.

Our Division of Atmospheric Water Resources Management is conducting an extensive program of weather modification research. These studies are known as Project Skywater. They include computer studies to devise practical field models for identifying seedable clouds, field seeding experiments, and evaluation of the results of cloud seeding. Pilot programs include large-scale testing and verification of techniques.

Operational-type activities in precipitation management have been limited to emergency drought situations in Arizona, Texas, Oklahoma, and Kansas. Coordination with State and local groups has been an essential part of these projects. Although solid scientific evaluation was not possible under emergency conditions, the drought was "broken" during the period of "cloud seeding." The first major operational use of cloud seeding will probably occur in the water-short river basins of the Western States.

Geothermal water development offers another exciting new source of
before the appropriate committees of the Congress. We need each other's help and cooperation in this regard.

Creating a responsive planning organization has been of high priority. Centrally located staffs have been strengthened by the addition of specialists in new fields such as environmental analysis, operations research, and social science. In the future, we plan to work more closely with other Federal and State agencies in interagency, interdisciplinary teams of limited duration that will be created to deal with specific problems. We are available to provide special technical services to States. State study teams, composed of Federal and State members from many different agencies which were established during our Western U.S. Water Plan Study, have proved to be an effective planning device.

Meaningful public involvement at early stages in plan formulation is a key element in our planning procedures for the future. Instead of presenting plans for public reaction, we hope to involve people with different, sometimes conflicting, objectives directly in the planning process. This should not only speed the planning process by avoiding costly delays in the review process but result in better plans.

One of Reclamation's recent programs is the Western U.S. Water Plan, established under the Colorado River Basin Project Act of 1968. This study will provide a critical analysis of water-related problems in the 11 Western States and provide recommendations for future studies. It will provide important insights for the Administration's reassessment of the Federal role in water planning, development, and management. The study has recently been accelerated, with completion set for June 30, 1974, to make information available for urgent decisions on the Administration's land and water study priorities.
I could occupy 5 or 10 minutes discussing other aspects of the Bureau's interests and activities, but I believe the merits of brevity are such that I'll only mention them.

We are in the process of creating a more responsive planning organization - partly through centralization. We propose to significantly increase public involvement in the planning process.

We will need to have the Western Water Plan by June 30, 1974, as directed. The short-term study must be completed, and it must contain significant insights as to water supplies and water needs.

The Colorado River Salinity study will continue.

The Atmospheric Water Resources Management Program (Project Sagrario) is continuing, and we are enthusiastic about its potentialities.

Imperatively, the geothermal test well program is continuing, with pilot plants in operation. The resource involves 1 billion acre-feet of renewable, hot, saline waters.
water. The Bureau of Reclamation has drilled two test wells in the Imperial Valley of California, which is underlain by more than 1 billion acre-feet of recoverable hot saline liquids. Pilot plants are presently being operated at the site to test desalting processes.

We are interested in both water and power aspects of geothermal development. However, we are confining our activity to water and are leaving the power aspect to non-Federal entities for exploration.

All of these new activities require a greater depth of perception and broader viewpoint in the analysis of water resources. They underscore our concept of water policy which is total water management—the examination of all aspects of water viewed as a complete system. This new concept is being tested in two areas: the Central Valley of California and the Rio Grande Valley between San Marcial, New Mexico, and Fort Quitman, Texas. The principal objective of these studies is to achieve better conservation, management, and utilization of existing supplies.

The Reclamation program is advancing on many fronts despite the uncertainties in a time of change. New challenges continually arise requiring innovative responses, but we believe that they can be met successfully by intelligent and diligent effort. Many of the significant recommendations of the National Water Commission have been foreseen and are in various stages of implementation by Federal water agencies. We face the future with confidence that National and regional water problems can be solved, and we welcome positive guidance on policies to be followed.

Thank you.
Remarks of Theodore M. Schad  
Executive Director, National Water Commission  
to open a panel discussion on  

THE NATIONAL WATER COMMISSION REPORT  

at the Annual Conference  
of the American Water Works Association  
Las Vegas, Nevada, Tuesday, May 15, 1973  

In starting off this morning's panel discussion of the recommenda-
tions of the National Water Commission and their impact on several  
aspects of water resources activities, it should be noted that the  
Commission's final report is now scheduled for completion about June  
15, 1973. After it is completed in printed form it will be submitted  
simultaneously to the President and the Congress as the Commission's  
final report, and the Commission's existence will be terminated soon  
thereafter. This is in accordance with the provisions of the National  
Water Commission Act, which provides for termination of the Commission  
not later than September 26, 1973.

The Commission has yet to place its final approval on the last of  
the page proofs of the report, so the panelists this morning have not  
had an opportunity to see the final wording of the report, but will be  
basings their comments on the review draft of the proposed report which  
was circulated late last fall. There have been numerous clarifications  
and minor changes in the wording, but the basic thrust of the report  
remains unchanged from what was in the review draft. Some of the changes  
are in the sections of the report dealing with cost-sharing, pollution  
abatement, and Indian water rights. These are among the sections being
reviewed by the Commission prior to final approval. The staff hopes
to have this approval very shortly, but until the report is completed
I am not in a position to go into detail on the final recommendations,
which are still subject to change.

Prior to sending the report to the President and the Congress,
copies will be furnished to the Water Resources Council for review and
comment. The Council's views on the report must be submitted simul-
taneously to the President and the Congress. This step is beyond the
control of the National Water Commission so, because of the time schedule,
the Commission will submit its final report to the President and the
Congress without waiting for the Council's views. (On the Commission's
interim reports it was possible to wait for the Council's views and
have them printed as an appendix to the reports.)

The final step in these complicated review and transmittal
procedures calls for the President to send Congress his comments on
the report and such recommendations for legislation as he deems appro-
priate. These procedures were set up in the National Water Commission
Act five years ago, and were designed to provide the Congress with the
Commission's full report and recommendations, and the views of the Water
Resources Council thereon, at the same time as they reach the President.

The Commission's recommendations are controversial enough so
they will probably form the basis for considerable discussion in the
halls of Congress, and elsewhere in the next few years. Some of the
matters covered in the recommendations, of course, have already been
under consideration by various committees of Congress—for example, legislation designed to improve land use planning, to establish drinking water standards, and to reduce the scope of the desalting research programs.

The first overall hearing on the Commission’s report is scheduled for June 28, 1973, before the Subcommittee on Water and Power Resources of the Senate Committee on Interior and Insular Affairs. This is the Committee in which the National Water Commission Act originated as S. 20 of the 90th Congress. The Water Resources Council is scheduled to appear before the Subcommittee on July 17, and hearings for other interests will be held after the August recess, to give reviewers time to study the report in detail.

Summary of the Recommendations

The final report will contain a total of 232 numbered recommendations covering a broad range of subjects. There are also a number of places where the Commission suggests certain things should be done, without making a formal recommendation. It is obviously impractical to go into very much detail on so many recommendations in these opening remarks.

Some of the recommendations are addressed to the President, some to the Congress, and some to various Federal and State agencies, or to components of the water industry generally. The Commission hopes that the recommendations will be used by those seeking improvements in policy
and procedures as a basis for proposed legislative or administrative action at all levels of government, and by the water industry and the public generally, in some instances.

No one will agree with all of the recommendations but there are probably some recommendations which will appeal to almost everyone. The Commission hopes this will keep the report active for a long time as a source of ideas for policy improvements in the future.

**Basic Philosophy**

The basic philosophy expressed by the Commission is that there is enough water to meet essential needs, including environmental needs, but not enough to waste, and that we will have to take better care of it in the future. The Commission believes that the best way to control overuse and waste of water is to make all users of water who get an economic return from its use pay the full costs of service. In other words water must be considered as an economic resource, not different from other minerals.

Along with increased reliance on economics to determine the best use of water for economic purposes, the Commission believes that public agencies at all levels will have to give increased attention to protecting the environment and seeing that non-marketable services provided by water are given due attention.

**Major Themes in the Report**

Seven themes run through most sections of the report, as follows:

1. The demand for water is not rigid and in an exorable growth pattern but depends on policy decisions that are within the control of society.
2. A change in emphasis from water development to preservation and enhancement of water quality and environmental preservation is under way and will continue in the future.

3. Planning for water development must be tied more closely to planning for water quality and all water planning must be coordinated with land use planning to a much greater extent than it has in the past.

4. Measures must be taken to conserve, increase efficiency, and motivate better use of water to serve agriculture, industry, and domestic and municipal purposes.

5. Sound economic principles must be used to encourage better use of water resources. The Commission believes that consumer willingness to pay is the most reliable economic indicator of desirable use but this must be coupled with governmental attention to protection of environmental values.

6. Changes in law and legal institutions will be required to bring them up to date to meet future conditions.

7. Development, management, and protection of water resources should be controlled by that level of government nearest the problem that is capable of adequately representing all interests involved.

Nature of Recommendations

The recommendations are not grouped in these seven categories but are spread throughout the seventeen chapters of the report. There will be differences of opinion as to the order of importance or priority of
the various recommendations. Each reader will no doubt seek his own priorities.

For the purposes of this discussion today, I have had a count made of the number of recommendations made in thirteen different categories. This does not mean to imply that this is the Commission’s order of priority, but in a general way serves to indicate where the Commission has placed its emphasis.

1. Land and Water Planning and Interrelationships - 48 recommendations in 12 of the 17 chapters of the report

2. Changes in Legal Systems for Dealing with Water - 45 recommendations in 4 chapters. This probably reflects the fact that 4 of the 7 Commissioners who are signing the report are lawyers, and they went into more detail on legal changes. These are mostly changes in State laws.

3. Basic Data, Research and Development, and Manpower - 29 recommendations in 8 chapters.


5. Cost-sharing - 26 recommendations in 8 chapters.


7. Changes or Clarifications in Policy - 23 recommendations in 7 chapters.

8. Urban or Metropolitan Area Problems - 17 recommendations in 4 chapters.


11. Federal-State Relations - 12 recommendations in 3 chapters.


This adds up to far more than the 232 recommendations, because many of the recommendations cover more than one of these subjects, or have more than one part. The subjects are so interrelated, too, that it is difficult to rigidly place them in categories.

This is about all I can cover in the time allotted to me. Perhaps I can go into the substantive nature of the recommendations in discussion of the remaining speakers' comments on the impact of the recommendations.