When Arrowrock Dam was completed in 1915, it is doubtful that the celebrants even tried to predict its benefits in terms of the value of the crops which would be grown in the ensuing half century on the lands within the project it served—almost a billion dollars worth, on a third of a million acres.

It is less doubtful, however, that many of those hardy individuals knew quite well what it would mean to the growth of the then fifty-year old community of Boise and the twenty-five year old State of Idaho.

We need not even speculate about two things they knew, and knew well—that water was the key to the value of land in this region, and that the size of the task and the breadth of the opportunity dictated a new order of cooperation.

Irrigation was no new thing—irrigation started in this valley in the 1860's, by which time the Mormon settlers had 15 years' experience in subjugating the arid lands of neighboring Utah by the increasingly ambitious irrigation works which their highly developed and highly motivated cooperative system made possible.

Mining districts, the early irrigation districts, and the appropriation doctrine for water law—these and other social and legal innovations were practical responses to the physical circumstances of the region.

To help put perspective on the fifty years of progress we celebrate tonight, I would like to enlarge our time reference, and our geographical reference.

Arrowrock did not spring full scale from engineering conception to construction; rather, it was a culmination of political and social forces which gave it a prehistory almost exactly as long as the half century of post-construction history which we commemorate.

Arrowrock cannot be considered as a phenomenon of the Boise River and Idaho. It is located in and is a part of the vast arid region west of the one hundredth meridian wherein the national interest in settlement, and the individual interest in bringing water to land was identical. Water and water only gave land its value in those days; and basically this is still true.

Theodore Roosevelt enunciated the national policy: "The reclamation and settlement of the arid lands will enrich every portion of our country, just as the settlement of the Ohio and Mississippi Valleys brought prosperity to the Atlantic states."
But Roosevelt was stating truth, not discovering it. That the settlement of the Western lands was not only in the national interest, but was virtually a national duty, was a part of our national heritage, dating back to the time of Thomas Jefferson and beyond.

What was not understood, and what had to be taught to America, was that the arid lands of the West could not be filled up by the same methods and subjected to the same human incentives which had led people to develop the Ohio, the Mississippi, and large parts of the Midwest plains.

For these lessons, we are indebted to Major John Wesley Powell, the first Director of the U. S. Geological Survey, the mother agency of the Bureau of Reclamation.

How Powell saw the problem, beginning with his first ventures into the canyons of the Colorado in 1868, and culminating in his Report on the Lands of the Arid Region in 1878, gives a remarkably prescient view of our problem.

In his preface to that report, he points out that the "redemption of the Arid Region involves engineering problems requiring for their solution the greatest skill . . . extensive and comprehensive plans, for the execution of which aggregated capital or cooperative labor will be necessary. Here, individual farmers, being poor men, cannot undertake the task. For its accomplishment a wise prevision, embodied in carefully considered legislation, is necessary."

That "wise prevision", the "carefully considered legislation", was, of course, the Reclamation Act of 1902. This law, recognizing that the needed projects were too vast for either private or single state efforts, had one of its first big tests with the Boise Project and Arrowrock Dam. The water users of the valley, accustomed to taking the initiative since it was their initiative which had brought it to the rather considerable development it already had, petitioned for the Project, and it was authorized in 1905. Construction authorization for Arrowrock Dam came six years later.

Of the problems of the dam's construction, others have spoken. Major Powell's assessment that from an engineering standpoint the greatest skill was required has been confirmed. But the problems of human engineering were equally complex. To mention just one, those owning vested interests in the private systems already built, most of them paid for, were required to change their position for the larger good of their neighbors and community; and it took courage to subscribe the contracts to repay the costs of so vast and novel a project.

Furthermore, the Dam itself could not be considered anything more than the early stage in a continuing series of developments, some of which are yet to come. Black Canyon, Deadwood, Cascade Anderson Ranch--these were Boise Project structures; Lucky Peak is operated as a part of the river-system control to provide maximum benefits from the river, although not an authorized component.
Irrigation was the lodestar of the earlier stages, but hydropower production, flood control, recreation, fish and wildlife and recreation benefits, water quality and pollution control have been added as direct and indirect benefits as the demands of society have grown more complex.

For myself, however, the happiness of this celebration is tempered by the knowledge that forces are at work which call into question some of the assumptions upon which this great system was built. I wonder whether any wisdom can be gleaned by going back to Major Powell's time to pick up the perspective he gave the country of the problems, to see whether there is a clue in history as to how we should face the next half century.

Where do we stand?

Idaho has undeveloped water.

Sixty nine million acre-feet of water flow out of Idaho annually, and more than half of this amount comes from watersheds within our boundaries.

Idaho has undeveloped land.

Six million acres of arable land in Idaho would grow crops, abundant crops, if water were brought to them. Conservatively, a fourth of this is feasible to irrigate under present standards of engineering and economic utility. One and one-half million acres, or half again the present irrigated acreage of three million could be added, which is the equivalent of adding another Minidoka Project.

Idaho will be a market, as well as a supplier, of the agricultural products of this irrigable land in the future.

A hundred billion feet of standing timber, managed on a sustained yield basis, will continue to support a thriving manufacturing industry, with technological improvements each year adding to the value of the products in Idaho.

Silver, lead, zinc and phosphate are vital and growing units of a great mining business. Powell saw irrigation as necessary to support the mining activities of the last century.

The climate, the recreation potential, the open space and the amenities assure a vital and progressive future. Further development of the available land and water will contribute vitally. What are the obstacles, and how are they to be overcome?

As I said earlier, engineering feasibility is assured for at least a fourth of our arable acreage. The aggregating of the investigations and other work
which has been done already on a number of proposed irrigation projects within the area into the Southwest Idaho Water Development Project, encompassing an integrated development stretching from the Bruneau plateau to the Weiser, will pull into a comprehensive planning unit a total of five hundred thousand acres of very fertile lands, and a hydroelectric generating capacity of over 425,000 kw, not to mention the fish and wildlife benefits, municipal water supplies, pollution and water quality control, and recreational benefits.

Do the people of Idaho want further development of this kind?

Those in the immediate area, particularly those who have existing rights would be in the same position as some of their forebears: they would have to accommodate to the idea of exchange of water, because integration through trans-basin diversions of the waters of the Snake, Boise, and Payette would be required. I think they will respond in the same way as those earlier pioneers.

Certainly from the public at large, within and near the State, there should be strong and concerted support. In this country made great by irrigation, there has been no loss of confidence in the economic and national value of a healthy economy of irrigated agriculture. Idaho also knows that its first attention must be given to the development and utilization of its water resources now unused.

Idaho is bound to grow at faster than the national pace. We must look ahead to our needs not for next year, or the next decade, but for the hundredth anniversary of Arrowrock. By then the country's population may well be twice today's--it is not too unreasonable, after taking a hard look at Arizona's recent history, to speculate about a population in this State of two to three million within the lives of many here tonight.

I reminded you that in the early days of the Boise Project, the whole Nation was interested in the development and reclamation of the arid West. How does the rest of the country feel about it now?

Not good.

Part of the national unease is related to the supposed problem of surpluses. I do not think the matter can be so simplified. Undeniably, there has been a tendency to equate proposals for reclamation of new lands with the parallel plans to retire cropping land, and it has been suggested more than once that the Federal Government ought not build any more reclamation projects while the surplus problem is unresolved.

The surpluses are not the problem they were two or three years ago, and indeed the stock of many commodities does not now exceed normal reserve levels.
Furthermore, as a Nation we have come more and more to realize the implications of the world-wide population explosion, and the importance to the United States of an ability to produce and lay down food supplies in different areas of the world as one of our great weapons of international diplomacy.

These considerations, coupled with an understanding of the "leadtime" concept for complex reclamation projects I hope will indicate that the development of Idaho land and Idaho water cannot be shelved as an improper program for the Federal Government.

Of more immediate concern, it seems to me is the question of allocation of costs and benefits, and provision for financing of further developments.

The remaining multiple-purpose reclamation opportunities, although sound and feasible, are complex and costly. Total payout of project costs by the water users is not possible, and wouldn't be fair if it were. Other direct and indirect beneficiaries are involved, and how the burden is to be divided, and the benefits distributed, has taken up a lot of time and attention in the Congress and the executive branch. These considerations have to be consistent with the basic Federal reclamation law, which states positively that the costs of a development—whether single, dual, or multiple-purpose—which are allocable to irrigation must be repaid to the Federal Government, although without interest.

The hydroelectric potential of an irrigation storage reservoir was early recognized as contributing to the "feasibility" of a project. Power revenues have been used to meet the project costs allocated to power generation, and also to help repay the irrigation allocation found to be beyond the water users' ability to handle, the statutory limit of their obligation.

It has always been the prerogative of Congress to specify these relationships, and also to specify what, if any, related or unrelated projects should be considered together for this purpose. Congress has dealt with this question in different ways at different times, but for the Central Valley of California, the Upper Colorado River Basin Project, and the Missouri River Basin Project, Congress has specified that all the developments in a river basin shall be considered together.

In a few individual situations, such as Mann Creek Project in Adams County, and the Upper Division of the Baker Project in Oregon, provisions were added in authorizing legislation which permitted the projects to receive financial assistance from the revenues from Federal hydroelectric plants on the Columbia River.

The shorthand term, as all of you know, for this is the "Basin Account." The process is a bookkeeping transaction, wherein a fund is created to consist
of the revenues from the participating units, with charges to be made against it as specified by Congress, for repayment of the power costs and a portion of the irrigation costs which are beyond the users' ability to pay.

There is no general legislation which creates a Basin Account for the Columbia Basin equivalent to the Central Valley, the Upper Colorado, and the Missouri, although, as stated, at least one Idaho project has been brought under the tent on a project-by-project basis. Heretofore, financial feasibility has been demonstrated without going outside the project.

The Basin Account, where it has been adopted, has regularized the process of planning and administration on a system-wide basis. It has assured that no one project would be prejudiced merely because of geography.

A Basin Account would assure for the Columbia Basin or the Pacific Northwest that a project would not be prejudiced because of chronology. Idaho has, by reason of its geography and other factors, developed its potential of land and water somewhat more slowly than other downstream States. The Southwest Idaho Water Development Project would be planned and built on a sounder basis if the planners could know, in advance, that adjustments in timing or engineering would not have to be made to conform it to a project-wide rather than to a system-wide method of operation for maximum benefit. Actually, the choice isn't available—in terms of benefits, any new projects have to fit into and be coordinated with the whole system, and the bookkeeping, in my opinion, should conform.

Congress can take care of this in both of the ways I've mentioned. The decision is a legislative, not an executive one. Both branches strongly feel that projects must first be found feasible, and must clear all legislative processes, including authorization, before construction; water users must pay the Reclamation Act prescribed amount—up to their reasonable ability to repay, and for a full payout period—and must carry all operation and maintenance and replacement costs.

But there is recent indication that Congress prefers an over-all, general policy approach—for in related areas it has enacted both the Federal Water Projects Recreation Act and the Water Resources Planning Act.

The latter act provides the means for financial assistance to States to enable them to increase their participation in water planning. This is sound, and will assure that local interests will be given full recognition in the final plans. Local river basin commissions, where desired by a majority of the States involved, composed of State and Federal representatives, will be responsible for developing plans on a regional or river basin level for water and related land resource utilization projects, and will be able to recommend the appropriate agency to handle construction.

One cannot consider the future of irrigated agriculture in Idaho as strictly a question of whether the Reclamation Act of 1902 is still considered to state the national interest in further reclamation development in our State, or,
assuming the affirmative as I do, that a Basin Account concept will be accepted so that the remaining Idaho projects can be financed under traditional concepts. I am well aware, as I know all of you are, of realities which are not always considered by those involved principally with Federal projects.

One reality is that private reclamation has come back upon the scene as a major force.

When John Wesley Powell wrote about the arid lands of the West, they were co-extensive with the public domain. Powell recognized that arable land and irrigable land were not the same, the latter presenting questions of engineering feasibility not greatly different from those presented to Hammurabi, King of Babylonia four millennia ago--storage and gravity.

On this concept, one of Powell's most urgent recommendations, his eloquent plea for classification of the land, led in bureaucratic time to the reclamation withdrawal of most arable lands then considered irrigable.

But technology has outrun the prevision of the Federal planners who blocked out the future course of reclamation. Along the Snake today, principally on private and State lands, great tracts of land can be seen green and rich, cropped by pumping and by sprinkler systems, by capital-intensive methods and in large units, which are legally equivalent to the early, pre-1902 gravity developments. They are private. The other reality is that the mixed ownership pattern which is the lot of public land States presents an offensive economic anomaly--such private land developments are held to strange and incongruous patterns, conformable only to the accident of State sections, and to actions in times past which passed title under the various laws from the Federal Government to private hands.

This private development is a major challenge, to the State, to the Federal Government, to those interested in reclamation here tonight.

Speaking personally, I am not disposed to be negative about private reclamation development. As to the lands which are private, the Federal administrator mostly ponders the indirect questions--questions about the impact on proposals for new multiple-purpose Federal reclamation projects; questions about whether some reclamation withdrawn land ought to be reviewed with the new technology in mind; questions about crop surpluses; questions which arise out of the checkerboard pattern of ownership.

As to the Federal lands, the serious questions which are presented are now mostly before the public. Since judicial consideration is involved, I shan't comment other than to say that the Desert Land Act, under which many people seek access to public lands for private reclamation developments, had not, the last time I checked, been repealed.
This new dimension of reclamation must be accommodated in our thinking. Let me turn once more to Major Powell.

That great man had no patience with myths. He devoted his life to dispelling the myth that the whole West was a land of milk and honey, where a quarter section of land was an assurance of security and the good life. He knew that the land was valueless without water, at least it was then, and he knew that getting water to the land was not within the capability of the average individual--cooperation was necessary, and capital, and most of all an understanding of the concept of an economic unit.

As an aspect of his myth-dispelling, he developed ideas as to how the arid lands ought to be parcelled out, in terms of sound social and valid economic sense. Thus he recommended--unsuccessfully--that land be parcelled according to the natural contours or water-availability of the land. He dispelled the notion that any but a large amount of land--he thought four sections--could be worth owning for "pasturage", and even then he contemplated a number of owners running in common.

In a contest between private reclamation and public reclamation, all else being equal, the odds are likely to favor the system which most nearly conforms to the circumstances of modern agriculture.

I hope the Public Land Law Review Commission, which surely must have a hand in this developing public policy question--because in Idaho and Oregon the available arable lands, newly become irrigable, are so largely in public domain status--will help us along a sound road in this respect.

The water ought to be brought to the land; it ought to be brought to the best land; and the pattern of the land's development ought to take into account modern methods of farming and modern methods of financing.

President Johnson has indicated his interest in this matter in an affirmative way by an Executive order establishing the President's Committee on Food and Fiber and the National Advisory Commission on Food and Fiber. Last month he asked a Cabinet-level Committee to "Appraise existing and alternative agricultural policies and foreign trade policies related thereto in terms of the national interest, the welfare of farmers, workers, consumers, rural Americans, and the general public; their effects on the performance of the economy and on foreign relations; and their implications for the optimum allocation of Federal resources among national objectives; . . ."

At the same time the President appointed a Commission from the private sector of the economy and charged it with the duty of transmitting to the Committee its independent analysis, evaluation and recommendations with respect to the same matters.
Sherwood Berg, Dean of the School of Agriculture at the University of Minnesota, is the Chairman of the Commission.

Although not included explicitly in the terms of the Executive order, the Federal program for reclamation and irrigation is bound to be an important aspect of any study which covers the matters listed in the Executive order cited above. Secretary Udall is determined to see that the deliberations of this Committee and the Commission will include the great and affirmative story which irrigated agriculture in the West can tell.

The beauty of irrigated agriculture is the stability which further diversification gives to the agricultural economy. This is not limited to cropping but is related to the livestock and other aspects of the agricultural economy as has been already so well demonstrated in this area.

We should all look forward to the next 50 years with confidence.