

University of Colorado Law School

Colorado Law Scholarly Commons

Western Water Law in Transition (Summer Conference, June 3-5)

1985

6-5-1985

Water Project Financing Needs in Colorado

J. William McDonald

Follow this and additional works at: <https://scholar.law.colorado.edu/western-water-law-in-transition>



Part of the [Administrative Law Commons](#), [Animal Law Commons](#), [Aquaculture and Fisheries Commons](#), [Biodiversity Commons](#), [Constitutional Law Commons](#), [Courts Commons](#), [Energy and Utilities Law Commons](#), [Environmental Law Commons](#), [Environmental Policy Commons](#), [Finance and Financial Management Commons](#), [Government Contracts Commons](#), [Hydraulic Engineering Commons](#), [Indigenous, Indian, and Aboriginal Law Commons](#), [Legal Ethics and Professional Responsibility Commons](#), [Legal History Commons](#), [Legislation Commons](#), [Natural Resource Economics Commons](#), [Natural Resources and Conservation Commons](#), [Natural Resources Law Commons](#), [Natural Resources Management and Policy Commons](#), [Oil, Gas, and Energy Commons](#), [Property Law and Real Estate Commons](#), [Public Policy Commons](#), [Recreation, Parks and Tourism Administration Commons](#), [State and Local Government Law Commons](#), [Urban Studies Commons](#), [Water Law Commons](#), and the [Water Resource Management Commons](#)

Citation Information

McDonald, J. William, "Water Project Financing Needs in Colorado" (1985). *Western Water Law in Transition (Summer Conference, June 3-5)*.

<https://scholar.law.colorado.edu/western-water-law-in-transition/18>

Reproduced with permission of the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment (formerly the Natural Resources Law Center) at the University of Colorado Law School.



William A. Wise Law Library
COLORADO LAW

UNIVERSITY OF COLORADO BOULDER



Getches-Wilkinson Center Collection

J. William McDonald, *Water Project Financing Needs in Colorado*, in *WESTERN WATER LAW IN TRANSITION* (Natural Res. Law Ctr., Univ. of Colo. Sch. of Law 1985).

Reproduced with permission of the Getches-Wilkinson Center for Natural Resources, Energy, and the Environment (formerly the Natural Resources Law Center) at the University of Colorado Law School.

WATER PROJECT FINANCING NEEDS IN COLORADO

A Discussion Paper
Prepared by the
Colorado Water Conservation Board
January, 1983

Submitted by
J. WILLIAM McDONALD
Colorado Water Conservation Board

WESTERN WATER LAW IN TRANSITION

A short course sponsored by the
Natural Resources Law Center
University of Colorado School of Law
June 3-5, 1985

.

.

.

WATER PROJECT FINANCING NEEDS IN COLORADO

A Discussion Paper
Prepared by the
Colorado Water Conservation Board
January, 1983

Introduction

In recent decades, the State of Colorado and its political subdivisions, except for municipalities, have historically played a minor role in financing the investigation and construction or rehabilitation of water conservation and flood control projects. The primary reasons for this have been the ability of municipal and private industrial water users to finance their own projects and the reliance on the federal government to finance irrigation and flood control projects and some municipal water supply projects. In the face of rapidly escalating construction costs, significant reductions in the amount of federal funds available for water project development, and calls for non-federal participation in the financing of federal projects (i.e., "up-front" cost-sharing), it has become necessary to examine the means by which future water developments in the state can be financed.

The Need for Future Water Development

Are Colorado's compact entitlements to be protected? Can we afford to lose any time in taking the steps necessary to protect those entitlements? Is Colorado's agricultural economy worth preserving and expanding--our rural communities worth stabilizing? Is dam safety important to the health and welfare of our citizens? Are reliable municipal and industrial water supplies not fundamental to our future growth and prosperity?

This is the agenda to which future water development in Colorado must be addressed. It is an agenda which cannot wait if the above questions are to be answered in the affirmative. The investment required from state funds will amount to hundreds of millions of dollars.

Both the Blue Ribbon Panel's report, "Colorado: Investing in the Future" (July, 1981), and the "Five Year Capital Investment Plan, FY 1983-1987" (January, 1982) illustrate the range of water development needs which Colorado confronts.

Whatever the source of analysis, long range estimates of water project investment needs over the next twenty to thirty years invariably amount to \$2-4 billion. The Five Year Capital Investment Plan identified nearly \$400 million of needed state investments for the immediate future alone.

In short, the need seems not to be in dispute. The question is one of how to obtain the necessary capital to pay for the costs of project construction--that is, how is water project development in Colorado to be financed?

The Fundamentals of Project Financing

The financing of water projects involves two main considerations:

- (1) What sources of money are available at what cost to pay for planning and pre-construction activities?
- (2) What means of financing are available to pay for the construction or rehabilitation of a project?

Whatever the subtleties and complexities of the financing package for any given project, these two fundamental questions ultimately govern the ability to construct or rehabilitate water conservation and flood control projects in all cases.

Planning and pre-construction activities take 2-3 years on even relatively small projects and as long as 5-10 years on major projects. These activities require substantial sums of money, frequently running into the millions of dollars even on relatively small projects. Furthermore, expenditures for these activities tend to be high-risk investments in that one does not know whether a proposed project will be technically and financially feasible, and can obtain any necessary regulatory permits, until monies are invested to get the answers to these questions.

As a result, private institutions are frequently reluctant to lend funds for feasibility and environmental studies. When this is the case, money for planning and pre-construction activities must come from the current revenues or cash reserves of project proponents. However, these activities are so expensive as to frequently exceed the capacity of local entities (such as water conservancy districts, irrigation companies and districts, and small municipalities) to pay for them.

With respect to the financing of construction or rehabilitation, there are essentially three means by which this can be accomplished:

- (1) Revenue financing,
- (2) General obligation financing, and
- (3) "Pay as you go" out of previously accumulated monies.

Revenue and general obligation financing both enable governmental entities to obtain capital from private financial markets. They differ, however, in that revenue financing relies on project revenues to retire the indebtedness incurred for project construction or rehabilitation, while future tax revenues must be pledged toward retiring indebtedness incurred through general obligation financing. "Pay as you go" financing obtains capital from the accumulation of previously collected taxes and therefore involves no indebtedness. Table 1 summarizes these three approaches.

TABLE 1

<u>Means of Financing</u>	<u>Source of Capital</u>	<u>Source of Repayment</u>
Revenue	Private funds	Project revenues
General obligation	Private funds	Future taxes
"Pay as you go"	Previously collected taxes	None required

It is important to note that financing for the construction or rehabilitation of any given project is not necessarily limited to only one of these three means. Indeed, one of the challenges of financing future projects will be to identify situations in which combinations of these three approaches can be used to raise the capital which will be required if Colorado is to proceed with an aggressive and timely water project construction and rehabilitation program.

Limitations on Revenue Financing

The availability and cost of revenue financing will be a function of the revenues which a project may be expected to generate, tax considerations, and the anticipated risks of the expected revenues not materializing. Thus, the ability of a project to generate sufficient revenues is the critical determinant of whether project construction and rehabilitation can be accomplished without use of tax revenues.

The generation of revenues by a water project is primarily a function of two factors:

- (1) the administrative practicability of charging for the benefits produced by a project, and
- (2) the willingness of potential users to pay for the benefits produced by a project.

The benefits of, or outputs from, water resources projects are often characterized as being either vendibles or nonvendibles. Vendibles include water supply for municipal, industrial, and agricultural purposes and the production of hydroelectric power. These outputs are referred to as vendibles because they are items over which ownership and control can be exercised and are therefore items which can be bought and sold.

In contrast, benefits such as flood control protection and recreational opportunities are not readily marketed outputs. Although it is not necessarily impossible in either case to collect fees directly from those who benefit from flood control protection and recreational opportunities, administrative problems can make it difficult to require the beneficiaries of these kinds of project functions to pay for the benefits received. As a consequence, the full value of flood control and recreational benefits is often not recovered from those who receive those benefits.

Apart and separate from the question of the administrative practicability of collecting revenues is the question of the willingness of potential users to pay for the full value of project outputs. Generally speaking, the construction and financing costs of municipal and industrial water supply projects have been and can be borne by project beneficiaries. However, it has become evident in the last several years that the rapidly escalating costs of construction, coupled with high interest rates in private financial markets, are making it increasingly difficult for Colorado's small rural communities to bear the cost of new projects.

With respect to irrigation projects, it is clear that the costs of developing new facilities are significantly greater than the value of the additional water supplies produced. This has long been recognized, of course, by the federal reclamation program. Thus, irrigators are unable to pay the full cost of developing new projects. Likewise, the cost of rehabilitating existing systems often exceeds irrigators' financial abilities. In short, irrigation projects most often cannot generate enough revenues to repay the investment involved, especially at today's interest rates for private capital.

Another potential source of project revenues is "excess charges" to one class of project users for the benefit of another class of user. For example, the federal reclamation program has

long been premised upon sales of hydropower at rates in excess of that needed to repay the construction costs allocable to a project's power features. These excess charges have then been used to repay that portion of the construction costs allocable to a project's irrigation features which are beyond the irrigator's ability to repay. The Upper Colorado River Basin Fund and the repayment provisions of the Pick-Sloan Missouri River Basin program are the devices with which we in Colorado are most familiar.

To some extent, future non-federal water project development in Colorado can use this same approach. It can be implemented either on an ad hoc project-by-project basis or through a centralized fund. It is doubtful, however, that hydropower developments, given current construction costs, will be able to assist with anything more than a small portion of the costs of the non-power features of most multiple-purpose projects. In other words, hydropower revenues may be largely consumed in just paying for the cost of hydropower features themselves.

It has been suggested from time to time that "excess" power revenues accruing to the Upper Colorado River Basin Fund ought to be accessible to Colorado for its direct use as it sees fit. Under the existing law, this is not possible. It would take both amendments to existing law and a very substantial increase in federal power rates before Colorado could realize a direct source of revenues large enough to be of any consequence. The preference customers of Colorado River Storage Project power and other Upper Basin states have voiced strong opposition to any such suggestions.

Another problem with revenue financing is that it may fail to achieve the optimum development of a reservoir site. For example, a municipality may desire to construct a dam at a site capable of storing 30,000 acre-feet. But from the municipality's point of view, a project in excess of 10,000 acre-feet may not be financially feasible if project revenues are the only source of repayment for the indebtedness incurred in raising capital to pay for construction costs. In such a case, Colorado might lose the opportunity to achieve the optimum development of its water resources.

In summary, a significant portion of Colorado's potential future water developments--small, rural municipal water supply projects; irrigation projects; rehabilitation of existing irrigation systems, and flood control projects--cannot, at least in large part, be financed through revenue financing. It is increasingly difficult to find water projects whose outputs are so highly valued that those outputs can generate the revenue necessary to repay a project's cost. Thus, it appears that revenue financing will be a significant source of capital only in the case of large municipal and industrial water supply projects and, to some extent, in the case of projects which have a hydropower component.

The Role of Tax Revenues

Given that a major portion of Colorado's water project financing needs cannot be met through revenue financing for want of sufficient project revenues, the only alternative left--if Colorado is to proceed with water project development, especially for the benefit of irrigated agriculture and rural communities--is the consideration of tax revenues. There are two key issues to be explored in this regard:

- (1) Should Colorado continue its historical policy of "pay as you go" financing for major capital investments or should it embark on a program of raising capital in private financial markets through general obligation financing (i.e., creating indebtedness)?
- (2) What tax source or sources should be utilized for either or both of these two financing approaches?

With respect to sources of tax revenues, there are three general categories:

- (1) General tax revenues (e.g., income taxes, sales and use taxes, "sin" taxes, etc.),
- (2) "Economic rents" for the use of publicly owned resources (e.g., severance taxes, mineral leasing fees, etc.), and
- (3) Property taxes

Each of these is briefly discussed below. Appendix A summarizes the estimated revenues which increases in various taxes would yield.

General Tax Revenues. The state obtains revenues through a wide variety of general taxes: income taxes, sales taxes, use taxes, liquor and cigarette taxes, inheritance taxes, etc. These tax revenues can be appropriated both for everyday governmental functions (i.e., personnel and operating expenses) and for major capital investment projects such as buildings, parks, and streets. For example, the General Assembly has appropriated \$78.6 million from general tax revenues since FY 72-73 for the benefit of water development through the Colorado Water Conservation Board construction fund (including the \$30.1 million transferred from the construction fund to the Water Resources and Power Development Authority by S.B. 19, 1981 Session).

The key issue with respect to the availability of general tax monies for water project development is the intense competition for scarce funds, especially since current projections of annual general fund surpluses are much less than those being made a year ago. The most recent unofficial

estimates, which are subject to change when the Office of State Planning and Budgeting makes final projections in the next several weeks, are as follows:

FY 82-83	\$	0
FY 83-84		0
FY 84-85		0
FY 85-86		84 million
FY 86-87		218 million
FY 87-88		327 million

Economic Rents. Charges for the use and exploitation of publicly owned resources such as lands and minerals have long been a source of revenue for federal and state governments. Notable examples are grazing and timbering fees, oil and gas royalties, severance taxes, and mineral leasing fees. Collectively, these are referred to as economic rents.

Pursuant to section 34-63-102, C.R.S. 1973, as amended, 10 percent of the monies accruing to Colorado under the terms of the federal Mineral Lands Leasing Act of 1920 have been paid annually into the Colorado Water Conservation Board construction fund since 1977. Through FY 81-82, the total amount received was approximately \$11 million. It is anticipated that future payments to the construction fund will be about \$2-2.5 million per year given present levels of mineral development on federal lands.

The other economic rent presently made available by statute for the financing of water projects is Colorado's severance tax on coal, oil and gas, molybdenum ore, oil shale, and metallic minerals. Half of the receipts from severance taxes are credited to a severance tax trust fund, which fund:

. . . is to be perpetual and held in trust as a replacement for depleted natural resources and for the development and conservation of the state's water resources pursuant to . . . [the statutory provisions governing the Colorado Water Conservation Board construction fund]. . . . Repayment of moneys . . . used for state water projects shall be required . . . and moneys so repaid shall be credited to the severance tax trust fund. (Section 39-29-109, C.R.S. 1973, as amended.)

The severance tax trust fund, which was created in 1977, is projected to have a balance of about \$47 million at the end of

FY 82-83 if no expenditures are made from the fund during the fiscal year. An expenditure of monies in the fund for water project construction has never been made.

Property Taxes. Section 11 of Article X of the Colorado Constitution permits the state to levy a property tax of up to four mills, with an additional one mill levy for the erection and maintenance of buildings at state educational institutions. Although used previously, this state assessed property tax was phased out in the 1960s. At current property valuations, a one mill levy would generate about \$15 million per year.

General Obligation Financing

The above sources of tax revenues are not insubstantial. However, these must be measured against all capital investment needs facing the state, as well as the hundreds of millions of dollars of needed water project construction and rehabilitation, including "up-front" cost-sharing on federal projects. When viewed from this perspective, the historical policy of "pay as you go" may not be responsive to the capital intensive requirements of water project development and rehabilitation which must be addressed over the next two or three decades.

If "paying as you go" is found to not meet Colorado's capital investment needs, then serious consideration must be given to commencing a general obligation financing program. Implementation of such a program would require two things:

- (1) Amendment of the State Constitution, which presently specifies that "the state shall not contract any debt by loan in any form," except in a very few instances (Section 4, Article XI), and
- (2) Pledges of specified future tax revenues which would be used to retire any indebtedness for want of sufficient project revenues.

With respect to pledges of future tax revenues, there are, as discussed above, several possible sources. However, not all taxes are equally attractive for general obligation financing purposes. This is because the amount of capital which can be borrowed is a function of the anticipated stability of the tax revenues which are pledged to retire the indebtedness to be incurred.

The more stable the tax revenues are expected to be, the lower the revenue to annual debt service ratio requirement will be. For example, property taxes are regarded by investment bankers as the best source of pledged revenues. Thus, for every \$3 of property taxes pledged, about \$1 to \$1.25 of capital can be

borrowed. In contrast, it might take a pledge of \$4 or \$5, or more, of some other tax which is a less stable source of revenues to raise \$1 of capital.

As a consequence of this situation, one must look not only at the amount of revenues which various taxes could raise, but also at the amount of capital which can be raised based upon a pledge of future revenues. Since property taxes are the most desirable source of pledged revenues, it may be desirable to consider reinstituting the state property tax now provided for in the State Constitution.

Summary and Conclusions

A large portion of Colorado's needed water conservation and rehabilitation projects cannot generate enough revenues to pay for themselves. Thus, if these needs are to be met and Colorado's compact entitlements protected over the next two decades, substantial sums of tax revenues must be devoted to this purpose.

Such tax revenues could be accumulated over time to "pay as you go" for project construction and rehabilitation. However, the need is so great for both water development and other capital investments that such a policy may not permit a timely and effective response to the investment needs which Colorado confronts.

Under these circumstances, careful consideration needs to be given to the desirability of embarking on a general obligation financing program in Colorado. This in turn will necessitate examining the need for a constitutional amendment.

Appendix A

Revenue Generated from Assumed
Tax Increases
(\$millions)

<u>Tax</u>	<u>Increase</u> ¹	<u>Annual Yield</u>	<u>5-Year Total</u>
Sales	1%	\$260 ²	\$1300 ²
State Property	4 mill (max.)	60	300
Liquor	10%	2.6	13
Cigarette	1¢	3.8	19

1 Increase over present tax rate.

2 The yield of this tax is quite sensitive to economic conditions. These estimates may be somewhat high given current economic difficulties.

Source: Office of State Planning and Budgeting