

SENATE ECOLOGY COMMITTEE

Minutes of Meeting -- February 25, 1971

149

Committee Members Present:	Thomas Wilson, Chairman
	Lee Walker
	John Foley
" "	Clifton Young
Absent:	Emerson Titlow
	Chic Hecht
	Coe Swobe

Also present were:

Dr. John Sharp	Desert Research Institute U.N.
John M. Ward	" " " "
Roy M. Whitacre	" " " "
Mrs. Fula Forst	League of Women Voters
William Picksley	Lahontan Audubon Society
Richard G. Miller	Carson City Resident
Dr. Andrew Burnett	Nevada Wildlife Federation
E.G. Gregory	State Division of Health
and others	

Members of the News Media

Chairman Wilson called the meeting to order at 2:49 p.m. Under consideration was one bill:

S.B. 159 Proposed by Senator Wilson.
Makes general fund appropriation to health division of department of health, welfare and rehabilitation to contract for development of method to monitor water quality in the Carson River system.

Dr. John Sharp, who stated he is a professor of geology for the D.R.I. of the University of Nevada, testified on behalf of the subject bill.

He submitted copies of a letter to the chairman regarding the development of a computerized mathematical model of water quality of the Carson River system and discussed the merits of the D.R.I.'s proposed programs. (See attached)

At the conclusion of his testimony, Dr. Sharp recommended the following changes be made in S.B. 159:

Line 5: Delete "develop" and insert "initiate development of"

Line 7: Delete "In developing" and insert "as"

Line 9: Delete "quality and"

Mr. Ernest Gregory and William Picksley stated they also supported the bill. Mr. Gregory said he endorsed the development of the program proposed by the D.R.I.

There being no further business, the meeting was adjourned at 4:10 p.m.

DESERT RESEARCH INSTITUTE

University of Nevada System

150

Center for Water Resources Research

Water Resources Building
Reno, Nevada 89507
Phone: (702) 784-6955

January 12, 1971

Senator Thomas R. C. Wilson, II
60 Court Street
Reno, Nevada

Dear Senator Wilson:

This is in follow-up to our recent conversation regarding development of a computerized mathematical model of water quality of the Carson River system. The Center for Water Resources Research is completing (June 28, 1971) a three-year research grant from the Federal Water Quality Administration (FWQA) under which the general technique for such a model was developed. We were fortunate in being able to apply the model to the Truckee River as a demonstration site and, thus, will soon have a working model for the entire river including its principal tributaries. Following on the successful Truckee venture, we hope to develop a similar model for the Carson.

Our intent in developing the Truckee model and proposed Carson model is to provide those groups and agencies responsible and interested in maintaining and improving the quality of these streams with a useful, inexpensive, and accurate tool for monitoring trends in water quality and evaluating the consequences of various actions which might improve or degrade water quality. Consequently, we are gratified that a local group, composed of the cities of Reno and Sparks and the Sierra Pacific Power Company, apparently is going to assume as of July 1, 1971, support of our monitoring and modeling work on the Truckee (see my letter of November 18, 1970). Similarly, a Carson model would eventually be turned over to a state or local group for their use, or remain under our Center with support from these sources.

Briefly, some of the uses of Truckee and Carson models are as follows. Near- and long-term trends in water quality could be monitored at various critical points on the rivers, permitting determination of favorable or adverse effects of various schemes for upstream release and downstream return of water and of releases of waste waters. Examples of the latter are releases of sewage effluent from the cinder cone at Tahoe City, from the proposed regional sewage treatment plant at Truckee, California, and arising as a result of export from the Tahoe Basin to the Carson Basin. Application of the model would enable evaluation of immediate water-quality consequences and long-term trends in quality caused by changes and intensification in land use, increases in population, and pollution abatement measures within the basin. As a consequence, authorities would have capability to recognize and evaluate situations threatening to degrade the rivers and to determine what measures might be most effective in forestalling such situations or actually improving the quality of the rivers.

The above are accomplished simply by running the developed model on the computer. For monitoring purposes comparisons would be made between current quality levels and the basic benchmark quality levels built into the model at the time of its development. The result would be a definitive measure of current improvement or degradation of quality. To evaluate the consequences of water release schemes and waste disposals, various test conditions would be superimposed on the model, resulting in comparison between current and/or benchmark conditions and new conditions possibly arising from proposed release or waste discharge schemes.

The Carson faces many of the same water-quality pressures as the Truckee - upstream use for waste disposal and increasing urban, population, and industrial pressures in the middle and lower reaches. Maintenance and possible improvement of its quality could be strongly fostered by the modeling management technique now available for the Truckee. State support for such an effort, even if only modest in amount, would permit initiation of the effort and form the basis for approaching one or more federal agencies for matching funds to reach the necessary level to complete the model. For example, I believe that the Bureau of Environmental Health has access to certain FWQA matching funds, or we could approach FWQA directly.

- My estimate of complete funding for a Carson model, split over a three-year period, is about \$100,000:

Year One	\$25,000
Year Two	\$35,000
Year Three	\$40,000

Funding on a \$20,000 per year level for a three-year period would cover a complete program of water-quality data collection, the required basic technical foundation of the model giving us our benchmark quality levels, and partially cover formulation of the computer-mathematical aspects of the model itself. Funding on a \$10,000 per year level would largely cover the basic data collection and permit initial work on the computer-mathematical aspects.

Local support for continuing the Truckee model and State support for commencing the Carson model would, I believe, comprise an attractive package to federal funding sources, wherein we would request funding to complete the Carson model and integrate the two models. The latter is a necessary step in view of the large-scale interchange of water between the two systems via Derby Canal.

In summary, I hope that the State can find it possible to support this effort in maintaining and expanding our modeling efforts. The result over the next three years or so should be a substantially improved capability on Nevada's part to protect, maintain, and possibly improve the quality of the Truckee and Carson systems. These streams are vital factors in the well-being of the citizens of western Nevada, and, certainly, their quality is

Senator Thomas R. C. Wilson, II

-3-

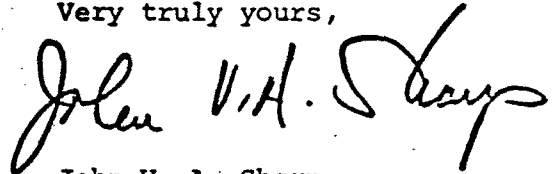
January 12, 1971

152

one of the pressing environmental questions in this part of the state.

I will be pleased to provide further information and elaborate on any of the above.

Very truly yours,

A handwritten signature in black ink, reading "John V. A. Sharp". The signature is written in a cursive style with a large, sweeping "S" at the end.

John V. A. Sharp
Professor of Geology

JVAS:df