

SENATE COMMITTEE ON FEDERAL, STATE AND LOCAL GOVERNMENTS
ASSEMBLY COMMITTEE ON GOVERNMENT AFFAIRS

JOINT HEARING

Minutes of Meetings -- March 7 and 8, 1973

Joint hearings of the Senate Committee on Federal, State and Local Governments and the Assembly Committee on Government Affairs were held on March 7th and 8th, 1973.

Those in attendance were:

James I. Gibson, Chairman)	
John Foley)	
Chic Hecht)	Senate Committee on Federal,
Lee Walker)	State and Local Governments
Carl Dodge)	
Joseph Dini, Chairman)	
Hal Smith)	
James Ullom)	
Jean Ford)	
Paul May)	Assembly Committee on Government
Eileen Brookman)	Affairs
Virgil Getto)	
Mary Gojack)	
Roy Young)	

Also present were:

Robert L. Summers, Atlas Chemical Testing Laboratories
Henry J. Greenville, Consultant to City of Henderson
R. T. Whitney, City of Henderson
Duane R. Sudweeks, City of North Las Vegas
Jack H. Mitchell, City of North Las Vegas
L. A. Clayton, Nevada Environmental Consultants
J. David Griffith, Nevada Environmental Consultants
Clay H. Lynch, City of North Las Vegas
Daisy J. Talvite, League of Women Voters
James C. Perkins, Division, Water Resources
Emil Gregory, Division of Health
R. Ian Ross, City of Las Vegas
R. P. Sauer, Las Vegas
Morgan J. Sweeney, Boulder City
Thomas R. Rice, Las Vegas Valley Water District
Urban J. Schreiner, Las Vegas Valley Water District
Gill Blonsley, Las Vegas Valley Water District
Ray Knisley, T.R.P.A.
William Cilax, L.V.V.W.D.

Glen C. Taylor, Basic Management
Don Paff, Colorado River Commission of Nevada
Assemblyman Smalley, Environmental Committee
Robert Craddock, Assembly
Myron E. Leavitt, Clark County Commissioners
Bob Broadbent, Clark County Commissioners
Elizabeth Phillips, Nevada Open Spaces Council
L. A. Clayton, NECON
Press representatives

SB-290 Provides state guarantee for funding of
Las Vegas Valley Liquid Waste Disposal.

Chairman Gibson called the meeting to order. He explained that in the interest of expediting the hearings, they separated the issues and will consider the abatement project separately from the issue of the Master Water Agency. The hearings today and tomorrow are for the purpose of the abatement project only. Chairman Gibson announced that there will be a representative of the National and Regional Environmental Project Administration here next week to speak before the committees regarding the standards that we are trying to meet, the overall approach to the Colorado River problem, and the 180-day abatement order we are faced with at this time. There are meetings currently being held on the federal level to re-think some of the standards that have been projected previously. These meetings will have a bearing on what the legislature finally decides has to be done with this project and the proposed water agency, as well.

Mr. Gregory of the Division of Health then came forward to testify and give some background information for the benefit of those who have no previous knowledge of this project and the problems involved, and also the problems we have from the standpoint of the Division of Health.

Note: The following testimony in these minutes is not verbatim, but only the main thrust of what was given.

Mr. Gregory, State Division of Health: As early as 1965 we started receiving complaints on the deterioration of the water quality in the Las Vegas Bay and Lake Mead, so we requested the federal water pollution control administration to make a study on the Bay to determine what the problem was. The study was not too detailed or complete, but it indicated that there was an increase in algae growing in the Lake and that it resulted from nutrients principally from the two sewage treatment plants -- the Clark County Sanitation District and the City of Las Vegas -- which discharges into Las Vegas Wash and hence to Las Vegas Bay.

In 1967 the political factions in the area and the citizens demanded that some action be taken to clean up the algae blooms that were occurring in Lake Mead. The background information on the water quality was extremely limited. After a survey they did propose water quality standards and effluent discharge standards to the Board of Health to adopt. These were quite rigid, but would prevent continuing increase in the algae bloom and eventually clean up the Las Vegas Wash and Bay arm of Lake Mead. The board did adopt these in two stages: (1) They adopted standards that would become effective in July of 1973; and (2) Standards that would become effective in July of 1980. The July, 1973 standards spoke to what was then available technology. There are several nutrients involved, but the two principal ones are nitrogen and phosphorous. These promote algae blooms -- there are other nutrients that stimulate blooms, but they don't know how much or to what extent. But normally if you treat- remove nitrogen and phosphorous, you can remove the other nutrients also. (At least there is indication this has occurred.)

The 1973 standards then, did accomplish what they could with existing technology, except perhaps, for nitrogen removal. The 1980 standard spoke to what could not be achieved with existing technology, but they felt in that time span with the water pollution techniques and efforts being made today nationally, that there would be technology available to achieve the 1980 standards, which were designed for the ultimate protection for the Las Vegas Bay Arm of Lake Mead. This technology is still not available, but hopefully, it will be in the future.

Further studies by the E.P.A. in 1971 indicated that the original premise that phosphorous was a major contributing element was a valid conclusion, and that nitrogen as another major contributing element was not a valid conclusion. The technology for nitrogen removal today is almost nil. The standards that were proposed could be revised to delete the requirement for nitrogen removal. They would have to tighten up the standards on phosphorous removal. After further consideration the Board of Health did relax these slightly.

Chairman Gibson inquired as to whether the federal government had accepted the standards we adopted?

Mr. Gregory: We are still haggling. The federal act pertains only to the Inter-state water -- it did not speak to tributaries to intra-state waters. The standards which the State Board of Health established says they have the authority to establish standards on tributaries. The federal people did not accept

these as federal standards. They have been re-submitted under the requirements of the amendments to the federal act. Currently they have not accepted them because it was part of an overall package which pertains to other streams throughout the state.

Mr. Thorne Butler, representing the Las Vegas Valley Water District, introduced some of the other members of the district who were present, and then came forward to testify before the committees.

Mr. Butler: What I would like to do is spend some time going over a brief history of the pollution problem, what the problem is, and our concept of the solution to this particular problem. As Mr. Gregory briefly mentioned, there were a series of studies conducted on Lake Mead, primarily by the federal water quality control administration at the request of the state in 1966. A report was published at that time and the conclusion was that the algae blooms in the Bay were a direct result of the nutrients being discharged primarily from the two major sewage treatment plants. There was another report in 1970 by the same agency which reinforced the original finding. Another study was done, which was published in 1971, which was in essence the algae growth study.

During this period of time because of the problem in 1968 an agreement between the county and what was then the Federal Water Control Administration Interagency Task Force was formed chaired by Dr. Ravenholt and members from various industrial and political communities in the valley. They contracted with Boyle Engineer to prepare what is now known as Phase I and Phase II reports. They developed a series of alternatives to solve the particular problems, but none were adopted. Finally, after that particular study was done, the Legislative Commission, which was chaired by Senator Smith, also reviewed the problem and, I believe, made a recommendation to Governor Laxalt to ask the Colorado River Commission to put together a solution to this pollution problem.

By this time we were into the 1971 session of the legislature and at that time the Nevada Revised Statutes 616 designated the district to come up with a plan and submit it to the legislature and the governor by December of 1972. Additionally, the study and planning operation was funded by residual monies left in the bond sales to construct the water treatment plant as part of the Southern Nevada water project. In essence, the administrative procedures have now brought us to this particular stage -- our report has been submitted to the governor.

After the 180-day enforcement notice, we did submit a schedule to the EPA in January of 1972. The only thing here is the anticipation that it would be an operational abatement project by December of 1975. In the original enforcement notice they asked it to be by December of 1974, which they felt was an impossibility and the EPA agreed to extend this for one year.

There is relative unanimity of opinion of what the problem is -- it is basically man-made and the fact is that we have passed water through our community and into our sewage plants, discharging into the Wash and eventually the Lake. I would like to add, that as far as most communities in the United States, Las Vegas has to be a paragon of virtue. All our sewage is secondary treated, there are very few communities that do this.

(Mr. Butler then proceeded to show color slide pictures and charts and give a narration explaining each one.)

The following is only part of Mr. Butler's narrative:

Mr. Butler: To give you some idea of the quantities involved -- domestic sewage averages about 31,000,000 gallons a day and contains about 200,000 pounds of salt and about 8,000 pounds of nutrients, which is primarily a mixture of nitrogen and phosphorous. Industrially, smaller in volume, but surprisingly larger in other elements -- 1-1/2 million gallons a day are flowing into the Wash, about 28,000 pounds of salt, 150 pounds of nutrients, which is nitrogen in character. At a few sources the underground water return is of a surprisingly large volume -- 10 million gallons a day, 654,000 pounds of salt and 4600 pounds of nutrients, primarily nitrogen. Even if the sewage plant nitrogen was removed in its entirety as a stimulator to algae growth, there is an equal poundage load of nitrogen into the Las Vegas Bay just from the underground discharge. So, if you are really going to stop the triggering effect of the blooming, you are going to have to look at all the nutrients or you are really not going to solve the problem. It is important to realize that you just can't attack one source of pollution -- you have to look at them all.

Just to reiterate the standard problem again -- it is complex, it's difficult to understand, we have spent a lot of time just trying to put this in perspective. We have a series of standards. We have interstate standards, those were adopted in 1967. They are now up for review under the new 1972 water problem act.

These standards are restrictive -- they describe water in its clarity, odor, et cetera. There are very few numerical values. It is the violation of those standards on which the EPA commences its 180-day enforcement notice. Another set of standards are those adopted by the Board of Health, when requested by the Interstate Task Force to set up some kind of standards on the Wash. They feel that when the standards to into effect in July of 1973, that if there are not some control strategy at work, that it would seem very difficult for the state agency to certify new subdivisions in the Clark County area -- those particularly that would eventually drain their waste into the Las Vegas Wash. Also, they have been cognizant of the problems that were going on in Congress, which finally culminated in the 1973 water control act. The objectives of that Act are: (1) By 1974 the best practical technology must be used for the treatment of waste water discharge; (2) by 1983 it must be the best available; and (3) by 1985 there is a goal that there be no discharge of waste water into the interstate water system.

Taking all this into account, the water district have set up a series of objectives in order to put together a selected project which would be implemented within a reasonable time. (1) The first is the development of the most feasible plan to materially reduce or eliminate, if possible, pollutants now entering Lake Mead from the Las Vegas Wash. (2) The detection and best use of water resources in the area. (3) The development of an interim plan, if possible, for the immediate relief of the problem caused by the Las Vegas Wash. (4) Minimizing to the greatest extent possible any adverse economic or environmental impact of any planned development.

Having gone with those basic objectives we began to put together an organization, trying to meet the deadline. A scientific evaluation committee was organized to try and evaluate the problems they were facing -- a series of studies were implemented -- a professional technical advisory board made up of professional engineer representatives from the various local communities, the state and the federal agencies (which was mandated in the legislation) was formalized. We began to move forward, delineate the problem, and hopefully, come up with some kind of an answer. Some of the studies were done by the Desert Research Institute, some by the University of Nevada in Las Vegas, some by Boyle Engineers and some by NECON. The study conducted by the University of Nevada was to try to get a sharper picture of just what the algae plants and problem in the Bay really was over a long period of time -- particularly with seasonal changes. The study done by the Desert Research Institute was primarily one to evaluate and quantitate the amount of underground water going into the Wash. The Boyle report was an important study and one of its most important phases was to look hard at what the water demands, the water resources, and waste water generated are in the Las Vegas Valley area. Additionally, they up-dated some of the alternatives that were in the Phase I and II report and added into it the concept of export.

(Mr. Butler spoke on the following alternatives:

1. Groundwater recharge.
2. Complete treatment.
3. Colorado River Return.
4. Export to Dry Lake.
5. Export to Eldorado Valley
6. Export to Hidden Valley and Jean Lake.
7. Combination:
 - a. Waste water separation by quantity.
 - b. Maintain vegetation in Las Vegas Wash.
 - c. Irrigation in Las Vegas Valley.
 - d. Desalinization plant.
 - e. Tertiary treatment capability.
 - f. Injection to groundwater basin.
8. Deep well disposal.
9. No action.

Mr. Butler: In summary, the project has several features: (1) Solves the entire pollution problem now and in a sense obtains the 1985 objective of no discharge of pollutants. (2) It has built into it sufficient flexibility, so that if other uses of water do come on line, i.e. electric power generation which has been proposed. (3) Reclamation is built into it. (4) This is a project that has been highly reviewed by a lot of people -- technical experts from Nevada and out of the state as well.

Attached hereto as Exhibit "A" is a letter from the Bureau of Reclamation, United States Department of the Interior.

David Griffith, Project Manager of Nevada Environmental Consultants: Nevada Environmental Consultants was retained by the Water District in July of 1972 and assigned the project of developing two reports. The first of these reports was the project report of abatement of pollution of the Las Vegas Wash and Bay. This report basically picks up where the Phase III report leaves off. The second report which we prepared in August and November of this year was the "Design Appendix" which is a formidable engineering document and discusses the engineering details of the export system, how we will get this waste water out of the valley.

The secondary objectives as outlined in the alternative scheme: The protection and development of water resources in the Las Vegas area; the proper management of the area's water resources; the utilization of flow, highly favoring the water from the Colorado River system to the maximum extent practical; and the maintenance of a green belt or wildlife habitat which has been established along the Las Vegas Wash.

(Mr. Griffith gave testimony and demonstrations at the black-board at this point, which were not audible on the tape.)

Mr. Griffith: The big problem we have is that even with reclaimed uses of water in the valley, we still have to get rid of this waste water coming in the winter time when there is not that great a demand. In the winter time our evaporation is less. We get evaporation rates of about 2 inches per month in the winter-time and 1 1/2 inches per month in the summertime. In trying to find a disposal site big enough, it takes about 180 acres of land to evaporate an annual average flow of one million gallons a day. We are looking ultimately at a large disposal site.

A concept that came up rather late in the program was how do we maintain the wildlife habitat that is developed along the Las Vegas Wash. The Wash itself back in the early 1900's was really a desert dry wash. There was no wildlife. However, as Las Vegas Valley developed and as waters were discharged down the Wash, as the BMI complex developed and their waters were discharged down the Wash, we found a rather dense growth of greenery had come up and has fostered quite a population of wildlife. There is a large segment of people in Las Vegas that want to maintain the wildlife sanctuary that has developed there in the last 30-40 years. We have two conflicting objectives -- we have the problem of getting rid of the nutrients, but yet we also have the desire of the people to direct the waters down the Wash so that we can maintain the wildlife.

Mr. Robert Broadbent, Clark County Commissioner: I would like to indicate to you some of the actions before the county commissioners that I feel apply to the pollution abatement project. First I'd like to say that some of us who have been more closely related to the Lake and lived close to it have probably been closer to the problems for many more years than a lot of other people.

In 1969 when the Board of Health set the standards for the sanitation district because at that time the sanitation district was named in those standards and they said that those people who own the sanitation plant, the sanitation district, by 1973 has to meet certain standards. In our study it was indicated to us that the plant to be built which would accomplish this purpose would be in the neighborhood of \$350 per million gallons. The board of county commissioners, at that time, indicated they felt a system which might pump the water out of the valley might be the most economical system.

The Board of Health, when they set the standards, also set 1980 standards. As you all know the 1980 standards cannot be met by any other method except pumping it out. Today, Mr. Gregory of the Board of Health indicated they may amend those standards, but at the same time when you gave a direction by mandate two years ago to the water district to come up with a pollution abatement project which would meet the standards, the board of health had not amended those standards. It seems to me that is the first question that has to be answered -- to amend those standards and then to meet the criteria to solve the problem of Lake Mead and the pollution of the Las Vegas Wash. The board of county commissioners, two years ago when the legislature passed enabling legislation which gave a mandate to the Las Vegas Valley Water District realized at that time, according to the legislation that was passed, the county would be responsible for the Las Vegas Valley Water District and probably for the implementing of the pollution abatement project.

The program went along to the point where the water district indicated to us that in order to go ahead with the engineering design that they had run out of money that they could legally use from the Colorado River Commission. They were restricted by the bond companies from using other money, so the Clark County Commissioners did approve interim financing, and made available to the water district a million dollars for engineering of the pollution abatement project. This engineering is presently going ahead -- you've heard from Mr. Griffith of NECON.

We also passed a resolution which indicated in essence we were in favor of the pollution abatement project, assuming that the standards which have been set by the State Board of Health and by the Environmental Protection Agency are the standards that must be met in order to accomplish the project. I don't see, as a member of the board, where there is any other choice except for export as a method of solving the problem under those existing standards. If those standards are amended, then of course, it is a different matter.

The Board of County Commissioners, as county commissioners and as members of the Las Vegas Valley Water District and the Sanitation District recognize and encourage a program that will clean up the Las Vegas Wash. They feel that it is mandatory that some action be taken, hopefully at this session of the legislature, that will set the gears in action to do it. Otherwise, under the enforcement action which has been given us by the E.P.A. and by the Board of Health, we may be faced with serious problems, not only in construction, but also from development in Clark County in coming years.

Mr. Thomas R. Rice, Las Vegas Valley Water District: You have heard many figures today about what the solution is and the need for doing something about it. Obviously, it's going to cost some money to do something about it. We would like to talk for a moment about that and what we propose to recommend to you to take care of that part of the problem. Sixty-five million dollars is the gross number that has been utilized in talking about the costs of the project, with the federal participation being about 75% of the cost.

In the information that has been furnished to the Legislative Commission there are charts showing these costs and the precise number, including construction at \$63,131,000. Obviously, this is an estimated number. Assuming, first of all, that the project is going to be built, the cost can vary, depending on what the federal government supplies by way of grants. At the present time the federal program is a changing program, because they are still formulating policy relative to what they are going to do on the federal grant program. I am sure you are aware that the President cut back the congressional authorization last Fall to 45% of the amount -- this in turn was allocated to the State of Nevada, means that for the fiscal years 1973 and 1974, there are 14.3 million dollars for the state. This, in turn, must be allocated by the state to those entities which are requesting funds for projects under the program.

Assuming that the state receives a full 75%, we can make one set of figures on the cost and how we would fund this project. Assuming we receive \$4,000,000 from the amounts available in 1973 and 1974, we have a different mix of local funding -- as time goes on we will know more about it.

The funding program that we have worked out is to take care of the construction program to meet the requirements of the current construction schedule and the time table set by the E.P.A. which would call for the completion of operational work by the end of 1975. We have already spent some money as you are aware -- we have spent in the neighborhood of 1.1 million dollars on the studies to date. These are monies which in large part we feel are reimburseable from the federal programs. We will have the additional amount that Mr. Broadbent spoke of today in the county to complete the engineering portion of the project.

The federal funds that are available this year can be utilized if we have bonding authority to start the project. Someone must be designated and given the authority to sell bonds for the construction of these works. Assuming we get a full 75% from the federal government, we contemplate at the present time that a

bond issue would be 25.5 million dollars over a period of years. The local government would have to put up what we call "front" money -- that is the money to complete construction up to certain phases before the federal funds become available, and phasing this out over a period of years we look to 35.5 million dollars as the local portion of this. The total cost under this program is \$57,000,000.

If we go on the basis of the current level of funds which would indicate at the present time (and this is a decision that hasn't been fully met and made by the state) that we would receive \$4,000,000 for the project in the years 1973 and 1974, and at the same rate from there on out. The local bond issue would have to be 55.4 million dollars. Obviously, a good portion of this would be paid by the federal government -- assuming again that we got 75% over a long period of time -- this takes 10 years at this rate. The impact on the local community is the same from the standpoint of the monthly charges that Dr. Butler showed on the chart. The revenues derived from the monthly charges would be used to repay the bonds. We would propose general obligation bonds passed by revenues, and with a charge for the utilization of the facilities to handle the waste waters. Through this charge all costs would be recovered including the capital interest. The amounts to the individual householder could vary from \$1.28 per month under a maximum federal participation to \$3.78 under no federal funds.

What we ask here is that the legislature continue on with this authorization they made two years ago and authorize selling the bonds to implement the program which was directed before and the authorization at this time is 65 million dollars. The bond counsel for the district, Mr. Schreiner, who worked on this legislation proposed incorporating in this legislation those requirements that a bond counsel looks for to insure a bond holder.

Mrs. Elizabeth Phillips, Nevada Open Spaces Council, read a prepared statement from a booklet entitled "Analysis of Las Vegas Valley Water District Plan to Abate Pollution in Las Vegas Wash and Bay and Suggested Alternatives." A copy of the pages read has been made and attached hereto as Exhibit "B".

Mrs. Daisy Talvite, League of Women Voters in Clark County, made a presentation to the committee, a copy of which is attached herewith as Exhibit "C".

Dr. Ravenholt, Chairman of the Interagency Task Force, also spoke to the committee on the history and background factors involved in this project.

(Recess)