MEMBERS PRESENT

Chairman Dini
Mr. Marvel
Mr. Fitzpatrick
Mr. Harmon
Dr. Robinson
Mr. Craddock
Mr. Jeffrey
Mr. Getto
Mr. Bedrosian
Mr. Bergevin

GUESTS PRESENT

See Guest List attached

* * * * * * *

Chairman Dini called the meeting to order at 8:00 A.M. He announced the first Bill on the Agenda would be AB 247.

AB 247 - ENABLES LOCAL GOVERNMENTS TO PURCHASE MOTOR VEHICLE FUEL TO SELL TO NON-PROFIT ORGANIZATIONS WHICH PROVIDE TRANSPORTATION FOR ELDERLY OR HANDICAPPED

RAY CARLSON, Division For Ageing Services

Mr. Carlson stated that for several years the Division has worked to provide services for ageing people throughout the State, and the services are of little value if the people can't get to them. He stated transportation is coordinated and they work with several divisions of the Dept. of Human Resources. He advised that tax money is used to buy it and it doesn't seem right that taxes should be paid to operate it.

Mr. Dini suggested that actaully what was wanted was an exemption from gasoline tax and Mr. Carlson stated that was correct. Mr. Carlson said the cost of operating the vehicles is pretty high, and the object is to provide the minimal services people need to enable them to live independently in their homes. Dr. Robinson stated he was concerned with abuse and with people attempting to convert the situation to private use. Mr. Carlson stated it would be no problem as the situation is very carefully controlled.

BOB SULLIVAN, Carson River Basin Council of Govts.

Mr. Sullivan stated there was a large senior citizen transportation program in rural Nevada and went on to elaborate on the program. He stated they do utilize county gas, everywhere. He said to acquire the gas from the county would help out. He said they were now paying in the low 60's but if they went to a regular pump outside it would be a tremendous help. He stated there wasn't much leeway for abuse as all their trips were logged and he enumerated other precautions they took.

Chairman Dini announced the testimony was concluded on AB 247.

SB 12 - PROVIDES EXCEPTION TO LIMITATION OF ONE SALARY FOR ALL SERVICES RENDERED BY PUBLIC EMPLOYEES

SENATOR WILLIAM RAGGIO

Senator Raggio stated the Bill alleviates a situation which has prevented some institutions, such as the University and Community College, from being able to have the services of some talented people for their programs. He stated that in their programs of instruction they would like to avail themselves of people who could lecture for limited sessions but are already employed in either state, city, or county government. He stated that the problem was that under Section 281.127 no one could be paid if an employee or in an official capacity to teach a course of instruction at the university or community college. The amendment, he went on, makes it clear this would be an exemption for people if they did it other than their regular hours of duty and not regularly employed by that particular governmental entity. Senator Raggio stated the amount of money involved is not much - $300 per credit per semester - but it does give some remuneration for their efforts.

FRED BARTLETT, State Personnel Division

Mr. Bartlett stated they were pretty much in agreement with the Bill but their Attorney General had pointed out a conflict which they felt should be cleared up for certain state officials, in particular those listed in NRS 232.050 through 232.460. He stated these were primarily department heads and key administrators throughout state government. He stated there was an exclusive clause in the statute that they may not seek other employment other than their current occupation and Mr. Bartlett stated some of them would like to be included in the Bill. He suggested an amendment to the Bill to take it

into consideration.

SB 96 - REMOVES POWER OF SECRETARY OF STATE TO COMMISSION NOTARIES PUBLIC

WILLIAM SWACKHAMER, Secretary of State

Mr. Swackhamer stated that a clause in the Constitution states that all commissions must be signed by the Governor and attested by the Secretary of State. He stated this became a problem and it was taken up with the Attorney General and it was his opinion that the people are acted under the cloak of the authority that was issued by the Commission; that their notary seals are valid. However, Mr. Swackhamer said, one problem was in the case of a complaint in a revocation he would be reluctant to try to revoke a person's license when not sure he had the authority to issue it in the first place. He stated the problem was resolved by removing the word "commission" and just appointing notaries public. He stated there would be no commission which would take the Governor completely out of the situation.

SB 56 - EXTENDS FREE DISTRIBUTION OF CERTAIN STATE PUBLICATIONS TO LIBRARIES IN UNIVERSITY OF NEVADA SYSTEM

Senator Jean Ford stated the Bill does three things: allows the libraries within the University system to be placed on the list to receive Supreme Court decisions, the statutes of Nevada, and the Nevada Reports without charge, at the same time other state agencies and public libraries around the State receive these publications. Mrs. Ford stated they are eager to have the service, they are used, and she has personal knowledge of that when she worked on her Master's Degree.

SB 61 - INCREASES AMOUNT OF MONEY DIVISION OF COLORADO RIVER RESOURCES OF DEPT. OF ENERGY MAY BORROW FOR CERTAIN WATER SERVICE FACILITIES

DUANE SUDWEEKS, Administration, Div. of Colorado Riv. Resources

JIM LONG, Financial Manager

Mr. Sudweeks testified in support of SB 61. Mr. Sudweeks had a prepared statement* which he read into the record. He stated SB 61 amends Chapter 482, Statutes of Nevada 1975, which authorizes the division to acquire the State and Federal facilities comprising the second stage of the Southern Nevada Water System. He stated that in addition to increasing State Facilities funding authorization, SB 61 amends the title of Chapter 482 to recognize the change made in 1977, making Colorado River Resources a division within the Dept. of Energy and removing it as a division within the Dept. of Conservation and Natural Resources. He went on to elaborate concerning the aforementioned in his prepared text which is attached to the record. He emphasized that it is extremely urgent that Senate Bill 61 be acted upon, passed, and approved by the Governor by Friday, February 23, 1979 because if second stage state facilities are to be constructed in accordance with present plans and specifications at the lowest possible cost, it is necessary that the construction contract be awarded to the successful bidder by April 10, 1979. He said that was the deadline date for awarding the bid within the required 120 days from bid opening on December 12, 1978. He stated that if the contract is not awarded and the project is delayed, it is unlikely that they will be able to meet the water needs of the users in 1982, and that in order to sell and deliver bonds by April 10th, it is necessary to publish the first notice of sale no later than February 26th.

Chairman Dini opened discussion of Mr. Sudweeks statement to the Committee. Dr. Robinson questioned Mr. Sudweeks as to support from other cities and counties. Mr. Sudweeks stated that the City of Las Vegas testified in support of the Bill on the Senate side as well.

DONALD L. PAFF, Gen. Mgr. & Secretary, Las Vegas Valley Water District, Las Vegas

Mr. Paff read a prepared text into the record which is attached hereto outlining the operation of his facility. In summation of his statement, Mr. Paff urged the Committee to support the request of the Division of Colorado River Resources to provide the additional $8,000,000 of funding authorization, pursuant to SB 61, required to proceed with the construction of the State facilities.

Mr. Paff then referred the committee to additional printed material which were comparisons of water rates with other communities and which material is attached to the record.

*See Exhibit

Chairman Dini asked Mr. Paff about meters and he responded all of the district facilities, both commercial, industrial, and residential are all metered. Mr. Bergevin asked Mr. Paff if not passing the Bill meant that Southern Nevada is going to come to a halt and Mr. Paff responded that they would be in trouble trying to meet the water quality standards and the effectiveness of the treatment facilities.

Chairman Dini then announced that for the record he would like to state that Jack Kenney, representing the Southern Nevada Home Builders, was in support of the Bill.

SB 15 - TRANSFERRING CERTAIN DUTIES FROM STATE PUBLIC WORKS BOARD TO DEPT. OF ENERGY

BILL HANCOCK, Secretary, Mgr., State Public Works Board

Mr. Hancock stated SB 15 does two things: it transfers the Board's responsibility for energy conservation standards to the Dept. of Energy and it eliminates or repeals the Board's authority for eminent domain. He stated it was their opinion this would tend to centralize the energy activity in the department. He stated the repeal of the eminent domain authority of the Public Works Board is a result of the 1977 legislation which gives the Division of Lands the authority to acquire all property for the state now, and, in view of that, there is no reason why the Public Works Board needs eminent domain authority.

KELLY JACKSON, Deputy Dir. Nevada Dept. of Energy

He stated his division advised the Public Works Board that if they would agree as the statute requires to provide some ongoing technical assistance, they would not object to the legislation.

Chairman Dini announced that the testimony on SB 15 was concluded and so was the hearing and the Bills would be considered.

COMMITTEE ACTION:

AB 247 - Mr. Getto moved to AMEND and DO PASS (amendments to redefine groups aimed at and to exert controls), and carried unanimously.

DRAFT BILL - Mr. Getto moved that the Committee order a Bill for study in placing some controls on public vehicles being driven for personaland private reasons, seconded by Mr. Marvel, and carried unanimously.

SB 12 - Mr. Marvel moved AMEND and DO PASS, seconded by Mr. Fitzpatrick, and carried unanimously (Attorney General conflict with 232.050 and 232.460 concerning department heads and key employees)

SB 96 - Dr. Robinson moved DO PASS, seconded by Mr. Harmon, and unanimously carried.

SB 56 - Mr. Bergevin moved DO PASS, seconded by Mr. Harmon, and unanimously carried.

SB 61 - Mr. Jeffrey moved DO PASS, seconded by Mr. Harmon, and unanimously carried.

SB 15 - Mr. Marvel moved DO PASS, Dr. Robinson seconded the motion, and unanimously carried.

Chairman Dini received the unanimous permission of the Committee to introduce BDR 43-1039*, 20-1046**, 22-616†, 31-1044††, and 31-1045^.

There being no further business to come before the meeting, the same was adjourned.

Respectfully submitted,

Sandra Shatzman

Sandra Shatzman
Assembly Attache

* AB 430
** AB 429
† AB 428
†† AB 427
^ AB 426

Govt Affairs
2/16/79

GUEST LIST

NAME (Please print)	REPRESENTING	IF YOU WISH TO SPEAK Pro	Con
J Ray Carlson re AB 247	Aging Services	✓	
[illegible]	[illegible]	AB 247	
[illegible]	Secy of State	SB 96	
W E Hanneberg	Public Works Bd	SB 15	
FRED BARTLETT	State Personnel Div	SB-12	
JACK KENNEY	So Nev Home Builders	SB 61	
Duane Sudweeks	Division of Colo. River Res.	SB 61	
James Long	" " " " "	"	

DEPARTMENT OF ENERGY

DIVISION OF COLORADO RIVER RESOURCES

Testimony Regarding Senate Bill 61 -
Assembly Committee on Government Affairs

February 16, 1979

Mr. Chairman and Committee members, I am Duane Sudweeks, Administrator of the Division of Colorado River Resources. With me is Jim Long, Financial Manager. I am testifying today in support of Senate Bill No. 61.

S. B. 61 amends Chapter 482, Statutes of Nevada 1975. Chapter 482 authorizes the Division to acquire the State and Federal facilities comprising the second stage of the Southern Nevada Water System. The 1975 Act, as originally amended by Chapter 397, Statutes of Nevada 1977, authorizes the Division to borrow money, pursuant to the State Securities Law, and otherwise become obligated up to $55-million for the State Facilities, up to $192.5-million for the Federal Facilities, and up to $5-million for electric transmission facilities.

Current cost estimates, which I feel are accurate at this time, indicate that the $5-million authorized for electric facilities is adequate and that the $192.5-million authorized for Federal Facilities is more than adequate. The $192.5-million was authorized only to the extent needed if Congress should fail to appropriate funds to the U. S. Bureau of Reclamation for construction of second stage Federal Facilities. Congress appropriated a total of $49.7-million

EXHIBIT J

through fiscal year 1979 and $41-million is included in the President's budget for fiscal year 1980. It appears that the President and Congress will continue to recommend and approve Federal funding of the Federal Facilities to the full amount authorized by Public Law 89-292. Our present estimate indicates $ 32 -million of State securities will have to be issued against the authorized $192.5-million to fund the portion of Federal Facilities that exceeds the authorized Federal funding.

The $55-million authorization for funding second stage State Facilities is inadequate. At the time my predecessor testified in 1977 relative to Chapter 397, he estimated the construction costs of the State Facilities to be $28.4-million in 1976 dollars, excluding interest during construction; therefore, $55-million seemed adequate at that time, even after adding conservative estimates for escalated construction costs and interest during construction. Construction bids for expansion of the Alfred Merritt Smith Water Treatment Facility were opened on December 12, 1978. The lowest of the seven bids is $38,560,000. After adding equipment, administrative and engineering costs and estimates for interest during construction, plus funded operation and maintenance and bond reserve funds, it is necessary to increase the funding authorization from $55- to $63-million. This provides a reasonable contingency of 10% for remaining construction, administration, debt expense and engineering, and an overall 3% contingency for interest rate fluctuations and possible funded reserve fund requirements. The increased construction costs, above those estimated in the 1976

EXHIBIT

pre-design report, are principally attributed to inflation, design modification and transfer of work responsibility from the United States Bureau of Reclamation to the State for improved projects coordination.

I would like to emphasize that executed contracts with Water Users, namely the Las Vegas Valley Water District, Boulder City, Henderson, North Las Vegas and Nellis Air Force Base, require that all debt repayment obligations, as well as operation and maintenance expenses, be paid from revenues from the sale of water to the Water Users. Although the credit of the State is pledged against the debt, it will not be necessary to appropriate General Fund money or assess taxes so long as the aforementioned contractual commitments are met.

The Water Users were consulted prior to drafting Senate Bill 61. The bill has their unanimous support. I understand the Las Vegas Valley Water District will testify today in support of the bill. I have letters of support from the City of North Las Vegas, the City of Henderson and the City of Boulder City, copies of which have been handed out with copies of my prepared testimony.

In addition to increasing State Facilities funding authorization, Senate Bill 61 amends the title of Chapter 482 to recognize the change made in 1977, making Colorado River Resources a division within the Department of Energy and removing it as a division within the Department of Conservation and Natural Resources.

EXHIBIT

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Attached to this testimony is reference data, including a map of the Southern Nevada Water System, cost components of second stage State Facilities supporting this $63-million funding authorization request, cost of Federal Facilities and funding sources, and Consulting Engineers' analysis of State Facilities cost increases.

Before concluding, I would like to point out that it is extremely urgent that Senate Bill 61 be acted upon, passed and approved by the Governor by next Friday, February 23, 1979. If second stage State Facilities are to be constructed in accordance with present plans and specifications at the lowest possible cost, it is necessary that the construction contract be awarded to the successful bidder by April 10, 1979. That is the deadline date for awarding the bid within the required 120 days from bid opening on December 12, 1978. If the contract is not awarded and the project is delayed, it is unlikely that we will be able to meet the water needs of the users in 1982. In order to sell and deliver bonds by April 10th, it is necessary to publish the first notice of sale no later than February 26th. S.B. 61 must be signed by the Governor prior to the first publication.

Mr. Chairman and Committee members, that concludes my testimony. I sincerely appreciate the opportunity to bring before you this matter which is so vital to the citizenry of Southern Nevada. Mr. Long and I will be pleased to answer any questions you may have.

EXHIBIT 142

DCRR
1/29/79

ATTACHMENT to Testimony regarding Senate Bill No. 61 -
Assembly Government Affairs Committee - February, 16, 1979

REFERENCE DATA

Southern Nevada Water System
Second Stage

* Map and Schematic of Southern Nevada Water System

* Cost Components of State Facilities

* Cost and Funding Sources of Federal Facilities

* Consulting Engineer's Analysis of Estimated Construction Cost Increases

EXHIBIT ___
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EXHIBIT F

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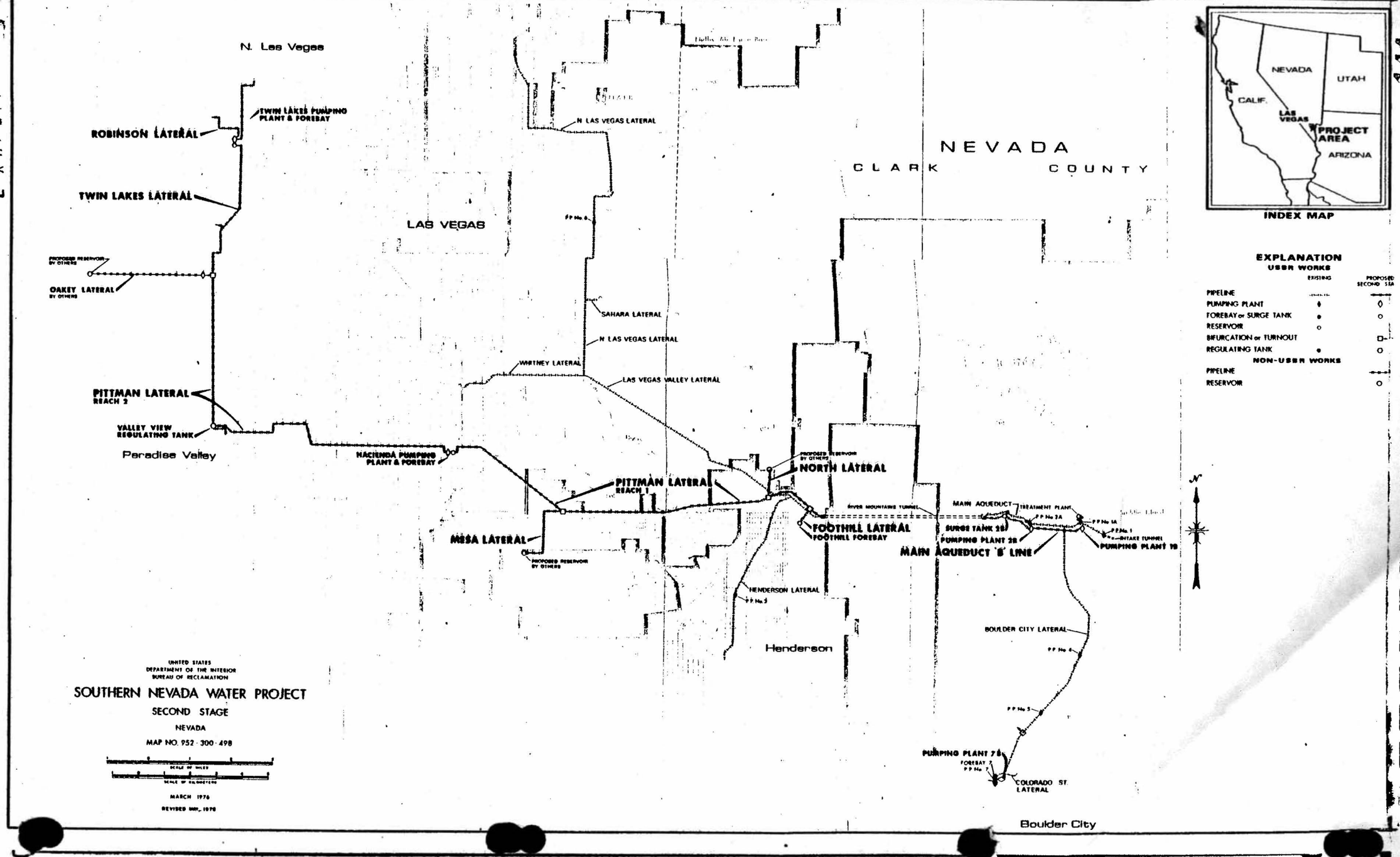

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

SOUTHERN NEVADA WATER PROJECT

SECOND STAGE

NEVADA

MAP NO. 952-300-498

MARCH 1976

REVISED MAY, 1978

ATTACHMENT to Testimony regarding Senate Bill No. 61 -

Assembly Government Affairs Committee - February 16, 1979

Southern Nevada Water System
State Facilities - Stage II Expansion
Estimated Cost

	Expended Thru 10-31-78	Estimated Cost to Complete	10% Contingency	Total
Construction				
Treatment Plant		$38,560,000	$3,856,000	$42,416,000
Powerline Relocation	$ 19,000			19,000
Terminal Chlorination		500,000	50,000	550,000
Equipment				
Contracts PP-1 through PP-7	6,600	1,224,400		1,231,000
Other		180,000	18,000	198,000
Engineering				
Design	2,292,000	100,000		2,392,000
Construction Management	7,000	1,493,000	150,000	1,650,000
Administration	133,100	222,900	22,000	378,000
Debt Expense	94,100	122,900	12,000	229,000
Sub-Total	$2,551,800	$42,403,200	$4,108,000	$49,063,000
Interest During Construction				7,231,000
O & M Reserve				100,000
Bond Repayment Reserve				4,648,000
Total				$61,042,000
Contingency (3%)				1,958,000
Total				$63,000,000

EXHIBIT —

ATTACHMENT TO Testimony regarding Senate Bill No. 61 -

Assembly Government Affairs Committee - February 16, 1979

Southern Nevada Water System
State Facilities - Stage II Expansion
Consulting Engineer's Analysis of Estimated Construction Cost Increases

		Current Estimate	Estimate in Pre-Design Report	Net Increase
1.	Concrete, Unit Cost Increase(1)	$ 1,935,000		$ 1,935,000
2.	Concrete, Quantity Increase(1)	8,755,000	$6,510,000	2,245,000
3.	Inplant Telemetry(2)	157,000		157,000
4.	Uninterruptible Power Supply(2)	132,000		132,000
5.	Plant Bypass(2)	45,000		45,000
6.	Aeration Channel(2)	368,000	95,000	273,000
7.	Chemical Pit 1 Building(3)	36,000		36,000
8.	Utility Building(3)	1,080,000		1,080,000
9.	Administration Building(3)			
	Laboratory	223,000		223,000
	Storage, Hallways	212,000		212,000
10.	Chlorine Dioxide System(3)	1,090,000	265,000	825,000
11.	Replace Existing Filter Bottoms(3)	1,091,000		1,091,000
12.	Existing Filter Piping(3)	-0-	600,000	(600,000)
13.	Air Backwash(3)	842,000	580,000	262,000
14.	Vertical Floc Drives(3)	2,977,000	1,400,000	1,577,000
15.	Carbon Flow, Flocculation Basins(3)	518,000		518,000
16.	Effluent Flow Control, Flocculation Basins(3)	1,563,000		1,563,000
17.	Deeper Flocculation Basins(3)	140,000		140,000
18.	Combined Flow Splitter & Mixing Chamber(3)	100,000		100,000
19.	Area Lighting(3)	300,000		300,000
20.	Yard - General(3)	600,000		600,000
	Total	$22,164,000	$9,450,000	$12,714,000

(1) Increase due to material costs and quantities. Items 3 through 20 exclude costs of concrete.

(2) Increase due to transfer of construction to State from Bureau of Reclamation.

(3) Project design concept changes from the pre-design report.

Explanations relate to the correspondingly numbered items above.

EXHIBIT 17

Construction Cost Increases (Continued)

1. Unit prices for concrete in place in current estimate compared to prices estimated in pre-design report are:

	Pre-Design	Current
Slab on Grade	$150/Cubic Yard	$120/Cubic Yard
Walls & Slab Above Grade	200/Cubic Yard	280/Cubic Yard
Complex Placement - Columns and Beams, etc.	250/Cubic Yard	380/Cubic Yard
Precast	--	180/Cubic Yard

2. Concrete quantities increased as follows:

Slab on Grade	1,900 Cubic Yard
Walls & Slab Above Grade	3,450 Cubic Yard
Complex Placement	3,125 Cubic Yard
Precast	5,200 Cubic Yard

Structures became more complex during design than anticipated in pre-design report due to restrictions not defined during report stage. Pre-design report did not include any precast concrete members.

This increase in concrete quantities represents 30% of the final estimated quantity of concrete. Principal areas contributing to the increase in quantity of concrete are: 1) aeration channel; 2) mixing chambers and flocculation basins (deeper basins required thicker walls); 3) Administration Building (added basement section to East wing); 4) Chlorine Building (added basement to provide storage for chemicals required for chlorine dioxide generation); and 5) Utility Building.

3 thru 6. During the course of design, a number of items of common interest between the Federal Facilities and the State Facility were incorporated within the State Facility and deleted from the Federal Facilities. These items were transferred for reasons of convenience and compatibility of design after completion of the pre-design report.

7. Chemical Pit 1 Building. The functions of equipment to be installed in this building were to be incorporated within the USBR Pumping Station 1. To eliminate having two contractors working in the same location at once, it was mutually agreed that a separate facility should be provided.

8. Utility Building. This building houses recovered wash water pumps, electrical switchgear, variable frequency drives and motor control centers for the flocculators, local control station, satellite control panel, process blowers, and standby generators. The pre-design report did not consider a Utility Building, as only the recovered wash water pumps were planned at this location. Electrical switchgear, motor control centers, process blowers, and standby generators were to be installed in the Administration Building, and the other features were either not planned at the time of the pre-design report or were small units

Construction Cost Increases (Continued)

designed for open, unhoused installation. During design, the potential nuisance and maintenance problems associated with the blowers and standb generators occupying space in the basement of the Administration Buildin were discussed, and by mutual agreement it was decided to provide a separate enclosure for these units, and the Utility Building was added.

9. Administration Building. The facilities central laboratory was designed into the expansion of the East wing of the Administration Building during the pre-design report. At the time the report was made public, the Environmental Protection Agency (EPA) released guidelines for water treatment plant laboratories for EPA certification under the Interim Primary Drinking Water Standards set by EPA. To insure that the proposed laboratory would be certifiable under the proposed regulations, the laboratory's analysis capabilities were modified and expanded. In conjunction with this expansion, a decision was made during design to create a regional certified laboratory for additional testing to meet the requirements of all water purchasing agencies associated with the facility. This decision changed the nature of work at the proposed laboratory from routine quality control and process evaluation to both quality and process control and assembly line type mass analysis of regional water samples. These decisions resulted in the need for a larger laboratory facility for instrumentation and personnel. Reviewing the two basic alternatives of lengthening the wing or designing a lower level, the second was chosen to be more feasible. The basement level that was created contains the additional space required by the expanded laboratory and unassigned areas for supply storage, ancillary laboratory support facilities, and future laboratory expansion.

10. Chlorine Dioxide System. The pre-design report addressed several methods of disinfection that could be used at the facility. The report recommendation was to maintain and expand the existing chlorine facilities and to provide space only for future installations of chlorine dioxide facilities. During the design phase of the project, EPA proposed a limit on the formation of the trihalomethanes (THM's), of 100 micrograms per liter. These THM's are formed from the reaction of chlorine and naturally occurring organic compounds such as humic acids. To enable the facility to meet this limit, a decision was mutually agreed upon to provide chlorine dioxide as the primary disinfectant. Chlorine dioxide does not form THM's.

11. Replacement of Existing Filter Bottoms and Filter Media. Two basic methods of cleaning the filters were reviewed during the development of the pre-design report. The first was water backwash with surface washers (the method currently in use at the facility) and water backwash with air backwash. The report recommendation was to stay with the surface washers with further study on the air backwash techniques. During the design phase, air backwash was determined to be superior in respect to maintenance problems and was recommended for the new filters. At this time, the decision was made to design the new filters with air/water backwash, and to upgrade the existing filters with this cleaning technique.

Construction Cost Increases (continued)

12. Existing Filter Piping. During the design phase, a joint effort to rework the existing piping in the filter gallery resulted in an estimated $600,000 savings over that which was proposed during the pre-design report.

13. Air Backwash. The method of cleaning the filters by the use of air backwash was adopted during the design phase of the project. (See Item No. 11 for related details). At that time, it was noted that air backwash had an estimated higher initial capital cost but would result in a lower operation and maintenance cost.

14. Vertical Flocculator Drives. The estimated cost of flocculation equipment in the pre-design report was based upon 30 drive units driving horizontal line shaft turbine and reel-type flocculators. This method of flocculation required the use of submerged flocculating equipment, bearings, and shafts, except the drives. Concerns about maintenance and corrosion problems and deeper flocculation basins (Item 17) resulted in reviewing current flocculating practices for improved application. The result of this study was a recommendation to use vertical shaft flocculating equipment constructed of 304 stainless steel. Again, it was noted initial installed cost would be greater but operation and maintenance costs would be decreased. In addition to the flocculators themselves, variable frequency drives (VFD's) were recommended over mechanical drives and SCR controllers because they utilized standard AC motors at higher operating efficiencies and would allow the most flexibility in adjusting the speed of the flocculators to match the varying characteristics of the raw water being taken from Lake Mead. The space required for these VFD's and motor control centers was assigned to the Utility Building (See Item 8).

15. Carbon Flow Scheme. To maximize the contact time for powdered activated carbon during taste and odor periods (caused by lake destratification during low flow demand periods of October through January) a concept was adopted that would make double use of two flocculation basins that would be normally idle at this season and which could be used for taste and odor removal. This concept required the modification of the established flow scheme through the two flocculation basins prior to the coagulation process. This additional flow scheme added five (5) large rectangular butterfly valves to the project.

16. Effluent Flow Control on Flocculation Basins. The pre-design report did not go into detail concerning the method of basin isolation and flow control. To maximize flexibility in putting individual basins in and out of service and allow for maintenance on individual basins without taking the entire facility out of service, thirty (30) rectangular butterfly valves were added to the flocculation facility. These valves would allow isolation and dewatering of individual basins for maintenance without shutting down the entire facility.

17. Deeper Flocculation Basins. The pre-design report flocculation basins were longer and shallower than the final design. During the report, it was our understanding that the BMI water line which traverses along the northern project limit could be relocated farther north. During the

Construction Cost Increases (continued)

design phase, it was determined that the line could not be moved, and further, construction of the new facility could not penetrate within forty (40) feet of the line. This decision required shortening the flocculation basins to avoid the water line, which, in turn, required deepening the basins to maintain both the require volume and the most effective sizing of the basins. Deepening of the basins resulted in more excavation, more concrete, because of deeper and thicker walls, and adjustment to the design of flocculation equipment (See Item 14).

18. Combined Flow Splitter and Mixing Chamber. For the same reasons as outlined in Item 17 above, the mixing chamber and flow splitter structure were combined to avoid the BMI water line.

19. Area Lighting. The cost assigned to area lighting during the pre-design report was based upon a low intensity lighting for emergency ingress and egress only. During the design phase, the lighting codes were reinterpreted to require a lighting intensity around and on water holding structures equal to that required on factory catwalks. This increase in light intensity required more fixtures, electrical conduit, wiring and controls.

20. Yard - General. The pre-design report addressed the use of contoured landscaping to hide and blend the facility into the natural landscape. Throughout the design phase, this concept was adopted, expanded and re-expanded in coordination with the USBR and the National Park Service. The final design is greater in magnitude, requires double handling of excavation, stockpiling of topsoil for final placement, and creation of an excess excavation disposal area with landscaping.

City of North Las Vegas

2200 Civic Center Drive • P.O. Box 4086
NORTH LAS VEGAS, NEVADA 89030
Telephone 649-5811

February 14, 1979

The Honorable Joseph Dini and Members of
the Assembly Committee on Government Affairs

Gentlemen:

The City of North Las Vegas is the second largest contract user of the Southern Nevada Water Project and as such we recognize the importance and the urgency of the completion of this project.

We urge the timely passage of SB 61 as necessary legislation for the financing and constructing of the treatment works necessary in the project.

Sincerely,

Raymond D. Schweitzer
City Manager

RDS:JHM:nm

EXHIBIT —

CITY OF HENDERSON

CITY HALL 243 WATER STREET 702/565-8921
HENDERSON, NEVADA 89015

Gateway to Lake Mead Resorts

EXHIBIT —

February 14, 1979

Division of Colorado River Resources
P. O. Box 19090
Las Vegas, Nevada 89119

Attention: G. L. Edwards, Civil Engineer

Subject: Testimony on SB 61 Committee Meeting

Dear Mr. Edwards:

The following is a verbatim account of my verbal testimony before the SB 61 Committee in Carson City on 31 January, 1979:

> "My name is Jay M. Rassler, Deputy Director of Public Works, City of Henderson. The City of Henderson is in full agreement with Division of Colorado River Resources' request."

Sincerely,

Jay M. Rassler

Jay M. Rassler, P. E.
Deputy Director of Public Works

JMR/acw

Assembly Government Affairs Committee

Gentlemen:

The foregoing demonstrates the position of the City of Henderson relative to SB 61.

Respectfully submitted,

Jay M. Rassler

Jay M. Rassler, P. E.
Deputy Director of Public Works

JMR/acw

CITY OF

Boulder City
Nevada

P. O. BOX 367

900 ARIZONA STREET 89005

February 14, 1979

Assembly Committee on Government Affairs
State of Nevada
State House
Carson City, Nevada

Gentlemen:

In lieu of my personal appearance before you, I am submitting this letter requesting your support and endorsement of the Senate Bill 61 which provides additional funding for the Southern Nevada Water System. This additional cost has been created as a result of inflation and the requirement for additional design and facilities in the Alfred Merritt Smith Water Plant.

Because of its climate and its location, Boulder City experiences extraordinary difficulties in connection with an adequate water supply. Boulder City's unusual amount of growth in the recent years and the deterioration of the original water supply equipment necessarily results in Boulder City becoming more dependent upon the supply of water from the Southern Nevada Water System. Boulder City received and continues to receive water through a Government system which was built in 1931 and is now antiquated, difficult to maintain and very expensive.

Boulder City, by endorsing the original obligations and financial commitments to meet the bonding costs has already expressed a willingness to pay its proportional share of costs. This attitude is also applicable to the additional funding requested under SB 61. Therefore we urge and request your support for this Assembly action.

Very truly yours,

John P. Names

JOHN P. NAMES
Director of Public Works
& Electrical Distribution

JPN-dr

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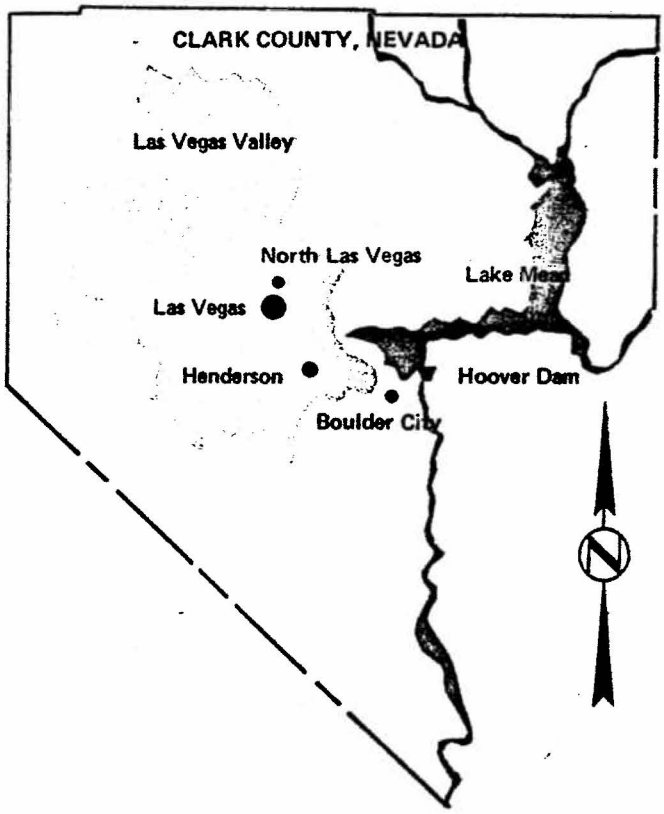
EXHIBIT —



LAKE MEAD

The source of water for the AMSWTF is Colorado River water in storage in Lake Mead. This is essentially a good raw water supply, although characterized by moderately high salinity, hardness and sulfate concentrations. During the fall season, temperature changes occur causing the lake to "turn over" and micro-organisms, originally at the bottom of the lake are introduced at the raw water intake. These micro-organisms undesirably effect the raw water quality by creating taste and odor problems. Throughout the year othe micro-organism populations occur t varying degrees. To maintain an aesthet cally pleasing water, special treatment i required. In selecting a water treatmen process for the Second Stage expansio of the SNWS, a treatment system was de veloped which would produce a contin uous supply of safe and potable wate and also make maximum use of the exist ing facility.

EXHIBIT 157

WATER TREATMENT

Soon after the raw water leaves the lake it begins undergoing treatment. Disinfection is, of course, the most important consideration in any water treatment process. To ensure complete destruction of all pathogenic organisms, chlorine injection points will be provided in the raw water supply pipeline, at many points within the treatment plant boundaries and at all the terminal delivery points.

Taste and odors will be combated by a series of treatment processes. Activated carbon will be introduced into the raw feed water as it enters the plant. The carbon will absorb much of the undesirable taste and odors. The water will then pass through the aeration basins where air will be entrained in the water, enhancing its flavor while removing more taste and odors.

The next pretreatment process will be the flash mixing of coagulants with the water where, in a fraction of a second, small microscopic particles will begin to stick together upon contact. The water then proceeds into large basins with paddle wheels, another front line treatment process known as flocculation. Additional chemicals can be added as necessary; the solution is gently mixed over a prolonged period of time forming discrete, visible particles which can be more effectively ly removed.

The pretreated water continues on to one of the most important treatment processes of this plant, second only to disinfection. This process is known as filtration. The water passes through 20" of anthracite coal and 10" of sand entrapping the greatest portion of the suspended material. The water is now a finished, crystal-clear product and, after some post-treatment to further insure complete disinfection and minimize its corrosiveness, it flows into a clearwell for a short storage period. It is ready for delivery through the many miles of transmission pipelines into the distribution grids and will not see daylight again until it comes out of the consumer's tap.

The filters, while performing their i
tant function, necessarily become pl
and lose their effectiveness as they
the water. Top filter performance re
backwashing to cleanse the entr
matter. Finished product water is pu
from the clearwell and is forced
wards through the filter media. Th
trapped matter is now placed back
suspension by the turbulent scrul
action of the backwashing and over
into recovery troughs where it flow
gravity into a clarifier. The water bec
quiescent and most of the material ir
pension settles out. The supernatan
water remaining in the clarifier, is

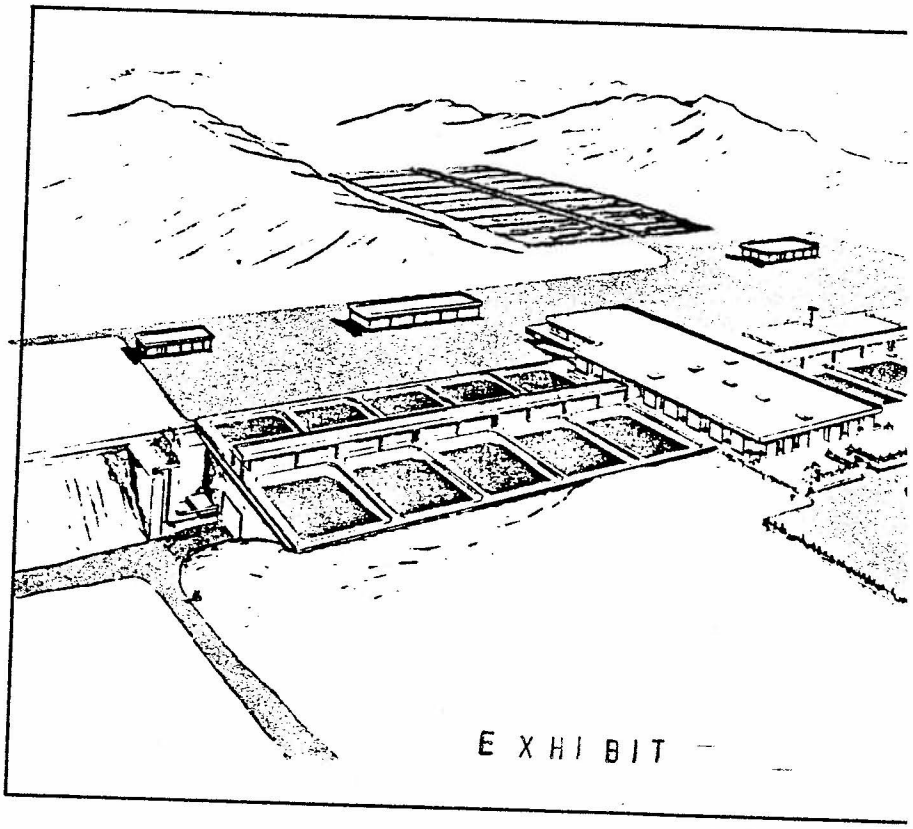


EXHIBIT —

PROPOSED PROJECT DEVELOPMENT

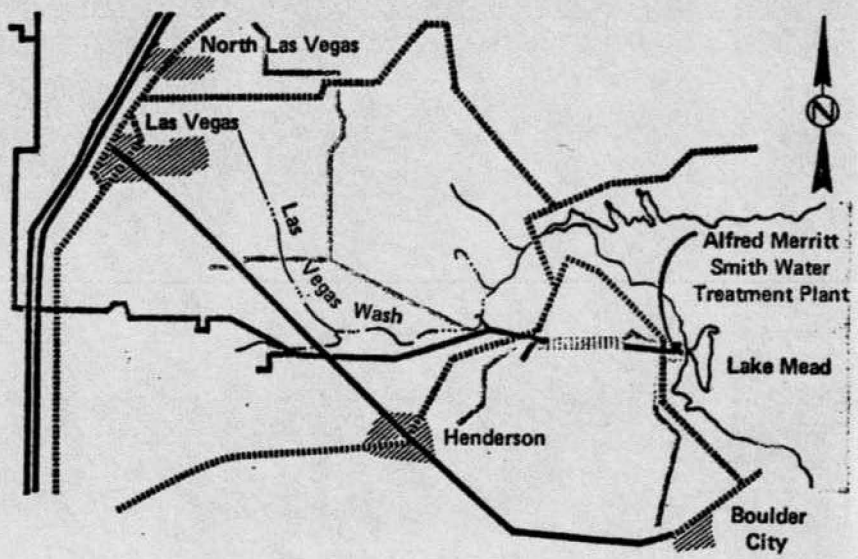
Much of the water treatment planned for the Second Stage facilities is already being performed by the existing treatment plant. The Second Stage will introduce two new pretreatment processes into the water treatment scheme; namely, aeration and flocculation. This will require the addition of an aeration chamber and ten new flocculation basins. It will be necessary, however, to expand the existing plant to increase its production capacity from 200 mgd to 400 mgd (Million Gallons per Day). A new flash mixing basin will be required and the number of dual media filters will have to be doubled, from ten to twenty filters. An additional seven million gallon clearwell is also planned, increasing the total storage capacity to twelve million gallons. The existing wash water recovery system will be relocated and three new sedimentation basins and two new thickeners will replace the existing system. The existing control building will undergo expansion and rearrangement for improving operating efficiency. A computer and automation section is being designed to take advantage of the most recent water system controls technology. The existing laboratory will be expanded and updated with the installation of more sophisticated laboratory and monitoring facilities. Personnel areas will be expanded to accommodate the enlarged staff. A new maintenance building will be added with a fully equipped facility for maintaining the entire Southern Nevada Water System.

SCHEDULING AND COSTS

The plant, as proposed, may be constructed with minimal interference to ongoing daily operation. It is anticipated that plant design will begin in the fall of 1976. Construction of the new facilities is scheduled to begin in mid-1978 and become operational by mid-1980. Rehabilitation of the existing facilities should be complete by early 1981.

The 58th Session of the State Legislature passed, and the Governor approved, authorization to finance up to $60 million for enlargement (Second Stage) of the treatment facility. It is estimated the cost of the expanded treatment facility, including financing, financing reserves, escalation, services and construction, will be $43 million.

EXHIBIT 16B



WATER PUMPING AND PIPELINE TRANSMISSION FACILITIES

In addition to the expansion of the AMSWTF the Bureau of Reclamation is currently working on plans to enlarge the transmission network of the Southern Nevada Water System.

At the request of the Division of Colorado River Resources, Congress authorized the Bureau of Reclamation to initiate pre-construction studies for the second stage of the project's pumping and transmission network facilities while the State authorized the study for enlargement of the water treatment plant. The proposed Second Stage facilities will increase the capacity of the SNWS to 400 mgd. The expanded transmission network will provide greater service for the Las Vegas Valley and Boulder City areas.

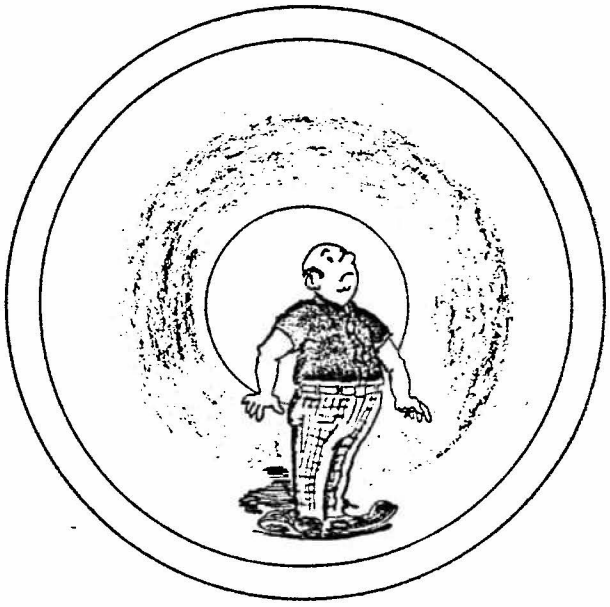
The first stage of the transmission network consisted of 35 miles of pipeline, eight pumping plants and a 4-mile long tunnel through a mountain range west of the treatment plant. The treated water is conveyed to the separate water purchasing entities for final distribution to the individual consumer. There are no open reservoirs which would allow contamination of the water within the transmission network.

The Second Stage of the transmission network will add another 32 miles of pipeline and five pumping stations to the Southern Nevada Water System. The second stage will provide service to a greater population of Southern Nevada and reduce the dependence upon depleting groundwater supplies.

EXHIBIT — 163

EXPANDED TRANSMISSION NETWORK
BASIC DATA

Total Length	67 miles
Number of Pumping Plants	13



The largest pipes used in the transmission network are 10 feet in diameter.

EXPANDED TREATMENT PLANT
BASIC DATA

Maximum Capacity	400 million gallons per day
Kind of Treatment	Pretreatment, aeration, taste and odor control, flocculation, filtration, chlorination, corrosion control

EXHIBIT

TESTIMONY OF DONALD L. PAFF

BEFORE THE

ASSEMBLY GOVERNMENT AFFAIRS COMMITTEE

SENATE BILL NO. 61

February 16, 1979

My name is Donald L. Paff. I am the General Manager and Secretary of the Las Vegas Valley Water District, Las Vegas, Nevada. Prior to joining the Water District, I was Administrator of the State of Nevada, Division of Colorado River Resources,for seven years. Along with other responsibilities, I was responsible for the financing and construction of the First Stage of the Southern Nevada Water System, and initiating the planning and financing of the Second Stage of the Southern Nevada Water System.

The Southern Nevada Water System, consisting of both Federal and State facilities, is a regional project designed to serve treated Colorado River water to the Las Vegas Valley and Boulder City areas. The First Stage of the System was placed in operation in 1971. The Federal facilities of the Second Stage, currently under construction, consist of the construction of the necessary pipelines, pumping plants and appurtenances, while the Second Stage of the State facilities consist of the expansion of the Alfred Merritt Smith Water Treatment Facilities from a capacity of 200 million gallons per day to 400 million gallons per day. The combined stages of the Southern Nevada Water System will be capable of treating and transporting 299,000 acre feet per year of Colorado River water.

The Las Vegas Valley Water District was created by Chapter 167 of Nevada Statutes of 1947, to provide for, among other things, the procurement,

distribution and sale of water, and to conserve the ground water resources of the Las Vegas Valley for present and future use. Currently, the District uses and pays for about 80 percent of the water treated and delivered from the First Stage of the System, and it is anticipated that this percentage usage will continue when the Second Stage is completed. It should be noted that the water-using agencies, through the use and sale of the water to their customers, support all costs of the System, both first and second stages, including debt service, operations and maintenance and adminstration.

Because of the District's direct interest and utilization of the Southern Nevada Water System, we support Senate Bill No. 61 to extend to the Division of Colorado River Resources, on the behalf and in the name of the State, the authority to borrow money and otherwise become obligated in a total principal amount of not exceeding $63,000,000 to defray wholly or in part the cost of acquiring, improving and equipping the State facilities.

The expansion of the State facility, the Alfred Merritt Smith Water Treatment Facility, was estimated to cost $55,000,000, such funding being authorized by Chapter 482, Statutes of Nevada, 1975, amended by Chapter 397, Statutes of Nevada, 1977. However, in November 1978, a revised Engineer's Estimate, taking into account experienced inflation and construction cost percentage increases and increasing requirements relating to Federal water quality standards, indicated the required State facilities would cost between $58,000,000 and $65,000,000. The revised estimates were verified by the receipt of construction bids on December 12, 1978, supporting the total costs of $63,000,000. After review by the Division of Colorado River Resources and the contracting water users of the Southern Nevada Water System, it was unanimously agreed that the planned expansion and modification of the treatment plant should proceed, subject to Legislative action to increase the funding authorization.

EXHIBIT — J

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Therefore, I respectfully urge this Committee to support the request of the Division of Colorado River Resources to provide the additional $8,000,000 of funding authorization, pursuant to Senate Bill No. 61, required to proceed with the construction of the State facilities. Additionally, we urge the Committee's earliest action on Senate Bill No. 61 in order that construction can be initiated and proceed on a schedule consistent with the Federal construction work.

I would be pleased to answer any questions of the Committee.

EXHIBIT —

EXTRACTS FROM:

$21,000,000

LAS VEGAS VALLEY WATER DISTRICT

1978 General Obligation Water Bonds

(REVENUE SUPPORTED)

Selling on
Thursday, August 3, 1978
At 11:00 o'clock A.M. P.D.T.

Board of Directors Meeting Room
Las Vegas Valley Water District Offices
3700 West Charleston Boulevard
Las Vegas, Nevada 89102

INFORMATION RE: SB 61

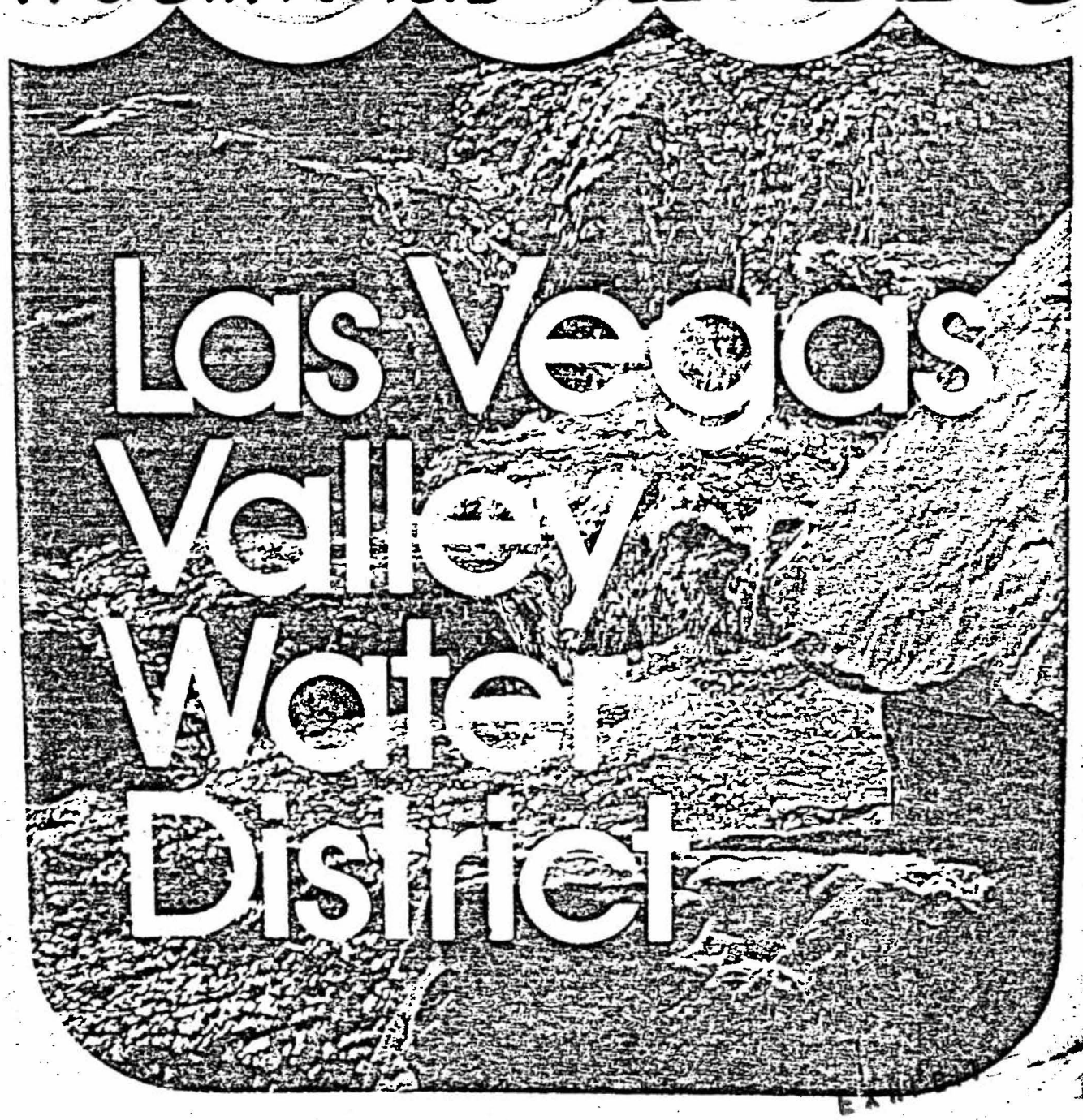
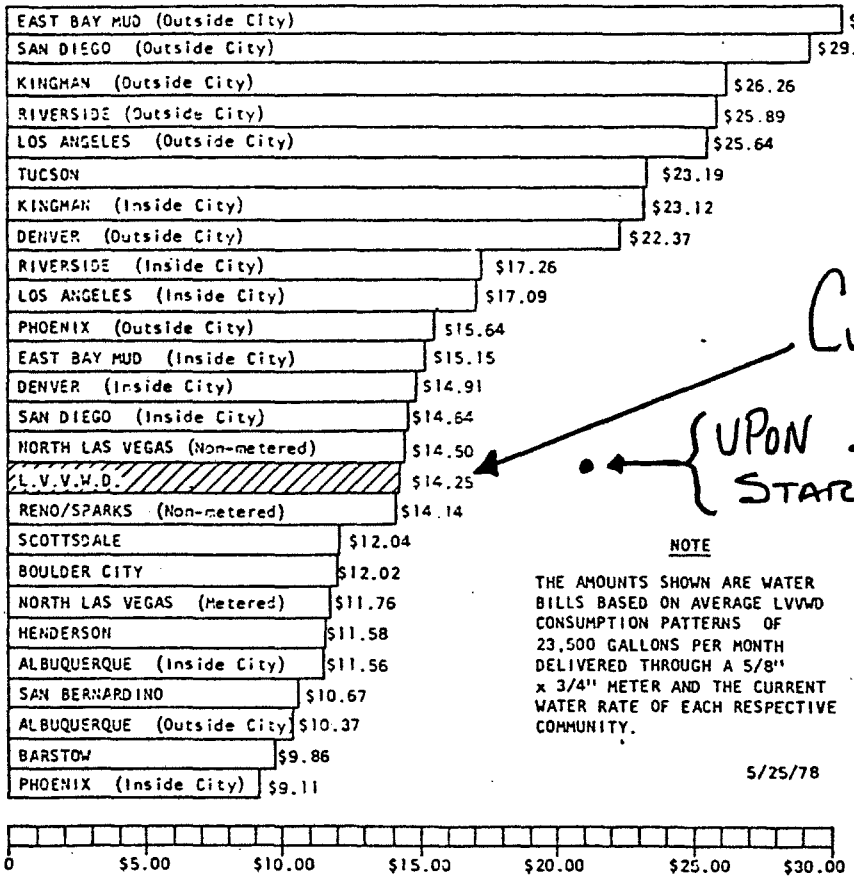


FIGURE 2

CURRENT AVERAGE MONTHLY WATER COSTS FOR A SINGLE RESIDENCE IN VARIOUS WESTERN CITIES.



SOURCE: LAS VEGAS VALLEY WATER DISTRICT

HAS BEEN REVISED TO: 50¢

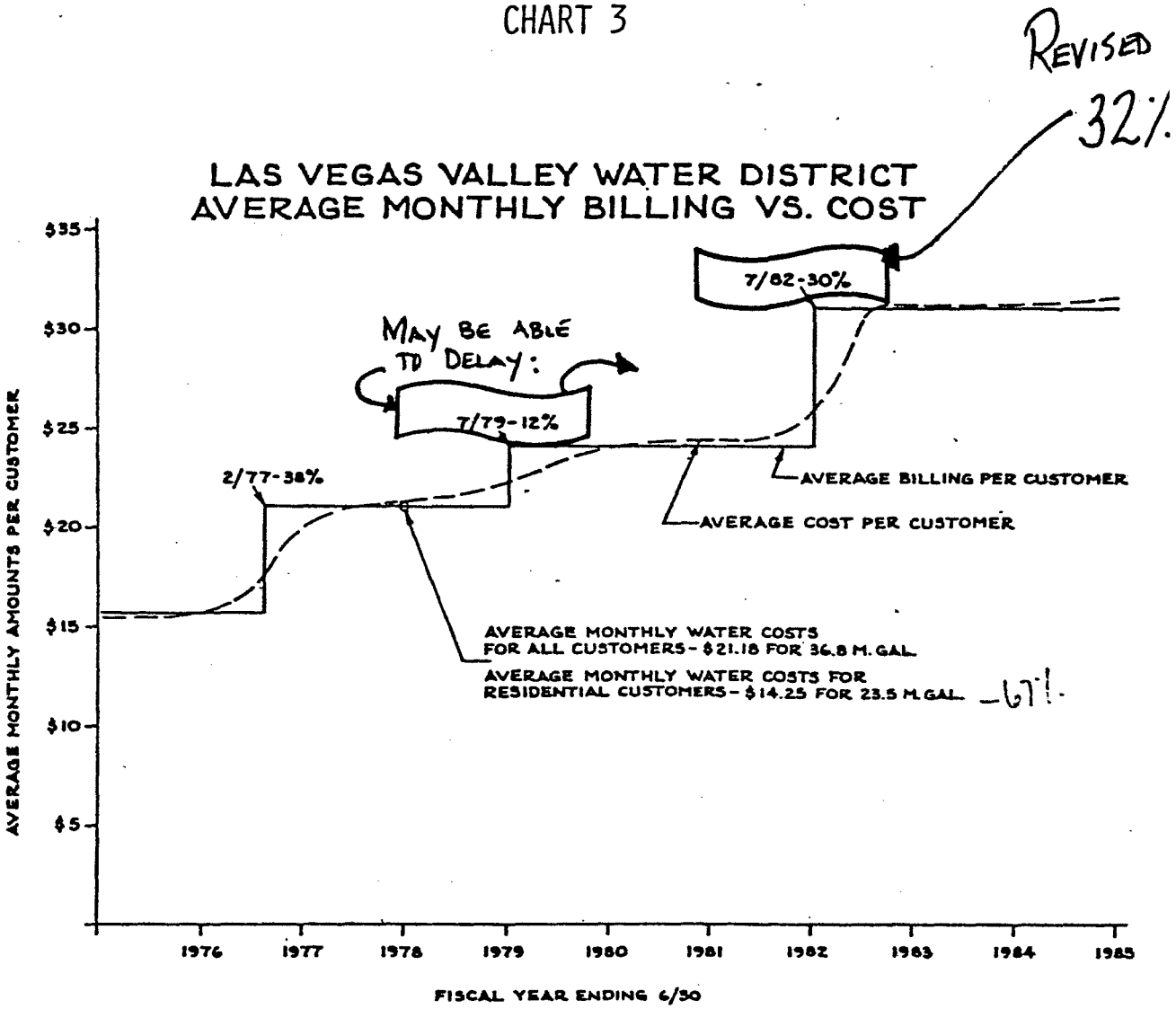
The operation of the second stage of the SNWS will have a significant impact on future water rates. Chart 2 plots the estimated costs through 1985 by major element. The bottom band shows the higher cost of water in 1982, as the second stage of the SNWS comes on-line. The wholesale cost of SNWS water is currently 21¢ per thousand gallons and is expected to go to 40¢ per thousand gallons. Approximately 62% of the District's supply now comes from the SNWS. By 1982, it is estimated that approximately 71% will come from the SNWS and the remaining 29% from wells. Costs, or revenue requirements, have been broken down into five basic categories:

1. SNWS Cost, which is made up of capital repayment, reserves, and operation and maintenance.

EXHIBIT 170

Chart 3 shows future costs and future revenues and their relationship. The example here is the average of all customers (hotels, commercial, residential) combined. The current average cost of water to residential customers and to all customers is also shown. As can be noted, rate increases are anticipated in July 1979 and July 1982.

CHART 3



SOURCE: LAS VEGAS VALLEY WATER DISTRICT

5-13-78

TYPICAL RESIDENTIAL BILL:

CURRENT RATES - $14.25
7/79 ? INCREASE - $16.00 } THIS $5.00 JU
7/82 INCREASE - $21.00 } DUE TO SNWS STAGE II START-UP

EXHIBIT 271

Chart 4 shows the elements of cost per customer, including the average billing per customer for costs of debt service. The impact of the start-up of the second stage of the SNWS is clearly shown.

CHART 4 (NOT REVISED FOR 50¢ Vs. 40¢

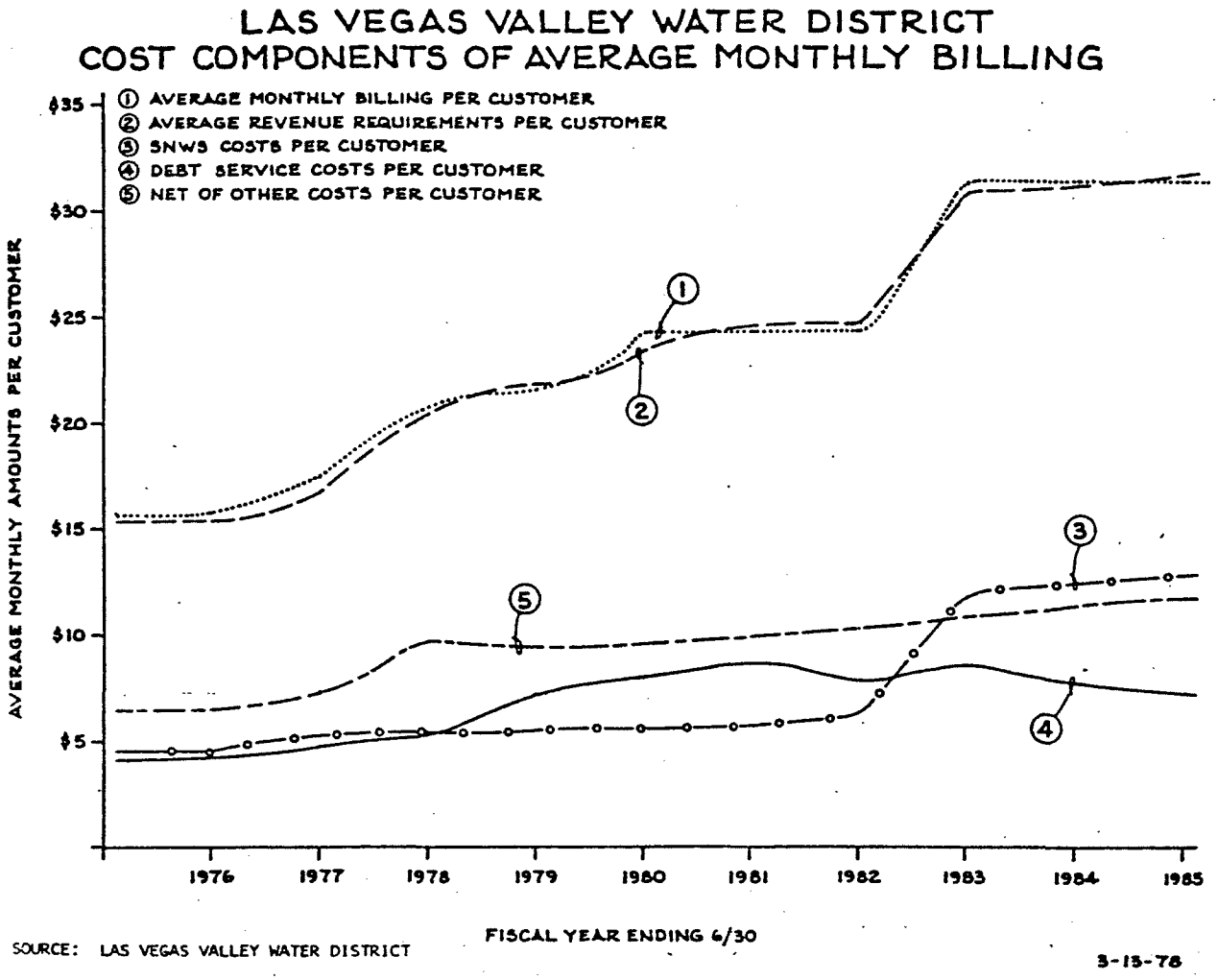


EXHIBIT 172