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**CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN**

MAY 1996

Prepared By

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CHAPTER I

CHAPTER I SUMMARY

The following represents a summary of the Wastewater Facilities Plan. The summary's format follows that of the general text, and emphasizes the most important elements of each chapter of the Plan.

CHAPTER II - INTRODUCTION

The southerly portion of Cathedral City, California (known as the Cove area) is reliant upon individual disposal systems (septic tanks with seepage pits or leach fields) for wastewater disposal. The lack of facilities for collection, treatment, and disposal of wastewater generated by residents in this area has long been recognized by DWA and regulatory agencies as a potential threat to ground water quality. In September of 1993 the California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB) adopted Resolution 93-112 which requested the City of Cathedral City "to submit an Action Plan which details steps which the City intends to take to reduce the population's effect on the ground water in the area."

In 1972, Krieger & Stewart prepared a report for Desert Water Agency (DWA) which addressed four wastewater facility alternatives for the southerly portion of Cathedral City and recommended implementation of Alternative III. Recently, DWA confirmed that Alternative III (collection and wastewater conveyance facilities within Cathedral City with all wastewater conveyed to the Coachella Valley Water District (CVWD) Palm Desert Wastewater Reclamation Plant for treatment and reclamation) is still the most advantageous project. DWA directed Krieger & Stewart, Incorporated (K&S) to revise Alternative III to reflect existing and future conditions within the Study Area.

CHAPTER III - STUDY AREA

The study area (see Figure III-1) consists of approximately 1,500 acres within the corporate boundary of Cathedral City, easterly of and adjacent to the City of Palm Springs. The northerly and northeasterly boundaries of the study area are formed by the City of Palm Springs City Limits and the southern right-of-way line of CVWD's Whitewater River right-of-way, respectively. The study area's westerly, southerly, and easterly boundaries are formed by the City of Cathedral City Limits.

Existing DWA wastewater facilities serving the Study Area are located in the northwesterly portion of the Study Area, primarily northerly of Highway 111 (see Figure III-2). Said facilities consist of approximately 17,900 L.F. of 8" gravity sewers, 800± L.F. of a 10" gravity sewer, 4,300 L.F. of 12" gravity sewers, 3,000 L.F. of an 18" gravity sewer with a 16" ductile iron pipe storm channel crossing,

a wastewater lift station (two 3.0 hp pumping units), and 1,400± L.F. of a 6" wastewater force main that conveys wastewater to the CVWD's wastewater system and ultimately to the Palm Desert Wastewater Reclamation Plant. Based on DWA records, the average daily wastewater flow is approximately 0.10 MGD. The balance of the Study Area is unsewered and relies on individual sewage disposal systems (septic tanks with seepage pits and leach fields) for wastewater disposal.

CHAPTER IV - PROJECTED WASTEWATER FLOWS

Projected wastewater flows are based on current zoning and assumed wastewater unit flow data (300 gpd per dwelling unit for residential areas and 1,500 gpd per acre for commercial and industrial areas). The ultimate average daily flow is estimated to be 1.74 MGD based on 4,141 residential dwelling units and 328.9 acres of commercial and industrial areas.

CHAPTER V - PROPOSED WASTEWATER SYSTEM IMPROVEMENTS

The proposed wastewater collection system consists of 116,800± L.F. of 8" gravity sewers, 3,300± L.F. of 10" gravity sewers, 3,400± L.F. of 12" gravity sewers, 4,500± L.F. of 15" gravity sewers, 100± L.F. of an 18" gravity interceptor sewer, 2,400± L.F. of a 16" force main (although actual length will depend on actual location of lift station), and appurtenant facilities, including 425 sewer manholes and 3,210 sewer laterals.

The proposed wastewater lift station consists of a concrete wet well with two 60 hp submersible pumps (one duty, one standby), hoist system for removal of pumps, diesel engine driven emergency standby generator, control building to house electrical switchgear, controls, telemetry, and standby generator, odor control facilities, and metering and monitoring facilities for quantity and quality wastewater measurements.

Estimated cost for facility improvements without financing are shown in Tables V-2 and V-3. As shown, the combined facilities cost of \$14,788,000 consists of \$13,685,000 for wastewater conveyance facilities (including gravity sewers, force main, sewer service laterals, and manholes), and \$1,103,000 for the wastewater lift station.

Annual operation and maintenance costs for all facilities within the Study Area (existing and proposed) are expected to be approximately \$225,000 per year (\$25,000 per year for existing facilities, \$150,000 per year for proposed wastewater conveyance facilities, and \$50,000 per year for the proposed wastewater lift station).

CHAPTER VI - PROJECT FINANCING ALTERNATIVES

There are a number of alternatives available to DWA for financing the construction of wastewater collection and conveyance facilities within the Study Area. The alternatives include direct issuance of bonds by DWA which could be repaid from sewer service revenues or tax revenues, Federal and State government sponsored loan programs, and pooled financing programs.

CHAPTER VII - FINANCIAL IMPACT

A. GENERAL

As discussed in Chapter III, DWA has existing wastewater facilities in the northwesterly portion of the Study Area. Since the proposed wastewater facilities are only necessary to provide service to unsewered properties and construction of additional wastewater facilities is not necessary to continue service to currently served properties, it appears appropriate for the new sewer users to pay all costs associated with the proposed wastewater facilities. Said costs include costs for facility improvements, CVWD fees for wastewater treatment and disposal capacity (sewer capacity charge), and costs to abandon existing individual sewage disposal systems (including connections to new sewer service laterals).

The total project cost including facility improvements, CVWD's sewer capacity charges, and the costs to abandon existing individual wastewater disposal systems is presented in Table VII-1. As shown, the total estimated project cost is \$29,827,000 (\$14,788,000 for facility improvements, \$10,139,000 for CVWD's sewer capacity charges, and \$4,900,000 for abandonment of existing individual wastewater disposal systems).

The estimated cost for each EDU is presented in Table VII-2. As shown, the estimated cost per EDU for those properties requiring the abandonment of existing individual wastewater disposal systems is \$7,233 and \$4,733 for those properties not requiring the abandonment of existing individual wastewater disposal systems. If the project is financed at 7% interest for 30 years, the annual cost would be approximately \$700 per EDU for those properties requiring the abandonment of existing individual wastewater disposal systems and approximately \$460 per EDU for those properties not requiring the abandonment of existing individual wastewater disposal systems. For the annual cost per EDU, it was assumed that the total estimated cost per EDU would be increased by 20% to cover the funding mechanism.

The operation and maintenance costs for the facilities is estimated at \$225,000 per year (\$175,000 per year for the existing and proposed collection system and \$50,000 per year for the wastewater lift station) or approximately \$39 per year per EDU or \$3.21 per month per EDU. DWA currently charges \$20.60 per month per EDU (\$3.00 per month for DWA operation and maintenance of the collection system and \$17.60 per month for CVWD's operations and maintenance of the treatment facility).

CHAPTER VIII - PHASED CAPITAL IMPROVEMENT SCHEDULE

A. GENERAL

The proposed wastewater facility improvements are described in Chapter V and are shown on Figure V-1 and Map 1. In order to accommodate project financing, the improvements could be constructed in the following five phases:

B. PHASE I

Phase I consists of two components: Phase I-A is the construction of facilities within Stage I of the Downtown Precise Area (Stage I is bounded by the flood control channel on the north, Van Fleet Avenue on the east, Highway 111 on the south, and Cathedral Canyon Drive on the west). The total estimated project cost is \$1,553,000 (\$669,000 for construction of facility improvements and \$884,000 for CVWD sewer capacity charges).

Phase I-B is the construction of interceptor sewers, the lift station, and the force main necessary to convey wastewater from Stage I of the Downtown Precise Area to CVWD's Palm Desert Wastewater Reclamation Plant and the construction of gravity sewers on the northerly and southerly sides of Highway 111 between Cathedral Canyon Drive and Date Palm Drive (excepting that portion included in Phase I-A). The total estimated project cost is \$2,148,000.

C. PHASE II

Phase II consists of the construction of facilities for Stage II of the Downtown Precise Area (balance of the Downtown Precise Area not included in Phase I). The total estimated project cost is \$3,677,000 (\$1,377,000 for construction of facility improvements and \$2,300,000 for CVWD sewer capacity charges).

D. PHASE III

Phase III consists of the construction of all facilities northerly of Highway 111 (except for those facilities to be included in Phase I) and all facilities westerly of the West Cathedral Canyon Channel. The total estimated project cost is \$8,195,000 (\$3,082,000 for construction of facility improvements, \$3,863,000 for CVWD sewer capacity charges, and \$1,250,000 for abandonment of existing individual wastewater disposal systems).

E. PHASE IV

Phase IV consists of the construction of all facilities northerly of Terrace Road and southerly of Highway 111 (except those areas included in Phase II). The total estimated project cost is \$6,742,000 (\$3,313,000 for construction of facility improvements, \$1,629,000 for CVWD sewer capacity charges, and \$1,800,000 for abandonment of existing individual wastewater disposal systems).

F. PHASE V

Phase V consists of the construction of all facilities southerly of Terrace Road including those facilities in Terrace Road. As shown, the total estimated project cost is \$7,512,000 (\$4,199,000 for construction of facility improvements, \$1,463,000 for CVWD sewer connection charge, and \$1,850,000 for abandonment of existing individual wastewater disposal systems).

CHAPTER II

CHAPTER II INTRODUCTION

The southerly portion of Cathedral City, California (known as the Cove area) is reliant upon individual subsurface disposal systems (septic tanks with seepage pits or leach fields) for wastewater disposal. The lack of facilities for collection, treatment, and disposal of wastewater generated by residents in this area has long been recognized by DWA and regulatory agencies as a potential threat to ground water quality.

In 1972, Krieger & Stewart prepared a report for DWA entitled Proposed Cathedral City Sewage System: Clean Water Grant Project Report (1972 DWA Report) which addressed the following four wastewater facility alternatives for the southerly portion of Cathedral City:

Alternate Plan I - Collection system and wastewater treatment plant within Cathedral City to collect and treat all wastewater generated within the study area.

Alternate Plan II - Collection and wastewater conveyance facilities within Cathedral City with all wastewater conveyed to the City of Palm Springs Wastewater Treatment Plant for treatment and disposal.

Alternate Plan III - Collection and wastewater conveyance facilities within Cathedral City with all wastewater conveyed to the Coachella Valley Water District (CVWD) Palm Desert Wastewater Reclamation Plant for treatment and reclamation.

Alternate Plan IV - The no project alternative.

Although, Alternative Plan III was the recommended project, persistent concerns regarding project costs delayed construction of the necessary facilities. In September of 1993, the California Regional Water Quality Control Board, Colorado River Basin Region (RWQCB) adopted Resolution 93-112 which requested the City of Cathedral City "to submit an Action Plan which details steps which the City intends to take to reduce the population's effect on the ground water in the area." A copy of said resolution is included as Appendix A.

In June of 1995, the RWQCB sent a letter to the City of Cathedral City expressing concern regarding the adverse impact of subsurface disposal of municipal wastewater on ground water quality. A copy of said letter is included as Appendix B.

Recently, DWA confirmed that Alternative Plan III as presented in the 1972 DWA Report is still the most advantageous project in terms of cost and ground water quality protection. Therefore, DWA directed Krieger & Stewart, Incorporated (K&S) to prepare a wastewater facilities plan for Alternative Plan III revised to reflect existing and future conditions within the Study Area.

Construction of wastewater collection and conveyance facilities within Cathedral City will have significant beneficial effects upon ground water supplies and water utilization efficiency in the upper Coachella Valley. Treating and reusing wastewater (reclamation) offers substantial benefits including fewer adverse impacts upon ground water quality and decreasing the quantity of ground water that must be extracted for irrigation uses, when compared with the disposal of wastewater by individual sewage disposal systems (septic tanks with seepage pits or leach fields).

The wastewater facilities plan report presents projected wastewater flows, recommended project facilities including sizing and location, budget costs for facilities, and possible construction phases for facilities.

CHAPTER III

CHAPTER III STUDY AREA

The Study Area (see Figure III-1) consists of approximately 1,500 acres within the corporate boundary of Cathedral City, easterly of and adjacent to the City of Palm Springs. The northerly and northeasterly boundaries of the Study Area are formed by the City of Palm Springs City Limits and the southerly right-of-way line of CVWD's Whitewater River right-of-way, respectively. The Study Area's westerly, southerly, and easterly boundaries are formed by the City Limits of the City of Cathedral City.

A. PHYSICAL ENVIRONMENT

The Study Area is situated at the foot of the San Jacinto Mountains on the south side of the Coachella Valley. The climate is typical of low deserts in the southwestern United States, with precipitation averaging between 3" and 6" per year, low humidity, high summer temperatures (occasionally exceeding 120°F), mild winters, and prevailing winds which are usually gentle, but occasionally increase to velocities as high as 50 to 60 miles per hour or more. The lowest average monthly temperature in the area (approximately 54°F) occurs in January, while the highest average monthly temperature (approximately 91°F) occurs in July.

The elevation of the Study Area ranges between approximately 800 feet above sea level in the southwest and about 280 feet above sea level in the east. The area southerly of Tahquitz Creek drains northeasterly and the area northerly of Tahquitz Creek drains southeasterly. Surface water drainage facilities convey storm water from the Cathedral Canyon portion of the San Jacinto Mountains and the southeasterly extension of Tahquitz Creek into the Whitewater River Flood Control Channel at the Study Area's easterly edge.

B. EXISTING ZONING AND DEVELOPMENT

The corridor northerly and southerly of Highway 111 is zoned commercial, planned community commercial, commercial tourist and recreation, and light industrial; however, the City of Cathedral City has recently rezoned the area between the Flood Control Channel on the north, Cathedral Canyon Drive on the west, Date Palm Drive on the east, and C Street on the south as Neighborhood Residential, Mixed Corridor, Downtown Core, and Open Space. This corridor is approximately 90% developed.

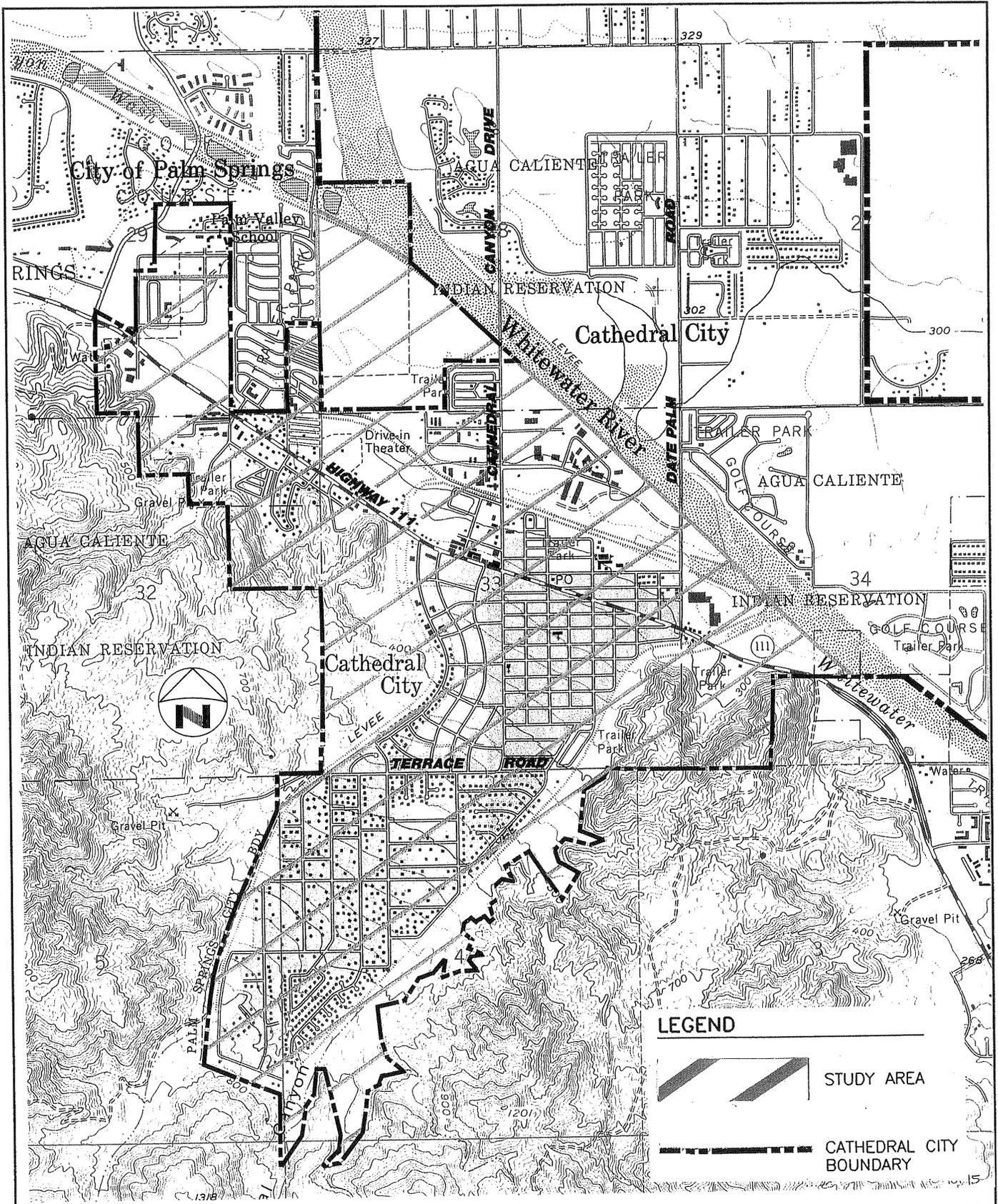
Portions of the Study Area southerly of the Highway 111 corridor between the East Cathedral Canyon Channel and the West Cathedral Canyon Channel are zoned multiple family residential and single family residential with a majority of the existing development being single family dwellings. This area is approximately 90% developed.

Portions of the Study Area northerly of the Highway 111 corridor are zoned as follows: planned community commercial, commercial business park, commercial tourist and recreation, light industrial, and multiple family residential. This area is approximately 80% developed.

Portions of the Study Area, southerly of the Highway 111 corridor and westerly of the West Cathedral Canyon Channel are zoned commercial tourist and recreation and open space/residential. This area is approximately 20% developed.

C. EXISTING FACILITIES

Existing DWA wastewater facilities serving the Study Area are located in the northwesterly portion of the Study Area, primarily northerly of Highway 111 (see Figure III-2). Said facilities consist of approximately 17,900 L.F. of 8" gravity sewers, 800± L.F. of a 10" gravity sewer, 4,300 L.F. of 12" gravity sewers, 3,000 L.F. of an 18" gravity sewer with a 16" ductile iron pipe storm channel crossing, a wastewater lift station (two 3.0 hp pumping units), and 1,400± L.F. of a 6" wastewater force main that conveys the wastewater to the CVWD's wastewater system and ultimately to the Palm Desert Wastewater Reclamation Plant. Based on DWA records, the average daily wastewater flow is approximately 0.10 MGD. The balance of the Study Area is unsewered and relies on individual sewage disposal systems (septic tanks with seepage pits leach fields) for wastewater disposal.



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DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
STUDY AREA

FIGURE
III-1

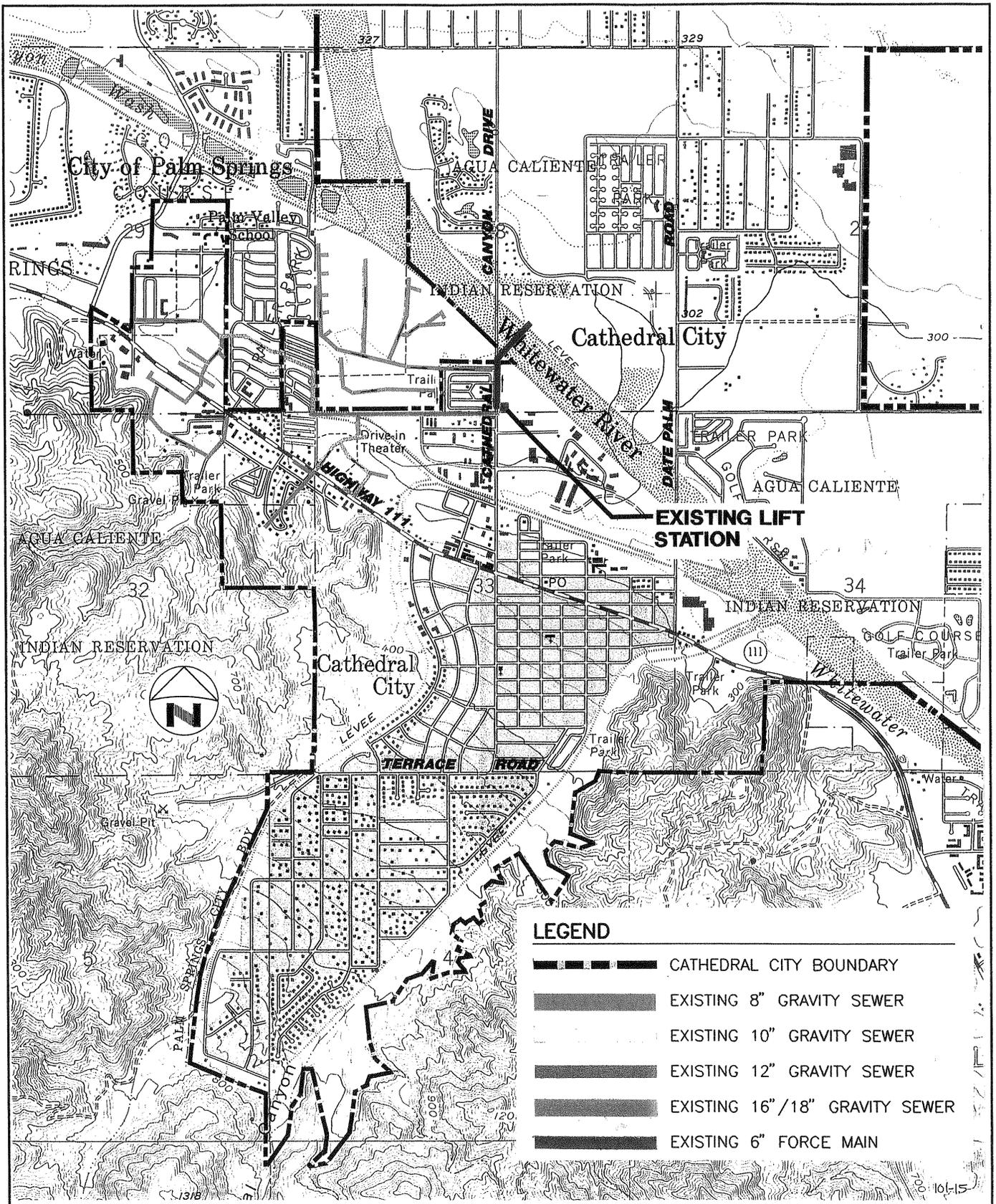
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DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 EXISTING FACILITIES

FIGURE
III-2

SCALE: 1"=2,000'

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CHAPTER IV

**CHAPTER IV
PROJECTED WASTEWATER FLOWS**

A. GENERAL

Projected wastewater flow requirements set forth herein, which were used to establish system requirements, are based on current zoning and assumed wastewater unit flow data. Current zoning is based on the Cathedral City Zoning Map (May 26, 1992) and the revised map of Downtown Precise Area (as adopted by City Council on June 14, 1995).

B. PROJECTED WASTEWATER FLOWS

Assumed wastewater unit flows for each of the zoning designations are as follows:

<u>Zoning</u>	<u>Description</u>	<u>Assumed Wastewater Unit Flows</u>
RMHP	Residential - Mobile Home Park	300 GPD/DU
DRN	Neighborhood Residential	300 GPD/DU
R3	Multiple Family Residential (1 DU/4,000 SF)	300 GPD/DU
R2	Multiple Family Residential (1 DU/4,000 SF)	300 GPD/DU
R1-7.2	Single Family Residential (1 DU/7,200 SF)	300 GPD/DU
R1-12	Single Family Residential (1 DU/12,000 SF)	300 GPD/DU
R1-15	Single Family Residential (1 DU/15,000 SF)	300 GPD/DU
OS-R20	Open Space/Residential (1 DU/20,000 SF)	300 GPD/DU
PD86	Planned Development	300 GPD/DU
CTR	Commercial Tourist and Recreation	1,500 GPD/AC
PCC	Planned Community Commercial	1,500 GPD/AC
CBP	Commercial Business Park	1,500 GPD/AC
I-1	Light Industrial	1,500 GPD/AC
MXC	Mixed Corridor	300 GPD/DU - Residential 1,500 GPD/AC - Commercial
DC	Downtown Corridor	1,500 GPD/AC
OS	Open Space	0

The Study Area was divided into 33 subareas based on the aforementioned Cathedral City Zoning Map and Downtown Precise Area map. Said subareas are shown on Figures IV-1, IV-2, and IV-3. For each subarea, the ultimate number of dwelling units or net developable acres were determined as follows:

1. For single family residential areas and mobile home parks, the ultimate number of dwelling units was based on the number of existing dwelling units and vacant lots.
2. For multiple family and open-space residential areas, the ultimate number of dwelling units was assumed to be 80 percent of the maximum number of dwelling units based on the gross acreage and average lot size from the Cathedral City Zoning Map.
3. For neighborhood residential, mixed corridor, and downtown core areas, the ultimate number of dwelling units and the net developable commercial area, was based on the maximum development as shown on the City's revised map of Downtown Precise Area.
4. For commercial and industrial areas (except in the Downtown Precise Area), the net developable area was assumed to be 80% of the gross acreage.

The assumed wastewater unit flow was applied to the ultimate number of dwelling units for residential areas and to the net acreage for non-residential areas to determine the ultimate average daily flow for each subarea. The initial average daily flow for each subarea was then determined by estimating the percent of each subarea that is presently developed.

Table IV-1 summarizes, for each subarea, the Cathedral City zoning designation, percent of subarea developed, gross developable area, ultimate number of dwelling units for residential areas or net developable acres for non-residential areas, initial average daily flow (MGD), and ultimate average daily flow (MGD). Based on Table IV-1, the following summary represents projections for the entire Study Area:

Ultimate Number of Single Family Residential, Open Space Residential, and Planned Development Dwelling Units	1,551
Ultimate Number of Multiple Family Residential Dwelling Units	530
Ultimate Number of Neighborhood Residential and Mixed Corridor Dwelling Units	1,530

Ultimate Number of Mobile Homes	530
Ultimate Number of Recreational Vehicles	100
Ultimate Acreage of Commercial and Industrial Areas	304
Ultimate Acreage of Downtown Core and Mixed Corridor Areas	24.9
Initial Average Daily Flow	1.07 MGD
Ultimate Average Daily Flow	1.74 MGD

Proposed facilities are based on the data presented in Table IV-1 and the projected contributions for the subareas to the proposed collection system facilities.

TABLE IV-1
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 PROJECTED WASTEWATER FLOWS BY SUBAREA

SUB-AREA NO. (1)	ZONING (2)	ZONING DESCRIPTION	COMMENTS	PERCENT DEVELOPED	GROSS AREA (ACRES)	ULTIMATE NUMBER OF DWELLING UNITS OR ACRES (3)	INITIAL ADF FLOW (MGD) (4)	ULTIMATE ADF FLOW (MGD) (4)
1	R1-12	SINGLE FAMILY RESIDENTIAL (1 D.U./12,000 S.F.)	DEVELOPED WITH HOUSES	94	98	220 DU	0.06	0.07
2	R1-7.2	SINGLE FAMILY RESIDENTIAL (1 D.U./7,200 S.F.)	DEVELOPED WITH HOUSES	99	59	210 DU	0.06	0.06
3	R1-15	SINGLE FAMILY RESIDENTIAL (1 D.U./15,000 S.F.)	DEVELOPED WITH HOUSES	97	31	80 DU	0.02	0.02
4	R1-7.2	SINGLE FAMILY RESIDENTIAL (1 D.U./7,200 S.F.)	DEVELOPED WITH HOUSES	96	82	250 DU	0.07	0.08
5	OS-R20	OPEN SPACE/RESIDENTIAL (1 D.U./20,000 S.F.)	NOT DEVELOPED, PARTIALLY IN HILLS, DIFFICULT TO DEVELOP, TO BE SEWERED BY CWMD	---	---	---	---	---
6	R1-7.2	SINGLE FAMILY RESIDENTIAL (1 D.U./7,200 S.F.)	DEVELOPED WITH HOUSES MOBILE HOME PARK	98	105	320 DU 70 MH	0.09 0.02	0.10 0.02
7	R2	MULTIPLE FAMILY RESIDENTIAL (1 D.U./4,000 S.F.)	DEVELOPED WITH APARTMENTS	90	27	235 DU	0.06	0.07
8	CTR	COMMERCIAL TOURIST AND RECREATION	EXISTING TRAILER PARK, MOTEL PRESENTLY SEWERED BY CWMD	---	---	---	---	---
9	DRN	NEIGHBORHOOD RESIDENTIAL		---	---	550 DU	0.03	0.17
9A	MXC	MIXED CORRIDOR		---	---	170 DU 8.2 AC	0.01 0.00	0.05 0.01
10	R2	MULTIPLE FAMILY RESIDENTIAL (1 D.U./4,000 S.F.)	EXISTING MOTELS/HOTELS AND RESIDENTIAL	90	19	165 DU	0.04	0.05
11	PCC	PLANNED COMMUNITY COMMERCIAL	INDUSTRIAL AND COMMERCIAL DEVELOPMENT	70	14	11.2 AC	0.01	0.02
12	CTR	COMMERCIAL TOURIST AND RECREATION	DIFFICULT TO DEVELOP	0	27	21.6 AC	0.00	0.03
13	OS-R20	OPEN SPACE/RESIDENTIAL (1 D.U./20,000 S.F.)	NOT DEVELOPED, IN HILLS, DIFFICULT TO DEVELOP	0	81	141 DU	0.00	0.04
14	PCC	PLANNED COMMUNITY COMMERCIAL	TO BE SEWERED BY CWMD	---	---	---	---	---

TABLE IV-1
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 PROJECTED WASTEWATER FLOWS BY SUBAREA
 (Continued)

SUB-AREA NO. (1)	ZONING (2)	ZONING DESCRIPTION	COMMENTS	PERCENT DEVELOPED	GROSS AREA (ACRES)	ULTIMATE NUMBER OF DWELLING UNITS OR ACRES (3)	INITIAL ADF FLOW (MGD) (4)	ULTIMATE ADF FLOW (MGD) (4)
15	PCC	PLANNED COMMUNITY COMMERCIAL		60	17	13.6 AC	0.01	0.02
16	MXC	MIXED CORRIDOR		---	---	161 DU 6.9 AC	0.02 0.00	0.05 0.01
17	OS	OPEN SPACE		---	2	---	0.00	0.00
18	DC	DOWNTOWN CORE		---	---	8.1 AC 23 DU	0.01	0.01 0.01
18A	DRN	NEIGHBORHOOD RESIDENTIAL		---	---	626 DU 1.7 AC	0.03	0.19 0.00
19	PCC	PLANNED COMMUNITY COMMERCIAL		70	10	8.0 AC	0.01	0.01
20	CBP	COMMERCIAL BUSINESS PARK		100	19	15.2 AC	0.02	0.02
21	I-1	LIGHT INDUSTRIAL		80	91	72.8 AC	0.09	0.11
22	I-1	LIGHT INDUSTRIAL		80	28	22.4 AC	0.03	0.03
23	CTR	COMMERCIAL TOURIST AND RECREATION	RV PARK WITH 100+ SPACES	100	13	100 RV	0.02	0.02
24	PCC	PLANNED COMMUNITY COMMERCIAL	COMMERCIAL PLUS TRAILER PARK PORTION OF TRAMVIEW MOBILE HOME PARK	90	54	43.2 AC 60 MH	0.06 0.02	0.06 0.02
25	PCC	PLANNED COMMUNITY COMMERCIAL	COMMERCIAL BUSINESS PARK DESERT HILLS MOBILE HOME PARK	50	57	45.6 AC 80 MH	0.03 0.02	0.07 0.02
26	PCC	PLANNED COMMUNITY COMMERCIAL		50	37	29.6 AC	0.02	0.04
27	OS-R20	OPEN SPACE/RESIDENTIAL (1 D.U./20,000 S.F.)	NOT DEVELOPED, IN HILLS, DIFFICULT TO DEVELOP	0	18	31 DU	0.00	0.01
28	PCC	PLANNED COMMUNITY COMMERCIAL		50	26	20.8 AC	0.02	0.03

TABLE IV-1
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PROJECTED WASTEWATER FLOWS BY SUBAREA
 (Continued)

SUB-AREA NO. (1)	ZONING (2)	ZONING DESCRIPTION	COMMENTS	PERCENT DEVELOPED	GROSS AREA (ACRES)	ULTIMATE NUMBER OF DWELLING UNITS OR ACRES (3)	INITIAL ADF FLOW (MGD) (4)	ULTIMATE ADF FLOW (MGD) (4)
29	R3	MULTIPLE FAMILY RESIDENTIAL (1 D.U./4,000 S.F.)		30	15	130 DU 80 MH	0.01 0.02	0.04 0.02
30	RMHP (5)	RESIDENTIAL - MOBILE HOME PARK	TRAMVIEW MOBILE HOME PARK	100		240 MH	0.07	0.07
31	PD86 (5)	PLANNED DEVELOPMENT	CONDOMINIUMS AROUND GOLF COURSE	100		299 DU	0.09	0.09
TOTAL:							1.07	1.74

(1) REFER TO FIGURES IV-1, IV-2, AND IV-3.

(2) CATHEDRAL CITY ZONING MAP (MAY 26, 1992) AND REVISED MAP OF DOWNTOWN PRECISE AREA (AS ADOPTED BY CITY COUNCIL JUNE 14, 1995).

(3) A. FOR SINGLE FAMILY RESIDENTIAL AREAS AND MOBILE HOME PARKS, THE ULTIMATE NUMBER OF DWELLING UNITS WAS BASED ON THE NUMBER OF EXISTING DWELLING UNITS AND VACANT LOTS.

B. FOR MULTIPLE FAMILY AND OPEN SPACE RESIDENTIAL AREAS, THE ULTIMATE NUMBER OF DWELLING UNITS WAS ASSUMED TO BE 80% OF THE MAXIMUM NUMBER OF DWELLING UNITS BASED ON THE GROSS ACREAGE AND AVERAGE LOT SIZE FROM THE CATHEDRAL CITY ZONING MAP.

C. FOR NEIGHBORHOOD RESIDENTIAL, MIXED CORRIDOR, AND DOWNTOWN CORE AREAS, THE ULTIMATE NUMBER OF DWELLING UNITS AND THE NET DEVELOPABLE COMMERCIAL AREA WERE BASED ON THE DOWNTOWN PRECISE AREA INCLUDED IN THIS REPORT AS FIGURES IV-2 AND IV-3.

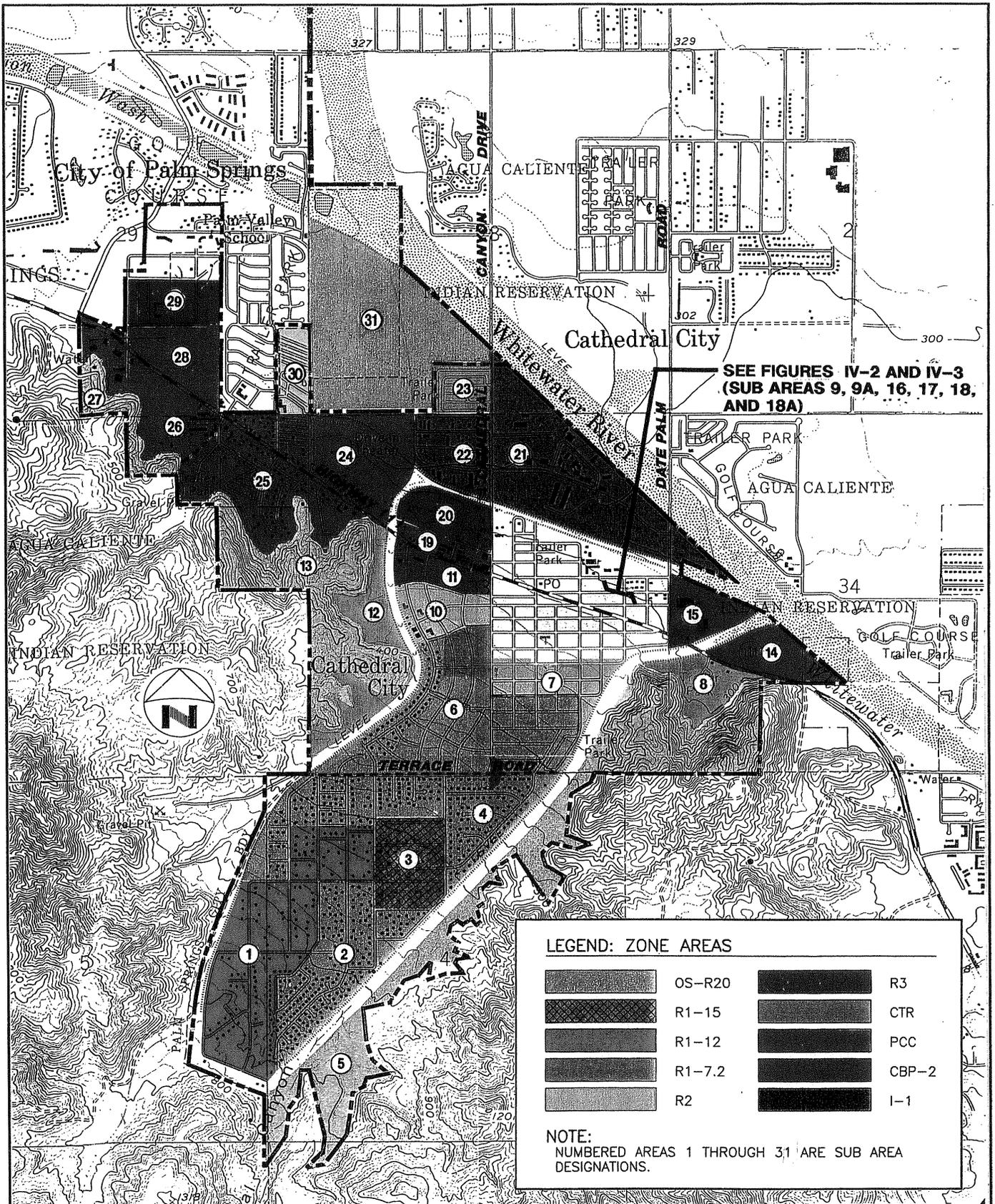
D. FOR COMMERCIAL AREAS AND INDUSTRIAL AREAS, EXCEPT IN THE DOWNTOWN PRECISE AREA, THE NET DEVELOPABLE AREA WAS ASSUMED TO BE 80% OF THE GROSS AREA.

(4) A. FOR SINGLE FAMILY RESIDENTIAL, MULTIPLE FAMILY RESIDENTIAL, CONDOMINIUMS, AND MOBILE HOMES, WASTEWATER FLOWS WERE ASSUMED TO BE 300 GPD PER DWELLING UNIT.

B. FOR RECREATIONAL VEHICLES, WASTEWATER FLOWS WERE ASSUMED TO BE 150 GPD PER VEHICLE.

C. FOR COMMERCIAL AND INDUSTRIAL AREAS, WASTEWATER FLOWS WERE ASSUMED TO BE 1,500 GPD PER ACRE.

(5) CITY OF PALM SPRINGS ZONING MAP (JANUARY 6, 1988).



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DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
EXISTING ZONING

FIGURE
IV-1

SCALE: 1"=2,000'

DATE: 03/05/96

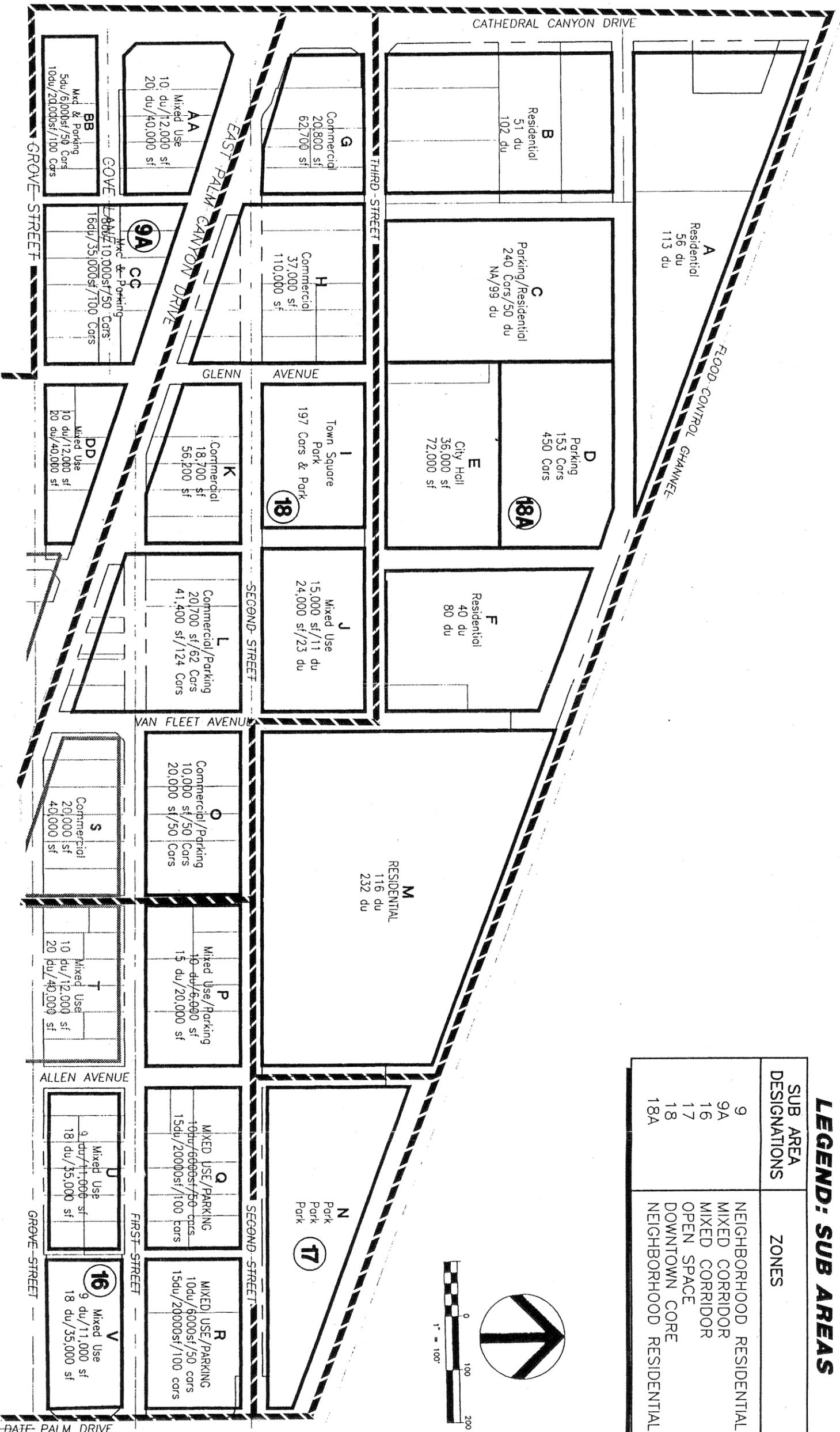
DRAWN BY: JKV

CHECKED BY: MEM

W.O.: 101-15

LEGEND: SUB AREAS

SUB AREA DESIGNATIONS	ZONES
9	NEIGHBORHOOD RESIDENTIAL
9A	MIXED CORRIDOR
16	MIXED CORRIDOR
17	OPEN SPACE
18	DOWNTOWN CORE
18A	NEIGHBORHOOD RESIDENTIAL



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DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
DOWNTOWN PRECISE AREA

FIGURE
IV-2

SCALE: N.T.S. DATE: 3/5/96 DRAWN BY: JKV CHECKED BY: JBH W.O.: 101-15

CHAPTER V

**CHAPTER V
PROPOSED WASTEWATER SYSTEM IMPROVEMENTS**

A. GENERAL

Proposed wastewater system improvements have been located and sized to meet the ultimate wastewater requirements of the Study Area. Said improvements consist of gravity sewers, manholes, sewer laterals, a lift station, and a force main.

B. SYSTEM DESIGN

1. General Location

Utilizing the most current Riverside County Flood Control and Water Conservation District topographic maps (1" = 200'), an April, 1993 aerial photograph (1" = 1,000') of the Study Area, and the Downtown Precise Area map prepared by the City of Cathedral City, locations for the proposed wastewater collection facilities were selected (see Figure V-1 and Map No. 1). Where possible, proposed wastewater collection system facilities were located in existing public right-of-way rather than private streets or within mobile home parks.

2. Capacity

To determine capacity for proposed wastewater conveyance facilities, nodes were assigned to all major junctions and the subareas tributary to each node were determined. Thereafter, using the initial and ultimate average daily flows for each subarea as shown in Table IV-1, the initial and ultimate average daily flows in the conveyance system at each node were determined. Peak flows were also estimated, based on an empirical formula developed by the City of Los Angeles, $Q_{\text{peak}} = 2.3 (Q_{\text{avg}})^{0.89}$. Table V-1 summarizes the tributary nodes and subareas, the initial average and peak daily flows, and the ultimate average and peak daily flows for each Node.

Capacity of existing sewers was determined by the use of the Manning formula, a friction factor of 0.013, and sewer diameters and slopes obtained from construction drawings. All existing sewers have adequate capacity to accommodate projected ultimate peak flows.

The capacity of proposed sewers was also estimated using the Manning formula with a friction factor of 0.013. It was assumed that sewer slopes would match the existing ground surface slopes and that the depth to diameter ratio of the sewers at ultimate peak flow would not exceed 0.50 for sewer diameters 10" and smaller and 0.75 for sewer diameters, 12" and larger. Recommendations for sewer design criteria are presented in Appendix C.

C. PROPOSED WASTEWATER COLLECTION FACILITIES

The proposed locations of wastewater conveyance facilities serving the area southerly of Highway 111 are similar to those presented in the 1972 DWA Report. Facilities consist of 8" gravity sewers (except for 10" and 12" trunk sewers located on the easterly edge of the Study Area) which conveys wastewater to the proposed lift station located southerly of Canyon Wash near Date Palm Drive.

Proposed locations of wastewater conveyance facilities serving the area northerly of Highway 111 are different than those presented in the 1972 DWA Report due to the subsequent pattern of development in that area, the locations of existing sewer facilities, and anticipated future development in accordance with the City's proposed map of the Downtown Precise Area.

All gravity sewers northerly of Highway 111 are proposed to be 8" in diameter with the exception of a 12" trunk sewer located southerly of Canyon Wash between Van Fleet Avenue and Date Palm Drive; a 12" trunk sewer located in Date Palm Drive between Highway 111 and the Canyon Wash, a 15" trunk sewer located in Cathedral Canyon Drive between Perez Road and northerly of Kieley Road, in Perez Road between Cathedral Canyon Drive and Date Palm Drive, and in Date Palm Drive between Perez Road and southerly of Canyon Wash; and an 18" trunk sewer which conveys wastewater to the proposed lift station.

Existing and proposed sewers within the Study Area are shown on Figure V-1 and Map 1 (inserted in pocket). Map 1 shows all major sewers (including diameter, slope, and capacity) within the Study Area and each node (including initial average and peak daily flows, and ultimate average and peak daily flows).

The proposed wastewater collection system consists of 116,800± L.F. of 8" gravity sewers, 3,300± L.F. of 10" gravity sewers, 3,400± L.F. of 12" gravity sewers, 4,500± L.F. of 15" gravity sewers, 100± L.F. of an 18" gravity interceptor sewer, 2,400± L.F. of a 16" force main (although actual length will depend on actual location of lift station), and appurtenant facilities, including 425 sewer manholes and 3,210 sewer laterals.

D. PROPOSED WASTEWATER LIFT STATION

The proposed wastewater lift station consists of a concrete wet well with two 60 hp submersible pumps (one duty, one standby), hoist system for removal of pumps, diesel engine driven emergency standby generator, control building to house electrical switchgear, controls, telemetry, and standby generator, odor control facilities, and metering and monitoring facilities for quantity and quality wastewater measurements.

Estimated initial flow is approximately 61% of the ultimate and although other project facilities can be constructed in phases, it is not cost effective to construct the lift station in phases (e.g. initially install pumps smaller than ultimate capacity or to construct multiple force mains). Therefore, it is recommended that all facilities be sized for ultimate wastewater flows.

As indicated, the sewage lift station will have backup pumping capacity and emergency backup power supply to ensure continued operation in the event of pump or power failure. To ensure protection of the proposed sewage force main where it crosses the Palm Canyon Wash, it has been assumed that the pipeline will be constructed using ductile iron pipe with minimum 12 feet of cover and concrete encasement. Recommendations for lift station design criteria are presented in Appendix D.

E. ESTIMATED COST FOR FACILITY IMPROVEMENTS

Estimated cost for facility improvements without financing are shown in Tables V-2 and V-3. As shown, the combined facilities cost of \$14,788,000 consists of \$13,685,000 for wastewater conveyance facilities (including gravity sewers, force main, sewer service laterals, and manholes), and \$1,103,000 for the wastewater lift station.

Estimated cost for facility improvements include construction costs, a 20% allowance for construction contingencies, a 20% allowance for administration, legal, and engineering costs, and DWA administration and general expenses. The estimated cost is based on 1996 cost levels.

F. OPERATION AND MAINTENANCE COSTS

Annual operation and maintenance costs for the sewers are assumed to approximate 1% of the project facilities cost. Annual operation and maintenance costs for the wastewater lift station are assumed to approximate 2% of the project facilities cost. The wastewater lift station energy costs are based on an average energy rate of \$0.10 per kilowatt hour.

Annual operation and maintenance costs for all facilities within the Study Area (existing and proposed) are expected to be approximately \$225,000 per year (\$25,000 per year for existing facilities, \$150,000 per year for proposed wastewater conveyance facilities, and \$50,000 per year for the proposed wastewater lift station).

**TABLE V-1
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PROJECTED WASTEWATER FLOWS BY NODES**

SYSTEM (1) NODE NUMBER	ESTIMATED WASTEWATER FLOW AT SYSTEM NODES (MGD)				TRIBUTARY NODES AND SUBAREAS	REMARKS
	ADF (2) INITIAL	ADF ULTIMATE	PDF (3) INITIAL	PDF ULTIMATE		
LIFT STATION	1.07	1.74	2.44	3.75	NODES 1A + 2A	TOTAL FLOW TO PROPOSED LIFT STATION
1A	0.47	0.77	1.17	1.82	NODES 1B + 3A + 4A	NEW SEWER
1B	0.45	0.73	1.13	1.74	NODE 5A + 1C + 50% OF AREA 16	NEW SEWER
1C	0.44	0.69	1.11	1.65	NODES 1D + 6A	NEW SEWER
1D	0.31	0.40	0.81	1.02	NODES 1E + 7A + AREA 7 + 33% AREA 6 + 33% OF AREA 9	NEW SEWER
1E	0.19	0.20	0.52	0.55	AREA 1 + 2 + 3 + 67% OF AREA 4	NEW SEWER
2A	0.60	0.97	1.46	2.24	NODES 2B + 8A + 33% OF AREA 21	NEW SEWER
2B	0.47	0.66	1.17	1.59	NODE 2C + 15% OF AREA 22 + 67% OF AREA 21	NEW SEWER. GRAVITY UNDER CHANNEL.
2C	0.41	0.59	1.04	1.44	NODE 2D + 60% OF AREA 22	NEW SEWER.
2D	0.39	0.57	0.99	1.39	NODES 2E + 12A + 11A + 25% OF AREA 22 + AREA 23	EXISTING 10" @ 0.82% ADEQUATE
2E	0.17	0.25	0.48	0.67	NODES 2F + 14A + AREA 30	EXISTING 12" SEWER @ 0.182% ADEQUATE
2F	0.07	0.12	0.22	0.35	NODE 2G + AREA 28	EXISTING 8" SEWER @ 0.40% ADEQUATE
2G	0.05	0.09	0.16	0.27	AREA 26 + AREA 27 + 50% OF AREA 25	EXISTING 8" SEWER @ 0.315% ADEQUATE
3A	0.01	0.02	0.04	0.07	25% AREA 16	NEW SEWER
4A	0.01	0.02	0.04	0.07	AREA 15	NEW SEWER. AREA 14 WILL NOT DRAIN BY GRAVITY.
5A	0.00	0.01	0.00	0.04	17% AREA 16	NEW SEWER

TABLE V-1
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PROJECTED WASTEWATER FLOWS BY NODES
(Continued)

SYSTEM (1) NODE NUMBER	ESTIMATED WASTEWATER FLOW AT SYSTEM NODES (MGD)				TRIBUTARY NODES AND SUBAREAS	REMARKS
	ADF (2) INITIAL	ADF ULTIMATE	PDF (3) INITIAL	PDF ULTIMATE		
6A	0.13	0.29	0.37	0.76	NODES 9A + 6B + 67% AREA 9 + AREA 9A + 60% AREA 10	NEW SEWER
6B	0.08	0.08	0.24	0.24	67% AREA 6	NEW SEWER
7A	0.02	0.03	0.07	0.10	33% AREA 4	NEW SEWER
8A	0.10	0.27	0.30	0.72	NODE 10A	NEW SEWER
8B	0.06	0.06	0.19	0.19	NODE 8C + AREA 19 + AREA 20	NEW SEWER
8C	0.03	0.03	0.10	0.10	50% AREA 11 + 40% AREA 10	NEW SEWER
9A	0.00	0.01	0.00	0.04	50% AREA 11	NEW SEWER
10A	0.10	0.27	0.30	0.72	NODE 8B + AREA 18A + AREA 18	NEW SEWER
11A	0.09	0.09	0.27	0.27	NODE 11B + 33% AREA 31	EXISTING 10" @ 0.25% ADEQUATE
11B	0.06	0.06	0.19	0.19	67% AREA 31	EXISTING 8" @ 0.33% ADEQUATE
12A	0.10	0.20	0.30	0.55	NODE 12B + AREA 24	EXISTING 15" SEWER @ 0.14% ADEQUATE
12B	0.02	0.12	0.07	0.35	NODES 13A + 12C	EXISTING 12" SEWER @ 0.19% ADEQUATE
12C	0.02	0.07	0.07	0.22	50% OF AREA 13 + 50% OF AREA 25	NEW SEWER
13A	0.00	0.05	0.00	0.16	AREA 12 + 50% OF AREA 13	NEW SEWER
14A	0.03	0.06	0.10	0.19	AREA 29	EXISTING 8" SEWER @ 0.40% ADEQUATE

(1) REFER TO MAP 1 FOR LOCATION OF SYSTEM NODES
(2) ADF = AVERAGE DAILY FLOW
(3) PDF = PEAK DAILY FLOW

TABLE V-2

DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 COLLECTION AND CONVEYANCE FACILITIES
 ESTIMATED FACILITIES COST (1)

DESCRIPTION	QUANTITY	UNIT COST	AMOUNT (2)
8" GRAVITY SEWER	116,800 ± L.F.	\$50 /L.F.	\$5,840,000
10" GRAVITY SEWER	3,300 ± L.F.	\$55 /L.F.	\$182,000
12" GRAVITY SEWER	3,400 ± L.F.	\$60 /L.F.	\$204,000
15" GRAVITY SEWER	4,500 ± L.F.	\$85 /L.F.	\$382,000
18" GRAVITY SEWER	100 ± L.F.	\$130 /L.F.	\$13,000
MANHOLES	425 EA	\$2,000 /EA	\$850,000
SEWER SERVICE LATERALS (3)	3,210 EA	\$500 /EA	\$1,605,000
16" FORCE MAIN	2,400 ± L.F.	\$100 /L.F.	\$240,000
CONSTRUCTION SUBTOTAL:			\$9,316,000
CONSTRUCTION CONTINGENCIES @ 20%:			\$1,863,000
CONSTRUCTION TOTAL:			\$11,179,000
ADMINISTRATION, LEGAL, AND ENGINEERING @ 20%:			\$2,236,000
SUBTOTAL:			\$13,415,000
DWA ADMINISTRATION AND GENERAL EXPENSES (4):			\$270,000
TOTAL:			\$13,685,000

NOTES:

- (1) PROJECT FACILITIES COST DOES NOT INCLUDE ABANDONMENT OF EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS.
- (2) ROUNDED TO NEAREST \$1,000.
- (3) ASSUMED ONE (1) SEWER LATERAL FOR EACH SINGLE FAMILY RESIDENTIAL DWELLING UNIT, ONE (1) SEWER LATERAL FOR EVERY TWO (2) MULTIPLE FAMILY RESIDENTIAL DWELLING UNITS, ONE (1) SEWER LATERAL FOR EVERY FIVE (5) NEIGHBORHOOD RESIDENTIAL AND MIXED CORRIDOR DWELLING UNITS, AND FIVE (5) SEWER LATERALS FOR EACH ACRE OF COMMERCIAL AND INDUSTRIAL AREAS.
- (4) ASSUME PROJECT IS DIVIDED INTO SIX COMPONENTS AT \$45,000 PER COMPONENT.

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 5/3/96

TABLE V-3

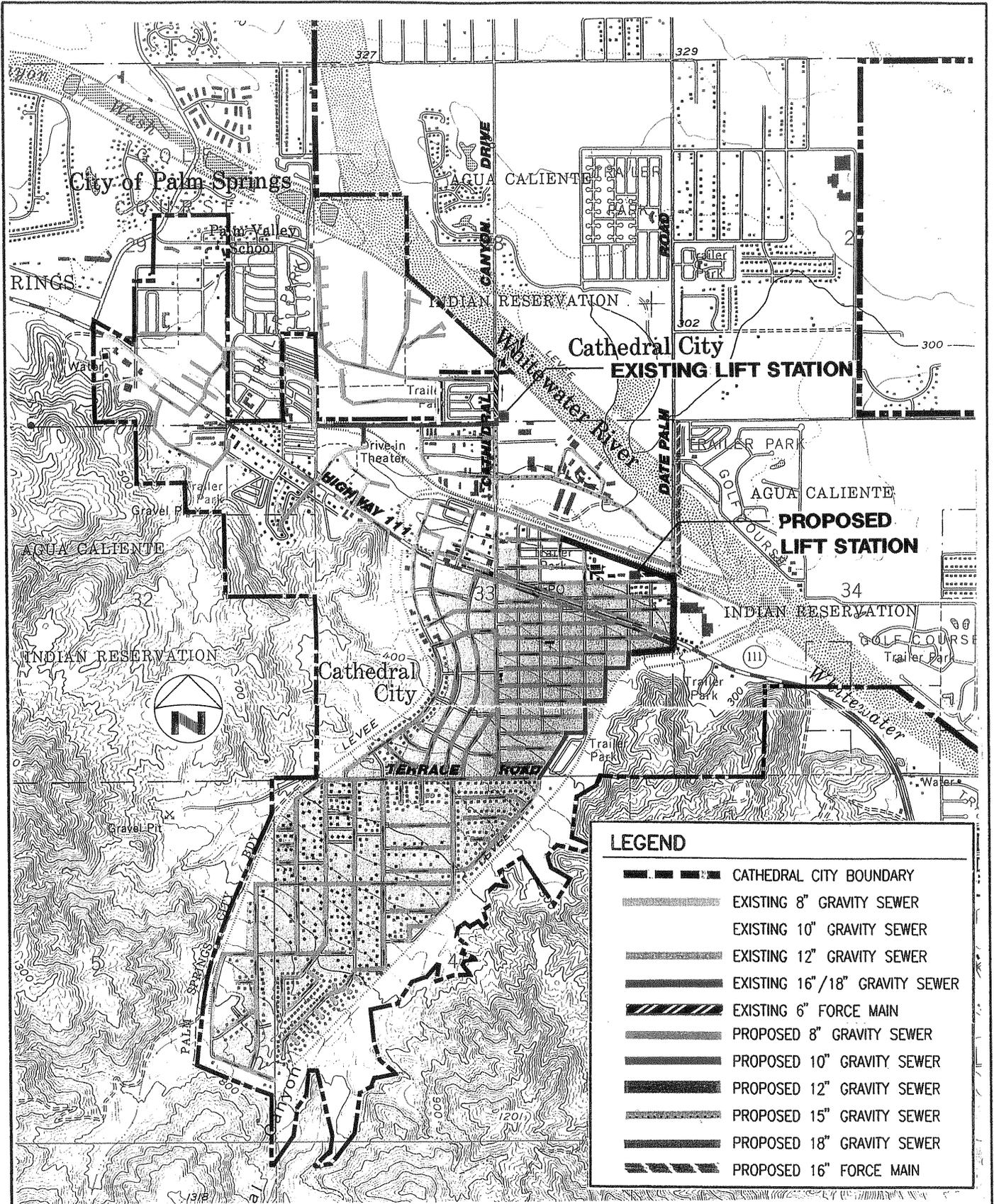
DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 WASTEWATER LIFT STATION
 ESTIMATED FACILITIES COST

DESCRIPTION	AMOUNT (1)
SUBMERSIBLE PUMPING UNITS	\$110,000
WET WELL AND VALVE VAULT	\$155,000
SITE PIPING	\$35,000
CONTROL BUILDING	\$75,000
EMERGENCY STANDBY GENERATOR	\$55,000
SITE WORK (GRADING, IMPORT, PAVING, FLOOD PROTECTION)	\$130,000
ELECTRICAL	\$50,000
ODOR CONTROL FACILITIES	\$75,000
METERING AND MONITORING FACILITIES	<u>\$50,000</u>
CONSTRUCTION SUBTOTAL:	\$735,000
CONSTRUCTION CONTINGENCIES @ 20%:	<u>\$147,000</u>
CONSTRUCTION TOTAL:	\$882,000
ADMINISTRATION, LEGAL, AND ENGINEERING @ 20%:	<u>\$176,000</u>
SUBTOTAL:	\$1,058,000
DWA ADMINISTRATION AND GENERAL EXPENSES:	<u>\$45,000</u>
TOTAL:	<u>\$1,103,000</u>

NOTES:

(1) ROUNDED TO NEAREST \$1,000.

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DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 EXISTING AND PROPOSED FACILITIES

FIGURE
V-1

CHAPTER VI

CHAPTER VI PROJECT FINANCING ALTERNATIVES

There are a number of alternatives available to DWA for financing the construction of wastewater collection and conveyance facilities within the Study Area. The alternatives include direct issuance of bonds by DWA which could be repaid from sewer service revenues or tax revenues, Federal and State government sponsored loan programs, and pooled financing programs. Said financing alternatives are discussed below:

A. LOCAL FINANCING

DWA has the power to issue assessment district bonds, general obligation bonds, community facilities district bonds, revenue bonds, or certificates of participation. Assessment district bonds require the formation of an assessment district, which could be defeated by simple majority protest of land owners based on land area. General obligation bonds and community facilities district bonds would both require approval by a two-thirds majority vote of registered voters residing within the area to be assessed. Revenue bonds would require approval by a simple majority vote of registered voters. Certificates of participation would not be subject to either protest or vote; however, DWA would have to rely entirely on wastewater service charges and fees to repay the debt.

DWA can secure revenues to retire debt through special assessments, ad valorem or special taxes, wastewater service charges and connection fees, and wastewater availability and standby charges (which would require an amendment to § 100-50 of DWA Law).

In order to impose special assessments, it would be necessary to form an assessment district and survive a majority protest hearing. Because any increase in ad valorem or special taxes would require approval by two-thirds of the voters, this financing alternative often is not feasible politically.

DWA could levy wastewater standby or availability charges, but this would require action by the State Legislature to modify §100-50 of DWA Law. Standby or availability charges are sometimes used to finance the design and construction of system improvements or to retire indebtedness incurred in financing such improvements. One of the distinct advantages of wastewater standby or availability charges is that they could be applied to all parcels within the project Study Area uniformly, or in accordance with zones of benefit or zones of use.

B. FEDERAL AND STATE FUNDING PROGRAMS

The primary source of potential government funding for the proposed project is the State Revolving Fund Loan Program, which is funded by the U.S. Environmental Protection Agency (U.S. EPA) and administered in California by the SWRCB.

The State Revolving Fund Program provides low interest loans for financing the construction of all types of wastewater treatment and reclamation facilities. The proposed project is eligible under the programs guidelines and is currently listed in the Federal Fiscal Year 1995 SRF Project Priority List (Cathedral City Wastewater Treatment Facility).

Loans under the State Revolving Fund Loan Program will cover up to 100% of eligible construction costs and planning, design, and construction engineering costs (within certain allowances). Loans under the State Revolving Fund Loan Program are limited to \$5 million dollars per agency per year, and are made at an interest of one-half the rate of the most recent sale of State General Obligation Bonds. The SRF interest rate is about 3%. The maximum repayment term for State Revolving Fund Loans is 20 years.

There are also number of programs offered by various branches of the Federal government (e.g. U.S. Farmer's Home Administration, U.S. Economic Development Administration, etc.), but the proposed improvements within the project planning area do not fall within the guidelines established for these programs.

C. POOLED FINANCING PROGRAMS

The Water Reuse Association of California recently created the Water Reuse Finance Corporation, which is intended to assist public agencies in California with low cost funding for wastewater reclamation-related projects. The Water Reuse Finance Corporation's program offers a number of advantages in comparison with both direct bond issues and government loans, along with certain potential disadvantages.

The program is financed through the issuance of certificates of participation, which in turn fund a pooled lease financing program; the funding requirements of a number of public agencies are pooled, after which the program issues the certificates of participation on the behalf of the participating agencies. The project is structured as a tax exempt lease purchase agreement, which offers a level repayment schedule without a lump sum payment or down

payment. Specific advantages over other forms of financing include: interest rates roughly equivalent to those offered by a bond issue without the complications entailed by the formation of a community facilities district or assessment district (e.g. no bond election or protest hearing procedure requirements); reduced delays in acquiring funding when compared with State Revolving Fund Loans, which often take 12 months or more to fund; and the availability of a full service financing team (including a financial advisor, an underwriter, bond counsel, underwriter's counsel, legal counsel, and trustee), thus relieving the participating agency from having to acquire said services individually. The primary uncertainty has to do with the interest rate that the participating agency must pay on the certificates of participation, as this cannot be known until the certificates are sold. Representatives of the Water Reuse Finance Corporation are available to confer with DWA representatives regarding the programs advantages and disadvantages, and can provide an evaluation of the proposed project in relation to the Water Reuse Finance Corporation's program.

CHAPTER VII

**CHAPTER VII
FINANCIAL IMPACT**

A. GENERAL

As discussed in Chapter III, DWA has existing wastewater facilities in the northwesterly portion of the Study Area. Since the proposed wastewater facilities are only necessary to provide service to unsewered properties and construction of additional wastewater facilities is not necessary to continue service to currently served properties, it appears appropriate for the new sewer users to pay all costs associated with the proposed wastewater facilities. Said costs include costs for facility improvements, CVWD fees for wastewater treatment and disposal capacity (sewer capacity charge), and costs to abandon existing individual sewage disposal systems (including connections to new sewer service laterals). To estimate the financial impact of the project upon unsewered equivalent dwelling units (EDUs) within the Study Area, we assumed the following:

1. An EDU is defined in DWA ordinance No. 42, Regulations Governing Sewer Service as "a single family residence; each unit of a duplex, triplex, or a greater number of similar units; each unit of an apartment complex, condominium complex, motel or hotel; and each mobile home. Each recreational vehicle or travel trailer shall constitute 0.5 equivalent dwelling units". DWA Ordinance No. 42 is presented in Appendix "E".
2. Sewer service requirements for each net acre of commercial and industrial property will averages 5 EDUs.
3. Based on data from Chapter IV, the number of EDUs requiring sewer service at ultimate development within the Study Area is estimated at 5,835. The total number of EDUs is summarized below by source:

	<u>EDUs</u>
2,081 Residential Dwelling Units (Single Family and Multiple Family)	2,081
1,530 Neighborhood Residential and Mixed Corridor Dwelling Units	1,530
530 Mobile Homes	530
100 Recreational Vehicles	50

304	Acres of Commercial and Industrial Areas	1,520
24.9	Acres of Downtown Core and Mixed Corridor Areas	<u>124</u>
	Total:	5,835

4. Based on DWA records, sewer service is currently provided to 568 EDUs; therefore, the number of additional EDUs which could be sewerred within the Study Area upon full development is 5,267 (5,835 - 568).
5. The estimated cost for facility improvements within the Study Area is \$14,788,000 (Chapter V). Assuming a total of 5,267 additional EDUs could be sewerred, the unit cost for the proposed facility improvements is \$2,808 ($\$14,788,000 \div 5,267$) per EDU.
6. Each new user will be required to pay the current CVWD sewer capacity charge. Said charge is required to cover the District's cost for conveyance, treatment, and disposal facilities. The current CVWD sewer capacity charge is \$1,925 per EDU.
7. Each new sewer user with an existing individual wastewater disposal system will be required to pay for the abandonment of said system (including connection to the new sewer service lateral) at an estimated cost of \$2,500/each.

B. TOTAL PROJECT COST

The total project cost including facility improvements, CVWD's sewer capacity charges, and the costs to abandon existing individual wastewater disposal systems is presented in Table VII-1. As shown, the total estimated project cost is \$29,827,000 (\$14,788,000 for facility improvements, \$10,139,000 for CVWD's sewer capacity charges, and \$4,900,000 for abandonment of existing individual wastewater disposal systems).

C. ESTIMATED COST PER EDU

The estimated cost for each EDU is presented in Table VII-2. As shown, the estimated cost per EDU for those properties requiring the abandonment of existing individual wastewater disposal systems is \$7,233 and \$4,733 for those properties not requiring the abandonment of existing individual wastewater disposal systems. If the project is financed at 7% interest for 30 years, the annual cost would be approximately \$700 per EDU for those properties requiring the abandonment of existing individual wastewater disposal systems and approximately \$460 per

EDU for those properties not requiring the abandonment of existing individual wastewater disposal systems. For the annual cost per EDU, it was assumed that the total estimated cost per EDU would be increased by 20% to cover the funding mechanism.

D. OPERATION AND MAINTENANCE COSTS

Since the existing and proposed wastewater collection system and new wastewater lift station will be used to service all EDUs in the Study Area, we have assumed operation and maintenance costs will be shared by all sewer users (not just the new sewer users).

As indicated in Chapter V, the operation and maintenance costs for the facilities is estimated at \$225,000 per year (\$175,000 per year for the existing and proposed collection system and \$50,000 per year for the wastewater lift station). Assuming a total of 5,835 EDUs, the operation and maintenance cost is approximately \$39 per year per EDU or \$3.21 per month per EDU. DWA currently charges \$20.60 per month per EDU (\$3.00 per month for DWA operation and maintenance of the collection system and \$17.60 per month for CVWD's operations and maintenance of the treatment facility).

**TABLE VII-1
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
ESTIMATED PROJECT COST**

DESCRIPTION	ESTIMATED COST (1)
COLLECTION AND CONVEYANCE FACILITIES	\$13,685,000 (2)
WASTEWATER LIFT STATION	\$1,103,000 (3)
CVWD SEWER CAPACITY CHARGES	\$10,139,000 (4)
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS	<u>\$4,900,000 (5)</u>
TOTAL:	\$29,827,000

NOTES:

- (1) ROUNDED TO NEAREST \$1,000.
- (2) REFER TO TABLE V-2.
- (3) REFER TO TABLE V-3.
- (4) BASED ON 5,267 EDUs AT \$1,925/EDU.
- (5) BASED ON 1,960 SYSTEMS TO BE ABANDONED AT AN ESTIMATED COST OF \$2,500 EACH. THE NUMBER OF WASTE DISPOSAL SYSTEMS TO BE ABANDONED IS BASED ON THE FOLLOWING:
 - A. ONE (1) WASTEWATER DISPOSAL SYSTEM PER EXISTING RESIDENTIAL DWELLING UNIT (SINGLE FAMILY AND MULTIPLE FAMILY).
 - B. FIVE (5) WASTEWATER DISPOSAL SYSTEMS PER ACRE FOR DEVELOPED COMMERCIAL AND INDUSTRIAL AREAS WITHOUT EXISTING SEWER SERVICE.
 - C. ALL EXISTING WASTEWATER DISPOSAL SYSTEMS IN THE DOWNTOWN PRECISE AREA WILL BE REMOVED DURING DEMOLITION; THEREFORE, COSTS FOR SAME WERE NOT INCLUDED IN THIS COST ESTIMATE.
 - D. ALL EXISTING WASTEWATER DISPOSAL SYSTEMS FOR MOBILE HOME PARKS WILL BE ABANDONED BY THE MOBILE HOME PARK ASSOCIATIONS; THEREFORE, COSTS FOR SAME WERE NOT INCLUDED IN THIS COST ESTIMATE.

MEM/kdc/kat
C101/15VII-2
5/2/96

TABLE VII-2
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 ESTIMATED COST PER EDU

DESCRIPTION	COST/EDU	
	FOR THOSE PROPERTIES REQUIRING THE ABANDONMENT OF EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS	FOR THOSE PROPERTIES NOT REQUIRING THE ABANDONMENT OF EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS
FACILITY IMPROVEMENTS	\$2,808 (1)	\$2,808 (1)
CVWD SEWER CAPACITY CHARGE	\$1,925	\$1,925
ABANDONMENT OF EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS	\$2,500	\$0
TOTAL (WITHOUT FINANCING):	\$7,233	\$4,733
ESTIMATED ANNUAL COST (2), ROUNDED:	\$700	\$460

NOTES:

- (1) ESTIMATED COST OF FACILITY IMPROVEMENTS IS \$14,788,000. THE NUMBER OF NEW EDUs IS ESTIMATED AT 5,267.
- (2) ASSUME TOTAL COST (WITHOUT FINANCING) IS INCREASED BY 20% TO COVER FUNDING MECHANISM AND THEN AMORTIZED AT 7% INTEREST FOR 30 YEARS.

MEM/kdc/kat
 C101/15VII-1
 5/2/96

CHAPTER VIII

**CHAPTER VIII
PHASED CAPITAL IMPROVEMENT SCHEDULE**

A. GENERAL

The proposed wastewater facility improvements are described in Chapter V and are shown on Figure V-1 and Map 1. In order to accommodate project financing, the improvements could be constructed in the following five phases:

B. PHASE I

Phase I consists of two components: Phase I-A is the construction of facilities within Stage I of the Downtown Precise Area (Stage I is bounded by the flood control channel on the north, Van Fleet Avenue on the east, Highway 111 on the south, and Cathedral Canyon Drive on the west). Phase I-A facilities include 6,400± L.F. of 8" gravity sewers, 25 manholes, and 125 sewer service laterals. Estimated project costs are set forth in Table VIII-1. The total estimated project cost is \$1,553,000 (\$669,000 for construction of facility improvements and \$884,000 for CVWD sewer capacity charges).

Phase I-B is the construction of interceptor sewers, the lift station, and the force main necessary to convey wastewater from Stage I of the Downtown Precise Area to CVWD's Palm Desert Wastewater Reclamation Plant and the construction of gravity sewers on the northerly and southerly sides of Highway 111 between Cathedral Canyon Drive and Date Palm Drive (excepting that portion included in Phase I-A). Phase I-B facilities include 5,300± L.F. of 8" gravity sewers, 400± L.F. of a 10" gravity sewer, 1,600± L.F. of a 12" gravity sewer, 100± L.F. of a 15" gravity sewer, 100± L.F. of an 18" gravity sewer, 25 manholes, lift station, and 2,400± L.F. of a 16" force main. Estimated project costs are set forth on Table VIII-2. The total estimated project cost is \$2,148,000.

C. PHASE II

Phase II consists of the construction of facilities for Stage II of the Downtown Precise Area (balance of the Downtown Precise Area not included in Phase I). Phase II facilities include 11,500± L.F. of 8" gravity sewers, 1,800± L.F. of 12" gravity sewers, 45 manholes, and 305 sewer service laterals. Estimated project costs for Phase II are set forth in Table VIII-3. The total estimated project cost is \$3,677,000 (\$1,377,000 for construction of facility improvements and \$2,300,000 for CVWD sewer capacity charges).

D. PHASE III

Phase III consists of the construction of all facilities north of Highway 111 (except for those facilities included in Phase I) and all facilities westerly of the West Cathedral Canyon Channel. Phase III facilities include 17,500± L.F. of 8" gravity sewers, 4,400± L.F. of 15" gravity sewers, 70 manholes, and 1,440 sewer service laterals. Estimated project costs for Phase III are set forth in Table VIII-4. The total estimated project cost is \$8,195,000 (\$3,082,000 for construction of facility improvements, \$3,863,000 for CVWD sewer capacity charges, and \$1,250,000 for abandonment of existing individual wastewater disposal systems).

E. PHASE IV

Phase IV consists of the construction of all facilities northerly of Terrace Road and southerly of Highway 111 (except those areas included in Phase II). Phase IV facilities include 31,800± L.F. of 8" gravity sewers, 2,900± L.F. of 10" gravity sewers, 115 manholes, and 580 sewer service laterals. Estimated project costs for Phase IV are set forth in Table VIII-5. The total estimated project cost is \$6,742,000 (\$3,313,000 for construction of facility improvements, \$1,629,000 for CVWD sewer capacity charges, and \$1,800,000 for abandonment of existing individual wastewater disposal systems).

F. PHASE V

Phase V consists of the construction of all facilities southerly of Terrace Road including those facilities in Terrace Road. Phase V facilities include 44,300± L.F. of 8" gravity sewers, 145 manholes, and 760 sewer service laterals. Estimated project costs for Phase V are set forth in Table VIII-6. As shown, the total estimated project cost is \$7,512,000 (\$4,199,000 for construction of facility improvements, \$1,463,000 for CVWD sewer connection charge, and \$1,850,000 for abandonment of existing individual wastewater disposal systems).

G. SUMMARY

A summary of all costs for all five phases is presented in Table VIII-7. As shown herein, the estimated costs range from \$3,677,000 for Phase II facilities to \$8,195,000 for Phase III facilities.

TABLE VIII-1
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 PHASE I-A (1)
 ESTIMATED COSTS

DESCRIPTION	QUANTITY	UNIT COST	AMOUNT (3)
8" GRAVITY SEWER	6,400 ± LF	\$50 /LF (2)	\$320,000
MANHOLES	25 EA	\$2,000 /EA	\$50,000
SEWER SERVICE LATERALS	125 EA	\$500 /EA	<u>\$63,000</u>
CONSTRUCTION SUBTOTAL:			\$433,000
CONSTRUCTION CONTINGENCIES @ 20%:			<u>\$87,000</u>
CONSTRUCTION TOTAL:			\$520,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			<u>\$104,000</u>
SUBTOTAL:			\$624,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			<u>\$45,000</u>
SUBTOTAL:			\$669,000
CVWD SEWER CAPACITY CHARGE 459 EDUs AT \$1,925/EDU			\$884,000
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS			<u>\$0 (4)</u>
TOTAL PROJECT COST:			\$1,553,000

NOTES:

- (1) STAGE 1 OF DOWNTOWN PRECISE AREA (AREA BOUNDED BY FLOOD CONTROL CHANNEL ON THE NORTH, VAN FLEET AVENUE ON THE EAST, HIGHWAY 111 ON THE SOUTH, AND CATHEDRAL CANYON DRIVE ON THE WEST).
- (2) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT; TRENCH EXCAVATION, BACKFILL, AND COMPACTION; INSTALLATION OF VCP SEWER; AND IMPORTED PIPE ZONE BACKFILL MATERIAL.
- (3) ROUNDED TO NEAREST \$1,000.
- (4) ASSUMES EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS WILL BE REMOVED DURING SITE DEMOLITION.

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 C101/15VIII1
 5/2/96

TABLE VIII-2
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PHASE I-B
ESTIMATED COSTS

DESCRIPTION	QUANTITY	UNIT COST	AMOUNT (2)
8" GRAVITY SEWER	5,300 ± LF	\$50 /LF (1)	\$265,000
10" GRAVITY SEWER	400 ± LF	\$55 /LF (1)	\$22,000
12" GRAVITY SEWER (FLOOD CONTROL CHANNEL)	1,600 ± LF	\$60 /LF (1)	\$96,000
15" GRAVITY SEWER (DATE PALM DRIVE)	100 ± LF	\$80 /LF (1)	\$8,000
18" GRAVITY SEWER (DATE PALM DRIVE TO LIFT STATION)	100 ± LF	\$130 /LF (1)	\$13,000
MANHOLES	25 EA	\$2,000 /EA	\$50,000
SEWER SERVICE LATERALS	0 EA	\$500 /EA	\$0
16" FORCE MAIN	2,400 ± LF	\$100 /LF	<u>\$240,000</u>
CONSTRUCTION SUBTOTAL:			\$694,000
CONSTRUCTION CONTINGENCIES @ 20%:			<u>\$139,000</u>
CONSTRUCTION TOTAL:			\$833,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			<u>\$167,000</u>
SUBTOTAL:			\$1,000,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			<u>\$45,000</u>
SUBTOTAL:			\$1,045,000
WASTEWATER LIFT STATION			<u>\$1,103,000 (3)</u>
SUBTOTAL:			\$2,148,000
CVWD SEWER CAPACITY CHARGE			\$0
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS			<u>\$0</u>
TOTAL PROJECT COST:			\$2,148,000

NOTES:

- (1) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT; TRENCH EXCAVATION, BACKFILL, AND COMPACTION, INSTALLATION OF VCP SEWERS, AND IMPORTED PIPE ZONE BACKFILL MATERIAL.
- (2) ROUNDED TO NEAREST \$1,000.
- (3) REFER TO TABLE V-3.

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C101/15VIII2
5/2/96

**TABLE VIII-3
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PHASE II
ESTIMATED COSTS**

DESCRIPTION	QUANTITY	UNIT COST	AMOUNT (2)
8" GRAVITY SEWER	11,500 ± LF	\$50 /LF (1)	\$575,000
12" GRAVITY SEWER	1,800 ± LF	\$60 /LF (1)	\$108,000
MANHOLES	45	\$2,000 /EA	\$90,000
SEWER SERVICE LATERALS	305	\$500 /EA	\$152,000
CONSTRUCTION SUBTOTAL:			\$925,000
CONSTRUCTION CONTINGENCIES @ 20%:			\$185,000
CONSTRUCTION TOTAL:			\$1,110,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			\$222,000
SUBTOTAL:			\$1,332,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			\$45,000
SUBTOTAL:			\$1,377,000
CVWD SEWER CAPACITY CHARGE 1,195 EDUs AT \$1,925/EDU			\$2,300,000
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS			\$0 (3)
TOTAL PROJECT COST:			\$3,677,000

NOTES:

- (1) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT, TRENCH EXCAVATION, BACKFILL, AND COMPACTION, INSTALLATION OF VCP SEWER, AND IMPORTED PIPE ZONE BACKFILL MATERIAL.
- (2) ROUNDED TO NEAREST \$1,000.
- (3) ASSUMES EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS WILL BE REMOVED DURING SITE DEMOLITION.

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C101/15VIII3
5/2/96

**TABLE VIII-4
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PHASE III
ESTIMATED COSTS**

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>AMOUNT (2)</u>
8" GRAVITY SEWER	17,500 ± LF	\$50 /LF (1)	\$875,000
15" GRAVITY SEWER	4,400 ± LF	\$85 /LF (1)	\$374,000
MANHOLES	70	\$2,000 /EA	\$140,000
SEWER SERVICE LATERALS	1,440	\$500 /EA	<u>\$720,000</u>
CONSTRUCTION SUBTOTAL:			\$2,109,000
CONSTRUCTION CONTINGENCIES @ 20%:			<u>\$422,000</u>
CONSTRUCTION TOTAL:			\$2,531,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			<u>\$506,000</u>
SUBTOTAL:			\$3,037,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			<u>\$45,000</u>
SUBTOTAL:			\$3,082,000
CVWD SEWER CAPACITY CHARGE 2,007 EDUs AT \$1,925/EDU			\$3,863,000
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS 500 SYSTEMS AT \$2,500/SYSTEM			<u>\$1,250,000</u>
TOTAL PROJECT COST:			\$8,195,000

NOTES:

(1) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT, TRENCH EXCAVATION, BACKFILL, AND COMPACTION, INSTALLATION OF VCP SEWER, AND IMPORTED PIPE ZONE BACKFILL MATERIAL.

(2) ROUNDED TO NEAREST \$1,000.

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C101/15VIII4
5/2/96

**TABLE VIII-5
DESERT WATER AGENCY
CATHEDRAL CITY SOUTH
WASTEWATER FACILITIES PLAN
PHASE IV
ESTIMATED COSTS**

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNIT COST</u>	<u>AMOUNT (2)</u>
8" GRAVITY SEWER	31,800 ± LF	\$50 /LF (1)	\$1,590,000
10" GRAVITY SEWER	2,900 ± LF	\$55 /LF (1)	\$159,000
MANHOLES	115	\$2,000 /EA	\$230,000
SEWER SERVICE LATERALS	580	\$500 /EA	<u>\$290,000</u>
CONSTRUCTION SUBTOTAL:			\$2,269,000
CONSTRUCTION CONTINGENCIES @ 20%:			<u>\$454,000</u>
CONSTRUCTION TOTAL:			\$2,723,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			<u>\$545,000</u>
SUBTOTAL:			\$3,268,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			<u>\$45,000</u>
SUBTOTAL:			\$3,313,000
CVWD SEWER CAPACITY CHARGE 846 EDU's AT \$1,925/EDUs			\$1,629,000
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS 720 SYSTEMS AT \$2,500/SYSTEM			<u>\$1,800,000</u>
TOTAL PROJECT COST:			\$6,742,000

NOTES:

(1) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT, TRENCH EXCAVATION, BACKFILL, AND COMPACTION, INSTALLATION OF VCP SEWER, AND IMPORTED PIPE ZONE BACKFILL MATERIAL.

(2) ROUNDED TO NEAREST \$1,000.

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C101/15VIII5
5/2/96

TABLE VIII-6
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 PHASE V
 ESTIMATED COSTS

DESCRIPTION	QUANTITY	UNIT COST	AMOUNT (2)
8" GRAVITY SEWER	44,300 ± LF	\$50 /LF (1)	\$2,215,000
MANHOLES	145	\$2,000 /EA	\$290,000
SEWER LATERALS	760	\$500 /EA	<u>\$380,000</u>
CONSTRUCTION SUBTOTAL:			\$2,885,000
CONSTRUCTION CONTINGENCIES @ 20%:			<u>\$577,000</u>
CONSTRUCTION TOTAL:			\$3,462,000
ADMINISTRATION, LEGAL, & ENGINEERING @ 20%:			<u>\$692,000</u>
SUBTOTAL:			\$4,154,000
DWA ADMINISTRATION AND GENERAL EXPENSES:			<u>\$45,000</u>
SUBTOTAL:			\$4,199,000
CVWD SEWER CAPACITY CHARGE 760 EDU's AT \$1,925/EDU			\$1,463,000
ABANDON EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS 740 SYSTEMS AT \$2,500/SYSTEM			<u>\$1,850,000</u>
TOTAL PROJECT COST:			\$7,512,000

NOTES:

(1) UNIT COST INCLUDES ASPHALT CONCRETE PAVEMENT REMOVAL AND REPLACEMENT, TRENCH EXCAVATION, BACKFILL, AND COMPACTION, INSTALLATION OF VCP SEWER, AND IMPORTED PIPE ZONE BACKFILL MATERIAL.

(2) ROUNDED TO NEAREST \$1,000.

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 C101/15VIII6
 5/2/96

TABLE VIII-7
 DESERT WATER AGENCY
 CATHEDRAL CITY SOUTH
 WASTEWATER FACILITIES PLAN
 ESTIMATED COSTS

DESCRIPTION	PHASE I-A	PHASE I-B	PHASE II	PHASE III	PHASE IV	PHASE V	TOTAL
FACILITY IMPROVEMENTS COST	\$669,000	\$2,148,000	\$1,377,000	\$3,082,000	\$3,313,000	\$4,199,000	\$14,788,000
CVWD SEWER CAPACITY CHARGE	\$884,000	\$0	\$2,300,000	\$3,863,000	\$1,629,000	\$1,463,000	\$10,139,000
ABANDONMENT OF EXISTING INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS	\$0	\$0	\$0	\$1,250,000	\$1,800,000	\$1,850,000	\$4,900,000
TOTAL:	\$1,553,000	\$2,148,000	\$3,677,000	\$8,195,000	\$6,742,000	\$7,512,000	\$29,827,000

MEM/kdc/kat
 C101/15VIII7
 5/2/96

APPENDIX A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

RESOLUTION NO. 93-112

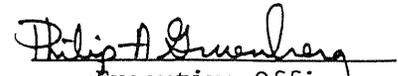
CONCERNING THE
COACHELLA VALLEY GROUND WATER
UNDERLYING CATHEDRAL CITY,
RIVERSIDE COUNTY

- WHEREAS, The California Regional Water Quality Control Board, Colorado River Basin Region, is responsible for protecting the quality of ground water within it's designated Region, as defined in Section 13200, Article 1, Chapter 4 of the California Water Code; and
- WHEREAS, The Water Quality Control Plan for the Colorado River Basin Region of California was adopted May 15, 1991, and designates the beneficial uses of the ground water in this Region; and
- WHEREAS, The beneficial uses of the ground waters in the Coachella Hydrologic Subunit are:
- a. Municipal supply (MUN)
 - b. Industrial supply (IND)
 - c. Agricultural supply (AGR); and
- WHEREAS, The California Department of Health Services specifies a maximum contaminant level for nitrate as 45 milligrams per liter for a domestic water supply section 64435, Article 4, Chapter 15 Title 22 of the California Code of Regulation; and
- WHEREAS, A report done in May, 1986, by Camp, Dresser, and McKee addressing ground water contamination in Coachella Valley was submitted to Desert Water Agency, Coachella Valley Water District, and this Regional Board, and that states:
- "The largest known area where septic tank use still prevails is in Cathedral City. The potential impact on local ground water quality includes increases in TDS, chlorides and nitrate... Data from five wells near Cathedral City ... have nitrate and TDS levels above background levels in the Palm Springs Subarea."; and
- WHEREAS, A report done by Desert Water Agency in February 1993 indicated that septic systems within Cathedral City may be responsible for nitrate concentrations in the ground water higher than 200 milligrams per liter, and also bacterial and viral contamination; and
- WHEREAS, Nitrate concentrations at 200 milligrams per liter render the ground water unusable for municipal purposes; and

WHEREAS, The unsewered area of the City of Cathedral City has significant growth potential and an effective sewerage system is needed to protect water quality; therefore be it

RESOLVED, That the City of Cathedral City is requested to submit an Action Plan which details steps which the City intends to take to reduce the population's effect on the ground water in the area.

I, PHIL GRUENBERG, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on September 15, 1993.


Executive Officer

APPENDIX B

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN • REGION 7**

73-720 FRED WARING DR., SUITE 100
PALM DESERT, CA 92260
Phone (619) 346-7491
FAX (619) 341-6820



JUN 07 1995

JUN 08 1995

Vern Hazen, City Manager
City of Cathedral City
35235 Date Palm Dr., Ste. 135
Cathedral City, CA 92234

Subject: Request for Adoption of a City Ordinance to Require Individual Subsurface Wastewater Disposal Systems (Septic Systems) to Connect to the Municipal Sewer Collection System

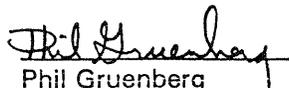
The staff at the Regional Water Quality Control Board is concerned with the impact of anthropogenic sources on the upper layer of the Coachella Valley ground water aquifer. Recently, staff was supplied with supplemental data which partially confirms our suspicions regarding the subsurface disposal of municipal wastewater on the quality of the ground water. Regional Board staff believes that the continued use of subsurface disposal systems in high density developed areas has the potential to cause long term degradation of the ground water in the Region. The Cathedral Cove area is of particular concern because, the septic system density is very high, and the Desert Water Agency has reported that nitrate concentrations in the shallow ground water already exceed the Maximum Contaminant Level established for drinking water. Therefore, we recommend that the use of these septic systems be phased out as soon as practical. In the areas where sewers currently exist, this phase-out is being achieved by the City requiring connection to the sewer when a septic system fails, and by lending agencies requiring sewer connections when properties are sold.

We recommend that the City of Cathedral City adopt an ordinance which would incorporate three conditions which would require connection to the municipal sewer collection system. These three conditions are as follows:

1. If sewer is available (according to definitions in the Uniform Plumbing Code), a sewer connection would be required within some reasonable period of time. The Regional Board recommends three years from the time sewer is available. However, if three years is unreasonable, a longer period may be acceptable.
2. If the property is sold or ownership is transferred, and sewerage is available, a sewer connection would be required.
3. If a septic system fails, and sewerage is available, a sewer connection would be required.

Vern Hazen
City Manager
Page 2

If you need any further information regarding the adverse impacts to ground water quality associated with the disposal of domestic waste from septic systems or would like to arrange a meeting to discuss this issue, please contact Dean Prat at (619) 776-8966.


Phil Gruenberg
Executive Officer

DP/jr

cc: Region 7 Board Members
Dave Luker, Desert Water Agency, Palm Springs, CA
Tom Levy, Coachella Valley Water District, Coachella, CA
George Thacker, Mission Springs Water District, Desert Hot Springs, CA
Don Park, County of Riverside, Bermuda Dunes, CA
David Scriven, Krieger and Stewart, Riverside, CA

File: ST GC 1.1

APPENDIX C

APPENDIX C

DESERT WATER AGENCY CATHEDRAL CITY SOUTH WASTEWATER FACILITIES PLAN

SEWAGE COLLECTION FACILITIES RECOMMENDED DESIGN CRITERIA

I. SEWER SYSTEM ANALYSIS CRITERIA

A. Sewer Diameters

1. The minimum sewer diameter shall be 8".
2. The minimum sewer lateral diameter shall be 4".

B. Sewer Friction Factors Design Formula

The friction factor for gravity sewers shall be $n = 0.013$.

Peak flow shall be computed from the average daily flow and the following equation:

$$Q_{\text{Peak}} = 2.3 (Q_{\text{Avg}})^{0.89}$$

Capacity of sewer shall be determined by the "manning" formula:

$$Q = A \frac{1.486 r^{2/3} s^{1/2}}{n}$$

Gravity sewer shall be designed at peak flow with a minimum velocity of 2 fps and a maximum velocity of 10 fps. The ratio of depth of flow to sewer diameter at peak flow shall not exceed 0.50 for sewer diameters up to and including 10" and 0.75 for sewer diameters 12" and larger.

II. SEWER LOCATION

Unless otherwise approved by the Agency, all sewers shall be located on the north or east side of the street, 6 feet off of street centerline per the Riverside County Road Department standards. Location is not to interfere with other existing utilities.

Sewer installation near water lines shall be in accordance with State Department of Health Services, Criteria for the Separation of Watermains and Sanitary Sewers. In general, sewers should cross perpendicular to water lines a minimum of 1 foot below the water. Sewer lines parallel to water lines shall be located a minimum of 10 feet from the water line.

Sewer installation, when crossing other utilities, shall provide a 1 foot minimum vertical clearance, unless otherwise approved by the District and State of California Health Department.

Sewer installation shall provide a minimum clearance of 50 feet from all potable, non-potable, and measuring wells.

III. MINIMUM SEWER COVER

The minimum cover over the top of sewer shall be 7 feet from finished road grade. Adequate depth shall be provided so that the sewer laterals will have a minimum cover of 5 feet at the property line with a minimum slope of 2% from the sewer to the property line.

IV. SEWER MATERIALS

All sewers shall be constructed of extra strength vitrified clay with bell and spigot joints for 8" and larger diameter.

V. SEWER SLOPES

Gravity sewers shall have the following minimum slope:

Diameter (Inches)	Min. Slope % (Ft/100 Ft)
8	.40
10	.28
12	.24
15	.12
18	.108
21	.088
24	.068
27	.060
30	.052

VI. MANHOLES

Manholes shall be spaced at 300 feet maximum intervals and at all grade breaks, changes in horizontal alignment, changes in sewer diameter, at all street intersections, at all sewer line intersections, at all intersections with other pipes or laterals 6" or larger in diameter, and at the end of all sewers.

VII. SEWER LATERALS

Sewer laterals shall have a minimum diameter of 4" and shall be constructed of the same materials as the sewer. Sewer laterals 6" and larger in diameter shall connect into the collection sewer line with a manhole installation. Laterals shall have a minimum slope of 2% from sewer to property line and shall have a minimum cover of 5 feet at the property line.

JCR/kdc
C101/15P5RPT1
3/13/96

APPENDIX D

APPENDIX D

DESERT WATER AGENCY CATHEDRAL CITY SOUTH WASTEWATER FACILITIES PLAN

SEWAGE LIFT STATION AND FORCE MAIN RECOMMENDED DESIGN CRITERIA

I. SEWAGE LIFT STATION SITE

- A. Site shall be of adequate size to operate and repair the lift station.
- B. Site shall be secured by commercial grade 6 feet high chain link fence with three strand barbed wire. Access gates shall include minimum 12 feet gate for vehicles and a 3 feet gate.
- C. Site shall be provided with weed control, aggregate base, concrete drive, and concrete wash down pad at wet well.
- D. All backfill and compaction shall be minimum 90% relative compaction.
- E. Site shall be provided with water supply protected by reduced pressure backflow device per Agency standards.

II. FORCE MAIN

- A. Force main size (diameter) shall be based on the following.
 - 1. Minimum size shall be 6" diameter.
 - 2. Peak flow with minimum velocity of 3 fps and maximum velocity of 6 fps.
- B. Material shall be ductile iron minimum pressure Class 150, Class 53 thickness per ANSI/AWWA or PVC per ANSI/AWWA C900 minimum DR-18.
- C. Pipeline profile shall avoid high points if feasible. All high points shall be provided with combination sewage air and vacuum valve installation.
- D. Pipe cover shall be minimum 48".
- E. Separation from water lines shall be in accordance with Department of Health Services.
- F. Force main shall be pressure and leak tested at pipe class pressure 150 psi in accordance with Standard Specification.

III. LIFT STATION

A. Raw Sewage Pumps

1. Number of pumps furnished shall provide complete redundancy. Minimum of two identical pumps each sized for 100% station capacity shall be installed.
2. Pump specifications.
 - a) Raw sewage nonclog submersible pumps.
 - b) Minimum 4" discharge.
 - c) Ability to pass minimum 2" diameter sphere.
 - d) Maximum 1800 rpm explosion proof submersible motor with moisture and temperature sensors.
 - e) Suitable to run dry without damage to pump.
 - f) UL or factory mutual explosion proof rating without being submerged.
 - g) Constructed of corrosion resistant materials and provided with corrosion resistant factory coating.
 - h) Acceptable manufacturers are Wemco, Flygt, KSB, or PACO.
4. Pump mounting and removal.
 - a) Provide rail-type or cable guide system to allow pump removal without removal of discharge piping. All materials to be stainless steel.
 - b) Provide stainless steel cable fastened to each pump and one portable hoist as manufactured by Therm for removal of pumps.
 - c) Cable connection shall be provided with a receptacle-plug connection.
5. Spare parts shall include one set of seals and bearings.

B. Wet Well Specifications

1. Cast-in-place precast concrete or precast circular concrete structure constructed water tight.
2. Size based on maximum pump cycling of five times per hour and to provide adequate spacing to permit adjacent pumps to operate simultaneously.
3. Aluminum spring assisted equipment hatch manufactured by Bilco or Dur-Red with stainless steel hardware.
4. Discharge piping shall be DIP coated with coal tar epoxy.
5. Pipe supports, brackets, and other equipment within the wet well shall be stainless steel.

C. Pump Discharge Piping Out of Wet Well

1. Discharge from each pump shall exit the wet well and enter a vault for easy access to valves.
2. Valve vault shall be precast concrete vault with concrete or crushed rock floor. Cover shall be galvanized checkered plate in easily removable sections designed for parkway loading.
3. Each pump shall be provided with 150 lb swing check valve (AWWA C508 with bronze trim) and shut-off valves (AWWA C509 solid wedge resilient seated gate valve or eccentric nonlubricated plug valve by DeZurik, Clow or Keystone). Sewage combination air and vacuum valves shall be provided at high points.

D. Odor Control

1. Evaluate need for odor control facilities including calculations for hydrogen sulfide generation.
2. Provide odor control equipment if determined necessary by Agency. Equipment shall include air scrubber. All permits required by SCAQMD shall be provided.

IV. ELECTRICAL AND CONTROLS

- A. 480 volt 3-phase service equipment.
- B. Automatic transfer switch.
- C. Electric switchgear and combination motor starters with electronic overload protection. Toshiba 2E Relay or equal.
- D. Electrical switch gear and equipment mounted in NEMA 12 enclosures.
- E. Complete controls for automatic pump operation using ultrasonic level control including HOA switch for each pump and selector switches for any pump to operate in any position (lead, lag, or standby). Standby pump shall have lockout on emergency power to prevent overloading the standby generator.
- F. Ultrasonic level control device for each pump start and stop, low water level, and high water level. High and low water levels will start all pumps and stop all respectively.
- G. Float switches for back up high and low water levels. Switches shall be Flygt, Roto-Float, Warrick, or Consolidated Electric Co., provided with intrinsically safe relays. Install floats so levels can be readily adjustable.
- H. Controls shall provide manual reset alarm conditions for normal power fail, high water level, low water level, standby pump run, and a common alarm contact. Alarm conditions shall activate alarm light. Each pump shall be provided with alarm light for pump high temperature, pump moisture, pump fail.

V. EMERGENCY POWER

- A. Provide prefabricated skid-mounted diesel engine driven, radiator-cooled, automatic emergency standby generator to power the lift station during normal power failure.
- B. Acceptable manufacturers are Onan or Caterpillar.
- C. Generator shall automatically start upon failure of normal power and be sized to operate lighting loads, and number of pumps necessary to meet flow requirements with maximum voltage DIP of 20%.
- D. Exhaust system shall be fully insulated and equipped with a residential-type silencer.
- E. Fuel tank for generator shall be mounted with unit or aboveground out-of-doors. Tank shall be dual wall welded steel or concrete sized for 48 hours of continuous operation assuming pumping 40% of the time. Facilities shall meet fire department criteria.
- F. Equipment shall meet all air quality requirements and engine shall be preapproved for emergency operation.

VI. TELEMETRY EQUIPMENT

- A. Agency shall provide standard radio telemetry equipment system to transmit alarm conditions to existing central receiving system at Agency Operations Building.
- B. Controls shall provide contacts for common alarm, normal power fail, high water level, and pump fail telemetry signals.

VII. CONTROL BUILDING

- A. Masonry block building to house standby generator, electrical service, switchgear, and controls.
- B. Building construction.
 - 1. Colored masonry block, solid grouted.
 - 2. Concrete footing and slab.
 - 3. Isolated concrete generator foundation.
 - 4. Wood roof with light-weight concrete shingles.
 - 5. Dry wall ceiling with insulation.
 - 6. Forced air ventilation.
 - 7. Metal doors with dead bolt locks.
- C. Sized for ease of operation and maintenance.

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3/13/96

APPENDIX E

ORDINANCE NO. 42
DESERT WATER AGENCY

REGULATIONS GOVERNING
SEWAGE SERVICE

EFFECTIVE DATE: July 1, 1987

REGULATIONS GOVERNING SEWAGE SERVICE

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REGULATIONS GOVERNING SEWAGE SERVICE

SECTION 1 - DEFINITIONS OF TERMS

1-1 Agency Definitions: Whenever the words defined in this section, or pronouns used in their stead, occur in these Regulations, they shall have the meanings here given:

- 1-1.1 AGENCY shall mean the Desert Water Agency, organized and operated pursuant to the provisions of the Desert Water Agency Law, Stats. 1961, Ch. 1069.
- 1-1.2 APARTMENT shall mean any dwelling unit within a building containing three or more dwelling units with separate plumbing facilities, but shall not include any building commonly known as a hotel, motel or condominium.
- 1-1.3 APPLICANT shall mean an individual, partnership, corporation or agency which is the Owner of the premises for which sewage service is being applied.
- 1-1.4 BOARD shall mean the Board of Directors of the Desert Water Agency.
- 1-1.5 BUILDING SEWER shall mean the Customer's pipeline extending from the Customer's house, building or structure which receives waste discharge from the house, building or structure and conveys it to the street lateral.
- 1-1.6 CAPACITY CHARGE shall mean a charge levied on a premises for the purpose of providing treatment capacity in a waste water reclamation plant and for conveyance capacity in the Sewer System.
- 1-1.7 CONDOMINIUM shall mean a unit of a development as defined in Section 1350 of the Civil Code.
- 1-1.8 CONNECTION CHARGE shall mean the charge levied by the Agency on any premises for the purposes of providing sewage service.
- 1-1.9 CONTRACTOR shall mean any individual, firm, corporation, partnership, or association duly licensed to perform work by the State of California in connection with sewer installations.
- 1-1.10 CUSTOMER shall mean the owner of the premises.
- 1-1.11 DEVELOPER shall mean a person, firm, corporation, partnership or association who proposes to develop, divide, divides or causes to be divided real property

into a subdivision for himself or for others, except that employees and consultants of such persons or entities, acting in such capacity, are not subdividers.

- 1-1.12 DUPLEX shall mean any building containing two dwelling units, excluding any building commonly known as a hotel, motel, apartment or condominium.
- 1-1.13 DWELLING UNIT shall mean a single family residence; each unit of a duplex, triplex or greater number of similar units; each unit of an apartment, condominium, motel, hotel and each mobile home.
- 1-1.14 EFFLUENT shall mean waste water or other liquid, partially or completely treated, or in its natural state, flowing out of a treatment plant, or associated basin or reservoir.
- 1-1.15 EQUIVALENT DWELLING UNIT (EDU) shall mean a single family residence; each unit of a duplex, triplex, or a greater number of similar units; each unit of an apartment complex, condominium complex, motel or hotel; and each mobile home. Each recreational vehicle or travel trailer park space shall constitute 0.5 equivalent dwelling units.
- 1-1.16 GENERAL MANAGER shall mean the General Manager of the Desert Water Agency.
- 1-1.17 INDUSTRIAL WASTES shall mean other than domestic waste.
- 1-1.18 INSTALLATION FEE shall mean that fee covering material, labor and equipment for installing a street lateral from an existing sewer main.
- 1-1.19 INTERCEPTOR/SEPARATOR SURCHARGE shall mean the charge established to provide inspection of an interceptor/separator as determined necessary.
- 1-1.20 INTRACT, or ONSITE shall mean that area which lies inside the peripheral boundary of a subdivided area and/or a developed area.
- 1-1.21 LOCAL AGENCY shall mean a city, county, or city and county.
- 1-1.22 LOT shall mean that portion of a parcel of land which is delineated or described as a single integral unit of a subdivision map.
- 1-1.23 MONTHLY SERVICE CHARGES shall mean a charge levied on any premises for the purpose of covering costs for upgrading and maintaining the facilities, and for billing, collection and administrative costs.

- 1-1.24 OFFTRACT, or OFFSITE shall mean that area which lies outside the peripheral boundary of a subdivided area and/or a developed area.
- 1-1.25 PERSON shall mean any individual, firm, corporation, company, political subdivision, city, county, district, the State of California, the United States of America, or any department or agency thereof. The singular shall in each case include the plural.
- 1-1.26 PREMISES shall mean any lot, or property, or any building or other structure.
- 1-1.27 REGULATIONS shall mean the current edition of, and any amendments or revisions to, the Agency's Regulations Governing Sewage Service.
- 1-1.28 SERVICE AREA shall mean that area for which the Agency provides sewage service.
- 1-1.29 SERVICE CONNECTION shall mean the same as STREET LATERAL.
- 1-1.30 SEWAGE shall mean domestic waste or industrial waste, or both.
- 1-1.31 SEWAGE SERVICE or SERVICE shall mean the furnishing of facilities for the collection, treatment and disposal of sewage, and all the administrative functions auxiliary thereto.
- 1-1.32 SEWAGE SYSTEM which shall include SEWER SYSTEM shall mean the facilities for collection, treatment and disposal of sewage constructed by the Agency, maintained and operated by the Agency for the purpose of providing sewage service.
- 1-1.33 SEWER MAIN or SEWER shall mean any sanitary sewage or treated industrial waste, or both, consisting of pipe and appurtenances including cleanouts and manholes for the collection of sewage and conveyance thereof.
- 1-1.34 SEWER EXTENSION shall mean the installation of any sewer and appurtenances, either intract or offtract beyond the existing sewer system.
- 1-1.35 STANDARD SPECIFICATIONS shall mean the current edition of the Standard Specifications for the Construction of Sewer Systems of the Agency.
- 1-1.36 STREET LATERAL shall mean the pipeline between a sewer main and a building sewer.

- 1-1.37 STREET SEWER shall mean that portion of any sewer main controlled by the Agency, located in a street, alley, easement, thoroughfare or right of way which is used for connections to serve individuals, premises, customers and the general public.
- 1-1.38 SUBDIVISION OR TRACT shall mean the division of any improved or unimproved land, shown on the latest equalized county assessment roll as a unit or as contiguous units, for the purpose of sale, lease, or financing, whether immediate or future except for leases of agricultural land for agricultural purposes. SUBDIVISION includes a condominium project or an apartment project.
- 1-1.39 WASTE WATER RECLAMATION PLANT shall mean any arrangement of devices and structures used for treating sewage.
- 1-2 Other Definitions: Words or terms not defined above shall be defined in accordance with the Glossary - Water and Waste Water Control Engineering prepared by the American Public Health Association and the Water Pollution Control Federation.

SECTION 2 - AUTHORITY

- 2-1 General Authority: The General Manager may prescribe and enforce regulations not in conflict or inconsistent with existing regulations to implement the application, administration, interpretation and enforcement of these Regulations.

- 2-2 Revision of Fees and Charges: The Board may from time to time, by resolution, fix, alter, change, amend or revise any fees and charges for facilities and services.

- 2-3 Authority of Inspectors: The General Manager or his duly authorized representatives and/or employees of the Agency shall be permitted to enter upon all premises to which sewage service is being provided for the purpose of determining the size, depth, grade, location, and condition of any sewer; determination of the location and discharge connections of plumbing fixtures; and inspection, observation, measurement, sampling, and testing of the quantity and nature of sewage being discharged to any sewer in accordance with the provisions of these Regulations.

SECTION 3 - SEWAGE SERVICE

- 3-1 Required Service Connection: Upon providing a sewer in any area within the Agency's service area, the Agency may declare the further maintenance or use of septic tanks or any other local means of sewage disposal in such area to be a public nuisance and may require all buildings to be connected with the sewer within 90 days from the completion of such sewer or within 90 days after written notice. In any event, the prevailing monthly sewer charge shall be imposed to all such developed properties at the expiration of the 90 day notice period. A sewer will be deemed available if the main sewer has been constructed and is available for use in any public street, alley, or right of way within 100 feet of the building to be served.
- 3-2 Changes in Customer's Equipment: Customers making any material change in the size, character or extent of the equipment or operations utilizing sewage service shall immediately give the Agency a written notice of the nature of the change.
- 3-3 Changes in Collection System: Any person making improvements or changes which will result in cutting, refitting, relocating, raising or lowering of street laterals, sewer mains or other parts of the sewage system by the Agency will be required to agree in writing to indemnify the Agency for all cost incurred by the Agency in making such changes. When the location of a street lateral is changed at the customer's request, the cost of making such change will be at the customer's expense.
- 3-4 Agency Consent: No premises shall receive sewage service without prior consent of the Agency. No consent shall be given unless proper application has been made as provided in Section 4, and applicable charges have been paid in accordance with these Regulations. The applicant is responsible for paying all costs and expenses incidental to the installation and maintenance of the building sewer and street lateral.
- 3-5 Damage to Agency Facilities: When damage is due to a line break or other system impairment, the person causing the break or impairment shall pay all costs incurred by the Agency in repairing such damage, including staff and overhead costs. In situations which in the discretion of the General Manager are emergencies, an additional charge in the amount of 100% of the above figure shall be imposed to attempt to recoup in behalf of the Agency and its sewage service customers all direct and indirect costs of such damage, including the threat to the public health and safety caused thereby. In such emergency situations, the minimum billing shall be \$250 because of the necessary, intangible and indirect costs of all such emergencies to

the Agency and its water customers.

- 3-6 Unauthorized Connections: It shall be a violation of these Regulations to alter, disturb, uncover, use, make any connections to or openings into any street sewer or appurtenances thereto without first obtaining permission in writing from the Agency. No person shall make a connection of roof downspouts, exterior foundation drains, areaway drains, air conditioning drains, swimming pool drains, or other sources of surface runoff or ground water to a street lateral which is connected directly or indirectly to a street sewer.
- 3-7 Notification of Change of Ownership: It shall be the duty of every owner signing an application for sewage service to notify the Agency of any change in the ownership of said premises at least two days prior to such change. Every applicant shall be liable for the service furnished and charges rendered in accordance with said application until the Agency receives written notice to cancel such service. Sewage service will be discontinued on the date of ownership change, unless the subsequent owner makes previous arrangements to continue the service.
- 3-8 Access to Premises: The Agency's duly authorized agents, shall at all reasonable times have the right to enter the Customer's premises for any purpose properly connected with its operations.
- 3-9 Responsibility: The Agency's responsibility ends at the street lateral connection to the sewer main, or in the case of any special installations approved by the Agency, at the point where the Agency's facilities end.
- 3-10 Ownership: All street laterals shall remain at all times the property of the Agency.
- 3-11 Maintenance: All street laterals shall be maintained and repaired by the customer. Maintenance and repairs shall not be performed until the Agency has been notified in advance. The Agency reserves the right to inspect the repairs at the customer's expense. Any expense caused to the Agency shall be charged against the customer whenever the act, negligence or carelessness of the customer results in the need for repair by the Agency.
- 3-12 Replacement: All street laterals shall be replaced by the Agency when rendered unserviceable through normal wear and tear at the Agency's expense, provided that where replacements are rendered necessary by the act, negligence or carelessness of the customer, the customer shall make the replacement under Agency inspection at the customer's expense. Replacement by the customer shall not be made until the Agency has been notified in advance.

SECTION 4 - SEWAGE SERVICE CONNECTIONS

- 4-1 Application: An applicant who desires sewage service must complete an application form supplied by the Agency. Each applicant for sewage service may be required to establish credit in accordance with Section 8.
- 4-2 Premises To Be Served: The applicant shall describe the premises to be served, and only the premises so specified will be connected to the sewer. The Agency reserves the right to make separate connections to each and every unit, or to make a single connection to the entire premises.
- 4-3 Division Of Property: Whenever property having a street lateral is divided into two or more parcels, the existing street lateral shall serve only the parcel which it directly enters, and new street laterals shall be provided for each of the remaining parcels.
- 4-4 Separate Service Connections: A street lateral of size and material in accordance with the Agency specifications shall be placed to each lot or parcel of a subdivision.
- 4-5 Approval Of Drawings: Every connection made to any sewer main from any premises shall be installed in accordance with the Agency's Standard Specifications. Sewer drawings will be required and they shall depict plan and profile views of proposed facilities. All drawings and specifications shall substantially conform to the Agency's Standard Specifications and shall be submitted to the Agency in advance of construction for prior approval by the Agency.
- 4-6 Licensed Contractors: Only duly authorized contractors, or employees, or agents of the Agency shall be permitted to install sewer facilities.
- 4-7 Street Lateral Size: The Agency reserves the right to determine the size of the street lateral.
- 4-8 Street Lateral Location: Where practicable, the Agency will install the street lateral at a location selected by the applicant, but the Agency reserves the right to determine the location in relation to boundaries of the premises to be served. Customarily, a street lateral will terminate at a point behind and adjacent to the curb in streets or adjacent to the property line where no curb exists. In locations where the applicant's premises do not directly abut on a public thoroughfare, the Agency at its option, may provide a street lateral of conventional length terminating at some practicable location on public property, and the applicant has the responsibility of connecting thereto. In the event the applicant's building sewer is installed prior to the time the street lateral is

installed, and its location does not correspond with that of the street lateral, then the applicant must bear the additional cost of connecting the street lateral piping with the applicant's building sewer.

- 4-9 Installation: All street laterals to be installed by a developer shall be plugged or connected to a building sewer unless otherwise approved in writing by the Agency.
- 4-10 Cost of Installation: The Agency will permit the installation of street laterals to the applicant's premises at the applicant's expense.
- 4-11 Interceptors/Separators: All interceptors/separators (i.e. grease, oil, sand and lint traps) shall be installed in accordance with the applicable governmental requirements. The applicant shall pay the cost of installation and maintenance. The Agency may at anytime inspect the installation and the operation of the facility and require the applicant to perform any maintenance necessary.
- 4-11.1 Interceptor/Separator Surcharge: The prevailing Interceptor/Separator Surcharge as provided for in Section 7-2 will be imposed on all premises required to install interceptors/separators.
- 4-11.2 Installation: No interceptor/separator shall be installed without prior approval from the Agency. Applicant shall notify the Agency 48 hours prior to the start of installation and all installations shall be inspected by the Agency at the applicable hourly rate paid for an inspector by the Agency.
- 4-12 Plan Check Fees: Plan Check Fees as provided for in Section 6-3 shall be charged for the Agency's services in checking the drawings for required sewer facilities.
- 4-13 Inspection of Connection: Every connection made to any sewer main shall be subject to inspection in accordance with Section 6-4. The Agency may have an inspector in attendance at all times during the actual work of connection.

SECTION 5 - SEWER EXTENSIONS

5-1 General Provisions:

- 5-1.1 Individual Extensions: The Agency will permit extension of its sewer mains and street laterals to individual's premises at the individual's expense.
- 5-1.2 Agency Ownership: Any facilities installed will be the sole property of the Agency. Before service is provided for permanent or temporary use, the applicant shall execute any and all documents required by the Agency to vest title in the Agency of those facilities.
- 5-1.3 Specifications: The size, type, quality of materials, and their actual construction will be done either by a contractor acceptable to the Agency or by the Agency. The sewer extension shall be installed in accordance with the Standard Specifications and the approved drawings. The installation of the sewer extension will be under the inspection of and subject to the approval of the Agency.
- 5-1.4 Costs: Adjustment of any difference between the estimated cost and the actual cost of any sewer extension constructed hereunder will be made as provided for in Section 5-2.2.
- 5-1.5 Feasibility: The right is reserved, as the interests of the Agency may require, to determine the economic and/or engineering feasibility of any sewer extension and the Agency will not make those sewer extensions for which the feasibility is uncertain, in the opinion of the General Manager, whose decision will be final.
- 5-1.6 Location: Sewer extensions will be required in all streets fronting the premises and to be installed in conjunction with proposed street improvements to the premises. Sewer extensions will be located in streets, in easements provided to the Agency by the applicant or in easements obtained by the Agency, or in property deeded to the Agency. Prior to installing a sewer extension, the applicant shall provide the Agency with such easements or deeds as may be necessary or reasonably appropriate to the operation thereof. The Agency will not be required to make extensions where street grades have not been brought to those established by public authority.
- 5-1.7 Parallel Mains: Where the premises are located adjacent to a street exceeding 70 feet in width, or a freeway, waterway, or railroad right of way, the Agency may elect to install a sewer main extension on the same side thereof as the premises in lieu of extending a service

connection across said street, freeway, waterway or railroad right of way from an existing or proposed unit.

- 5-1.8 Agency Right To Allow Connections: The Agency shall have the right at any time to allow other users to connect to the Agency's sewer system at any location, whether built by the Agency or by another party and transferred to the Agency, subject to payment of such fees as may be required by agreement or by resolution of the Board.
- 5-1.9 Minimum Sizing: The Agency will not permit a sewer main extension of less than eight inches in diameter unless approved in advance by the Agency.
- 5-1.10 Agency Right To Design And Construct: The Agency reserves the right to design and construct sewer facilities at its discretion. The cost of said facilities shall be borne by the applicant including but not limited to design, materials and installation.
- 5-1.11 Separate Service Connections: A street lateral of size and material in accordance with the Agency's specifications shall be placed to each lot or parcel of a subdivision.
- 5-2 Types Of Extensions:
- 5-2.1 General:
- 5-2.1.1 Oversizing: If the Agency requires a size or type of sewer extension in excess of the requirements of the applicant, the applicant will be reimbursed for the additional incremental cost of the material for the oversized requirement only, pursuant to the terms and conditions fixed by the Agency.
- 5-2.1.2 Offtract Improvements: If offtract improvements are required to serve the applicant's intract improvements, the cost of required facilities shall be borne by the applicant, including but not limited to design, materials and installation.
- 5-2.1.2.1 Main Extension Refund Agreement: The Agency may elect to enter into a refunding agreement with the applicant. The refunding agreement shall contain terms and conditions as the Board shall from time to time deem necessary and appropriate. Any refund shall be based on a front footage charge.
- 5-2.2 By Agency: The Agency may extend its sewer system to the applicant's premises at the applicant's expense. The applicant shall pay the Agency a deposit equal to the estimated cost of the sewer extension, as determined

by the Agency. Said deposit shall be used to compensate the Agency and/or any contractors and suppliers engaged by the Agency in the installation of the sewer extension. Within 60 days after the cost of the sewer extension has been determined, any difference between the cost and the deposit shall be paid by or refunded to the applicant. The Agency will not be required to pay interest on the deposit. Where two or more applicants apply for service from the same sewer extension, the Agency may allocate the costs proportionately.

- 5-2.3 By Applicant: The applicant shall furnish security to the Local Agency to guarantee the installation of the sewer extension in the amount equal to the estimated cost thereof as determined by the Agency. The applicant will be required to deposit with the Agency a sum of money equal to ten percent of the estimated construction costs as determined by the Agency for the purpose of covering the cost of inspection and incidentals. The sewers and appurtenances shall be installed by a contractor holding a valid California contractor's license in accordance with the provisions of Division 3, Chapter 9 of the Business and Professions Code of the State of California, or any amendments thereto. As used in this Section, the word "applicant" shall be deemed to include the word "subdivider".
- 5-3 Inspection: The Agency will provide inspection of the sewer extension at the applicant's expense as provided for in Section 6-4.
- 5-4 Plan Checking: The Agency will review and check the drawings for the sewer extension prior to approval at the applicant's expense as provided for in Section 6-3.
- 5-5 Design Review: The Agency will perform design review for tentative projects on an actual cost basis. An estimate will be prepared by the Agency prior to performing said review in accordance with Section 6-5.

SECTION 6 - FEES AND CHARGES

- 6-1 Capacity Charges: Each applicant shall pay to the Agency a sewer Capacity Charge then in effect as established by resolution of the Board.
- 6-1.1 Time of Payment: The Capacity Charge shall be paid to the Agency prior to issuance of a financial arrangement letter from the Agency to the appropriate governmental entity or prior to the provision of water or sewage service, whichever occurs first.
- 6-2 Connection Charges: Every customer who wishes to connect to the Agency's sewer system shall execute the Agency's standard sewage service application and pay the Connection Charge where applicable in an amount established by resolution of the Board.
- 6.2.1 Time of Payment: The Connection Charge shall be paid to the Agency prior to issuance of a financial arrangement letter from the Agency to the appropriate governmental entity or prior to the provision of water or sewage service, whichever occurs first.
- 6.2.2 Exemption: A subdivider who installs sewer facilities in accordance with Section 5-2.2 and 5-2.3 shall not be charged a Connection Charge for those sewer mains that subdivider installs only.
- 6-3 Plan Check Fees: Plan Check Fees are established by resolution of the Board and shall be charged for the Agency's services in checking the drawings for required sewer facilities.
- 6-4 Inspection Fees: The Agency shall provide inspection at the applicant's expense at the applicable hourly rate paid by the Agency for an inspector.
- 6-5 Design Review Fees: Design Review Fees are established by resolution of the Board and shall be charged for the Agency's services in analyzing the sewer requirements for proposed developments.

SECTION 7 - MONTHLY CHARGES

- 7-1 Service Charges: Customers shall pay monthly charges for sewage service as set by resolution of the Board.
- 7-1.1 Monthly Service Charges: The monthly charge for all types or classes of service shall be set by resolution of the Board.
- 7-1.2 Quantitative Charges: The quantitative charge for all metered and unmetered water used for all purposes shall be set by resolution of the Board.
- 7-1.3 Treatment By Other Entities: Charges include those payments the Agency is required to make to other entities to cover operation and maintenance and "in lieu of" taxes.
- 7-2 Interceptor/Separator Surcharge: The monthly charge for those premises with interceptors/separators shall be set by resolution of the Board.

SECTION 8 - CREDIT POLICY

8-1 Establishing Credit: Sewage service, in all cases, will be kept in the name of the property owner. Each applicant for sewage service will be required to establish credit to the satisfaction of the General Manager before service will be rendered. Owner's credit will be deemed established with no deposit required, if:

8-1.1 Residential: The new owner can provide proof of ownership for the property to be serviced, and the owner has had service within the Agency service area during the past two years and maintained an account history where service had not been discontinued for nonpayment for 12 consecutive months; or,

The new owner can provide proof of ownership for the property to be serviced, and the new owner can furnish a letter/statement from the water or sewer entity which provided prior service to the new owner stating that an account history was maintained where service had not been discontinued for nonpayment for 12 consecutive months during the past two years.

8-1.2 Non-Residential: The policy for establishing credit for a non-residential service shall be the same as that provided for a residential account.

8-2 Amount of Deposit: Where credit cannot be established pursuant to Sections 8-1.1 and 8-1.2, a deposit shall be required as follows:

8-2.1 Residential: The amount of the deposit shall be two times the monthly bill.

8-2.2 Non-Residential: The amount of the deposit shall be two times the average monthly bill, using the most recent 12 months of consecutive service to determine the average. Where a deposit amount cannot be determined by taking an average of the 12 most recent months of service, a minimum deposit will be required based on the size of the water meter which serves the property. The minimum deposit shall be as set by resolution of the Board.

8-3 Application of Deposit: Deposits shall be held for one year. Upon the completion of one year's continuous service, during which time service had not been discontinued for nonpayment, the deposit shall be applied to the sewer account. If service is discontinued for nonpayment, the deposit shall remain with the Agency until service is ordered discontinued by the applicant.

The deposit, less the amount of any unpaid sewer and water bills, will be refunded without interest upon

discontinuance of service by the applicant.

Refunded deposits shall be forfeited to the Agency if unclaimed by the depositor within two years from the date service is discontinued.

SECTION 9 - DISCONTINUANCE AND RESTORATION OF SERVICE

9-1 Discontinuance of Service:

- 9-1.1 Agency Initiated: The Agency has the right to discontinue service if a customer fails to comply with these Regulations. Under such circumstances, the Agency will make a reasonable effort to notify the customer. Prior to discontinuance of service, notice is not necessary when the noncompliance, violation or infraction of these Regulations by the customer results, or is likely to result in a dangerous or unsanitary condition on the premises, or in the sewer system, or elsewhere. In such case the Agency may order immediate discontinuance of service.

Before discontinuing service, subject to the exception as otherwise provided above, the Agency will give the customer a notice in writing specifying the reason or reasons why service may be discontinued and granting an opportunity to be heard within five days of receipt of said notice. If the customer fails or refuses to comply with the notice or fails to request an opportunity to be heard within a period of five days after the presentation of the notice, then the Agency may discontinue service to the customer. If the person requests the opportunity to be heard and is heard, the Agency will thereafter determine if service shall be continued.

- 9-1.2 At Customer's Request: A customer may have service discontinued by notifying the Agency at least 48 hours in advance of the desired date of discontinuance. Service will be only discontinued on the Agency's normal working days and during normal working hours unless approved by the Agency in advance.

9-2 Restoration of Service:

- 9-2.1 General Provisions: A customer whose service has been discontinued may have it restored by making application.
- 9-2.2 Unauthorized Restoration: It shall be a violation of these Regulations to make a reconnection to the sewer system once service to the premises has been discontinued in accordance with Section 3-6.

SECTION 10 - BILLING AND COLLECTION

10-1 Rendering of Bills: The charges fixed for any premises served shall be billed and collected with the charges for water service furnished by the Agency. Bills for sewage service shall be rendered monthly and are due and payable upon receipt. If it is necessary for the Agency to visit the premises to collect payment for the second and each subsequent time, a collection fee to be determined by the General Manager will be added to the amount owing. Any check submitted for payment of sewage service which is not honored and returned by the bank shall be subject to a return check fee. Such checks not paid in cash by the customer shall result in a discontinuance of sewage service.

10-2 Proration of Bills: The charges applicable to opening periods, closing bills and bills rendered for periods corresponding to less than one month will be computed as follows:

The amount of the minimum charge and the quantity allowed therefor will be prorated on the basis of the ratio of the number of days in the period to the number of days in an average billing period. The measured quantity of usage will be applied to such prorated amounts and quantities.

10-3 Delinquent Accounts: The bill for sewage service is delinquent if not paid within 30 days after billing. When delinquency occurs, a final notice will be mailed to the billing address, with a copy sent to the service address. If payment has not been received 15 days after a final notice has been issued, the service address if different from the billing address will be tagged 48 hours in advance of scheduled turn off to give the occupant opportunity to pay the outstanding account. If occupant does not pay the outstanding account or make arrangements for payment by the date of scheduled turn off, then service may be discontinued without further notice.

Service shall not be restored to the premises until all charges which are delinquent, including fees, if any, have been paid in full. An owner whose service has been discontinued for nonpayment of bills, or whose deposit shall have been applied in whole or in part of the payment of any bills, will be required to reestablish credit by a cash deposit in accordance with Section 8-2.

A sewer customer who has a delinquency on any premise(s) may not receive water or sewage service on another premise until all delinquencies, including fees, are paid in full. Additionally, when a service has been turned off for nonpayment, all charges may be transferred to another account held in the sole name of the same owner. This

account will become delinquent if payment is not made within 15 days from the date of delinquency transfer, and will be subject to turnoff without further notice. The Agency may file liens against the property to enforce collection of delinquent accounts.

SECTION 11 - REGULATIONS OF WASTE AND WATER

- 11-1 Discharges: Except as hereafter provided, no person or customer shall discharge or cause to be discharged any of the following described wastes or waters into any sewer of the Agency:
- 11-1.1 Any liquid or vapor having a temperature higher than 150°F.
 - 11-1.2 Any waters or wastes which contain more than 150 milligrams per liter (mg/L) of fat, oil or grease.
 - 11-1.3 Any gasoline, benzine, naphtha, fuel oil, or other flammable or explosive liquid, solid or gas.
 - 11-1.4 Any waste products resulting from the handling, storage and sale of fruits and vegetables in wholesale or retail produce establishments and wastes from plants engaged in the preparation, processing or preserving of foods not intended primarily for immediate consumption.
 - 11-1.5 Any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, coal tar, asphalt, cement, plastics, wood, paunch manure, or any other solid or viscous substance capable of causing obstruction to the flow in sewers or other interference with the proper operation of the sewer system.
 - 11-1.6 Any waters or wastes having a pH lower than 5.0 or higher than 9.5 having any other corrosive property capable of causing damage or hazard to structures, equipment or personnel engaged in the operation or maintenance of the sewer system.
 - 11-1.7 Any waters or wastes having a corrosive property capable of causing damage to or hazard to, or containing a toxic or poisonous substance in sufficient quantity to injure or interfere with the operation of a waste water reclamation plant, or to constitute a hazard to humans or animals.
 - 11-1.8 Any waters or wastes containing dissolved, suspended or settleable solids of such character and quantity that abnormal attention or expense is required to handle such materials in the sewer system.
 - 11-1.9 Any noxious or malodorous gas or substance in a quantity capable of creating a public nuisance.
 - 11-1.10 Any water or wastes having a biological oxygen demand (BOD) greater than 400 mg/L by weight.

- 11-1.11 Any water or wastes containing more than 500 mg/L by weight of suspended solids (SS).
- 11-1.12 Any waters or wastes containing wax, whether emulsified or not, in excess of 100 mg/L or containing substances which may solidify or become viscous at temperatures between 32°F and 150°F.
- 11-1.13 Any garbage that has not been properly shredded.
- 11-1.14 Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the Agency in compliance with applicable State or Federal regulations.
- 11-1.15 Unusual volume of flow or concentration of wastes constituting slugs.
- 11-1.16 Waters or wastes containing substances which are not amenable to treatment or reduction by the treatment processes employed, or are amenable to treatment only to such degree that the waste water reclamation plant effluent cannot meet the requirements of other agencies having jurisdiction.
- 11-1.17 Any storm water, surface water, ground water, roof runoff, subsurface drainage, cooling water or industrial waste.
- 11-1.18 Any brines or dissolved salts in excess of 1000 mg/L to the sewer system including discharge of salts from regeneration of water softening units in industrial, commercial establishments and private residences and homes.
- 11-2 Admission of Prohibited Discharges: If any waters or wastes are discharged, or are proposed to be discharged to the sewer system, which waters or wastes contain the substances or possess the characteristics enumerated in Section 11-1, and which in the judgement of the Agency, may have a deleterious effect upon the sewer system, or which otherwise create a hazard to life or constitute a public nuisance, the Agency may:
- 11-2.1 Reject the wastes.
- 11-2.2 Require pretreatment to an acceptable condition for discharge to the sewer system.
- 11-2.3 Require control over the quantities and rates of discharge to the sewer system.
- 11-2.4 Require payment to cover the added cost of handling the treatment of waters or wastes not covered by existing

sewer charges under the provisions of these Regulations.

- 11-3 Pretreatment: Where required, in the opinion of the Agency, the customer shall provide at his own expense such pretreatment or handling as may be necessary to meet the Agency's requirements and any plans, specifications and any other pertinent information relating to proposed preliminary treatment, interceptors/separators, or handling facilities shall be submitted for the approval of the Agency and no construction of such facilities shall be commenced until approval is obtained and standards set forth in this Section are met.
- 11-4 Industrial Wastes: Pretreatment of industrial wastes shall be in accordance with the Environmental Protection Agency pretreatment standards which have been promulgated for specific industrial classes.
- 11-5 Maintenance of Pretreatment Facilities: When pretreatment facilities are provided for any waters or wastes to meet the requirements of this Section, they shall be maintained in satisfactory and effective operation by the customer at its expense.
- 11-6 Monitoring:
- 11-6.1 Control Manhole: When required by the Agency, the Customer discharging industrial wastes shall install a suitable control manhole together with such necessary meters and other appurtenances in the building sewer to facilitate observation, sampling and measurement of the wastes. Such manhole shall be accessible and safely located, and shall be constructed in accordance with plans approved by the General Manager. The manhole shall be installed by the customer at his expense, and shall be maintained by him so as to be safe and accessible at all times.
- 11-6.2 Sampling: All measurements, tests and analyses of the characteristics of water and wastes to which reference is made in these Regulations shall be determined in accordance with the latest edition of Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and shall be determined at the control manhole provided or upon suitable samples taken at said control manhole. In the event that no special manhole has been required, the control manhole, shall be considered to be the nearest downstream manhole in the sewer system from the point where the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the waste water reclamation plant and to determine the existence of hazards to life, limb and property.

11-6.3 Interceptors/Separators: (i.e. grease, oil, sand and lint) Interceptors/Separators shall be provided when, in the opinion of the Agency, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand or other harmful ingredients; except that such interceptors/separators shall not be required for dwelling units. All interceptors/separators shall be of a type and capacity approved by the Agency, and shall be located as to be readily and easily accessible for cleaning and inspection. Interceptors/separators shall be maintained in continuously efficient operation at all times by the customer and at the user's expense.

SECTION 12 - ENFORCEMENT

- 12-1 General Provisions: The following procedures are established for enforcement of these Regulations, not for penalty. All Customers shall be held strictly responsible for any and all acts of tenants, agents or employees, and those Customers shall be liable for any expense, loss or damage incurred by the Agency, all pursuant to these Regulations.
- 12-2 Violations:
- 12-2.1 Written Notice: Any Person found in violation of these Regulations will be notified pursuant to Section 9-1.1, except when immediate discontinuance of service is required as provided for in that Section.
- 12-2.2 Corrective Action: Upon being notified by the Agency of any defect arising in any street lateral or of any violation of these Regulations, the Customer shall immediately take whatever corrective action may be necessary.
- 12-2.3 Violation is a Misdemeanor: Sections 31105 and 31106 of the Water Code of the State of California provide that violation of an ordinance, rule or regulation of a Special Act Agency by any Person is a misdemeanor punishable by a fine not to exceed \$100, imprisonment not to exceed one month, or both. Each incident in violation of these Regulations shall be deemed a separate violation, and each day or part of a day a violation of these Regulations continues shall be deemed a separate offense hereunder and shall be punishable as such.
- 12-3 Public Nuisance: Continued habitation of any building or continued operation of any industrial facility in violation of these Regulations is hereby declared to be a public nuisance. The Agency may cause proceedings to be brought for the abatement of the occupancy of the building or industrial facility during the period of such violation.
- 12-4 Discontinuance of Service: The Agency may discontinue service as provided in Section 9-1.
- 12-5 Abatement: During any period of discontinuance of service, occupancy of such premises shall constitute a public nuisance, whereupon the Agency may cause abatement proceedings to be brought against said premises. In such event, and as a condition of restoration of service, the Customer shall pay to the Agency a reasonable attorney's fee and the cost of suit arising in said action, in addition to the charges provided for in Section 8 and Section 9.

SECTION 13 - SEVERABILITY

13-1 Severability of Regulations: These Regulations and the various sections, parts and clauses thereof, are hereby declared to be separable. If any part, section, subsection, paragraph, sentence, clause or phrase of these Regulations is for any reason held to be unconstitutional or unlawful, such provision shall not affect the validity of the remaining portions of these Regulations.

SECTION 14 - EFFLUENT TO COACHELLA VALLEY WATER DISTRICT

- 14-1 Provisions: The provisions of this Section shall apply to all facilities constructed for the purpose of transporting effluent to the Coachella Valley Water District ("District") for treatment or disposal.
- 14-2 Plan Checks and Inspection: Plans and specifications for construction of sewer facilities shall be subject to approval by the Agency, as well as by the District, at District's request. Construction of the facilities will be subject to inspection by the Agency, as well as by the District, at District's request. The developer of property requiring such construction shall pay to the Agency the prevailing charges for plan checking and inspection services, as determined by the Agency and District.
- 14-3 Connections: Agency shall notify and obtain District's approval before connecting into District's sewer system.
- 14-4 Bonds: The developer of any property shall provide such bonds or other security as the Agency and the District may require to assure construction of sewer facilities. Neither the Agency or District shall be required to give assurances to any governmental agency that sewage service will be provided to the property until such security has been provided or the facilities have been accepted by the Agency and District.
- 14-5 Transfer of Title: Upon satisfactory completion of construction, a developer shall convey to District the title of those facilities lying within District's boundaries. The developer shall convey to the Agency the title to those facilities lying within the Agency's boundaries and within the boundaries of the Whitewater River Stormwater Channel. Title shall be free and clear of all mechanic's liens, or other liens or encumbrances of any kind. The developer shall provide such evidence of clear title as may be required by the Agency or District. The developer shall also convey to the Agency and District all appropriate rights of way for such facilities. All instruments of conveyance shall be in a form approved by the Agency and District.
- 14-6 Sewer Capacity Charge: Each developer whose property is provided with sewage service shall pay to the Agency the Capacity Charge established by the Agency and in effect at the time application for service is made, but in no event shall such charge be less than that established by District.
- 14-7 Operation and Maintenance: The Agency shall operate and maintain all sewer facilities constructed pursuant to this

Section, including such facilities as may be constructed within District's boundaries.

14-8 Monthly Charges: Users shall pay a monthly charge for services provided by the Agency and District in an amount determined by resolution of the Board.

14-8.1 District Charges: The amount of the charge attributable to services provided by District shall consist of two components:

14-8.1.1 Monthly Service Charge: A monthly service charge equal to that charged by District within its Improvement District No. 80, less customer account expense.

14-8.1.2 "In Lieu Of Taxes" Charge: An amount, as determined by District, to compensate District for the use of its sewer system, and to provide funds equal to taxes or other charges for sewage service collected from landowners and customers within District which are not applicable to customer outside of its boundaries.

14-8.2 Agency Charges:

14-8.2.1 Monthly Service Charge: The amount of the monthly charge attributable to the Agency shall include the amount necessary as determined by the Agency, to cover its costs for upgrading and maintaining the facilities, for billing, collections, and administrative costs. The monthly charges are subject to change at any time by resolution of the Board.

14-9 Termination: The Agency shall have the right at any time to terminate the flow of effluent to District and to provide for the treatment or disposal of such effluent entirely within the Agency's boundaries.

SECTION 15 - ADOPTION

15-1 Effective Date: Except as otherwise provided herein,
this Ordinance becomes effective on July 1, 1987.

15-2 Previous Ordinances Repealed: Ordinance No. 24, 36 and
40 are hereby repealed.

ADOPTED this 5th day of May, 1987.

President

ATTEST:

Secretary-Treasurer