

LAS VEGAS WASH COORDINATION COMMITTEE

WORKING TOOLS AND TRAINING TO MAINTAIN THE VALLEY'S ENVIRONMENTAL RESOURCES TO THE LAS VEGAS WASH

Home Upcoming Events Additional



# What is "the Wash"?

What is "the Wash"?

Why is "the Wash" important?

What is being done?

What can I do?

Chronology of Events

Wash Facts

4 Flow Components

Images

Visiting the Wash

What is "the Wash"?

## Chronology of Events

Wash Chronology

<< Earlier 1960s >>

Wash Chronology

- Chronology Index
- 2 to 24 Million
- Early 1900's
- 1950's
- 1960's
- 1970's
- 1980's
- 1990's
- 2000

**1950s – Population growth continues; the first wastewater treatment facilities were built; increased water flowing in the Wash creates extensive wetland environment**

In the early 1950s, treatment of sewage in the Valley was by means of cesspools, septic tanks and several small treatment plants mainly operated by hotels along Las Vegas Boulevard. Urban coverage (i.e., developed land) in the Valley was approximately 12,000 acres in 1950, and continuing growth of both the tourist and residential portions of the community demanded more sanitary and efficient means of treating wastewater. So, in August 1954, the Clark County Water Reclamation District (CCWRD), formerly Clark County Sanitation District, was created. A year later, Clark County residents approved construction of a collection system (pipelines) and wastewater treatment facility (the West Plant) and, in November 1956, the CCWRD began receiving sewage from the community at these facilities. The West Plant had a treatment capacity of 12 million gallons per day (mgd).

Around the same time, the City of Las Vegas decided to relocate their 7.5 mgd trickling filter treatment plant from in town (located on the southwest corner of Mojave Road and Harris Avenue) to its present location near the Wash. By 1957, the relocated wastewater treatment plant and an accompanying new sewer system were in operation. Today this facility is named the City of Las Vegas Water Pollution Control Facility.

As the Clark County Water Reclamation District and City of Las Vegas began discharging wastewater into the Wash in 1956 and 1957, respectively, wetland vegetation in the Wash was further enhanced, an event that hadn't occurred naturally prior to steady influx of residents to the Valley starting in the 1950s.

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**1957 – Modern techniques accurately determine the flow of water in the Wash; flood event causes initial headcutting in the Wash channel**

Increasing volumes of treated wastewater caused increasing flows in the Wash. This was monitored by stream gauging conducted by the U.S. Geological Survey (USGS) at Pabco Road beginning in 1957. The USGS continued to quantify the increase in stream flow over time. In 1957, a flood event caused minimal erosion in the Wash and, although the floodplain absorbed most of the water, headcutting started.

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More Information  
Wash Facts  
• History

DCT  
4  
205-685-6710  
CLNR

415-550-8320

5046870000 Group LLC IMPA on City Property, THEN,  
 FOLLOWED BY CSD  
 FOLLOWED BY CITY OF HEARDENSON

**HISTORY OF WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL SYSTEMS IN LAS VEGAS VALLEY**

WASTEWATER COLLECTION, TREATMENT & DISPOSAL SYSTEM	OWNER	LOCATION OF FACILITY	DATE OF START OPERATION	POPULATION		DESIGN AVE. DRY WEATHR FLOW CAPACITY (MGD)	LEVEL OF TREATMENT	COMMENTS
				SERVED AT START OF OPERATION (capita)	DESIGN (capita)			
First sewage collection system in Las Vegas Valley (Downtown Las Vegas)	City of Las Vegas	Sewer system serving original townsite. (Area bounded by Ogden, Stewart, Main and 4 <sup>th</sup> St.)	Early 1920's	3000	5000	0.4	NO TREATMENT	Discharge of raw sewage to Las Vegas Creek - actual point of discharge unknown at this time. (Probably near Bonanza and 8 <sup>th</sup> St.)
First treatment of sewage in Las Vegas Valley (Ponds)	City of Las Vegas	Probably located near presently-named Harris & Manning	Late 1920's	4500	10,000	0.8	Raw sewage lagoons	Available information on wastewater systems for period prior to 1940 is very sketchy at this time. This first treatment, given the level of technology during 1920 - 25 and given the requirements for treatment, was probably raw sewage lagoons. Discharge, when and if it occurred was to Las Vegas Creek and, possibly, to Las Vegas Wash. This discharge probably never reached the Colorado River due to percolation into the ground, enroute.
First treatment plant (first "mechanical" treatment plant) in Las Vegas	City of Las Vegas	Bonanza and Pecos	Early 1930's	6000	15,000	1.5	Primary treatment (Gravity settling process, only)	Discharge of primary effluent to Las Vegas Creek and thence to Las Vegas Wash. Discharge probably did not reach the Colorado River. This new plant has been located farther East because of encroaching development.
Relocated site for new plant with additional capacity	City of Las Vegas	Mojave and Harris Ave.	Early 1940's	15,000	70,000	7.5	Primary treatment	Plant has been relocated farther East again to minimize odor complaints from encroaching development. Discharge continues to be to Las Vegas Creek and is starting to create a wetlands area surrounding Las Vegas Wash. Lou Anton becomes Plant Superintendent in 1949.
Plant # 1 (New location again)	City of Las Vegas	Vegas Valley Dr. (West side of Las Vegas Wash)	1955	80,000	150,000	15	Secondary treatment (Trickling Filter Process)	Plant has been located as far West as possible to place maximum distance from encroaching development. Water pollution control concerns now require secondary treatment to protect Wash and Lake Mead.

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# HISTORY OF WASTEWATER COLLECTION, TREATMENT AND DISPOSAL SYSTEMS IN LAS VEGAS VALLEY

Walt Johnson  
03 August, 2003

WASTEWATER COLLECTION, TREATMENT & DISPOSAL SYSTEM	OWNER	LOCATION OF FACILITY	DATE OF START OPERATION	POPULATION		DESIGN AVE. DRY WEATH'R FLOW CAPACITY (MGD)	LEVEL OF TREATMENT	COMMENTS
				SERVED AT START OF OPERATION (capita)	DESIGN (capita)			
West Plant (Clark County Water Reclamation District, formerly Clark County Sanitation)	Clark County Sanitation District	East end of Flamingo Rd.	November 1956	30,000	120,000	12	Secondary treatment (Trickling Filter Process)	Clark County Sanitation District # 1 was established in August, 1954. Sewer system and first plant, (West Plant) were built and started Nov 1956. The plant was located on West side of Las Vegas Wash, similar to City of LV plant in 1955, to minimize odors and any conflicts with development which was growing Easterly. Discharged flows from both City and County plants were large enough to now cause continual Jim Parrot became Pit Supert and District Manager. Additional capacity added to Plant #1.
Plant # 2	City of Las Vegas	Vegas Valley Dr (West side of Las Vegas Wash)	1966			15 + 15 = 30	Secondary treatment (Trickling Filter Process)	Nevada Power Co. seriously requesting treated effluent for cooling tower water make-up in view of potential cost savings compared to using potable water.
Plant # 3	City of Las Vegas	Vegas Valley Dr (West side of Las Vegas Wash)	Early 1970's			15 + 15 + 15 = 45	Secondary treatment (Trickling Filter Process)	Additional capacity added to Plant #1 & 2. In 1972, the Clean Water Act passed by Congress required new requirements, such as, the NPDES discharge permit requirement. This impacted any discharge to the Wash. Most closely watched were discharge limitations for BOD, TSS, and coliform.
East Plant	Clark County Sanitation District	East end of Flamingo Rd.	Early 1970's			12 + 20 = 32	Secondary treatment (Trickling Filter Process)	Same comment as above to apply to West and East Plants.
Plant # 4	City of Las Vegas	Vegas Valley Dr (West side of Las Vegas Wash)	Late 1980's			66	Secondary treatment (Trickling Filter Process)	New concerns raised regarding nutrients going to Lake Mead. Phosphorus is likely suspect for agent that could cause algae blooms in lake.

**HISTORY OF WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL SYSTEMS IN LAS VEGAS VALLEY**

Walt Johnson Page 3  
03 August, 2003

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East Plant Expansion	Clark County Sanitation District	East end of Flamingo Rd.	Early 1980's			Total plant capacity = 40	Secondary treatment (Trickling Filter Process)	Improvements included changing from rock media to plastic media in trickling filters.
Advanced Wastewater Treatment (AWT) Plant	Clark County Sanitation District	East side of Las Vegas Wash (Hollywood Blvd)	1982			Total plant capacity = 55	Advanced Tertiary Treatment	Designed to remove phosphorus using lime addition process. New discharge permit stipulates 1.0 mg/L max. for phosphorus.
Central Plant	Clark County Sanitation District	East end of Flamingo Rd.	Dec 1993			capacity = 88	Nit/denit Process added	New nitrification/denitrification facilities will remove ammonia. Later modification permitted process to also remove phosphorus and allow abandonment of lime addition process.
Nitrification Facility	City of Las Vegas	Vegas Valley Dr (West side of Las Vegas Wash	1994			Total plant capacity = 66	Secondary treatment (Activated Sludge with nitrification)	Nitrification system removes ammonia, one of the two nutrients (ammonia and phosphorus). <i>ammonia to be removed at City plant</i> Phosphorus at City plant removes phosphorus using alum, then later changed to ferric chloride.
Process trains # 9 and # 10	Clark County Sanitation District	East end of Flamingo Rd.	April 2003			Total plant capacity = 88 + 20 = 108	Nit/denit Process w/Bio-P removal	These process trains added to existing process trains # 1 through # 8. All ten trains are designed for Biological Nutrient Removal (BNR) for removal of ammonia and phosphorus.
BNR Facility	City of Las Vegas	Vegas Valley Dr (West side of Las Vegas Wash	June 2003			Total plant capacity =	Nit/denit Process w/Bio-P removal	This BNR Facility is added to accompany total plant processes in order to take advantage of biological nutrient removal. This will be a cost savings to the City compared to using chemical processes. The BNR Pitt can treat 31 MGD.

*at AWT Plant  
at Las Vegas*

*Fast Expansion  
ccwd primary 1-1-05  
11-12 03?*

*20*

"74" East side on line and  
Nickels  
Zimpro and Z hearth Furnaces

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Late "78" Big A Sludge injection  
79 Terragator " "  
until 1981-82

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Aut Start up "82-83"

"76" Started Chem. Addition  
and Zimpro and Furnace started  
to roll apart

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30 loads per 8 hr @ 3000 gal 78-79  
45-60 loads per 8 hr @ 7000 gal 79-82  
in to ground

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01 Two more Dahl 3-4  
and rebuilt 1-2

02 ERW Pump station @ AWT  
water tower

6-02 Primary 7-10 - 40mgd

Bar Screen / Grit 2-02  
170 mgd MGD

CP Filters and UV 6-02  
8 filters 68 mgd  
3 UV Bank's

New lab 1-1-03

Desert Breeze WRC 4-03