

**Blue Diamond Detention Basin  
Las Vegas and Tributaries  
(Tropicana and Flamingo Washes)  
Nevada**

**Pertinent Data<sup>1</sup> (English Units)**

Completion Date .....	January 2001
Stream System.....	Blue Diamond Wash
Drainage Area.....	67.24 mi <sup>2</sup>
Total length of dam (embankment and spillway).....	4,978.35 ft
<b>Dam embankment (earthfill)</b>	
Crest elevation.....	2,976.90 ft
Crest length.....	3,153.54 ft
Crest width .....	19.69 ft
Maximum height above streambed.....	59.07 ft
<b>Spillway</b>	
Crest elevation.....	2,966.24 ft
Crest length.....	1,824.80 ft
Elevation of maximum water surface ).....	2,973.64 ft
Design Discharge.....	144,000 ft <sup>3</sup> /s
<b>Outlet Works (ungated steel bulkhead with 3.22 ft wide by 1.94 ft high opening)</b>	
Height of concrete box conduit .....	6.56 ft
Width of concrete box conduit.....	4.59 ft
Length of concrete box conduit.....	222.68 ft
Intake elevation .....	2917.85 ft
<b>Basin Bypass Conduit</b>	
Height of concrete box conduit .....	5.25 ft
Width of concrete box conduit.....	4.59 ft
Length of concrete box conduit.....	1610.89 ft
Intake elevation .....	2941.94 ft
<b>Detention Basin (design)</b>	
Area at dam spillway crest.....	116 ac
Gross capacity at dam spillway crest.....	2313 Ac-Ft
<b>Storage allocation below dam spillway crest</b>	
Flood control (includes 89.59 Ac-Ft for antecedent sediment allowance).....	2313 Ac-Ft
<b>100-year flood (reservoir design flood routing)</b>	
Inflow volume (6-hr).....	2334 Ac-Ft
Peak inflow .....	13,700 ft <sup>3</sup> /s
Peak outflow.....	218 ft <sup>3</sup> /s
Peak elevation .....	2,966.14 ft
Drawdown time (99% recovery).....	7 day
<b>Probable maximum flood (spillway design flood routing)</b>	
Inflow volume (24-hr).....	29,226 Ac-Ft
Peak inflow .....	144,000 ft <sup>3</sup> /s
Peak outflow.....	144,000 ft <sup>3</sup> /s
Peak elevation .....	2,973.64 ft
Spillway flow duration.....	8.75 h

<sup>1</sup> Note: All SI-to-English conversions based on Federal Standard 376B.  
All elevations based on the following survey controls:  
Horizontal: North America Datum of 1983 (NAD 83)  
Vertical: North America Vertical Datum of 1988 (NAVD88)

**Blue Diamond Detention Basin  
Las Vegas and Tributaries  
(Tropicana and Flamingo Washes)  
Nevada**

**Pertinent Data<sup>1</sup> (Metric Units)**

Completion Date .....	January 2001
Stream System.....	Blue Diamond Wash
Drainage Area.....	174.15 km <sup>2</sup>
Total length of dam (embankment and spillway).....	1,517.400 m
<b>Dam embankment (earthfill)</b>	
Crest elevation.....	907.360 m
Crest length.....	961.200 m
Crest width .....	6.000 m
Maximum height above streambed.....	18.000 m
<b>Spillway</b>	
Crest elevation.....	904.110 m
Crest length.....	556.200 m
Elevation of maximum water surface .....	906.36 m
Design discharge .....	4,078 m <sup>3</sup> /s
<b>Outlet Works (ungated steel bulkhead with 0.980 m wide by 0.590 m high opening)</b>	
Height of concrete box conduit .....	2.000 m
Width of concrete box conduit.....	1.400 m
Length of concrete box conduit.....	67.874 m
Intake elevation .....	889.360 m
<b>Basin Bypass Conduit</b>	
Height of concrete box conduit .....	1.600 m
Width of concrete box conduit.....	1.400 m
Length of concrete box conduit.....	491.000 m
Intake elevation .....	896.704m
<b>Detention Basin (design)</b>	
Area at dam spillway crest .....	469,549 m <sup>2</sup>
Gross capacity at dam spillway crest .....	2,852,791 m <sup>3</sup>
<b>Storage allocation below dam spillway crest</b>	
Flood control (includes 110,508m <sup>3</sup> for antecedent sediment allowance).....	2,852,791 m <sup>3</sup>
<b>100-year flood (reservoir design flood routing)</b>	
Inflow volume (6-hr).....	2,878,989 m <sup>3</sup>
Peak inflow .....	388 m <sup>3</sup> /s
Peak outflow.....	6.17 m <sup>3</sup> /s
Peak elevation .....	904.08 m
Drawdown time (99% recovery).....	7 day
<b>Probable maximum flood (spillway design flood routing)</b>	
Inflow volume (24-hr).....	4,039,680 m <sup>3</sup>
Peak inflow .....	4,078 m <sup>3</sup> /s
Peak outflow.....	4,078 m <sup>3</sup> /s
Peak elevation .....	906.36 m
Spillway flow duration.....	8.75 h

<sup>1</sup> Note: All elevations based on the following survey controls:  
Horizontal: North America Datum of 1983 (NAD 83)  
Vertical: North America Vertical Datum of 1988 (NAVD88)