

11/6/2017

Reno Stead Water Reclamation Facility and Washoe County Lemmon Valley Water Reclamation Facility Effluent and Swan Lake  
 Data compiled by : Joe Coudriet

Agreement for flows to Swan Lake		
490 ac ft annually		
159.25 million gallons annually		
0.4363 MGD (at continuous flow)		
1 MGD	=	1120.147 AFY
1Mgallons	=	3.0689 acft

Lemmon Valley Water Reclamation Facility (LVWRF)		(the listed effluent is approximate, is from 2007 Quad Knopf Hydrologic Study, and is assumed to be representative of the plant operating at max capacity)
0.65	MGD (million gallons per day); represents maximum future daily effluent for March, which is the annual effluent estimated in the 2007 Quad Knopf Hydrologic Study, and is assumed to be representative of the plant operating at max capacity for a future condition under existing permit	
650,000	gal/day (for March only)	
19,500,000	gal/month (represents March's effluent, which is the only time effluent is discharged to the playa)	
59.8	ac ft/month (represents March's effluent, which is the only time effluent is discharged to the playa)	
10800	ac ft (Swan Lake Storage at FEMA 100 yr elevation)	
0.55%	% that annual discharge represents in terms of Swan Lake total volume (in this case March's discharge is the annual discharge)	
0.00727272	inches/ft (depth of water that 1 ac ft of storage represents based on Stage Storage Curve at FEMA 100 yr elev (slope is 12 inches/1650 acft = .00727 inches per acft)	
0.44	inches (depth of water that annual discharge represents based on .00727 inches per acft and based on FEMA 100 yr flood elevation)	

Reno Stead Water Reclamation Facility (RSWRF)--Existing		(the listed effluent is based on the 2016 data for outfall to creek--this is a good approximation of 2017 contribution)
1.5	million gallons per day, approx 2016 average annual influent flow	
1115	ac ft/yr (measured total discharge to Swan Creek/Swan Lake 2016 dataset--which is latest full year of data)	
363,323,397	gal/yr (measured total discharge to Swan Creek/Swan Lake 2016 dataset--which is latest full year of data)	
10800	ac ft (Swan Lake Storage at FEMA 100 yr elevation)	
10.32%	% that 2016 annual discharge represents in terms of Swan Lake total volume (in this case March's discharge is the annual discharge)	
0.00727272	inches/ft (depth of water that 1 ac ft of storage represents based on Stage Storage Curve at FEMA 100 yr elev (slope is 12 inches/1650 acft = .00727 inches per acft)	
8.11	inches (depth of water that 2016 annual discharge represents based on .00727 inches per acft and based on FEMA 100 yr flood elevation)	
RSWRF Reuse Flows		
597	ac ft/yr (of flows sent to reuse system that would have otherwise been discharged to Swan Creek/Swan Lake 2016 dataset--which is latest full year of data)	
194,532,796	gal/yr (of flows sent to reuse system that would have otherwise been discharged to Swan Creek/Swan Lake 2016 dataset--which is latest full year of data)	
5.53%	% that 2016 annual discharge represents in terms of Swan Lake total volume at 100 year elev	
0.00727272	inches/ft (depth of water that 1 ac ft of storage represents based on Stage Storage Curve at FEMA 100 yr elev (slope is 12 inches/1650 acft = .00727 inches per acft)	
4.34	inches (depth of water that 2016 reuse system flows represent based on .00727 inches per acft and based on FEMA 100 yr flood elevation)	