

## Sheth, Gary

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**From:** Michele.Robertson@aps.com  
**Sent:** Friday, August 08, 2014 11:16 AM  
**To:** Sheth, Gary  
**Cc:** Pamela.Norris@aps.com  
**Subject:** RE: Questions about Morgan Lake Intake  
**Attachments:** removed.txt

Gary,

I apologize for the delay in responding to your request. Here is the information on the river station intake.

Morgan Lake Intake

**System description:** Morgan Lake Dam stores water which is used for cooling and other industrial and domestic uses in the Four Corners Power Plant. Morgan Lake Dam is filled by water diverted from the San Juan River via a river diversion pump station which consists of two pumps in series and flow is through a 36-inch pipe. All of the water supply for the plant is obtained from the San Juan River. An average of 27,682 acre-feet of water is pumped from the San Juan River to Morgan Lake annually.

**Location:** The river intake structure is located at 36° 44' 33.22" North, 108° 27' 41.70" West

The intake structure on the San Juan River consists of two 10- by 10-foot intake bays, placed perpendicularly to the flow of the river. These intake bays are located just upstream of the APS Weir. The weir includes a control gate that provides the ability to control water depths at the intake location. The intakes are screens with an approximately 1-inch by 3-inch opening. Approach velocities toward the screens are approximately 0.38 foot per second. No fish collection or return facilities are associated with the intake

Morgan Lake Dam is location in Section 6, Township 29 North, and Range 16 West, 2076977.0851 northing - 2539870.7365 easting. Morgan Lake Dam is located in the northwestern New Mexico, in San Juan County, on the Navajo Indian Reservation. The dam is located approximately 6 miles southwest of Fruitland, New Mexico. The dam is accessible from U.S. Highway 64 via County Road 6675 near Fruitland, New Mexico.

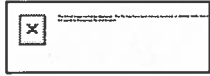
**Current pumping capacity:** single train = 75.13 acre-feet/day and double train = 120.20 acre-feet/day

**Average intake volume:** 74.17 acre-feet/day over a 10 year period

The intakes are operated in two modes, pumping either 17,000 gallons per minute (gpm) or 32,000 gpm (approximately 37 and 71 cubic feet per second [cfs], respectively) from the San Juan River. The intake is operated at any time of day, as needed. The 17,000-gpm mode is generally used during the October to May timeframe, and the 32,000-gpm mode is generally used during the May through October timeframe. This diversion rate is driven primarily by the evaporation rate in the Plant and from Morgan Lake. These pumps run approximately 80 percent of the time. (This reflects operation prior to closure of Units 1-3). The 17,000-gpm mode is through one 10- by 10-foot screen and the 32,000-gpm mode is 16,000 gpm each, through both 10- by 10-foot screens. These intakes were installed pursuant to the FCPP lease.

We previously discussed scheduling a conference call to discuss the draft permit. Please provide some possible dates and times if you want to plan that discussion.

Thank you,



**MICHELE ROBERTSON, R.G.**  
Principal Environmental Scientist  
Corporate Environmental, Health & Safety  
400 North 5th Street, Phoenix, AZ 85004, M.S. 9303  
**Tel** 602 250 3196 **Cell** 480 332 7417  
[michele.robertson@aps.com](mailto:michele.robertson@aps.com) [aps.com](http://aps.com)

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**From:** Sheth, Gary [<mailto:Sheth.Gary@epa.gov>]  
**Sent:** Monday, July 28, 2014 11:05 AM  
**To:** Robertson, Michele  
**Subject:** FW: Questions about Morgan Lake Intake

Hi Michele,

I am following up on the request I made earlier for information as detailed below. Please forward the requested information at your earliest convenience.

Thanks,

Gary Sheth  
NPDES Permits Office (WTR-5)  
Water Division  
USEPA Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Tel: 415.972.3516  
Fax: 415.947.3545

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**From:** Sheth, Gary  
**Sent:** Tuesday, June 10, 2014 1:08 PM  
**To:** [Michele.Robertson@aps.com](mailto:Michele.Robertson@aps.com)  
**Subject:** RE: Questions about Morgan Lake Intake

Hi Michele,

Please provide a full description of the intake structure, mechanism, and process for intake of water from the San Juan River to Morgan Lake. Please include information about the exact location of the intake structure, design capacity, average intake volume, as well as any measures in place to minimize entrainment and impingement of biota resulting from the intake of water.

Thanks,

Gary Sheth  
NPDES Permits Office (WTR-5)

Water Division  
USEPA Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Tel: 415.972.3516  
Fax: 415.947.3545

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**From:** [Michele.Robertson@aps.com](mailto:Michele.Robertson@aps.com) [mailto:[Michele.Robertson@aps.com](mailto:Michele.Robertson@aps.com)]  
**Sent:** Tuesday, June 10, 2014 12:03 PM  
**To:** Sheth, Gary  
**Cc:** [Richard.Grimes@aps.com](mailto:Richard.Grimes@aps.com); [Pamela.Norris@aps.com](mailto:Pamela.Norris@aps.com)  
**Subject:** Questions about Morgan Lake Intake

Gary,

Could you outline the questions you have about the intake? My notes of our conversation are not clear and this will help ensure that we provide the information you need.

Thank you,

Michele



**MICHELE ROBERTSON, R.G.**  
Principal Environmental Scientist  
Corporate Environmental, Health & Safety  
400 North 5th Street, Phoenix, AZ 85004, M.S. 9303  
**Tel** 602 250 3196 **Cell** 480 332 7417  
[michele.robertson@aps.com](mailto:michele.robertson@aps.com) [aps.com](http://aps.com)

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