

**SOUTHERN NEVADA WATER AUTHORITY  
BOARD OF DIRECTORS  
REGULAR MEETING  
MARCH 17, 2016  
MINUTES**

CALL TO ORDER 9:01 a.m., Colorado River Conference Rooms, Southern Nevada Water Authority, 100 City Parkway, Seventh Floor, Las Vegas, Nevada

BOARD MEMBERS PRESENT Mary Beth Scow, Chair  
Sam Bateman, Vice Chair  
Marilyn Kirkpatrick  
Bob Coffin  
Duncan McCoy  
Steve Sisolak  
Anita Wood

BOARD MEMBERS ABSENT None

STAFF PRESENT John Entsminger, Greg Walch, Julie Wilcox, Dave Johnson, Gina Neilson

OTHERS PRESENT Marc Jensen

*Unless otherwise indicated, all members present voted in the affirmative.*

**COMMENTS BY THE GENERAL PUBLIC**

*For complete comments, audio is available online at [snwa.com](http://snwa.com)*

Ed Uehling referred to Item 9 of the agenda, and commented that the Authority is not interested in conserving water and referenced a previously-approved agreement with California as an example. He said that if the system's tiers are extended, more would be spent per thousand gallons.

**1. For Possible Action: Approval of Agenda & Minutes**

FINAL ACTION: A motion was made by Director Kirkpatrick to approve the meeting's agenda and the meeting minutes of January 21, 2016. The motion was approved.

**2. For Possible Action: Receive a presentation from the Authority's Youth Advisory Council and direct staff accordingly.**

The Youth Advisory Council gave their presentation on desert agriculture and drip irrigation. Board members thanked them for their commitment to water conservation and offered other ideas for future study and consideration.

**CONSENT AGENDA: The following items are considered routine and were taken in one motion.**

- 3. For Possible Action: Approve and authorize the General Manager to sign a task order between Carollo Engineers, Inc., and the Authority for the Authority's continued participation in the Water Research Foundation study, Blending Requirements for Water from Direct Potable Reuse Treatment Facilities, and accept additional funds in an amount not to exceed \$50,000.**
- 4. For Possible Action: Approve and authorize the General Manager to sign Amendment No. 1 to the agreement between Spring Valley Associates, LLC, and the Authority for professional staffing services for the Authority's Northern Resources properties, for an amount not to exceed \$1,200,000 annually.**
- 5. For Possible Action: Approve and authorize the General Manager to execute a purchase agreement between Ameron Water Transmission Group, LLC, and the Authority in the amount of \$4,531,810 for the supply of 355 feet of large diameter steel pipe and associated fittings for the Lake Mead Intake No. 3 Low Lake Level Pumping Station Discharge Aqueducts, and authorize the General Manager to approve change orders for additional costs for an amount not to exceed \$400,000.**

6. **For Possible Action: Approve the award of Bid No. 2304-15, Annual Requirements Contract for Liquid Chlorine, to DX Systems Company, L.P., in the estimated amount of \$539,800 for a period of one year from date of award, with the option to renew for four additional one-year periods, and authorize an increase in an amount not to exceed 5 percent for each renewal term.**
7. **For Possible Action: Approve the award of Bid No. 2306-15, AMSWTF Filter Beds 1 and 2 Butterfly Valves, to Ferguson Enterprises, Inc., DBA Ferguson Waterworks, in the amount of \$538,852.**

FINAL ACTION: Director Wood made a motion to approve staff's recommendations. The motion was approved.

### **BUSINESS AGENDA**

8. **For Possible Action: Approve and authorize the General Manager to accept funds in an amount not to exceed \$160,000 to develop a preliminary interpretive plan for a Colorado River traveling exhibit; authorize the Authority to contribute up to \$15,000 as a co-project participant; and authorize the General Manager to enter into and execute agreements to accept these contributions and other agreements that may be necessary to effectuate the development of the Plan.**

General Manager Entsminger and Councilwoman Scow said they are excited to work with partners of the Colorado River Basin on this project, including all seven Basin states, non-governmental organizations, the federal government, and the Chicago Field Museum. Mr. Entsminger said that he thinks it will go a long way towards helping educate the population both in the seven states and worldwide about the challenges facing the Colorado River.

FINAL ACTION: Director McCoy made a motion to approve staff's recommendation. The motion was approved.

9. **For Possible Action: Receive an update on conservation activities and approve new conservation initiatives, including a revised watering schedule and uniform fountain policy.**

Mr. Entsminger gave a presentation about the summer watering schedule and fountain use.

Vice Chair Bateman asked about the watering schedule and if enforcement measures are going to be taken on a purveyor or city level. Mr. Entsminger said that the watering schedule varies by jurisdiction – each has its own enforcement capabilities. He said that the new schedule will not add any overhead to what is being done already since staff is already in place to monitor other requirements. Mr. Entsminger added that the Authority is the regional agency and does not have the regulatory authority to mandate the changes that need to be done. He said that if the Board recommends the policy, the Authority's member agencies would consider the proposed changes at the Council level for them to be enacted.

Director Sisolak asked how much water a golf course uses, and how many used reclaimed water. Mr. Entsminger said that golf courses use 600 to 650 acre feet a year, and nearly all golf courses use at least a portion of reclaimed water. Director Sisolak and Chairwoman Scow said that the Authority should think about going to IRPAC to add a fifth tier for egregious water wasters. Mr. Entsminger said that the tier structure is implemented by the member agencies, and recommended taking it to the Las Vegas Valley Water District's advisory committee instead.

Directors Sisolak, McCoy, and Councilwoman Scow said they wanted to see data and the performance of a study of water usage on Sundays. Director Sisolak recommended that the Youth Advisory Council (YAC) do the experiment to promote an effective message in the community. Mr. Entsminger said the Authority can arrange for YAC to do a demonstration at the Springs Preserve.

Directors Coffin, Sisolak, McCoy, and Wood stated that vegetable and flower gardens should be exempt from the proposed watering restrictions. Director Coffin and McCoy said that they do not think gardens consume a great deal of water, and spoke about the importance of drip irrigation, and personal and community gardens.

Director Sisolak and Kirkpatrick expressed concern about unintended consequences caused by the proposed restriction. Mr. Entsminger reported that experts were consulted about impacts to fescue; the Authority is already working on preliminary outreach and advertisements that will be brought to the Board.

Mr. Entsminger said that the proposed summer watering schedule is intended to be voluntary for the first year to allow the community to adjust, and would become mandatory the year after.

Director. Sisolak asked about the amount of water used by marijuana cultivation facilities, and Mr. Entsminger committed to providing that information.

FINAL ACTION: Vice Chair Bateman made a motion to approve staff's recommendation. The motion was approved.

10. **For Possible Action: Approve and authorize the General Manager to sign, in substantially the same form, a water service agreement between Playa Solar 1, LLC, and Playa Solar 2, LLC, collectively, and the Authority for construction water services, and authorize the General Manager to enter into ministerial agreements necessary to effectuate.**

Mr. Entsminger said that this agreement is largely for construction water for a large solar facility in Garnet Valley. He said that for the return of supply construction water, Playa Solar will drill a production well in Garnet Valley and turn over ownership to the Authority, which could be used for the future Garnet Valley/APEX water system.

Directors Kirkpatrick and Sisolak stated their preference of utilizing Nevada and Clark County labor to perform the work.

Director Wood asked if staff reached out to the City of North Las Vegas to review the agreements. Dave Johnson indicated that they had. Director Wood expressed concerns that her staff still had outstanding questions about the item.

Director Wood inquired whether SNWA could supply construction water to both Playa Solar and Faraday Future through the aquifer. Mr. Entsminger said that the Nevada State Engineer approved temporary change applications for a sufficient volume of water in Garnet Valley to cover both Playa Solar and Faraday Futures' construction water needs. She also asked SNWA to confirm that the \$1 million investment from Playa Solar will reduce funding for water service to Kapex for the same amount. Mr. Entsminger confirmed that the \$1 million value for the well will reduce the costs of the permanent water system by that same amount. Mr. Entsminger also mentioned the work that is being done to secure contracts for the 30 percent design effort. Director Wood also asked if the SNWA plans to provide water to Special Improvement District/Tax Increment Area authorized by Senate Bill 3, and how the Authority would reduce costs if cost estimates exceed the financed amount. Mr. Entsminger said that the costs for the project will be better informed by the 30 percent design effort, and noted that a review will need to be conducted when all entities' costs are known for Phase I.

FINAL ACTION: Director Sisolak made a motion to approve staff recommendations. The motion was approved.

11. **For Possible Action: Receive an update from staff on water resources including, but not limited to, drought conditions in the Colorado River Basin, the results of the implementation of the Authority's Water Resource and Conservation Plans, activities on the Colorado River, the development of in-state water resources, and the status of construction activities near Lake Mead.**

Marc Jensen, Director of Engineering, gave a presentation on updates of the Low Lake Level Pumping Station, and Greg Walch, General Counsel, gave a presentation on Colorado River hydrology.

NO ACTION REQUIRED.

#### **Public Comment**

Ed Uehling recognized the efforts of the Youth Advisory Council, but noted concerns about the Board's lack of interest. Mr. Uehling noted the previously-approved water banking agreement with California and his concerns about the agreement and loss of revenue.

#### **Adjournment**

There being no further business to come before the board, the meeting adjourned at 10:22 a.m.

APPROVED:

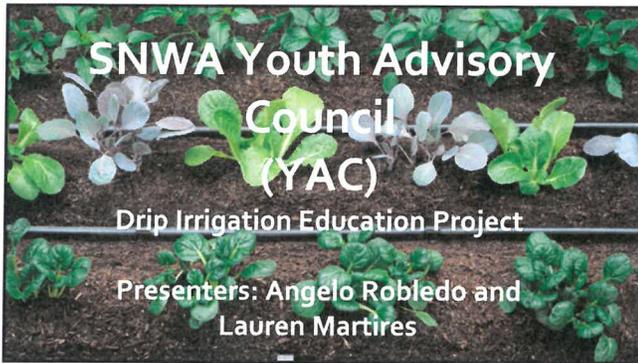
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Mary Beth Scow, Chair

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John J. Entsminger, General Manager

**Copies of all original agenda items and minutes, including all attachments, are on file in the General Manager's office at the Las Vegas Valley Water District, 1001 South Valley View Boulevard, Las Vegas, Nevada.**



### Youth Advisory Council

- Group of high school students passionate about exploring, researching, and solving water issues in southern Nevada
- Our mission is to educate the youth around the Las Vegas Valley about water conservation and inspire and motivate the community to gain environmental sustainability skills and knowledge

### Desert Agriculture

- With very little precipitation and harsh temperatures, desert agriculture relies heavily on irrigation
- However, problems occur when raising non-native plants depletes the desert's limited groundwater supply
- Need to use what water we have in the most efficient way

### Gilcrease Orchard

Inquired about the most resourceful way local farmers water their crops.

A photograph of a red barn with a white sign that says "Gilcrease ORCHARD". The sign features a small tree icon. A few people are standing in front of the barn.

## Drip Irrigation

- An irrigation method that conserves water by allowing it to drip slowly to the roots of the plant
- Can be done through a network of valves, pipes, tubing and emitters
- Preferred method by desert farmers and growers

## Research

### • SNWA Drip Irrigation Class

Learned how to install a basic drip irrigation system, from the home water source to the plants.



## Research

- Online research on affordable/sustainable methods
- More attainable and relatable to our audience
- Teaches youth how drip irrigation works, let's them practice the watering method and see it's value to our community



## Bringing our Educational Presentation to the Public

- Short demonstrations of effective drip irrigation techniques
- Introduction of a hands on approach to drip irrigation; marketable to both home and classroom gardens
- Explanation of the benefits of drip irrigation over traditional methods in the desert
- How to build own personal drip irrigation system with both high-quality pieces of equipment, as well as with recycled household items
- Presentable at the local schools as well as at venues such as the Springs Preserve





**SNWA Conservation Initiatives**

Conservation Initiatives

The SNWA continues to explore opportunities to reduce water use in Southern Nevada and maximize the use of water resources.



SNWA Ordinance Review Team

In September 2015, technical representatives from SNWA Member Agencies met regularly to evaluate opportunities for additional conservation savings.

- Jennifer Ammerman, Clark County
- Brenda Pohlmann, City of Henderson
- Michael Tassi, City of Henderson
- Dennis Demera, LVVWD
- Quan Phang, City of North Las Vegas
- Sherri McMahon, City of Las Vegas
- Steve Gebeke, City of Las Vegas
- Skip Spillman, Boulder City
- Doug Bennett, SNWA
- Katie Horn, SNWA

SNWA Ordinance Review Team

The team evaluated existing ordinances and opportunities for small revisions to yield large water savings or regional uniformity.

The team focused on two issues:

- Summer Watering Schedule
- Manmade ornamental water features (fountains)

### Summer Watering

SNWA's Summer Watering Schedule allows watering any day per week.

Watering Group	Winter	Spring / Fall	Summer
	November - February	March - April / November - December	May - August
A	Monday	Monday, Wednesday, Friday	Any Day
B	Tuesday	Tuesday, Thursday, Saturday	Any Day
C	Wednesday	Monday, Wednesday, Friday	Any Day
D	Thursday	Tuesday, Thursday, Saturday	Any Day
E	Friday	Monday, Wednesday, Friday	Any Day
F	Saturday	Tuesday, Thursday, Saturday	Any Day

### Summer Watering

SNWA Conservation staff evaluated the potential impacts of prohibiting Sunday sprinkler watering during Summer months.

Findings:

- Prohibiting Sunday sprinkler watering during Summer is achievable without causing permanent landscape damage.
- Sunday was the most common day skipped among customers who already skip a day.
- Lawns watered 6 days per week had comparable appearance to lawns watered every day during summer.

### Estimated Water Savings

50

million gallons potential savings each Sunday during summer months

900

million gallons potential savings each year

### Other Watering Schedule Changes

The team also recommended aligning time-of-day restrictions to the same summer months used for watering restrictions (May through August).

Watering Group	Winter	Spring / Fall	Summer
	November - February	March - April / November - December	May - August
A	Monday	Monday, Wednesday, Friday	Any Day
B	Tuesday	Tuesday, Thursday, Saturday	Any Day
C	Wednesday	Monday, Wednesday, Friday	Any Day
D	Thursday	Tuesday, Thursday, Saturday	Any Day
E	Friday	Monday, Wednesday, Friday	Any Day
F	Saturday	Tuesday, Thursday, Saturday	Any Day

**Mandatory watering restrictions**  
 All water users are required to adhere to the following mandatory watering restrictions during the summer months (May through August).  
 - May 1st - Oct. 31st: Mandatory watering restrictions apply to all water users.  
 - Watering is prohibited on the following days: Monday, Wednesday, Friday, Saturday, and Sunday.  
 - Watering is permitted on the following days: Tuesday, Thursday, and Saturday.  
 - Watering is permitted on any day during the summer months (May through August).  
 - This will be changed to May 1 through August 31

Manmade Ornamental Water Features



The SNWA Ordinance Review Team evaluated fountain ordinances across the local jurisdictions.

Conclusions:

- Fountain ordinances were not uniform
- Agencies were willing to pursue more uniform fountain policies

Manmade Ornamental Water Features

The main goal was to establish uniform fountain and water feature policies in Southern Nevada.

The team reviewed components from the existing ordinances to agree upon regional standards.

Key Components of Regional Fountain Policy

- Generally, water features are prohibited
- Exemptions include swimming pools, recreational water parks, features sustaining aquatic animals prior to 2003, and interpretive features in educational exhibits.
- Features that serve other allowable uses, such as irrigation reservoirs on golf courses or a building's cooling system, may also be exempted



Key Components of Regional Fountain Policy

Jurisdictions may require proposed water features to mitigate water use:

- **Convert existing grass:** Convert 20 square feet of grass to water efficient landscape for each square foot of water surface area.
- **Support Conservation Programming:** Pay \$40 into the SNWA's WaterSmart Landscape Program for each square foot of water surface area.
- **Reduce/eliminate another body of water:** Reduce or eliminate an existing, compliant body of water for a net decrease of water surface area.

**Anticipated Results**

- Increase uniformity among jurisdictions
- Provide clarification and consistency in addressing regional approach to ornamental water features
- Maintain economic opportunities

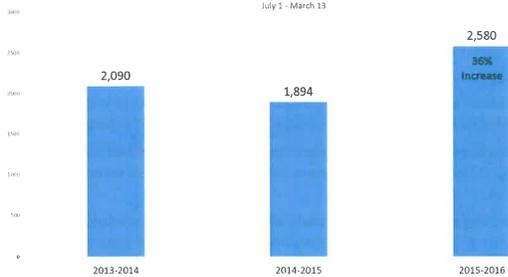
**WSL Program Update**

In September 2015, the Board of Directors authorized a promotional increase in the Water Smart Landscapes rebate (from \$1.50 to \$2.00)



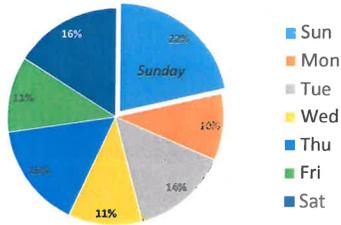
**WSL APPLICATIONS: FISCAL YEAR TO DATE**

Water Smart Landscapes Residential Applications Received  
July 1 - March 13



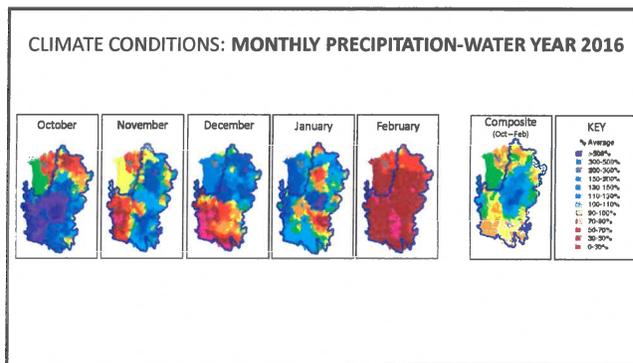
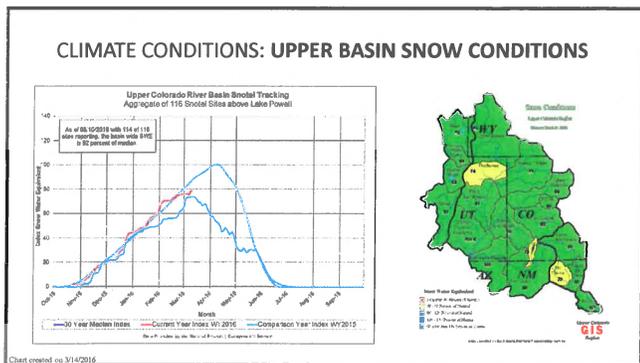
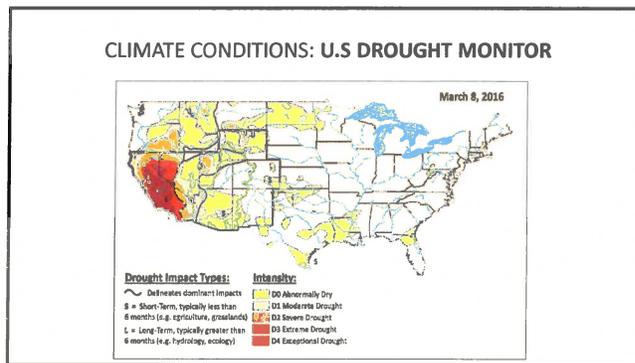
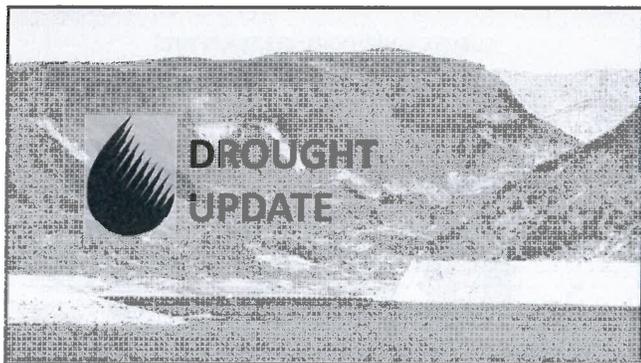
### Summer Watering

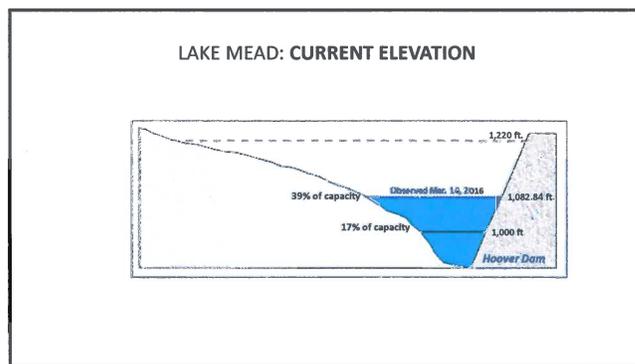
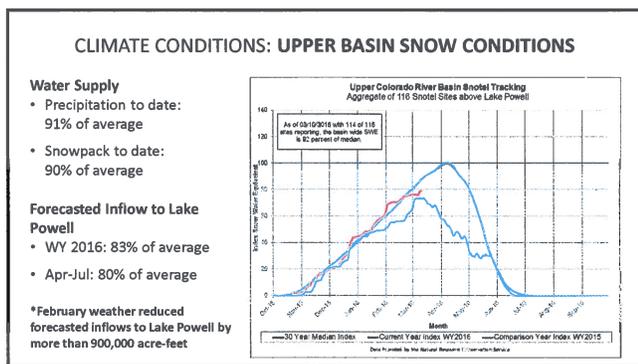
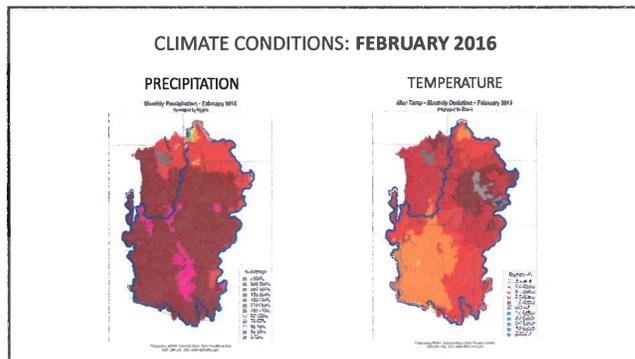
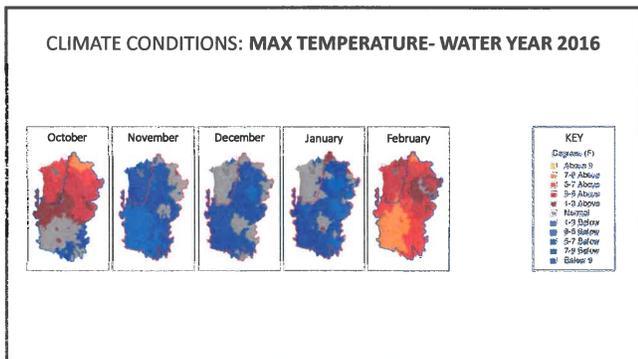
Most Commonly Skipped Irrigation Day in Summer



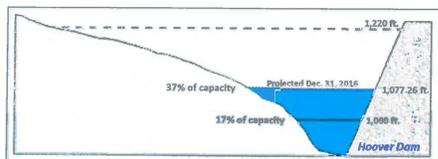
### Summer Watering

- This is the first change to the Watering Restrictions since 2003.
- Watering days will go from 191 per year to 174, a 9% reduction.
- Sunday was chosen since it is not part of any group's current watering schedule and also the most commonly skipped day.
- Applies to sprinkler irrigation only. Drip irrigation requirements will not change.
- Customers will continue to be able to conduct supervised operation of sprinklers for testing and maintenance and to hand water at any time on any day.
- 2016 will be voluntary compliance, supported by an educational campaign. Mandatory compliance will begin May 2017.

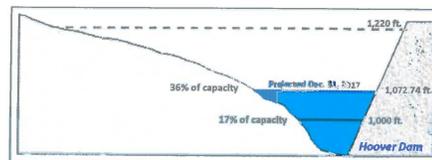




### LAKE MEAD: PROJECTED ELEVATION



### LAKE MEAD: PROJECTED ELEVATION





### Low Lake Level Pumping Station (L3PS)

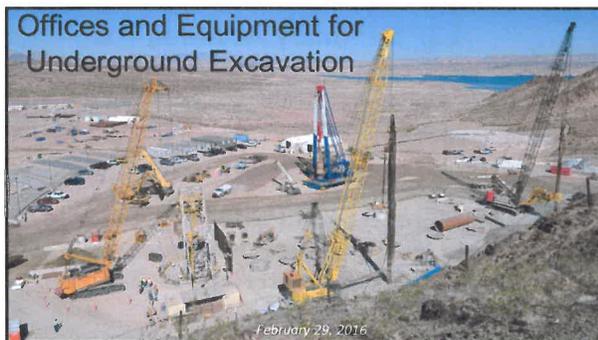
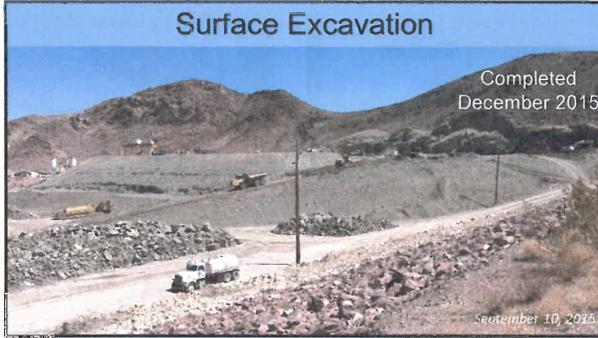
- Approved as part of IRPAC recommendations in December 2014.
- Connects to Intake No. 3
- Substitutes for Intake Pumping Stations 1 and 2 at very low lake levels.
- Will operate between lake elevations 875 and 1060.
- Added to Major Construction and Capital Plan in May 2015.

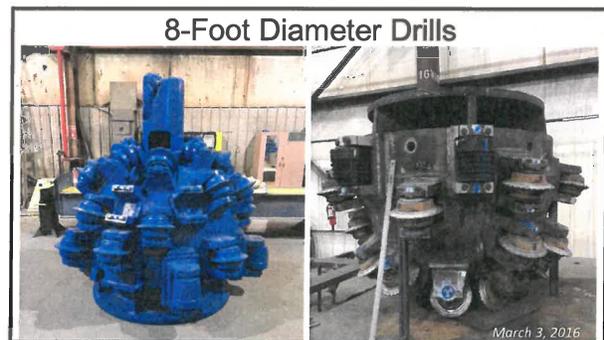
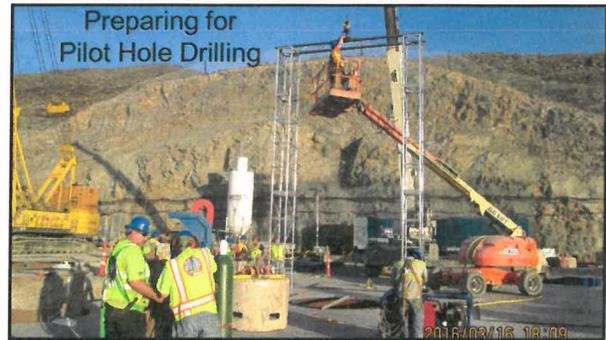
### Pumping Station Characteristics

- Located at Lake Mead near the two existing intakes and the Alfred Merritt Smith Water Treatment Facility (AMSWTF).
- Facilities will be mostly underground using high flow, high pressure submersible pumps.
- Will be capable of pumping up to 600 mgd of water to the AMSWTF and 300 mgd to the River Mountains WTF
- Entails new electrical power supply lines and two large diameter discharge pipelines.

### L3PS Primary Activities

- **Surface excavation for working pad and drainage**
- **Underground excavation of well shafts and forebay**
- **Procurement of pumps**
- **Procurement of valves and fittings for construction of discharge pipelines**
- **Construction of discharge pipelines**
- **Construction of above ground pumping station facilities**
- **Construction of electrical power supply facilities**
- **Installation and commissioning of pumps**





### L3PS Completed Activities

Activity	Time Frame
Awarded surface excavation contract	May 2015
Completed design and awarded underground excavation contract	Sep 2015
Awarded purchase of 3 test pumps	Sep 2015
Completed surface excavation work	Dec 2015
Awarded purchase of large diameter valves	Jan 2016
Completed pre-excavation grouting for well shaft drilling	Feb 2016
Award purchase of 355 feet of large diameter pipe & fittings	Mar 2016

### L3PS Current and Upcoming Activities

Activity	Time Frame
Complete design and begin construction of discharge aqueducts	Jul 2016
Complete design and begin construction of above ground PS	2016
Complete underground excavation of 34 well shafts and forebay	2018
Complete installation of discharge aqueducts	2019
Complete power supply facilities	2019
Complete all work and begin operations	2020