

AGENDA

SOUTHERN NEVADA WATER AUTHORITY BOARD OF DIRECTORS

**REGULAR MEETING
9:00 A.M. – APRIL 15, 2021**

**BOARD CHAMBERS, SOUTHERN NEVADA WATER AUTHORITY
100 CITY PARKWAY, SEVENTH FLOOR, LAS VEGAS, NEVADA
(702) 258-3100**

Board of Directors

Marilyn Kirkpatrick, Chair
Dan Stewart, Vice Chair
Claudia Bridges
Cedric Crear
Jim Gibson
Justin Jones
John Lee

*John J. Entsminger,
General Manager*

Date Posted: April 8, 2021

SOUTHERN NEVADA
WATER AUTHORITY



The Southern Nevada Water Authority makes reasonable efforts to assist and accommodate persons with physical disabilities who desire to attend the meeting. For assistance, call the Agenda Coordinator at (702) 258-3939 at least 24 hours prior to the meeting.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

City of Boulder City, City Hall
401 California Street
Boulder City, Nevada

City of Henderson, City Hall
240 Water Street
Henderson, Nevada

City of North Las Vegas, City Hall
2250 Las Vegas Boulevard North
North Las Vegas, Nevada

City of Las Vegas, City Hall
495 South Main Street
Las Vegas, Nevada

Clark County Government Center
500 S. Grand Central Parkway
Las Vegas, Nevada

Clark County Water Reclamation District
5857 E. Flamingo Road
Las Vegas, Nevada

Southern Nevada Water Authority
100 City Parkway, Suite 700
Las Vegas, Nevada

Las Vegas Valley Water District
1001 S. Valley View Boulevard
Las Vegas, Nevada

All items on the agenda are for action by the Board of Directors, unless otherwise indicated. Items may be taken out of order. The board may combine two or more agenda items for consideration, and the board may remove an item from the agenda or delay discussions relating to an agenda item at any time.

Visit our website at www.snwa.com for Southern Nevada Water Authority agenda postings, copies of supporting material, and approved minutes. To receive meeting information, contact Mitch Bishop at (702) 822-8317 or agendas@snwa.com.

CALL TO ORDER

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: This is a period devoted to comments by the general public pertaining to items on this agenda. If you wish to speak to the Board about items within its jurisdiction, but not appearing on this agenda, you must wait until the “Comments by the General Public” period listed at the end of this agenda. Please limit your comments to three minutes or less and refrain from making comments that are repetitious, offensive, or amounting to personal attacks. No action may be taken upon a matter not listed on the posted agenda. Public comment can also be provided in advance of the meeting and submitted to publiccomment@snwa.com.

ITEM NO.

1. *For Possible Action:* Approve agenda with the inclusion of tabled and/or reconsidered items, emergency items and/or deletion of items, and approve the minutes from the regular meeting of March 18, 2021.

BUSINESS AGENDA

2. *For Possible Action:* Approve and authorize the General Manager to sign, in substantially the same form as attached hereto, a Solar Energy Power Purchase Agreement between Boulder Flats Solar, LLC, and the Authority to purchase electrical power from a solar photovoltaic generation facility located on land leased from the City of Boulder City.
3. *For Possible Action:* Approve and authorize the General Manager to sign, in substantially the same form as attached hereto, an agreement between Black & Veatch Corporation and the Authority to provide professional engineering design services for the Horizon Lateral Project for an amount not to exceed \$55,900,000.
4. *For Possible Action:* Approve and authorize the General Manager to sign, in substantially the same form as attached hereto, an agreement between JVC Associates, Inc., dba JVC Architects, and the Authority to provide professional services for the design of the Horizon Lateral management office building for an amount not to exceed \$477,840.

5. *For Information Only:* Receive an overview and discuss the Fiscal Year 2021/22 Tentative Budget.

COMMENTS BY THE GENERAL PUBLIC

NO ACTION MAY BE TAKEN: At this time, the Board of Directors will hear general comments from the public on matters under the jurisdiction of the Southern Nevada Water Authority. Please limit your comments to three minutes or less and refrain from making comments that are repetitious, offensive, or amounting to personal attacks. No action may be taken upon a matter not listed on the posted agenda.

**SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
REGULAR MEETING
MARCH 18, 2021
MINUTES**

CALL TO ORDER 9:06 a.m.

BOARD MEMBERS PRESENT Marilyn Kirkpatrick, Chair
Dan Stewart, Vice Chair
Claudia Bridges
Cedric Crear
Jim Gibson
Justin Jones
John Lee

BOARD MEMBERS ABSENT None

STAFF PRESENT John Entsminger, Colby Pellegrino, Doa Ross, and Tabitha Fiddymont

OTHERS PRESENT None

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

COMMENTS BY THE GENERAL PUBLIC

For full public comment, visit snwa.com/apps/snwa-agendas/index.cfm

Ed Uehling spoke concerning water conservation, in particular outdoor water use. He said that the Authority should be encouraging indoor water use while discouraging outdoor water use. However, he said that water conservation should not come at the price of causing older homes to lose their lawns. He provided a photo of a home with dead grass in the front yard as an example for the record.

ITEM NO.

1. ***For Possible Action: Approve agenda with the inclusion of tabled and/or reconsidered items, emergency items and/or deletion of items, and approve the minutes from the regular meeting of January 21, 2021.***

FINAL ACTION: Director Gibson made a motion to approve the agenda for this meeting, and to approve the minutes from the regular meeting of January 21, 2021. The motion was approved.

BUSINESS AGENDA

2. ***For Possible Action: Receive a presentation on current and anticipated conservation activities, discuss new programs and approaches to achieve conservation goals, and, if appropriate, direct staff accordingly.***

Colby Pellegrino, Deputy General Manager, Resources, gave a presentation that provided information for items 3-6, and item 8. A copy of her presentation is attached to these minutes.

Director Crear asked about the Authority's past drought media campaign and whether there were plans to do more drought awareness media campaigns. John Entsminger, General Manager, said there was an initial push in 2002 when the drought intensified, and over the years, the Authority has used targeted marketing, such as the Ryan Reaves compliance ads to encourage people to change their watering clocks, to continue to encourage water conservation. Ms. Pellegrino said that staff planned to bring a new advertising and marketing contract to the Board in May for its consideration.

Director Jones asked if commercial projects could be required to separately meter landscaping to better track consumptive uses. Ms. Pellegrino said that it would be possible to meter or sub-meter landscaping, which could be a future discussion among the water purveyors. Chair Kirkpatrick suggested that possibly an incentive could be developed to encourage properties to install sub-meters for landscaping. Mr. Entsminger said that incentive programs, such as the Water Smart Landscapes turf conversion program, have been extremely successful in the past; however, moving forward, the community will need to develop more stringent codes and regulations to achieve additional water conservation.

The Board discussed how to address non-functional turf in common areas and entrances in neighborhoods where the neighborhoods have declined incentives and offers to assist in converting turf to water smart landscaping. Mr. Entsminger said that some neighborhoods have demonstrated that incentives are not enough and that new regulations and enforcement will be required.

Director Jones asked who the target was for artificial turf installation incentive. Ms. Pellegrino said that large turf areas, such as parks and sports fields, were the target of the program. She said that the program was designed to help mitigate the initial installation costs, which are highest during the first installation. The program is designed so that the reduced water costs over the life of the artificial turf installation will offset future replacement costs.

Chair Kirkpatrick encouraged staff to ensure that the turf product used in the installations was of a high quality that would be long-lasting.

Director Crear said that the City of Las Vegas was planning on rehabilitating a number of parks within the city. He said that he would have his staff coordinate with the Authority on those rehabilitations to ascertain what water saving opportunities existed.

Chair Kirkpatrick encouraged staff to look into a comprehensive blanket agreement that might allow local jurisdictions to take advantage of the turf installation program while streamlining the process. Ms. Pellegrino said that the Clark County School District football field conversions were a good example of the benefits that could be derived from such a large-scale bidding process, and that staff would explore the opportunities further. Mr. Enstminger used the example of how most local jurisdictions have an on-call paving master contract that allows for pavement repair, as needed, without going to bid for each individual repair. He said that something similar could be set up for turf installations.

Chair Kirkpatrick asked what were the top water consumptive-use industries in Southern Nevada. Mr. Enstminger said that resorts, golf courses, data centers and sand/gravel operations were some of the highest water users by industry. Director Jones asked how much water was considered high-use. Ms. Pellegrino said that the threshold was a million gallons of water per month, which is about 3 acre-feet of water. She said that there are data centers in Southern Nevada that use more than 100 acre-feet of water per month.

Chair Kirkpatrick suggested that federal funding might be available to help retrofit cooling systems in local municipal buildings to help save water.

Director Jones asked how it would be possible to make it less costly to convert entire neighborhoods from septic systems to the municipal sewer system. Ms. Pellegrino said that the proposed pilot program had limited funding and was focused on first ensuring that homes converting from wells to the municipal water system were also connecting to the sewer system. Based on the results of the pilot program, the Authority would work with the member agencies to possibly revise and expand the program.

Director Gibson asked if there was an estimate of the amount of return-flow credits that would be gained from converting septic systems to municipal sewer systems. Ms. Pellegrino said that staff had not completed an estimate but the potential was fairly significant since there were approximately 14,000 septic systems within the Las Vegas Valley.

NO ACTION REQUIRED

3. ***For Possible Action:* Discuss developing a policy regarding large water users and direct staff to work with the member agencies to draft a policy for Board consideration.**

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

4. ***For Possible Action:* Authorize a new conservation incentive program for the installation of artificial turf in new recreational fields that would provide a rebate of up to \$2 per square foot.**

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

5. ***For Possible Action:* Approve and authorize the General Manager to sign, in substantially the same form as attached hereto, Amendment No.1 to the existing interlocal agreement for Water Efficient Technologies Projects between the Clark County School District and the Authority for an increase in the amount of \$868,692 to accommodate installation of artificial turf at three additional high schools.**

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

6. ***For Possible Action:*** Approve, in substantially the same form as attached hereto, an interlocal agreement among the Clark County Water Reclamation District, City of Henderson, City of North Las Vegas, City of Las Vegas, and the Authority to establish a septic system conversion pilot program in the Las Vegas Valley; direct staff to amend the Groundwater Management Program's Well Conversion Guidelines to include septic conversion; approve the Authority's contribution of \$60,000; and authorize the General Manager or designee to negotiate and execute the agreements necessary to carry out the septic conversions.

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

7. ***For Possible Action:*** Approve and authorize the General Manager to sign, in substantially the same form as attached hereto, an agreement between Brown and Caldwell and the Authority to provide professional design engineering and construction support services for a portion of the Garnet Valley Water System for an amount not to exceed \$888,667.

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

8. ***For Information Only:*** Receive an update from staff on water resources including, but not limited to, drought conditions in the Colorado River Basin, conservation programs and activities, activities on the Colorado River, and water resource acquisition and development.

The update was included as part of the Item 2 presentation.

NO ACTION REQUIRED

Public Comment

Ed Uehling spoke regarding consumptive and non-consumptive water use. He said that additional rate tiers should be introduced to encourage water conservation among high water users. He said that construction water should also be charged at a higher tier.

Adjournment

There being no further business to come before the Board, the meeting adjourned at 10:39 a.m.

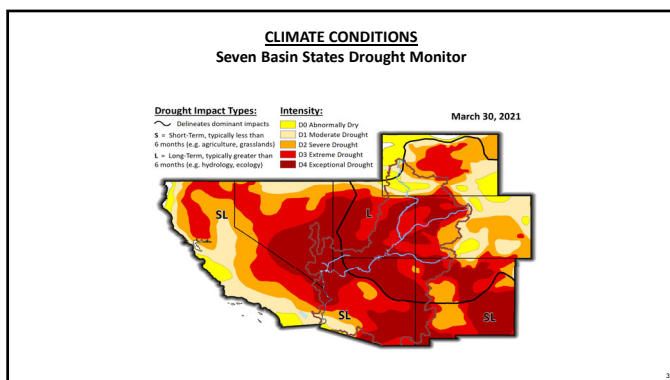
Copies of all original agenda items and minutes, including all attachments, are on file in the General Manager's office at the Las Vegas Valley Water District, 1001 South Valley View Boulevard, Las Vegas, Nevada.



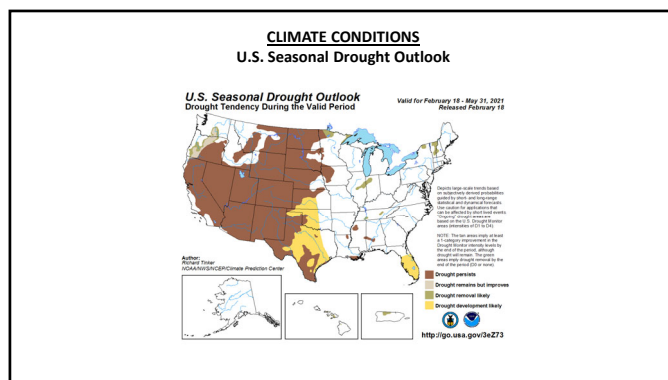
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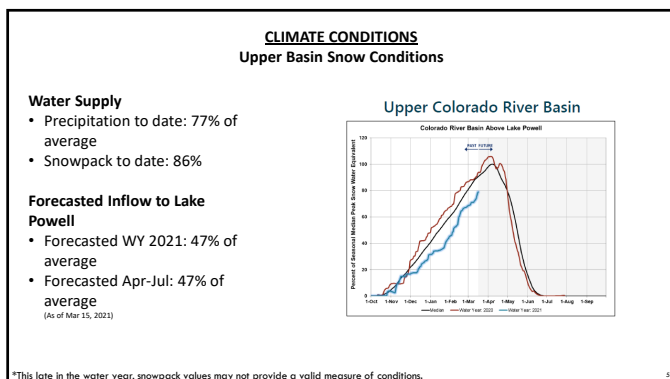
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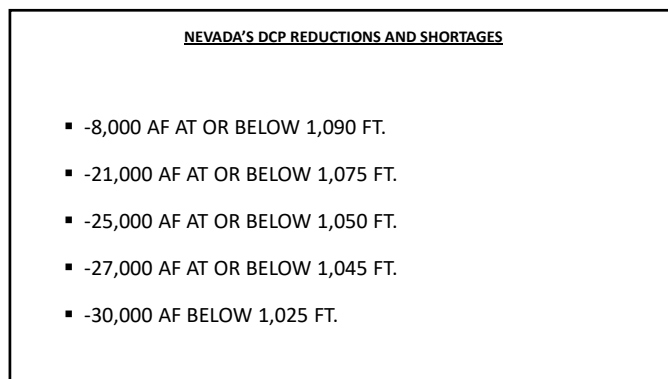
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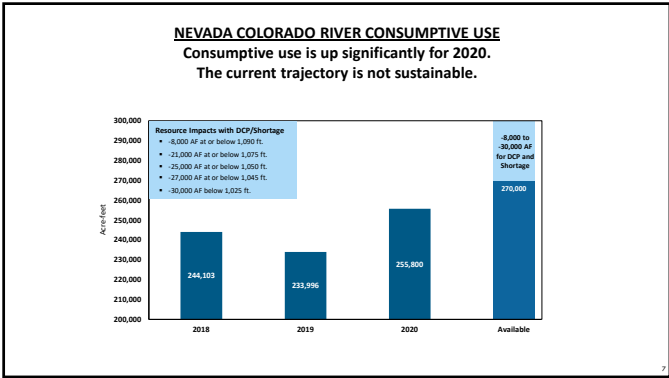
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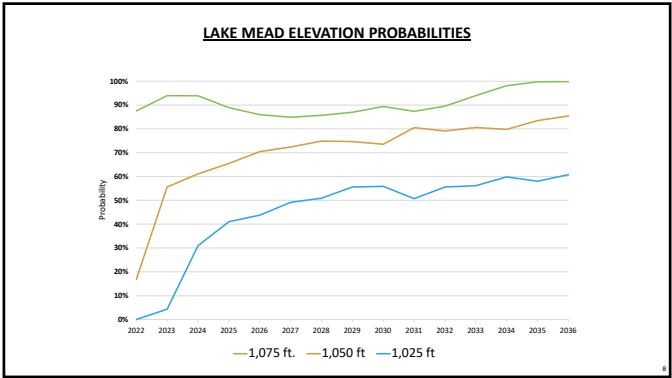
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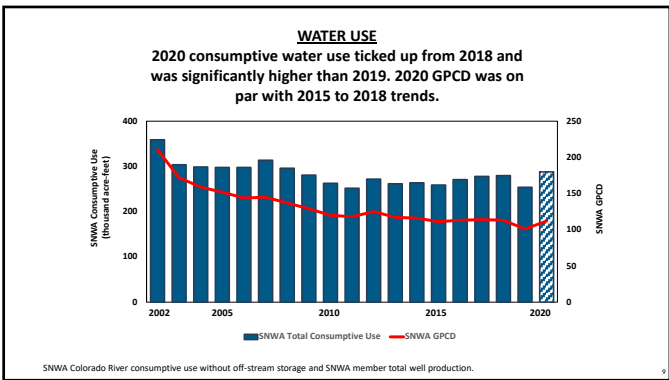
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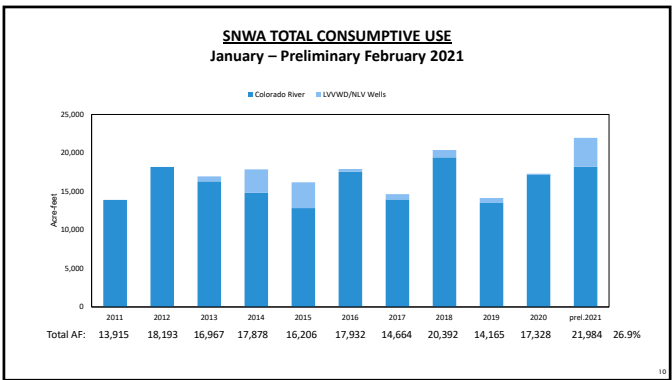
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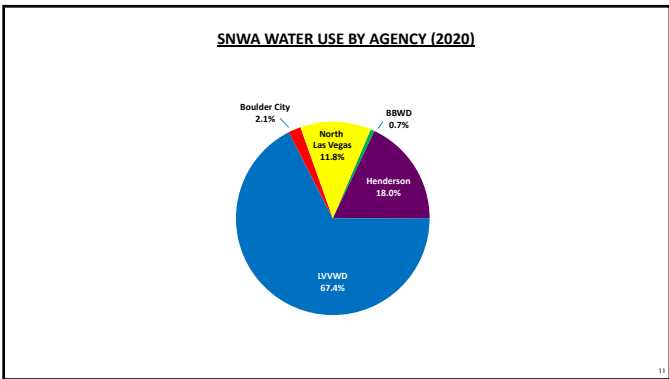
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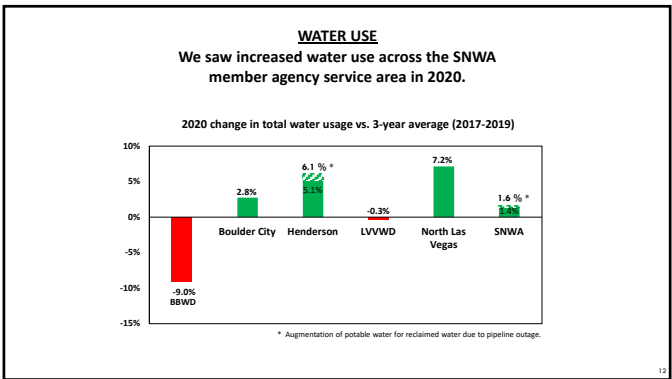
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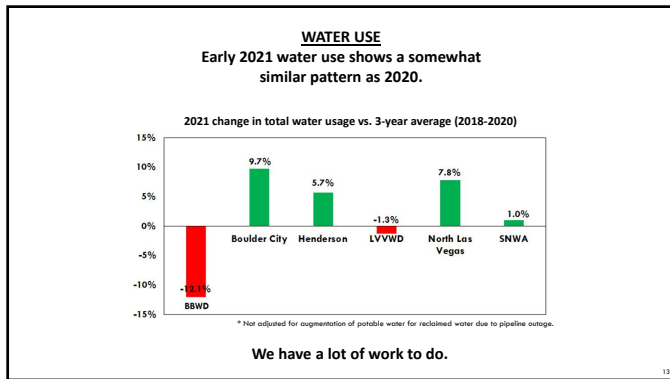
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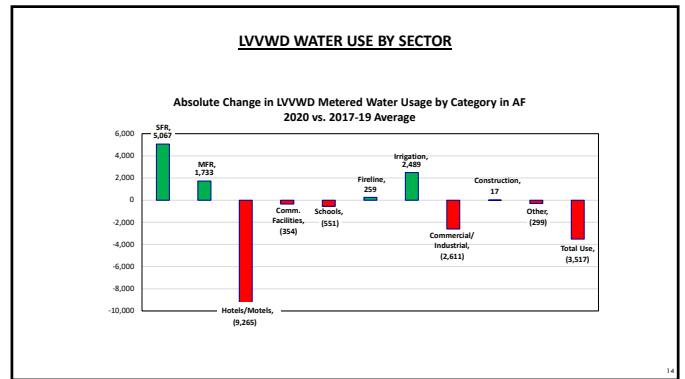
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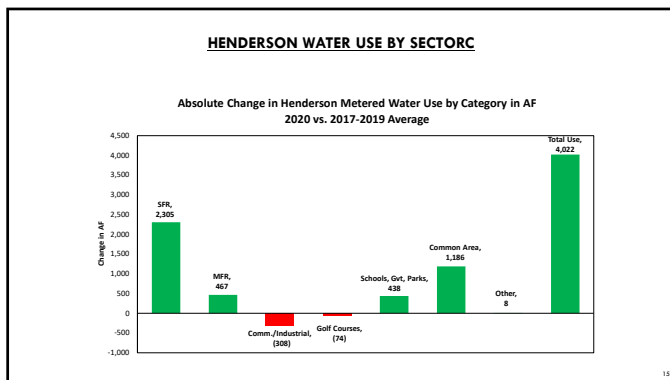
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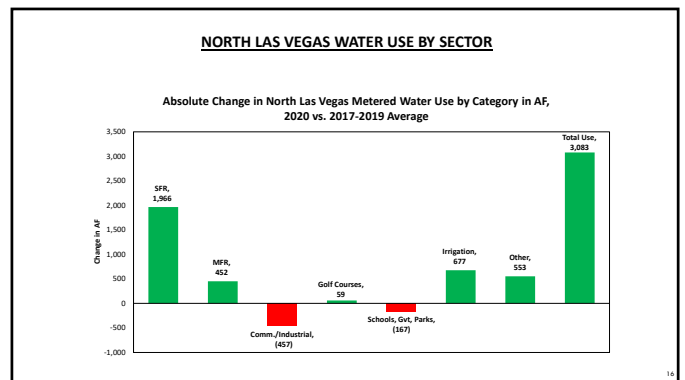
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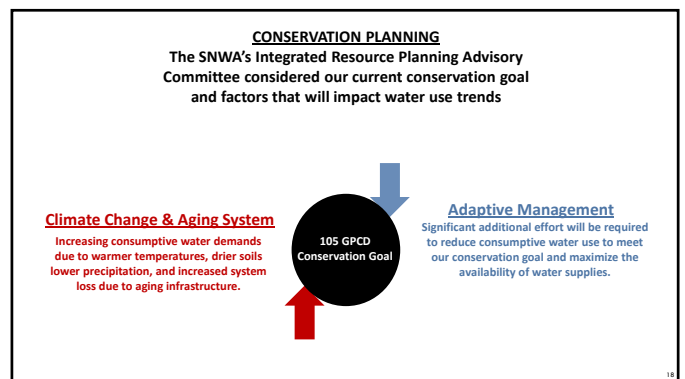


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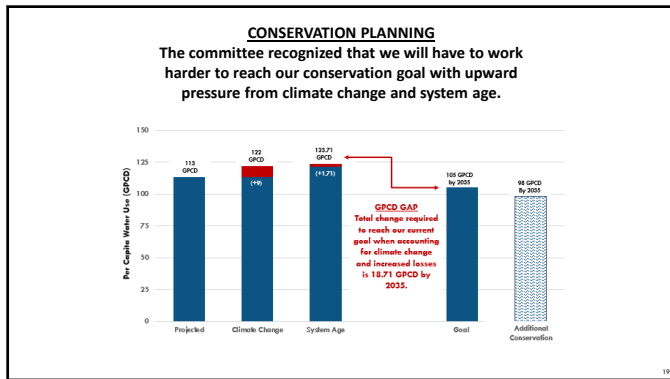
2020 IN REVIEW

The SNWA continues to monitor conservation progress against established benchmarks and historical water use.

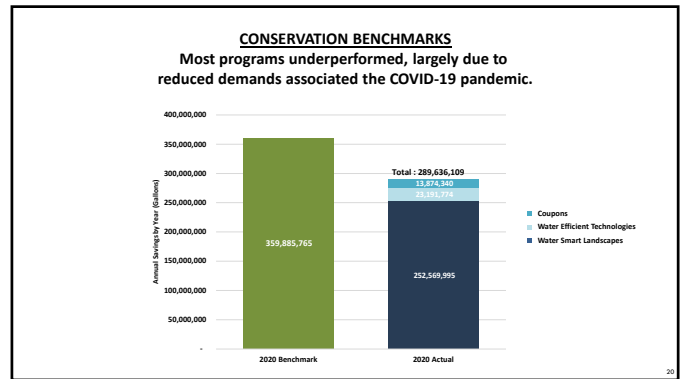
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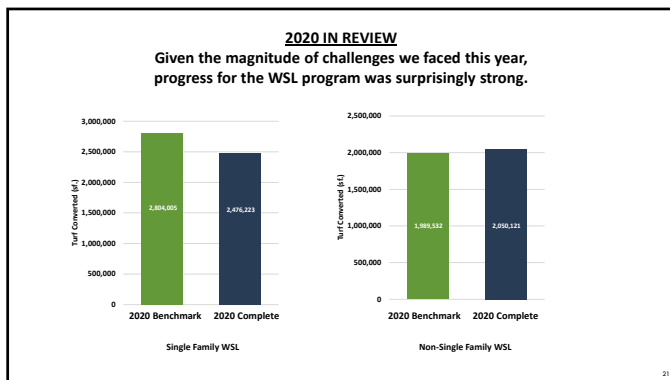
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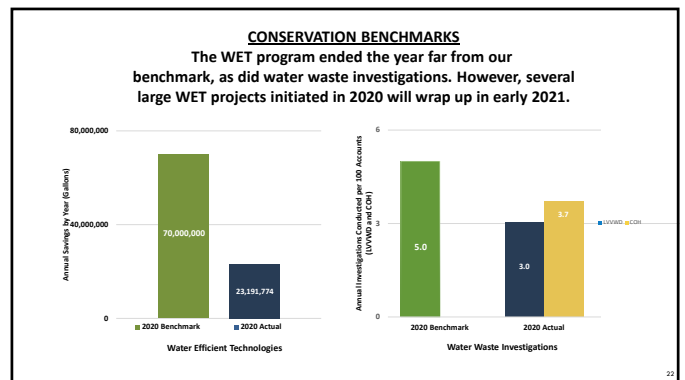
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CONSERVATION STRATEGIC PLAN

The SNWA developed a Conservation Strategic Plan that integrates recommendations from IRPAC and that sets a path for continued conservation progress.

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CONSERVATION STRATEGIC PLAN

Water Efficiency Goals:

- Reduce and restrict the use of non-functional turf.
- Improve water efficiency in new development.
- Improve compliance with landscape watering restrictions and reduce water waste.
- Reduce water losses associated with evaporative cooling.
- Reduce losses associated with single-family leaks.
- Improve system efficiency through asset management.

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CONSERVATION STRATEGIC PLAN

Supporting Goals:

- Engage the public in water conservation efforts.
- Improve water efficiency in new development.
- Improve internal communication and collaboration.
- Use research to inform program and policy development.



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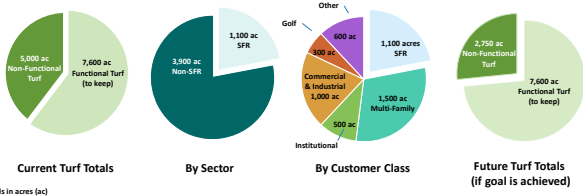
NON-FUNCTIONAL TURF

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OBJECTIVE: Reduce non-functional turf acreage by 150 acres (6.5 million square feet) per year and restrict new turf installations for a 4.76 GPCD water savings by 2035.

CHALLENGES & NEXT STEPS

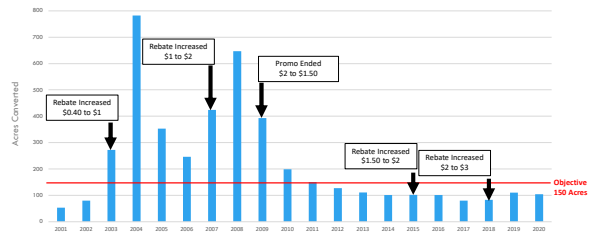
Most of the remaining non-functional turf is in the non-SFR sector. We need to increase participation rates and implement new incentives for turf alternatives.



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OBJECTIVE: Reduce non-functional turf acreage by 150 acres (6.5 million square feet) per year and restrict new turf installations for a 4.76 GPCD water savings by 2035.

Landscape conversions have declined in recent years.



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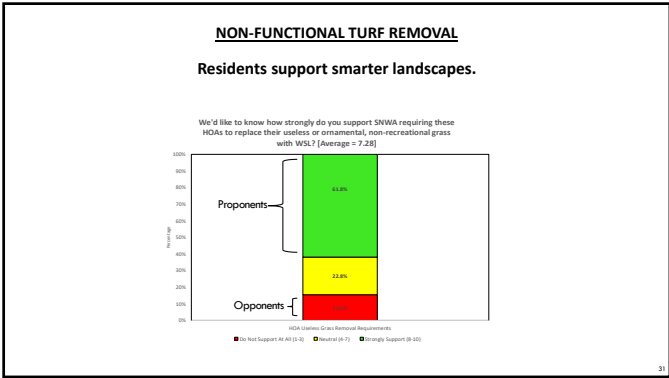
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NON-FUNCTIONAL TURF REMOVAL

"...our community chose Altura for the beautiful green entrance. As we are well aware there is not much of it unless you live on a golf course. With that said, Altura is declining to move forward with the proposed turf replacement."



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OBJECTIVE: Engage in land use planning and policy processes to reduce consumptive water use in new development for 1.09 GPCD water savings by 2035.

CHALLENGES & NEXT STEPS

Our community needs to consider and address water supply impacts (consumptive vs. non-consumptive water footprint) when planning for economic growth and diversification.

- Work with SNWA member agencies to close loopholes under older developer agreements that may allow for non-functional turf installation in new development projects.
- Ensure compliance with service rule, code and ordinance changes related to new turf installation.

ACTION ITEM: Incentivize artificial turf for new park developments where turf is allowed.

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OBJECTIVE: Engage in land use planning and policy processes to reduce consumptive water use in new development for 1.09 GPCD water savings by 2035.

ARTIFICIAL TURF INCENTIVE

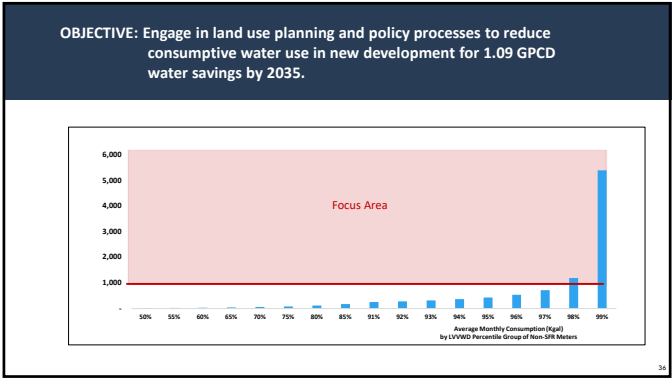
A rebate of up to \$2 per square foot for the installation of artificial turf in new recreational fields will reduce planned consumptive uses and avoid the more costly option of retrofitting these fields later.

Considerations for the incentive:

- Some of the Valley's largest turf areas are functional sporting fields.
- Capital costs for installing synthetic fields are a deterrent to installation.
- Current incentives are not sufficient to compel sports turf managers to consistently choose synthetic fields over irrigated turfgrass.
- Expected to save up to six million gallons annually for a typical football/soccer field.

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OBJECTIVE: Engage in land use planning and policy processes to reduce consumptive water use in new development for 1.09 GPCD water savings by 2035.

CHALLENGES & NEXT STEPS

We need to encourage water efficient development as we work to diversify our local economy. Applying the same kind of water efficiency expectations and standards that we have to resorts for the last 15 years will help to ensure that new development activities do not erode conservation progress.

— **ACTION ITEM:** Work with member agencies to develop and implement the large water user review policy; update service rules, codes and ordinances to target the top 2% of highest water users.



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OBJECTIVE: Engage in land use planning and policy processes to reduce consumptive water use in new development for 1.09 GPCD water savings by 2035.

HIGH WATER USERS POLICY

A policy regarding high water users will help guide decision-makers when considering planning and land use decisions that affect the community.

Considerations for the policy:

- Consumptive versus non-consumptive uses
- Resource footprint
- Mitigation efforts
- Implementation



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EVAPORATIVE COOLING EFFICIENCY

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OBJECTIVE: Implement policy, program and best management practices to improve evaporative cooling efficiency for a 2.23 GPCD water savings by 2035.

CHALLENGES & NEXT STEPS

More research is needed to determine the number of water-cooled HVAC units, quantify consumptive water use and evaluate the effectiveness/efficiency of alternate technologies.

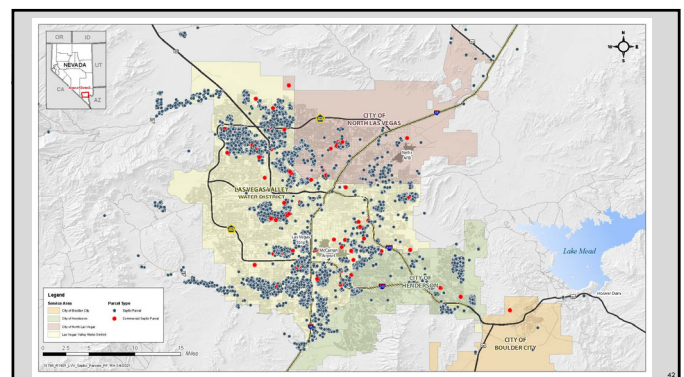
- Conduct research to assess total water use associated with cooling.
- Initiate a pilot study at LVVWD/SNWA facilities to inform program/policy decisions, and best management practices.
- Secure and expand WET program enrollment for cooling water efficiency upgrades through direct-outreach to non-SFR customers.
- Enlist participation from other agencies and businesses in metering and monitoring programs.



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OTHER EFFORTS

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OBJECTIVE: Abandon septic systems and convert to municipal sewer systems to improve groundwater quality and expand water supplies through return-flow credits.

CHALLENGES & NEXT STEPS

The use of septic systems can adversely affect groundwater quality; converting municipal water users (~14,000) from septic to the municipal sewer systems will allow for the capture, treatment and return of water to Lake Mead for return-flow credits.

- **ACTION ITEM:** Consider interlocal agreement/update Groundwater Management Program (GMP) guidelines to require sanitary sewer conversions as a condition connection to a municipal water system; provide financial incentives to support conversions.
- Work with the Southern Nevada Health District to make rule/code changes to reduce the number of new permitted septic systems.



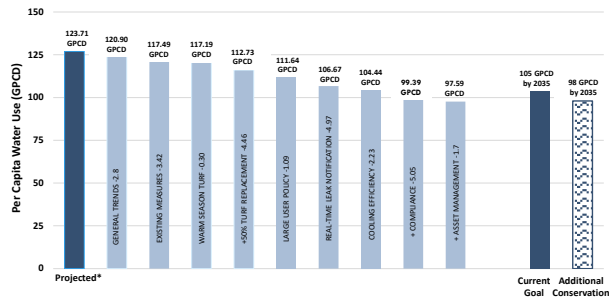
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OVERARCHING OBJECTIVE

Pursue changes necessary to achieve the SNWA's current water conservation goal of 105 GPCD by 2035 and further efforts to achieve additional conservation thereafter.

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THE PATH TO OUR CONSERVATION GOAL

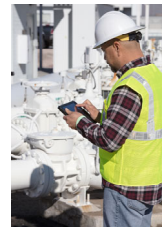


*With climate change & system loss

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HOW YOU CAN HELP

- Encourage municipalities to evaluate and update existing programs for water waste enforcement, customer leak resolution and compliance.
- Use outreach tools (social media platforms, newsletters, agency websites, speaker's bureau presentations, etc.) to encourage constituents to participate in SNWA incentive/rebate programs.
- Prioritize the removal of non-functional turf, replacement of cool-season turf and cooling system upgrades in your jurisdictions.
- Provide direction on:
 - Large Water User Policy
 - Septic conversions
 - Artificial turf incentive for new parks



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 SOUTHERN NEVADA WATER AUTHORITY™

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3/18/2021 SNWA Board Meeting

Public Comment – Ed Uehling



SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
AGENDA ITEM

April 15, 2021

Subject:

Power Purchase Agreement

Petitioner:

E. Kevin Bethel, Chief Financial Officer

Recommendations:

That the Board of Directors approve and authorize the General Manager to sign, in substantially the same form as attached hereto, a Solar Energy Power Purchase Agreement between Boulder Flats Solar, LLC, and the Authority to purchase electrical power from a solar photovoltaic generation facility located on land leased from the City of Boulder City.

Fiscal Impact:

The estimated capital cost required for the Authority to construct a transmission line interconnecting this solar project is \$20 million. Capital funds requested for current year expenditures are available in the Authority's Capital Budget. Capital funds for future year expenditures will be budgeted accordingly. Operating expenses will not be incurred until 2023 when SNWA begins receiving energy. All operating expenses will be budgeted accordingly.

Background:

In 2018, the Authority issued a Request for Interest to potential solar power developers interested in selling power under a long-term contract that would tie directly into the Authority's existing transmission system, where the Authority would build any required transmission line extensions. The Authority received proposals from many solar power developers and entered into a Memorandum of Understanding (MOU) with ibV Energy Partners (ibV), whose offer most closely met the Authority's requirements at the lowest cost to the Authority. Under the MOU, both parties worked together on the feasibility of the project and on the best contractual structure. In September 2019, ibV was awarded a solar land lease from the City of Boulder City (Boulder City) through a competitive auction for 1,100 acres, allowing for up to a 130-megawatt (MW) solar photovoltaic power facility. In November 2020, the Boulder City council approved the solar land lease for development by ibV.

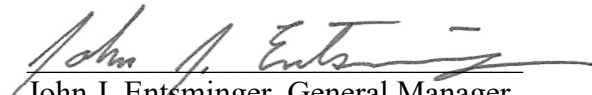
The Authority has been working diligently for many years to add renewable energy resources to its portfolio and currently stands at 21 percent renewables. The Nevada Renewable Portfolio Standard increases from 21 percent in 2020 to 50 percent in 2030. This solar project is critical for the Authority to meet the much higher standard in future years and is projected to get the Authority to 60 percent by 2030. The Authority's purveyor members that currently receive power from the Authority and the Colorado River Commission of Nevada (CRC) have also expressed interest in receiving some of the solar power from the Authority. In order to accommodate that interest, the Authority will purchase 113 MW of solar power from ibV and then resell 25 MW of that supply to the purveyor members through additional agreements to be developed between the Authority and its purveyor members.

This power purchase agreement is at a fixed price of \$24.14 per MWh for the entire 25-year term, which is significantly lower than any alternate market resource available today. ibV's solar project is called Boulder Flats Solar and will require the Authority to build a 10-mile, 230-kV transmission

line extension to interconnect it with the existing transmission system. The Authority plans to have the CRC build and operate the line extension on the Authority's behalf. The estimated cost of the line extension is \$20 million.

This agreement is being entered into pursuant to NRS Chapter 332 and Section 6(f) of the SNWA 1995 Amended Cooperative Agreement. The office of the General Counsel has reviewed and approved the agreement.

Respectfully submitted:

A handwritten signature in dark ink, appearing to read "John J. Entsminger", is written over a horizontal line.

John J. Entsminger, General Manager

JJE:EKB:SPK:LEB:cc

Attachments

DISCLOSURE OF OWNERSHIP/PRINCIPALS

Business Entity Type (Please select one)						
<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Partnership	<input checked="" type="checkbox"/> Limited Liability Company	<input type="checkbox"/> Privately Held Corporation	<input type="checkbox"/> Publicly Held Corporation	<input type="checkbox"/> Trust	<input type="checkbox"/> Non-Profit Organization
<input type="checkbox"/> Other						
Business Designation Group (Please select all that apply)						
<input type="checkbox"/> MBE	<input type="checkbox"/> WBE	<input type="checkbox"/> SBE	<input type="checkbox"/> PBE	<input type="checkbox"/> VET	<input type="checkbox"/> DVET	<input type="checkbox"/> ESB
Minority Business Enterprise	Women-Owned Business Enterprise	Small Business Enterprise	Physically Challenged Business Enterprise	Veteran Owned Business	Disabled Veteran Owned Business	Emerging Small Business
Number of Clark County Nevada Residents Employed: 0						
Corporate/Business Entity Name: Boulder Flats Solar, LLC						
(Include d.b.a., if applicable)						
Street Address:			c/o ibV Energy, 777 Brickell Ave., Suite 500		Website: www.ibvenergy.com	
City, State and Zip Code:			Miami, FL 33131		POC Name: Robin Saiz	
					Email: robin.saiz@ibvenergy.com	
Telephone No:			(561) 568-6766		Fax No:	
Nevada Local Street Address: (If different from above)					Website:	
City, State and Zip Code:					Local Fax No:	
Local Telephone No:					Local POC Name:	
					Email:	

All entities, with the exception of publicly-traded corporations and non-profit organizations, must list the names of individuals, either directly or indirectly, holding more than five percent (5%) ownership or financial interest in the business entity appearing before the Board of Directors.

Publicly-traded corporations and non-profit organizations shall list all Corporate Officers and Directors in lieu of disclosing the names of individuals with ownership or financial interest.

Entities include all business associations organized under or governed by Title 7 of the Nevada Revised Statutes, including but not limited to private corporations, close corporations, foreign corporations, limited liability companies, partnerships, limited partnerships, and professional corporations.

Full Name	Title	% Owned (Not required for Publicly Traded Corporations/Non-profit organizations)
Vogt Solar Holdings, Inc.	Owner	100%

This section is not required for publicly-traded corporations.

- Are any individual members, partners, owners or principals, involved in the business entity, an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please note that the employee(s), or appointed/elected official(s) may not perform any work on professional service contracts, or other contracts, which are not subject to competitive bid.)
- Do any individual members, partners, owners or principals have a spouse, registered domestic partner, child, parent, in-law or brother/sister, half-brother/half-sister, grandchild, grandparent, related to an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please complete the Disclosure of Relationship form on Page 2. If no, please print N/A on Page 2.)

I certify under penalty of perjury, that all of the information provided herein is current, complete, and accurate. I also understand that the Board will not take action on any item without the completed disclosure form.

Timothy Kim Digitally signed by Timothy Kim Date: 2021.02.22 14:16:02 -08'00' Signature	Timothy C. Kim Print Name
President Title	2/22/2021 Date

DISCLOSURE OF RELATIONSHIP

List any disclosures below:
(Mark N/A, if not applicable.)

NAME OF BUSINESS OWNER/PRINCIPAL	NAME OF ENTITY* EMPLOYEE/OFFICIAL AND JOB TITLE	RELATIONSHIP TO ENTITY* EMPLOYEE/ OFFICIAL	ENTITY* EMPLOYEE'S/ OFFICIAL'S DEPARTMENT
N/A			

* Entity employee means an employee of Las Vegas Valley Water District, Southern Nevada Water Authority, or Silver State Energy Association .

“Consanguinity” is a relationship by blood. “Affinity” is a relationship by marriage.

“To the second degree of consanguinity” applies to the candidate’s first and second degree of blood relatives as follows:

- Spouse – Registered Domestic Partners – Children – Parents – In-laws (first degree)
- Brothers/Sisters – Half-Brothers/Half-Sisters – Grandchildren – Grandparents – In-laws (second degree)

For Entity Use Only:

If no Disclosure or Relationship is noted above or the section is marked N/A, please check this box.


☒ No Disclosure

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the Entity employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the Entity employee(s) noted above involved in any way with the business in performance of the contract?

Notes/Comments:

 Digitally signed by Scott P. Krantz
DN: cn=Scott P. Krantz, o=Southern
Nevada Water Authority, ou=Director,
Energy Management,
email=scott.krantz@snwa.com, c=US
Date: 2021.02.22 16:45:38 -08'00'

Signature

Scott P. Krantz, Director, Energy Management

Print Name

Authorized Department Representative

SOLAR ENERGY POWER PURCHASE AGREEMENT

BETWEEN

BOULDER FLATS SOLAR, LLC

(“SELLER”)

AND

SOUTHERN NEVADA WATER AUTHORITY

(“BUYER”)

MARCH 25, 2021

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SOLAR ENERGY POWER PURCHASE AGREEMENT
BETWEEN
BOULDER FLATS SOLAR, LLC
AND
SOUTHERN NEVADA WATER AUTHORITY

This Solar Energy Power Purchase Agreement (this “PPA” or “Agreement”) is made as of [____], 2021 (“Effective Date”) by and between (i) **Boulder Flats Solar, LLC** (“Seller”), a Delaware limited liability company with a principal place of business at c/o ibV Energy Partners LLC, 777 Brickell Ave., Suite 500, Miami, FL 33131, and (ii) **Southern Nevada Water Authority** (“Buyer”), a Nevada joint action agency with a principal place of business of Energy Management Department, M/S 115, 100 City Parkway, Suite 700, Las Vegas, Nevada 89106. Seller and Buyer are hereinafter referred to individually as a “Party” and collectively as the “Parties.”

WHEREAS, Seller desires to develop, design, construct, own and operate a solar photovoltaic electric generating facility with an expected total maximum power output of approximately 113 MW_{AC}, and which is further defined below as the “Facility”; and

WHEREAS, Seller intends to locate the Facility in the City of Boulder City, Nevada pursuant to the terms of a Ground Lease to be entered into by and between Seller and the City of Boulder City (the “Facility Site Lease”), and to interconnect the Facility with the Interconnection Provider’s Interconnection Facilities; and

WHEREAS, during the Term of this PPA, Seller desires to sell and deliver to Buyer at the Point of Delivery all of the Solar Energy Output generated by the Facility and any Renewable Energy Benefits associated with such Solar Energy Output and Buyer wishes to receive and purchase such Solar Energy Output generated by the Facility and any Renewable Energy Benefits associated with such Solar Energy Output on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the premises and the mutual covenants and conditions herein contained, the sufficiency and adequacy of which are hereby acknowledged, the Parties agree to the following:

Article 1 - Definitions and Rules of Interpretation

1.1 Rules of Construction. The capitalized terms listed in this Article shall have the meanings set forth herein whenever the terms appear in this PPA, whether in the singular or the plural or in the present or past tense. Other terms used in this PPA but not listed in this Article shall have meanings as commonly used in the English language and, where applicable, in Prudent Industry Practices. Words not otherwise defined herein that have well known and generally accepted technical or trade meanings are used herein in accordance with such recognized meanings. In addition, the following rules of interpretation shall apply:

- (A) The masculine shall include the feminine and neuter.

(B) References to "Articles," "Sections," "Exhibits" or "Schedules" shall be to articles, sections, exhibits or schedules of this PPA.

(C) The Exhibits and Schedules attached hereto are incorporated in (as if fully set forth herein) and are intended to be a part of this PPA; provided, that, except as provided in Section 20.7 hereof, in the event of a conflict between the terms of any Exhibit or Schedule and the terms of this PPA, the terms of this PPA shall take precedence.

(D) This PPA was negotiated and prepared by both Parties with the advice and participation of counsel. The Parties have agreed to the wording of this PPA and none of the provisions hereof shall be construed against one Party on the ground that such Party is the author of this PPA or any part hereof.

(E) The Parties shall act reasonably and in accordance with the principles of good faith and fair dealing in the performance of this PPA. Unless expressly provided otherwise in this PPA, (a) where this PPA requires the consent, approval, or similar action by a Party, such consent or approval shall not be unreasonably withheld, conditioned or delayed, and (b) wherever this PPA gives a Party a right to determine, require, specify or take similar action with respect to a matter, such determination, requirement, specification or similar action shall be reasonable.

(F) Use of the words "include" or "including" or similar words shall be interpreted as "including but not limited to" or "including, without limitation."

1.2 Interpretation of Arrangements for Utility Supply to the Facility. This PPA does not provide for the supply of retail electric power to the Facility ("House Energy"). Seller's arrangements for the supply of House Energy to the Facility shall be separate and free-standing arrangements. For purposes of this PPA, the provider of House Energy shall be deemed to be a separate entity and separate contracting party. Notwithstanding any other provision in this PPA, nothing in Seller's arrangements for the supply of House Energy to the Facility shall alter or modify Seller's or Buyer's rights, duties or obligations under this PPA.

1.3 Definitions. The following terms shall have the meanings set forth herein:

"Additional Maintenance Outages" has the meaning assigned to it in Section 10.5 hereof.

"Affected System" means an electric system interconnected to the River Mountains System that may be affected by the proposed interconnection, including facilities operated by the Western Area Power Administration – Lower Colorado (WALC) region.

"Affiliate" means, with respect to any Person, each Person that directly or indirectly controls or is controlled by or is under common control with such Person. For the purposes of this definition, "control" (including the terms "controls", "under the control of", "controlled by", and "under common control with"), as used with respect to any Person,

shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management of the policies of such Person, whether through ownership interest, by contract or otherwise.

“Agreement” or “PPA” means this Power Purchase Agreement together with the Exhibits attached hereto (including the Interconnection Terms), as such may be amended from time to time.

“Applicable Law” means all applicable laws, statutes, treaties, codes, ordinances, regulations, certificates, orders, licenses and permits of any Governmental Authority, now in effect or hereafter enacted, amendments to any of the foregoing, interpretations of any of the foregoing by a Governmental Authority having jurisdiction, and all applicable judicial, administrative, arbitration and regulatory decrees, judgments, injunctions, writs, orders, awards or like actions (including those relating to human health, safety, the natural environment or otherwise).

“Bankruptcy Code” means the United States Bankruptcy Code, 11 U.S.C. § 101, *et seq*, as amended from time to time.

“Business Day” means any calendar Day that is not a Saturday, a Sunday, or a NERC, state and/or federal recognized holiday where banks are permitted or authorized to close in Nevada.

“Buyer” is defined in the preamble of this PPA and includes such Person’s permitted successors and assigns.

“Buyer Receipt Delay Period” has the meaning assigned to it in Section 7.1(A).

“Buyer Termination Payment” means the sum of Losses plus Costs minus Gains, plus all other amounts then owed to Buyer by Seller, expressed in Dollars. If the Buyer Termination Payment calculation does not demonstrate that the Buyer suffered a net loss, the Buyer Termination Payment shall be \$0.

“Change in Applicable Law” means the enactment, adoption, promulgation, implementation, repeal or issuance of, or a new or changed interpretation of, any Applicable Law that takes effect after the Effective Date, including Applicable Laws regarding Renewable Energy Benefits, Taxes, import or export tariffs, reliability, renewable energy requirements or the generation and sale of electricity.

“Code” means the U.S. Internal Revenue Code of 1986, including applicable rules and regulations promulgated thereunder, as amended from time to time.

“Commercial Operation” means operation of the Facility beginning on the Commercial Operation Date and continuing through the Term of this PPA.

“Commercial Operation Date” or “COD” means the date on which (i) the Demonstrated Capacity is determined by the Tests to be 113 MW_{AC} (as may be modified

by Section 3.3) of Solar Energy at the Point of Delivery, as adjusted for the level of solar irradiation and ambient conditions at the time of the Commissioning Test; (ii) Seller determines, in its sole discretion, that the Facility is ready to operate under the terms of this Agreement; and (iii) Seller provides to Buyer written notice stating that the Commercial Operation Date has been achieved for purposes of this Agreement.

“Commissioning” or “Commissioned” means, with respect to any Unit, the commencement of the period during which such Unit has begun Testing and ending when such Unit has been approved for the production of Solar Energy and authorized to commence delivery of Solar Energy Output, provided, however, that for certain tax and other corporate purposes, in accordance with Applicable Law, Commissioning shall be deemed to occur when any measurable amount of Solar Energy Output is first generated at the Facility and delivered and sold to Buyer consistent with the provisions of this PPA.

“Commissioning Tests” has the meaning assigned to it in Section 10.2.

“Conditions Precedent Deadline” shall mean December 31, 2021.

“Confidential Information” has the meaning ascribed to it in Section 20.12(D).

“Contract Year” shall mean each calendar year following the Commercial Operation Date, beginning on January 1 and ending on December 31 of such year (or commencing upon the Commercial Operation Date, if the Commercial Operation Date is January 1).

“Costs” means transaction costs and expenses (including costs incurred in connection with transmission or distribution services that would otherwise not have been incurred hereunder) reasonably incurred due to termination of this Agreement and all reasonable attorneys’ fees and expenses incurred in connection with termination of this Agreement, including the determination of a Termination Payment. In the case of Buyer, Costs shall include the construction cost to date at the time of termination of the Interconnection Provider’s Interconnection Facilities, including all committed equipment costs, demobilization costs, the cost, if any, to terminate the Interconnection Facility Access Rights and the cost to terminate construction contract(s) for the Interconnection Provider’s Interconnection Facilities. In the case of Seller, Costs shall include all Project development, construction and related costs incurred to date at the time of termination of the agreement.

“CPR” has the meaning ascribed to it in Section 12.4.

“CPR Rules” has the meaning ascribed to it in Section 12.4.

“Curtailed Energy” has the meaning ascribed to it in Section 8.2(A).

“Daily Buyer Receipt Delay Payment” has the meaning assigned to in Section 7.1(A).

“Day” means a period beginning at 12:00 a.m. PPT on any Day and ending at 11:59 p.m. PPT on such Day.

“Delay Damages” has the meaning assigned to such term in Section 4.1(D).

“Demonstrated Capacity” means the Facility’s actual net generating nameplate capacity rating, measured in MW_{AC}, as determined by the Commissioning Tests, as adjusted to PVUSA Test Conditions using the PVUSA power equation, or similar methodology commonly in use by the solar industry at the time of the Commissioning Tests. PVUSA Test Conditions are defined as (i) 1,000 watts per square meter solar irradiance, (ii) 20 degrees Celsius ambient temperature, and (iii) 1 meter per second wind speed.

“Disclosing Party” has the meaning ascribed to it in Section 20.12(A).

“Disputing Party” has the meaning assigned to it in Section 9.5 hereof.

“Dollars” means the lawful currency of the United States of America.

“Effective Date” has the meaning ascribed to it in the preamble of this Agreement.

“Electric Metering Device(s)” means any of the physical or electronic metering devices, data processing equipment and apparatus associated with the meters owned by Buyer, or its designee, required for (a) accurate determination of the quantities of Solar Energy Output from the Facility and for recording other related parameters required for the reporting of data to Seller, and (b) the computation of the payment due to Seller from Buyer. Electric Metering Devices do not include any check meters Seller may elect to install as contemplated by Section 5.3(c).

“Emergency Condition” means a condition or situation that presents an imminent physical threat of danger to life, health or property or is imminently likely, in the reasonable opinion of the Interconnection Provider and as determined on a non-discriminatory basis, to cause a material adverse effect on the security of or damage to the Interconnection Provider’s System.

“EPC Contract” means the engineering, procurement and construction contract(s) or other similar documents entered into by Seller for the engineering, procurement and construction of the Facility.

“Estimated Solar Output” means the amount of Solar Energy Output measured in MWh that Seller estimates the Facility will produce in any given Year, as set forth in Schedule 2, as may be adjusted pursuant to Section 3.3. Estimated Solar Output for periods not shown in Schedule 2 shall be determined by a pro rata adjustment of the values set forth in Schedule 2.

“Event of Default” has the meaning set forth in Article 12.

“Facility” means Seller’s solar electric generating facility and Seller’s Interconnection Facilities, as identified and described in Article 3, including all of the following, the purpose of which is to produce electricity and deliver such electricity to the Point of Delivery: Seller’s equipment, buildings, all of the generation facilities, including step-up transformers, output breakers, facilities necessary to connect to the Point of Delivery, protective and associated equipment, improvements, and other tangible assets, contract rights, easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation, and maintenance of the electric generating facility that produces the Solar Energy Output subject to this PPA.

“Facility Capacity” means the designed expected aggregate nameplate capacity rating of the Facility of 113 MW_{AC}, which Facility Capacity may be adjusted pursuant to Section 3.3.

“Facility Site Lease” has the meaning set forth in the Recitals.

“FERC” means the Federal Energy Regulatory Commission or any successor agency.

“Financial Closing” means the fulfillment of each of the following conditions:

(A) the execution and delivery of the Financing Documents; and

(B) all conditions precedent to the initial availability for disbursement of funds under the Financing Documents (other than relating to the effectiveness of this PPA) are satisfied or waived.

“Financial Credit Support” has the meaning ascribed to it in Section 11.1.

“Financing Documents” means the loan and credit agreements, notes, bonds, indentures, sale-leaseback agreements, guarantees, security agreements, lease financing agreements, partnership and limited liability company operating agreements, mortgages, deeds of trust, interest rate exchanges, swap agreements and other documents relating to the development, bridge, construction and/or permanent debt and/or equity financing (including the monetization of Tax Credits and accelerated depreciation by equity investment, issuance of cash in lieu of Tax Credits and/or sale-leaseback agreements) for the Facility, including any credit enhancement, credit support, working capital financing, or refinancing documents, and any and all amendments, modifications, or supplements to the foregoing that may be entered into from time to time at the discretion of Seller or its Affiliates in connection with development, construction, ownership, leasing, operation or maintenance of the Facility.

“Financing Parties” means the Persons (including any trustee or agent on behalf of such Persons) providing financing or refinancing to or on behalf of Seller or its Affiliates, whether debt or equity, or a combination thereof, for the design, development, construction, Testing, Commissioning, operation and maintenance of the Facility (whether limited recourse, or with or without recourse).

“Force Majeure” and “Force Majeure Event” have the meaning set forth in Section 14.1(A).

“Forced Outage” means any condition at the Facility that causes a reduction of, or cessation in the delivery of, or inability to deliver, Solar Energy Output that is not the result of (i) a Scheduled Maintenance Outage, (ii) a Force Majeure Event, (iii) a Seller Delivery Excuse, (iv) an Emergency Condition, or (v) changes in solar availability due to changes in weather and ambient conditions.

“Forward Contract” means a contract for the purchase, sale, or transfer of a commodity or any similar good, article, service, right or interest which is presently or in the future becomes the subject of dealing in the forward contract trade, or a product or byproduct thereof, including electric power or energy, with a maturity date more than two days after the date the contract is entered into, consistent with the definition set forth in the Bankruptcy Code and subject to the applicable safe harbor provisions relating to “forward contracts” in the Bankruptcy Code.

“Forward Contract Merchant” means an entity the business of which consists in whole or in part of entering into forward contracts as or with merchants in a commodity or any similar good, article, service, right or interest which is presently or in the future becomes the subject of dealing in the forward contract trade, including electric power or energy, consistent with the definition set forth in the Bankruptcy Code and subject to the applicable safe harbor provisions relating to “forward contracts” in the Bankruptcy Code.

“Gains” means an amount equal to the present value of the economic benefit to the non-defaulting Party (exclusive of Costs), resulting from the termination of this Agreement, determined in a commercially reasonable manner. Gains shall be measured with respect to the Estimated Solar Output over the remainder of the Term (ignoring any early termination of this Agreement).

“Governmental Approval” means any authorization, consent, permission, approval, license, ruling, permit, exemption, variance, order, judgment, instruction, condition, direction, directive, decree, declaration of or regulation by any Governmental Authority relating to the construction, development, ownership, occupation, start-up, Testing, wholesale sales, reliability compliance, operation or maintenance of the Facility, or the execution, delivery of or performance under this PPA and recovery of the related costs. Governmental Approval shall also mean, where and as applicable and the context so dictates, any requirements, authorization, consent, permission, approval, license, ruling, permit, exemption, variance, order, judgment, instruction, condition, direction, directive, decree, declaration of or regulation with regard to any renewable energy benefits or requirements.

“Governmental Authority” means any federal, state, local or municipal governmental body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or

power; or any court or governmental tribunal, including NERC, NVTREC, the RRO and any successor agencies.

“Guaranteed Commercial Operation Date” means December 31, 2023, subject to extension where provided under this Agreement.

“House Energy” has the meaning assigned to it in Section 1.2.

“Interconnection Facilities” means Interconnection Provider's Interconnection Facilities and Seller's Interconnection Facilities.

“Interconnection Facility Access Rights” means the access rights described in Section 6 of Exhibit C.

“Interconnection Provider” means the Buyer or its designated representative that operates or maintains the River Mountains System.

“Interconnection Provider's Interconnection Facilities” means the facilities and equipment installed by the Interconnection Provider (including the approximately ten (10) mile distribution line from the Point of Delivery to the River Mountains System), after the Point of Delivery interconnecting the Facility with the River Mountains System.

“Interconnection Provider's Interconnection Facilities Site” means the parcel of real property on which the Interconnection Provider's Interconnection Facilities will be located, including any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the Interconnection Provider's Interconnection Facilities.

“Interconnection Provider's System” means Interconnection Provider's Interconnection Facilities and the River Mountains System.

“Interconnection Terms” means the requirements for interconnection of the Facility to Interconnection Provider's Interconnection Facilities set forth in Exhibit C.

“ITCs” means investment tax credits established pursuant to the Code, as such law may be amended or superseded.

“kW” means one or more kilowatts of electricity, as the context requires.

“kWh” means kilowatt hour.

“Losses” means an amount equal to the present value of the economic loss to the non-defaulting Party (exclusive of Costs) resulting from termination of this Agreement, determined in a commercially reasonable manner. Losses shall be measured with respect to the Estimated Solar Output over the remainder of the Term (ignoring any early termination of this Agreement) and shall take into account lost Renewable Energy Benefits. If the non-defaulting Party is Seller, Losses shall include any lost TaxCredits, depreciation or other tax benefits as well as the costs of any debt

financing utilized by Seller or Seller's Affiliates in connection with the construction of the Facility

"Month" means a calendar month.

"Monthly Billing Period" means the period during any particular Month in which either Test Energy and/or Solar Energy Output has been generated by Seller for Buyer and delivered to the Point of Delivery for sale to Buyer, whether or not occurring prior to or subsequent to the Commercial Operation Date.

"MW" means megawatt or one thousand kW.

"MW_{AC}" means megawatt alternating current.

"NERC" means the North American Electric Reliability Corporation or any successor organization.

"Nevada Public Records Act" means NRS § 239.001 to § 239.341, inclusive, and as may be amended or succeeded.

"Non-Scheduled Maintenance Period" has the meaning assigned to it in Section 10.4(A).

"NVTREC" means the Nevada Tracks Renewable Energy Credits system, or its successor.

"O&M Records" has the meaning assigned to it in Section 13.2(A).

"Operation Date" means the date on which the Facility begins the production of electric energy.

"Operation and Maintenance Agreement" means that certain operation and maintenance agreement between Seller and a third-party with respect to the Facility.

"Output Guaranty" has the meaning assigned to it in Section 7.4.

"Output Shortfall" has the meaning assigned to it in Section 7.4.

"Pacific Prevailing Time" or "PPT" means the time in effect in the Pacific Time Zone of the United States of America, whether Pacific Standard Time or Pacific Daylight Saving Time.

"PEC Administrator" means the Person appointed by the PUCN to administer the system of portfolio energy credits established pursuant to the Portfolio Standard (NRS § 704.7821).

"Performance Liquidated Damages" means \$40/MWh in respect of each MWh of Output Shortfall.

“Permitted Buyer Maintenance” shall mean Buyer maintenance on the Interconnection Provider’s System that is not Unpermitted Buyer Maintenance.

“Person” means any natural person, corporation, limited liability company, general partnership, limited partnership, proprietorship, other business organization, trust, union, association or Governmental Authority.

“Point of Delivery” means the 230 kV bushings at the transformer at the substation at the Facility, which is the electric system point at which Seller makes available to Buyer and delivers to Buyer the Solar Energy Output being provided by Seller to Buyer under this PPA, and the physical point at which electrical interconnection is made with Interconnection Provider’s Interconnection Facilities.

“Portfolio Energy Credit” or “PEC” means a unit of credit which equals one kWh of electricity generated, acquired or saved by a portfolio energy system or efficiency measure or as calculated by the PUCN operations staff and certified by the PEC Administrator pursuant to the Renewable Energy Law. (or by a successor Governmental Authority pursuant to a successor law if the Renewable Energy Law is replaced, superseded or preempted by another law or regulatory regime tasked with enforcement of renewable energy quotas by utility providers in Nevada), and certified by NVTREC.

“Post-COD Credit Support” has the meaning assigned to it in Section 11.1.

“PPA” or “Agreement” has the meaning ascribed to it in the Recitals, including the Exhibits and Schedules attached hereto and incorporated in Section 1.1(C), as the same may be amended from time to time in accordance with the provisions hereof.

“Projected Schedule” means the projected time-frame for delivery of a specific quantity of Solar Energy Output by Seller to Buyer at the Point of Delivery during the term of this PPA.

“Prudent Industry Practices” means those practices, methods, equipment, specifications and standards of safety and performance, as the same may change from time to time, as are commonly used by operators of utility electric generation stations of a type and size similar to those constituting the Facility (or if the context refers to interconnection facilities, interconnection facilities of a type and size similar to the Interconnection Facilities), which, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, could have been expected to accomplish the desired result at a reasonable cost, consistent with good, safe, and prudent engineering practices in connection with the operation, maintenance, repair, and use of equipment and facilities and commensurate standards of safety, performance, dependability, efficiency, and economy that conform to all material operation and maintenance standards recommended by the Facility’s equipment suppliers and manufacturers and Applicable Law. Prudent Industry Practices are not intended to be limited to the optimum practice or method to the exclusion of others, but rather to be a spectrum of possible but reasonable practices and methods.

“PUCN” means the Public Utilities Commission of Nevada and any successor entity thereto.

“Purchase Option” has the meaning ascribed to it in Section 11.1.

“Purchase Option Termination Date” has the meaning ascribed to it in Section 11.1.

“PURPA” has the meaning ascribed to it in Section 20.14.

“Receiving Party” has the meaning ascribed to it in Section 20.12(A).

“Receiving Party’s Representatives” has the meaning assigned to it in Section 20.12(B).

“Renewable Energy Benefits” means any and all renewable and environmental attributes, emissions reductions, credits, offsets, allowances reporting rights and benefits, howsoever entitled, associated with the production of the Solar Energy Output, and includes any and all Portfolio Energy Credits and Renewable Energy Benefits Reporting Rights. Renewable Energy Benefits exclude and do not include ITCs or any Tax Credits, or other tax incentives existing now or in the future associated with the construction, ownership or operation of the Facility.

“Renewable Energy Benefits Reporting Rights” means the exclusive right of a purchaser of Renewable Energy Benefits to report exclusive ownership of Renewable Energy Benefits in compliance with federal or state law, if applicable, and to federal or state agencies or other parties at such purchaser’s discretion, and include reporting under Section 1605(b) of the Energy Policy Act of 1992, under regulations of the Environmental Protection Agency under Clean Air Act Amendments Section 111 (d), and under any present or future domestic, international, or foreign emissions trading program or renewable portfolio standard.

“Renewable Energy Law” means an act of the Nevada Legislature relating to energy and requiring certain providers of electric service to comply with the portfolio standard for renewable energy, and providing for other matters relating thereto, including those codified as NRS § 704.7801 to § 704.7828, inclusive, and the rules of NVTREC, and the regulations, guidance and other requirements promulgated thereunder, in each case as such laws, regulations, guidance and requirements may be amended, preempted or superseded.

“Renewable Energy System” means a generation facility that is both (a) a “renewable energy system” as defined in the Renewable Energy Law as the Renewable Energy Law exists as of the Effective Date and (b) a “renewable Generating Unit” under NVTREC.

“Required Commercial Operation Date” means December 31, 2022, subject to extension where provided under this Agreement.

“Restoration” has the meaning assigned to it in Section 14.5(B).

“Restoration Report” has the meaning assigned to it in Section 14.7.

“Restoration Schedule” has the meaning assigned to it in Section 14.5(B).

“River Mountains System” means the non-integrated, looped distribution system comprised of 230 kV substations, overhead lines and an associated communication network originating from the Mead 230 kV substation and connecting to the Eastside and Newport substations, and located within the proximate vicinity to SNWA water pumping and treatment facilities loads, over which the Interconnection Provider has rights (by ownership or contract) to distribute capacity and energy from the Point of Delivery.

“Rolling Period” has the meaning assigned to it in Section 7.4.

“RRO” means the regional reliability organization designated by NERC for the geographic area in which the Facility operates.

“Scheduled Maintenance Outage” means a time during which the Facility is shut down or its output reduced to undergo scheduled maintenance in accordance with this PPA, or as otherwise agreed by Seller and the Buyer.

“Seller Delivery Excuse” shall mean: (i) any breach by Buyer of its obligations under this PPA; (ii) any material delay or failure by Buyer in giving any approval within the times required under this PPA; or (iii) any delay or failure of Buyer to accept Solar Energy Output or Renewable Energy Benefits as required under this PPA because of (a) failure by Buyer to complete its obligation to interconnect the Seller’s Interconnection Facilities to the Interconnection Provider’s Interconnection Facilities consistent with the in accordance with the provisions of this PPA including the Interconnection Terms (not caused by Seller’s breach of the Interconnection Terms), (b) a failure of Buyer to obtain or maintain adequate transmission arrangements, (c) a failure of Buyer to comply with Applicable Law, (d) as a result of Buyer’s gross negligence or willful misconduct, or (e) as a result of Unpermitted Buyer Maintenance; in each case, to the extent that that any of the foregoing actually and proximately prevents the Seller from performing any of its obligations or satisfying any conditions under this PPA.

“Seller’s Interconnection Facilities” means the equipment between the single collection point for the A/C wiring from the output of the Facility inverters and the Point of Delivery as well as all transmission or distribution facilities required to access the Interconnection Provider’s Interconnection Facilities at the Point of Delivery, along with any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of such facilities. On the low side of the step-up transformer, it includes Seller’s relays, and load control equipment as provided for in the Interconnection Terms.

“Seller Termination Payment” means the sum of Losses plus Costs minus Gains, plus all other amounts then owed to Seller by Buyer, expressed in Dollars. If the

Seller Termination Payment calculation does not demonstrate that the Seller suffered a net loss, the Seller Termination Payment shall be \$0.

“Site” means the parcel of real property on which the Facility will be located, including any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the Facility. The Site is more specifically described in the Facility Site Lease.

“Site Control” means that Seller owns the Site or has obtained the necessary real property rights to construct and operate the Facility on the Site throughout the Term.

“Solar Energy” means the electric energy generated by the Facility using solar electric generation technologies.

“Solar Energy Output” means the unit contingent electric energy generated in MWh using solar electric generation technologies delivered at 230 kV voltage to the Point of Delivery as measured by the Electric Metering Devices installed pursuant to Section 5.3, net of energy used by the Facility. Solar Energy Output shall be of a power quality of 60 cycle, three-phase alternating current that is compliant with the Interconnection Agreement.

“Solar Energy Payment” has the meaning assigned to it in Section 8.1(A).

“Solar Energy Payment Rate” means the rate in \$/MWh set forth in Schedule 1 for “Solar Energy Payment Rate.”

“Standard and Poor’s” or “S&P” means Standard and Poor’s Ratings Group, a division of McGraw Hill, Inc. and any successor entity thereto.

“System Control Center” or “SCC” means Buyer’s representative(s) or designee(s) responsible for dispatch of generating units and scheduling energy and capacity from the Facility.

“Tax Credits” means investment tax credits under Section 48 of the Code as in effect on the date of this PPA, and any successor or other provision providing for a federal, state or local tax credit, cash grant, tax exemption, depreciation, tax attribute or benefit or similar program determined by reference to ownership of renewable energy production facilities, renewable electric energy produced from Solar Energy or amounts invested in renewable energy generating facilities.

“Taxes” means all taxes, fees, levies, licenses or charges imposed by any Governmental Authority, other than taxes, levies, licenses or charges based upon net income or net worth.

“Term” means the period during which this PPA shall remain in full force and effect, and which is further defined in Article 2.

“Termination Payments” means Buyer Termination Payments and Seller Termination Payments.

“Test” or “Testing” means those tests, evaluations and measurements of the Facility’s output capability that are undertaken in connection with the Commissioning of the Facility pursuant to Section 10.2 of this PPA, which shall include such tests as are consistent with Prudent Industry Practices and that are required by the Financing Documents, applicable permits and the EPC Contract.

“Test Energy” means the Solar Energy Output that is generated by the Facility, delivered to Buyer at the Point of Delivery, and purchased by Buyer, pursuant to Section 10.2(C).

“Unit” means any of the generator units forming a part of the Facility.

“Unpermitted Buyer Maintenance” shall mean Buyer maintenance on the Interconnection Provider’s System that is not scheduled at least 48 hours prior to the date of such maintenance or that occurs during a Non-Scheduled Maintenance Period other than during an Emergency Condition.

“WECC” means the Western Electricity Coordinating Council and any successor entity thereto.

“Year” means a calendar year.

Article 2 - Term and Termination

This PPA shall become effective as of the Effective Date and shall remain in full force and effect, unless earlier terminated in accordance with the provisions of this PPA, until the twenty fifth (25th) year anniversary of Commercial Operation Date (the “Term”). Applicable provisions of this PPA shall continue in effect after termination, including early termination, to the extent necessary to enforce or complete the duties, obligations or responsibilities of the Parties arising prior to termination and, as applicable, to provide for: final billings and adjustments related to the period prior to termination, repayment of any money due and owing to either Party pursuant to this PPA, repayment of principal and interest associated with security funds, and the indemnifications specified in this PPA.

Article 3 - Facility and Interconnection Provider’s Interconnection Facilities Description

3.1 Summary Description. In accordance with the terms and conditions of this Agreement:

(A) Seller shall construct, own, operate and maintain the Facility and associated equipment having an aggregate maximum power output of approximately 113 MW_{AC}, as seasonally adjusted and/or normalized and subject to adjustment as provided in Section 3.3.

(B) Buyer shall construct, own and operate the Interconnection Provider's Interconnection Facilities.

3.2 General Design of the Facility. Seller shall construct the Facility in accordance with Prudent Industry Practices and in compliance with the terms and conditions of the Interconnection Terms. During Commercial Operation, Seller shall operate and maintain the Facility in accordance with Prudent Industry Practices and the Interconnection Terms. In addition to the requirements of the Interconnection Terms, the Facility shall at all times:

(A) have the required panel space to accommodate metering, generator telemetering equipment and communications equipment;

(B) have remote monitoring facilities; and

(C) have suitable solar radiation meters necessary to characterize the solar resource and site ambient conditions including temperature, pressure and humidity.

3.3 Demonstrated Capacity Adjustment. Prior to the Commercial Operation Date and based on Commissioning Tests, Seller may, on one occasion only, increase or decrease the Facility Capacity by providing Buyer with written notice of such adjustment, which shall become the Demonstrated Capacity; provided, however, that Seller may not decrease the Demonstrated Capacity to below 110 MW_{AC} or increase above 116 MW_{AC} without Buyer's prior written consent in its sole discretion. Upon written approval by both Parties, Schedule 2 shall be updated to reflect the Demonstrated Capacity without the need to amend this Agreement.

3.4 Interconnection Provider's Interconnection Facilities. Buyer shall construct the Interconnection Provider's Interconnection Facilities in accordance with Prudent Industry Practices and in compliance with the terms and conditions of the Interconnection Terms. During Commercial Operation, Buyer shall operate and maintain the Interconnection Provider's Interconnection Facilities in accordance with Prudent Industry Practices and in compliance with the terms and conditions of the Interconnection Terms.

Article 4 - Commercial Operation

4.1 Commercial Operation.

(A) Time is of the essence in the performance of this PPA and Seller shall use commercially reasonable efforts to achieve Commercial Operation within the time frames specified in this PPA. Seller shall meet the milestones set forth in Exhibit F at the times indicated, as extended pursuant to Section 4.1(B); provided, that if a milestone is not completed on or before the date specified in Exhibit F, and if Seller (i) informs Buyer of a revised projected date for the occurrence or completion of such milestone, and any estimated impact on the timing of the Commercial Operation Date (ii) provides Buyer with a description of the reasons behind the failure to meet the original milestone deadline and whether remedial

actions are necessary or appropriate and (iii) continues to seek attainment of the milestone using diligent efforts, then no failure of Seller to achieve such milestone on or before a scheduled date shall constitute an Event of Default. Subject to extension as specifically provided for herein, the Facility shall achieve the Commercial Operation Date no later than the Required Commercial Operation Date.

(B) The Required Commercial Operation Date and any unattained milestones shall be extended, day-for-day, for each day of delay due to (i) a Force Majeure Event that has occurred and is continuing; or (ii) Seller Delivery Excuse.

(C) If the Commercial Operation Date has not occurred by the Required Commercial Operation Date (as may be extended in accordance with this PPA), then Seller shall pay to Buyer liquidated delay damages at the rate of five thousand dollars (\$5,000) per day ("Delay Damages"), for each day from and after the Required Commercial Operation Date through the Commercial Operation Date, provided that in no event shall Delay Damages exceed two million dollars (\$2,000,000).

(D) Seller may extend the Guaranteed Commercial Operation Date day for day to the extent any delay is caused by Force Majeure or Seller Delivery Excuse. If after such period as extended by Seller, the Commercial Operation Date has not occurred, Buyer may terminate this Agreement pursuant to Section 12.3 following the provision of notice as provided therein.

(E) Each Party agrees and acknowledges that (a) the damages that Buyer would incur due to Seller's delay in achieving the Required Commercial Operation Date would be difficult or impossible to predict with certainty, and (b) it is impractical and difficult to assess actual damages in the circumstances stated, and therefore the Delay Damages as agreed to by the Parties and set forth herein are a fair and reasonable calculation of such damages. Notwithstanding the foregoing, this Section 4.1(E) shall not limit the amount of damages payable to Buyer if this Agreement is terminated as a result of a Seller Event of Default under Section 12.1(F) and any such termination damages shall be determined in accordance with Article 12 of this PPA, including a Buyer Termination Payment, inclusive of Delay Damages paid by Seller to Buyer under Section 4.1(C).

(F) By the fifteenth (15th) day following the end of the calendar month in which the Delay Damages begin to accrue, and continuing on the fifteenth (15th) day of each calendar month during the period in which Delay Damages accrue (and the following months if applicable), Buyer shall deliver to Seller an invoice showing Buyer's computation of such damages as calculated in accordance with Section 4.1(C) and any amount due Buyer in respect thereof for the preceding calendar month. No later than ten (10) days after receiving such an invoice, Seller shall pay to Buyer, by wire transfer of immediately available funds to an account specified in writing by Buyer or by any other means agreed to by the Parties in

writing from time to time, the amount set forth as due in such invoice in accordance with Section 4.1(C).

(G) Time is of the essence in the performance of Buyer's obligation to construct the Interconnection Provider's Interconnection Facilities and Buyer shall use commercially reasonable efforts to complete such facilities on or prior to the Substantial Completion Date shown in Exhibit G, as extended pursuant to the terms of this Section 4.1(G). Buyer shall meet the milestones set forth in Exhibit G at the times indicated; provided, however that any unattained milestones shall be extended, day-for-day, for each day of delay due to (i) a Force Majeure Event that has occurred and is continuing; or (ii) any breach by Seller of its obligations under this PPA; (iii) any delay or failure of Seller to fulfill its obligation to achieve operation of the Facility or Seller's Interconnection Facilities in accordance with the provisions of this PPA including the Interconnection Terms (not caused by Buyer's breach of its obligations under this PPA), (iv) any material delay or failure by Seller in giving any approval within the times required under this PPA; or, (iii) a failure of Seller to comply with Applicable Law, or (iv) as a result of Seller's gross negligence or willful misconduct; in each case, to the extent that that any of the foregoing actually and proximately prevents the Buyer from performing its obligation to complete the Interconnection Provider's Interconnection Facilities as required by this PPA. If a milestone is not completed on or before the date specified in Exhibit G, and if Buyer (i) informs Seller of a revised projected date for the occurrence or completion of such milestone, and any estimated impact on the timing of completion of the Interconnection Provider's Interconnection Facilities (ii) provides Seller with a description of the reasons behind the failure to meet the original milestone deadline and whether remedial actions are necessary or appropriate and (iii) continues to seek attainment of the milestone using diligent efforts, then no failure of Buyer to achieve such milestone on or before a scheduled date shall constitute an Event of Default. Subject to extension as specifically provided for herein, the Interconnection Provider's Interconnection Facilities shall be completed no later than the Substantial Completion Date shown in Exhibit G.

4.2 Test Energy. Seller shall coordinate the production and delivery of Test Energy with Buyer, including providing Buyer with prior notice of delivery as Buyer may reasonably request. Buyer shall cooperate with Seller to facilitate Testing of the Facility. Buyer shall accept delivery of Test Energy, provided that the Facility is installed and interconnected in accordance with the Interconnection Terms and shall pay for such Test Energy in accordance with the provisions of Section 8.1(B).

4.3 Cooperation. Seller and Buyer shall create a development committee with one representative from each Party. The initial representative of each Party shall be the same as for the operating committee established pursuant to Section 10.3, and each Party may change designation of its development committee representative, or designate an alternative representative, by written notice to the other Party at any time. Following the Effective Date, such development committee shall meet (remotely or in-person, as chosen by the Parties in their discretion) on a monthly basis. The development committee shall discuss progress on the milestones set forth in this Agreement and such other topics

relating to the prospective achievement of Commercial Operation with respect to the Facility and completion of the Interconnection Provider's Interconnection Facilities.

Article 5 - Delivery and Metering

5.1 Delivery Arrangements.

(A) As further specified in Section 7.2, Seller shall be responsible for all interconnection and transmission or distribution arrangements and costs required to deliver the Solar Energy Output and Test Energy from the Facility to Buyer at the Point of Delivery at the required voltage. Buyer shall be responsible for all arrangements, upgrades and costs or charges, if any, required for or imposed in connection with the delivery of Solar Energy Output at and from the Point of Delivery, including transmission and distribution costs and transmission and distribution line losses and third party transmission imbalance charges or penalties. Seller shall bear no responsibility related to delivery with respect to the Solar Energy Output past the Point of Delivery. Notwithstanding the foregoing, each Party shall provide the other Party access to lands controlled by the granting Party as described in Section 6 of the Interconnection Terms.

(B) As further specified in Section 7.2, Buyer shall be responsible for all electric losses, transmission and ancillary service arrangements and costs, and control area or generator imbalance services required to deliver the Solar Energy Output and Test Energy beyond the Point of Delivery. Buyer shall receive all transmission credits associated with its contract capacity allocated by the transmission provider.

5.2 Availability Reporting. Seller shall be responsible for providing accurate and timely updates on the current availability of the Facility to Buyer's SCC and any applicable reliability coordinator, balancing authority area or market operator.

5.3 Electric Metering Devices.

(A) Seller shall ensure that the Solar Energy sold and delivered pursuant to this PPA shall be metered and accounted for separately from any electric generation or storage facility that utilizes the same Point of Delivery. Seller shall ensure that Electric Metering Devices are installed at the point shown in Exhibit D that measure the output of the Facility before such energy is commingled with the energy from any such project.

(B) The following provisions of this section shall govern Electric Metering Devices except to the extent the Interconnection Terms modify or otherwise conflict with these provisions, in which case, the Interconnection Terms shall govern.

(C) Buyer shall, at Seller's cost, provide, install, own, operate and maintain Electric Metering Device(s) to be located at the point shown in Exhibit D, as set out

in the Interconnection Terms. If more than one Electric Metering Device is installed, then data from all Electric Metering Device(s) shall be aggregated into one revenue Electric Metering Device. The metering system design shall be presented by Buyer to Seller prior to commercial operation of the Facility. Any potential energy losses observed between the Electric Metering Device(s) and the Point of Delivery during testing prior to the commercial operation shall be mutually addressed by both the parties. The Electric Metering Device(s) shall be used for quantity measurements under this Agreement. Such equipment shall be bi-directional and shall be capable of measuring and reading instantaneous and hourly real and reactive energy and capacity. Each Party shall have access to all data generated from the Electric Metering Device(s). Seller, at its sole expense, may install additional check meters. Seller shall not install any check-metering equipment on the Interconnection Facilities or any part of the River Mountains System. Buyer shall have access to all data generated by any check meter. Seller shall not undertake any action that may interfere with the operation of the Electric Metering Device(s), and shall be liable for all costs, expense, and liability associated with any such interference with the Electric Metering Device(s).

(D) Electric Metering Devices shall be tested at least once every calendar year by Buyer at its sole expense. Either Party may request a special test of Electric Metering Device(s) or check meter(s), and the Party requesting the special test shall bear the cost of such testing unless there is an inaccuracy outside the limits established in American National Standard Institute Code for Electricity Metering (ANSI C12.1, latest version), in which case Party that owns the Electric Metering Device or check meter that is inaccurate shall bear the cost of the special testing. Electric Metering Device(s) and check meter(s) installed pursuant to this Agreement shall be sealed and the seal broken only when they are to be adjusted, inspected or tested. Authorized representatives of both Parties shall have the right to be present at all routine or special tests and to inspect any readings, testing, adjustment or calibration of the Electric Metering Device(s) or check meter(s). Buyer shall provide at least fifteen (15) days prior notice of routine Electric Metering Device testing to Seller. If Seller has installed check meter(s) in accordance with Section 5.3(C), Seller shall test and calibrate each such check meter(s) at least once every calendar year. Seller shall provide fifteen (15) days prior notice of routine check meter testing to Buyer. In the event of special Electric Metering Device testing, the Parties shall notify each other with as much advance notice as practicable.

(E) If the Electric Metering Devices are registering but their accuracy is outside the limits established in ANSI C12.1, upon discovery of such inaccuracy, Buyer shall promptly, but not more than ninety (90) days after such discovery, repair and recalibrate or replace the Electric Metering Device(s) at Seller's cost. Thereafter, Seller shall adjust invoices issued pursuant to Section 9.1 for the lesser of (a) the period in which the inaccuracy existed or (b) one hundred eighty (180) days. If the period in which the inaccuracy existed cannot be determined, the inaccuracy shall be deemed to have existed for the purposes of clause (a) above for a period equal to one-half of the elapsed time since the latest prior test and calibration of the

Electric Metering Devices. If adjusted settlements are required, Buyer shall render a statement describing the adjustments to Seller within thirty (30) days of the date on which the inaccuracy was rectified.

Article 6 - Conditions Precedent

6.1 Seller's Conditions Precedent. Seller's obligations under this PPA are conditioned upon the occurrence of each of the following conditions (or the waiver by Seller thereof) prior to the Condition Precedent Deadline , each of which Seller shall pursue diligently:

(A) Seller shall have obtained Site Control and executed such easements, leases, options, rights-of-way and other real estate contracts as may be necessary for the transmission line and other Seller's Interconnection Facilities from the solar project to and including the Point of Delivery, and such Site Control, the Facility Site Lease and such other contracts are in full force and effect;

(B) Seller shall have received (i) a preliminary title report with regard to the Site that does not include any third party encumbrances unacceptable to Seller and (ii) a commitment to issue a title policy from a provider acceptable to Seller with such terms and coverages as are acceptable to Seller;

(C) The results from the Affected System system impact study for the Facility shall demonstrate the capacity required for interconnection of the Facility in the full amount of the Facility Capacity may be safely and reliably injected in the River Mountains System in accordance with this PPA (provided, that in the event of a shortfall the Buyer may cure such shortfall by payment of the required network upgrade charges).

(D) Seller shall have obtained insurance coverage for all risks from the spillway on such terms and conditions as are satisfactory to Seller;

(E) Seller shall have obtained all tax abatements or exemptions applicable to the Facility under Nevada law;

(F) Financial Closing shall have occurred and Seller shall have notified Buyer of such occurrence; and

(G) Seller shall have determined in its sole discretion that union labor is not required to be utilized to carry out the obligations under the EPC Contract.

Seller shall use commercially reasonable efforts to achieve the satisfaction of the Seller Conditions Precedent by the Conditions Precedent Deadline. At Seller's request, Buyer will reasonably cooperate with Seller as may be necessary in order to assist Seller in achieving the satisfaction of the Seller Conditions Precedent. Buyer or Seller may terminate this Agreement if the Seller Conditions Precedent are not satisfied or waived by Seller by the Conditions Precedent Deadline. Provided that the terminating Party is

not otherwise in breach of this Agreement, termination of this PPA pursuant to this Section 6.1 shall not trigger the default provisions contained herein or any liability under this Agreement. The Parties may mutually agree to extend the Conditions Precedent Deadline.

6.2 Buyer's Conditions Precedent. Buyer's obligations under this PPA are conditioned upon the occurrence of each of the following conditions (or the waiver by Buyer thereof) prior to the Condition Precedent Deadline, each of which Buyer shall pursue diligently:

(A) Buyer shall have obtained all property rights needed for construction of the Interconnection Provider's Interconnection Facilities and such easements, leases, options, rights-of-way and/or other real estate contracts necessary for the Interconnection Provider's Interconnection Facilities Site are in full force and effect;

(B) Buyer shall have received (i) a preliminary title report with regard to the Interconnection Provider's Interconnection Facilities Site that does not include any third party encumbrances unacceptable to Buyer and (ii) a commitment to issue a title policy from a provider acceptable to Buyer with such terms and coverages as are acceptable to Buyer; and

(C) The results from the Affected System system impact study for the Facility shall demonstrate the capacity required for interconnection of the Facility in the full amount of the Facility Capacity may be safely and reliably injected in the River Mountains System in accordance with this PPA and in the event of any shortfall, such shortfall can be cured by payment by Buyer of less than \$ 2 million in network upgrade charges.

Buyer shall use commercially reasonable efforts to achieve the satisfaction of the Buyer Conditions Precedent by the Conditions Precedent Deadline. At Buyer's request, Seller will reasonably cooperate with Buyer as may be necessary in order to assist Buyer in achieving the satisfaction of the Buyer Conditions Precedent. Buyer or Seller may terminate this Agreement if the Buyer Conditions Precedent are not satisfied or waived by Buyer by the Conditions Precedent Deadline.

Provided that the terminating Party is not otherwise in breach of this Agreement, termination of this PPA pursuant to this Section 6.2 shall not trigger the default provisions contained herein or any liability under this Agreement. The Parties may mutually agree to extend the Conditions Precedent Deadline.

Article 7 - Sale and Purchase of Solar Energy Output and Renewable Energy Benefits

7.1 Sale and Purchase of Solar Energy Output and Capacity.

(A) Beginning on the Commercial Operation Date, Seller shall generate from the Facility, deliver to the Point of Delivery, and sell to Buyer at the Solar Energy Payment Rate the Solar Energy Output and all of the Renewable Energy Benefits

produced by the Facility, and Buyer shall purchase all such Solar Energy Output and Renewable Energy Benefits, all at the applicable price set forth in Section 8.1. If Buyer does not receive Solar Energy Output due to Buyer failing to timely complete the Interconnection Provider's Interconnection Facilities, and such failure is not due to a Buyer Receipt Excuse, then for each day commencing on the first day of Buyer's failure to receive Solar Energy Output and ending on the date of Buyer's completion of the Interconnection Provider's Interconnection Facilities and receipt of Solar Energy Output as provided herein ("Buyer Receipt Delay Period"), Buyer shall pay Seller a daily payment at the rate equal to the Estimated Solar Output multiplied by the energy price set out in Schedule 1. ("Daily Buyer Receipt Delay Payment").

(B) Seller shall be in control of the Solar Energy Output and Test Energy from the Facility up to and until delivery and receipt at the Point of Delivery and Buyer shall be in control of such energy from and after delivery and receipt at the Point of Delivery. Title and risk of loss related to the Solar Energy Output and Test Energy shall transfer from Seller to Buyer at the Point of Delivery. Seller will convey good title to the Solar Energy Output to Buyer at the Point of Delivery free and clear of any liens or other encumbrances or title defects, including any which would affect Buyer's ownership of any portion of such Solar Energy Output or prevent the subsequent transfer of such Solar Energy Output by Buyer to a third party. Until title passes at the Point of Delivery, Seller shall be deemed in exclusive control of the Solar Energy Output and shall be responsible for any damage or injury caused thereby. After title to the Solar Energy Output passes to Buyer at the Point of Delivery, Buyer shall be deemed in exclusive control of such Solar Energy Output and shall be responsible for any damage or injury caused thereby.

(C) Ownership by Buyer of Renewable Energy Benefits as set forth in Section 7.1(A) shall be for the entire Term of this PPA, including any Renewable Energy Benefits that are reserved or "banked" throughout the Term of this PPA, but not used, sold, assigned or otherwise transferred during the Term of this PPA. Buyer may, to the extent permitted by Applicable Law and this PPA, assign its rights, title and interest in and to any Renewable Energy Benefits obtained under Section 7.1(A) (but not any payment obligation) to one or more third parties under any transaction permitted by Applicable Law. Any financial or other compensation received by Buyer from the disposition of Renewable Energy Benefits Reporting Rights held by Buyer as set forth in Section 7.1(A) shall inure solely to the benefit of the Buyer.

(D) Tax Credits in effect on the date of this PPA or arising hereafter shall be accrue solely to the benefit of Seller. Seller shall bear all risks, financial and otherwise throughout the Term, as to Seller's or the Facility's eligibility to receive Tax Credits, or to or qualify for accelerated depreciation for Seller's accounting, reporting or tax purposes, on account of rules respecting the Facility owner minimum interest in the Facility's risks, the relationship between Facility owner and Seller or otherwise. The obligations of the Parties hereunder shall be effective

regardless of whether the sale of Solar Energy Output from the Facility is eligible for, or receives, Tax Credits during the Term.

(E) Seller and Buyer shall execute all documents and instruments necessary to effect the transfer of the Renewable Energy Benefits to Buyer or its respective designees, including compliance with all Applicable Laws, including the Renewable Energy Law and all rules and regulations established by any Person for the issuance and tracking of PECs, including the PEC Administrator, the PUCN and NVTREC. Without limiting the generality of the foregoing, Seller shall, on or before the Commercial Operations Date, certify the Facility as a Renewable Energy System pursuant to the Renewable Energy Law. Seller shall provide Buyer copies of such certification and all related documentation.

7.2 Scheduling.

(A) Scheduling shall be on a “must-take” basis, except for Forced Outages, Scheduled Maintenance Outages, Additional Maintenance Outages, Permitted Buyer Maintenance, Force Majeure Events and Emergency Conditions, in each case to the extent that the Solar Energy Output of the Facility is reduced. At least thirty (30) Days prior to the anticipated Commercial Operation Date, Seller shall provide Buyer with a good faith estimate of the quantity of Solar Energy Output that it expects to generate for the remainder of that Year. By October 1 of each succeeding Year, Seller shall provide Buyer with a good faith estimate of the hourly quantities of Solar Energy Output that Seller expects to generate in the following Year (the “Projected Schedule”).

(B) Seller shall provide to Buyer its good faith, non-binding estimates of the daily quantity (by hour) of Solar Energy Output to be delivered by Seller to the Point of Delivery for the following three (3) Month period by 4:00 p.m. PPT on the date falling at least three (3) Days prior to the beginning of that Month.

(C) If, at any time following submission of a good faith estimate as described in Section 7.2(B), Seller becomes aware of any change that alters the values previously provided to Buyer, Seller shall promptly notify Buyer of such change or predicted change.

(D) Buyer or its designee shall act as the scheduling agent for the Solar Energy Output and schedule the Solar Energy Output from the Point of Delivery in accordance with Applicable Law and any requirements established by a reliability coordinator, balancing authority area or market operator. Any charges, penalties, costs, fees or other amounts associated with such scheduling and requirements shall be for the account of Buyer.

(E) Seller shall act as the scheduling agent for the Facility and schedule the Facility in accordance with Applicable Law and any requirements established by a reliability coordinator, balancing authority area or market operator. Any

charges, penalties, costs, fees or other amounts associated with such scheduling and requirements shall be for the account of Seller.

7.3 Forced Outages. Seller shall notify Buyer and SCC by telephone call (with confirmation in each case to follow by written notice or other form of documentation as agreed upon by both Parties) immediately upon discovering that the Facility is unable to deliver all or part of any scheduled quantity of Solar Energy Output due to a Forced Outage and, as soon as reasonably practicable following such discovery, shall notify Buyer and SCC in writing of its best estimate of the expected duration of such Forced Outage. Such estimate by Seller shall be based on the best information available to it. Should Seller expect any further changes in the duration of any such Forced Outage, it shall promptly notify Buyer and SCC of the same.

7.4 Solar Energy Output Guaranty. Seller is obligated to deliver a quantity of Solar Energy Output during each Rolling Period which is equal to the Output Guaranty. For purposes of this Agreement, "Output Guaranty" for any Rolling Period means the sum of (i) ninety percent (90%) of the Estimated Solar Output for such Rolling Period, less (ii) Curtailed Energy and any quantities of Solar Energy Output that were not delivered to the Point of Delivery to the extent due to Seller Delivery Excuse, energy interrupted or reduced in delivery due to actions of the Interconnection Provider pursuant to Sections 7.1 or 7.2 of the Interconnection Terms in Exhibit C, or a Force Majeure Event. For purposes of this Agreement, "Rolling Period" means the first Contract Year and thereafter any two consecutive Contract Years occurring during the Term.

(A) If the quantity of Solar Energy Output delivered by the Facility during any Rolling Period is equal to or greater than the Output Guaranty for such Rolling Period, Seller's delivery obligation for such Rolling Period shall be deemed satisfied for such Rolling Period.

(B) If the quantity of Solar Energy Output delivered by the Facility during any Rolling Period is less than the Output Guaranty for such Rolling Period, the Seller shall determine the resulting shortfall, if any, for the first Contract Year occurring during such Rolling Period (the "Output Shortfall").

I If the product of the Output Shortfall calculation set forth in Section 7.4(B) is a positive number, Seller shall pay Buyer liquidated damages equal to the product of the Output Shortfall for that Contract Year and Performance Liquidated Damages; plus the value of Renewable Energy Credits for the periods of the Output Shortfall; plus any penalties incurred by Buyer for failure to meet renewable energy requirements due to the Output Shortfall.

(D) Each Party agrees and acknowledges that (i) the damages that Buyer would incur due to the Facility's failure to achieve the Output Guaranty would be difficult or impossible to predict with certainty and (ii) the liquidated damages contemplated by this Section 7.4 are a fair and reasonable calculation of such damages.

(E) On January 31 of each Contract Year, Buyer shall deliver to Seller an invoice showing Buyer's computation of Solar Energy Output and Output Shortfall, if any, for the prior Contract Year and any amount due Buyer for liquidated damages pursuant to Section 7.4(C). In preparing such invoice, Buyer shall utilize the meter data provided to Buyer for the Contract Year in question, but may also rely on historical averages and such other information as may be available to Buyer at the time of invoice preparation, if the meter data for such Contract Year is then incomplete or otherwise not available. To the extent required, Buyer shall true up any such invoice as promptly as practicable following its receipt of actual results for the relevant Contract Year. Seller shall pay to Buyer, by wire transfer of immediately available funds to an account specified in writing by Buyer or by any other means agreed to by the Parties in writing from time to time, the amount set forth as due in such invoice, and shall within thirty (30) days after receiving the invoice raise any objections regarding any disputed portion of the invoice. All disputes regarding such invoices shall be subject to Sections 9.5 and 13.4. Objections not made by Seller within the thirty (30) day period shall be deemed waived.

(F) Survival on Termination. The provisions of this Section 7.4 shall survive the repudiation, termination or expiration of this PPA for so long as may be necessary to give effect to any outstanding payment obligations of Seller due and payable prior to any such repudiation, termination or expiration.

Article 8 - Payment Calculations

8.1 Energy, Renewable Energy Benefits, and O&M Payments.

(A) Buyer shall pay Seller a monthly payment due and payable in each Monthly Billing Period in accordance with the invoicing procedures set forth in Section 9.1 equal to the sum, over all hours of the Monthly Billing Period, of the product of (i) the Solar Energy Payment Rate; and (ii) the amount of Solar Energy Output (MWh) delivered to the Point of Delivery from the Facility during that hour and all Curtailed Energy. Such payment shall be referred to as the "Solar Energy Payment".

(B) Test Energy Payment. Buyer shall pay Seller for Test Energy generated prior to the Commercial Operation Date by making a monthly payment due and payable in each Monthly Billing Period in accordance with the invoicing procedures set forth in Section 9.1, equal to the product of: (a) fifty percent (50%) of the rate in \$/MWh set forth in Schedule I for "Energy Price" during the first Year after the Commercial Operation Date; and (b) the amount of Test Energy (MWh) delivered during that Month.

8.2 Curtailed Energy.

If (i) Seller cannot deliver Solar Energy Output because of a Seller Delivery Excuse, or (ii) delivery of Solar Energy Output is curtailed by Buyer other than as a result of an Emergency Condition (such Solar Energy Output described in clauses (i) and (ii),

“Curtailed Energy”), the Parties shall determine the quantity of Curtailed Energy by subtracting the actual availability of the Facility from the Estimated Solar Output.

8.3 Payment Support Requirement. Neither Party shall initiate any action before any Governmental Authority to deny recovery of payments under this PPA, and each Party shall use its best efforts to defend all terms and conditions of this PPA consistent with Applicable Law.

8.4 Survival on Termination. The provisions of this Article 8 shall survive the repudiation, termination or expiration of this PPA for so long as may be necessary to give effect to any outstanding payment obligations of the Parties due and payable prior to any such repudiation, termination or expiration.

Article 9 - Billing and Payment Procedures

9.1 Statements and Payment of Electricity Payments.

(A) Seller shall read or have read on its behalf the Electric Metering Devices at the Points of Delivery at 11:59 p.m. PPT on the last Day of each Month, unless otherwise mutually agreed by the Parties.

(B) On or before the tenth (10th) Day of each Month following the Month in which the Commercial Operation Date occurs, Seller shall prepare an invoice showing the Solar Energy Payment payable by Buyer pursuant to Article 8 of this PPA (in Dollars) payable to Seller for the preceding Month. Each such invoice shall show information and calculations, in reasonable detail. Buyer shall pay Seller such invoiced amounts within fifteen (15) Days of the date of such invoice.

(C) Beginning with the first Month following the Month in which the first Unit has been Commissioned until an invoice is required to be prepared pursuant to clause (B) above, Seller shall prepare an invoice showing the charges for Test Energy and Renewable Attributes payable to Seller for the preceding Month. Buyer shall pay Seller such invoiced amounts within fifteen (15) Days of the date of such invoice.

(D) Buyer shall, subject to Sections 9.5 and 9.8, pay all invoices on or before the due date therein specified. If Buyer should dispute a portion of the charges set forth on any invoice, it shall nonetheless pay all amounts not in dispute by the applicable due date.

(E) If any date on which any payment by Buyer would otherwise have been due is a Business Day, then Buyer shall make such payment on the Business Day that immediately follows such payment date.

(F) In the event a Meter error, as specified in Section 5.3, is discovered that affects an invoice under this Agreement, Seller shall adjust each affected monthly invoice, and promptly render a new monthly invoice to Buyer. Buyer shall

use the index or pricing point utilized by WAPA under its transmission tariff for energy imbalance or such other index or pricing point as mutually agreed by the Parties to reconcile any error.

9.2 Miscellaneous Payments. Any amounts due to either Seller or Buyer under this PPA, other than those specified in Sections 4.1, 7.4, 9.1 and 12.8, shall be paid within twenty (20) Days following receipt by the other Party of an itemized invoice from the Party to whom such amounts are due setting forth, in reasonable detail, the basis for such payment. If either Party is billed or credited for any charges, costs, fees, penalties, credits or other amounts properly payable by the other Party pursuant to the terms of this Agreement, the Party receiving such invoice shall deliver such invoice to the other Party and such other Party shall pay such invoice by the later of the due date or twenty (20) days after receipt from the receiving Party.

9.3 Currency and Method of Payment. Notwithstanding anything contained in this PPA, all payments to be made by either Seller or Buyer under this PPA shall be made in Dollars in immediately available cleared funds by wire transfer into the relevant account specified in this PPA or, if no account is specified, into the account designated by the receiving Party.

9.4 Default Interest. Except where payment is the subject of a bona fide Dispute (in which case it shall be treated under Section 9.5 below), if any payment due from Buyer to Seller or from Seller to Buyer under this PPA is not paid when due, then, in addition to such unpaid amount, interest shall be due and payable thereon. Applicable interest shall be calculated at the prime rate as published in the Wall Street Journal on the first Business Day of each Month plus two percent (2%) (the "Default Rate"), as in effect from time to time and shall continue to accrue from the date on which such payment became overdue to and until the date such payment is made in full (both dates inclusive).

9.5 Disputed Items.

(A) Either Party (the "Disputing Party") may dispute in good faith the accuracy of a reading of the Electric Metering Devices and/or the accuracy of an invoice. Where a reading or bill is the subject of a Dispute in good faith, the Disputing Party shall give written notice to the other Party within ten (10) Days after the delivery of the invoice or statement by the other Party, together with details of its reasons for such Dispute. The Disputing Party shall make payment of any undisputed amounts to the other Party by the due date for payment specified in such invoice. Any amount or adjustment with respect to a meter reading subsequently agreed to by the Parties or determined to be due shall be made (in each case in settlement of a Dispute) by a credit or additional charge on the next bill rendered (as the case may be).

(B) All amounts paid or refunded as a result of the settlement of a Dispute shall be paid or refunded, as applicable, with interest thereon at the Default Rate from the Day on which such payment originally fell due or was paid to and until the date such payment is made or refunded in full (both dates inclusive).

9.6 Statement Errors. In the event that either Party becomes aware of any error in any statement within one (1) year of the date of a statement, such Party shall, immediately upon discovery of the error, notify in writing the other Party of such error and shall rectify such error (whether such error was in the form of an underpayment or overpayment) within thirty (30) Days of such notification. Provided that the other Party is satisfied (in its sole and reasonable discretion) that the aforementioned notification requirements have been complied with in good faith by the Party who has made the error, no interest shall be payable in respect of any amount that was erroneously overpaid or underpaid. No adjustment to a billing statement shall be made if notice of an error in such statement is not provided within one (1) year of the date of such statement.

9.7 Taxes.

(A) Seller shall pay or cause to be paid when due, or reimburse Buyer for, all existing and any new sales, use, excise, ad valorem, and any other similar taxes, imposed or levied by any Governmental Authority on the Solar Energy Output or Renewable Energy Credits up to and including the Point of Delivery, or on the generation or sale of the Solar Energy Output or Renewable Energy Credits from Seller to Buyer hereunder, regardless of whether such taxes are imposed on Buyer or Seller under Applicable Law. Buyer shall pay or cause to be paid when due, or reimburse Seller for, all such taxes levied at or beyond the Point of Delivery upon a purchaser of on the Solar Energy Output or Renewable Energy Credits regardless of whether such taxes are imposed on Buyer or Seller under Applicable Law. If taxes are imposed or levied by a Governmental Authority on a Party in error or incorrectly, or on the wrong Party, the Parties shall work in good faith to cause such Governmental Authority to correct such error and levy or impose such taxes correctly. The Contract Price shall not be adjusted on the basis of any action of any Governmental Authority with respect to changes to or revocations of sales and use tax benefits, rebates, exception or give back.

(B) Seller shall not be obligated to pay or reimburse Buyer for taxes imposed on or measured by the Buyer's overall revenues or income. Buyer shall be responsible for the payment of, and no amount payable by Seller to Buyer shall be subject to adjustment for, taxes imposed on Buyer and its property.

(C) Buyer shall not be obligated to pay or reimburse Seller for taxes imposed on or measured by the Seller's overall revenues or income. Seller shall be responsible for the payment of, and no amount payable by Buyer to Seller shall be subject to adjustment for, taxes imposed on Seller and its property.

(D) If a Party is required to remit or pay Taxes that are the other Party's responsibility hereunder, such Party shall promptly reimburse the other for such Taxes.

(E) The Parties shall provide each other, upon written request, with copies of any documentation that may be reasonably necessary in the ordinary

course of any inter-governmental, state, local, municipal or other political subdivision tax audit inquiry or investigation.

(F) Consistent with Applicable Law, the Parties shall cooperate to minimize Taxes; however, no Party shall be obligated to incur any material financial burden to reduce Taxes for which the other Party is responsible hereunder.

9.8 Set-Off and Payment Adjustments. All payments between the Parties under this PPA shall be made free of any restriction or condition and without deduction or withholding on account of any other amount, whether by way of set-off or otherwise, unless this Agreement expressly provides for such set-off. Payments to be made under this PPA shall, for a period of not longer than two (2) years, remain subject to adjustment based on billing adjustments due to error or omission by either Party, provided that such adjustments have been agreed to between the Parties or resolved in accordance with the provisions of Section 13.4 hereof.

9.9 Survival on Termination. The provisions of this Article 9 shall survive the repudiation, termination or expiration of this PPA for so long as may be necessary to give effect to any outstanding payment obligations of the Parties that became due and payable prior to any such repudiation, termination or expiration.

Article 10 - Operations and Maintenance

10.1 Construction of the Facility.

(A) Starting on the date that falls one Month after the date upon which a notice to proceed under the EPC Contract is given in accordance with the terms of the EPC Contract and, thereafter, at Monthly intervals, Seller shall report to Buyer on the construction of the Facility during the previous Month and shall provide progress reports and an updated completion schedule for the Facility. Such Monthly reports shall provide a schedule showing items completed and to be completed, including each milestone set forth in Exhibit F, and a best estimate time-frame within which Seller expects its EPC contractor to complete such non-completed work. None of the foregoing shall be deemed to be in lieu of, or in substitution for, the general record and reporting obligations attendant to Seller in accordance with Article 13 hereof.

(B) Except with respect to the Purchase Option in the circumstances described in Section 11.1, neither this PPA nor any such ancillary document shall be interpreted to create in favor of Buyer, and Buyer specifically disclaims, any right, title or interest in any part of the Facility.

10.2 Commissioning Tests.

(A) Seller shall coordinate testing plans with Buyer by providing a Testing plan at least thirty (30) days prior to the first anticipated Test Date, updates

to such Testing plan on a weekly basis, and at least forty-eight (48) hours prior notice of the actual Test Date and of the proposed Tests scheduled relating to the Commissioning of the Facility ("Commissioning Tests"). Representatives of Buyer shall have the right to be present at all such Testing. Seller shall promptly notify Buyer of any changes to the Test Date or the date of any Commissioning Tests relating to the Facility in order that Buyer may arrange for its respective representatives to attend.

(B) The results of Commissioning Tests shall determine the Facility's Demonstrated Capacity. Seller may conduct multiple Commissioning Tests to determine the highest Demonstrated Capacity.

(C) Test Energy shall be delivered by Seller for Buyer at the Point of Delivery, and Buyer shall purchase such Solar Energy Output as set forth in Section 8.1(B).

10.3 Maintenance of the Facility. Seller shall operate and maintain all Facility equipment or cause the same to be operated and maintained at all times in accordance with manufacturers' recommendations and Prudent Industry Practices and otherwise in accordance with this PPA, including the Interconnection Terms. Seller and Buyer shall create an operating committee with one representative from each Party. The initial representative of each Party shall be as set out in Exhibit A, and each Party may change designation of its operating committee representative, or designate an alternative representative, by written notice to the other Party at any time. Such operating committee shall meet on an annual basis and, if requested by a member of the operating committee, one additional meeting per calendar quarter. The operating committee shall discuss Seller's maintenance plan for the following Year and other matters that are germane to the effective planning and execution of Facility's operations and maintenance. Buyer may make suggestions on the maintenance plan for the Facility; provided, however, that Seller shall not be obligated to follow such Buyer recommendations unless failure to follow the recommendation results in a breach of this Agreement by Seller.

10.4 Scheduled Maintenance.

(A) Three (3) Months prior to the Commercial Operation Date and, thereafter, by October 1 of each Year, Seller shall deliver to Buyer and SCC the Projected Schedule for the Facility for the subsequent annual period, including Scheduled Maintenance Outages. Seller shall take manufacturers' recommendations and Prudent Industry Practices into account when establishing the proposed schedule for Scheduled Maintenance Outages, which schedule shall correspond with the Projected Schedule. Scheduled Maintenance Outages and/or Additional Maintenance Outages may not be scheduled during the Months of June, July, August, or September (the "Non-Scheduled Maintenance Period") unless agreed to in writing by Buyer in its sole discretion, or unless such Scheduled Maintenance Outages and/or Additional Maintenance Outages can be performed at night and do not affect the Facility's operations during the day.

(B) Within thirty (30) Days of receiving the proposed schedule for Scheduled Maintenance Outages from Seller, Buyer may propose amendments thereto. Seller shall not unreasonably withhold its consent to such proposed amendments, provided that, it shall not be unreasonable for Seller to withhold its consent to any such proposed amendments that would be contrary to Prudent Industry Practices.

(C) Seller shall be entitled to change any Scheduled Maintenance Outages for the then current Year upon fourteen (14) Days' notice to the Buyer and SCC, or if such changes are required to comply with Prudent Industry Practices or, in the alternative, if Buyer in its sole discretion consents to the change, provided that in each case any changes shall not be scheduled during the Non-Scheduled Maintenance Period. Seller shall not unreasonably refuse to change the schedule of Scheduled Maintenance Outages if requested to do so by Buyer upon not less than fourteen (14) Days' prior notice, provided that any such change would not be contrary to Prudent Industry Practices or cause Seller to incur any material costs.

(D) Any maintenance outages that do not correspond to the descriptions contained in clauses (A)-(C) of this Section 10.4 shall be deemed to be Additional Maintenance Outages under Section 10.5.

10.5 Additional Maintenance Outages. As the need arises for Seller to conduct further maintenance on the Facility during which the Facility is shut down or its output reduced in addition to that conducted pursuant to Section 10.4 hereof ("Additional Maintenance Outages"), Seller shall notify Buyer of such required maintenance, together with proposed dates for carrying out such additional maintenance and the estimated duration of the work to be carried out. Unless deferral of such maintenance would cause an Emergency Condition, Seller shall prepare a schedule of such Additional Maintenance Outages based on Prudent Industry Practices taking into account the reasonable requests of Buyer to the extent reasonably possible. Seller shall use Prudent Industry Practices to avoid Additional Maintenance Outages during the Non-Scheduled Maintenance Period. Notwithstanding the foregoing, Additional Maintenance Outages that consist of washing PV panels to increase the production of Solar Energy Output may be performed by Seller during a Non-Scheduled Maintenance Period upon five (5) business days advance written notice to Buyer, with effort to minimize outages, and no more than three (3) times per calendar year.

10.6 Access to and Inspection of Facility.

(A) Seller shall provide Buyer and its authorized agents, employees and inspectors with reasonable access to the Facility for the purposes set forth herein. Buyer acknowledges that such access does not provide Buyer with the right to direct or modify the operation of the Facility in any way and further acknowledges that any exercise by Buyer of its rights under this Section 10.6 shall be at its own risk and expense. Buyer shall abide by Seller's safety procedures and rules while visiting the Site.

(B) No inspections of the Facility, whether by Buyer or otherwise, shall relieve Seller of its obligation to maintain the Facility and operate the same in accordance with Prudent Industry Practices. In no event shall any statement, representation, or lack thereof by Buyer, either express or implied, relieve Seller of its exclusive responsibility for the Facility. Any inspection of Seller's property or equipment by Buyer or any review by Buyer or consent by Buyer to Seller's plans, shall not be construed as endorsing the design, fitness or operation of the Facility equipment nor as a warranty or guarantee.

Article 11 - Security

11.1 Seller's Security. Within ten (10) Business Days after the date that the Seller Conditions Precedent and the Buyer Conditions Precedent have each been satisfied or waived, Seller shall provide Buyer credit support of two million dollars (\$2,000,000) (the "Financial Credit Support") and an option for Buyer, pursuant to customary terms and conditions reasonably acceptable to the Parties, to purchase the Facility for a purchase price equal to the fair market value (FMV) of the Facility, exercisable solely in the event of a Seller Event of Default prior to the Purchase Option Termination Date, as such term is defined below ("Purchase Option"). In the event of a Seller Event of Default prior to the Purchase Option Termination Date, (as defined below), Buyer and Seller shall appoint an independent appraiser with significant experience in appraising utility-scale solar power generation facilities in the United States ("Qualified Appraiser") to determine the fair market value of the Facility. The appraisal shall be completed prior to the Purchase Option Termination Date. "Purchase Option Termination Date" shall mean the day preceding the first to occur of the following dates:

1. The date on which Seller physically controls the Facility and has obtained all permits and licenses, and achieved the interconnection requirements, required for operation of the Facility;
2. The date on which critical pre-operational testing of the Facility is completed;
3. The date on which the Facility is first synchronized into a power grid for generation of electric energy and production of income; or
4. The date on which daily or regular operation of the Facility commences;

Notwithstanding any other provision of this Agreement, the Purchase Option shall expire and be of no further force and effect after, the Purchase Option Termination Date, subject only to Seller's obligation to complete sale of the Facility to Buyer as provided herein and provided further that Seller shall not have received an opinion from Seller's tax counsel that, effective upon or prior to such sale, the Facility will have become placed in service under the Code, which opinion Seller shall provide to Buyer upon Buyer's request. All unused portions of the Financial Credit Support shall be returned to Seller upon the earlier of (a) the completion of the sale of the Facility to Buyer following exercise of the Purchase Option in accordance with the foregoing provisions, or (b) the termination or expiration of this PPA, the Financial Credit Support shall take the form of (i) a letter of credit substantially in the form attached at Exhibit H and from a financial institution that has a credit rating of at least "BBB" or better by Standard & Poor's or "Baa2" or better by Moody's (or an equivalent rating from an equivalent rating agency as may reasonably be

approved by Buyer), or (ii) cash (in immediately available funds), which cash must be delivered to a custodian to be held by the custodian as security for Seller's obligations hereunder pursuant to an escrow agreement reasonably agreed by the Parties.

11.2 Effect of Security. Nothing in this Article 11, any security agreement or any such Financial Credit Support is intended, or shall be deemed or construed to, in any way limit or modify any obligation or agreement of or recourse to the Parties hereunder.

Article 12 - Default and Remedies

12.1 Events of Default. Except to the extent excused due to an event of Force Majeure, an event of default ("Event of Default") shall be deemed to have occurred with respect to a Party (the "Defaulting Party") upon the occurrence of one or more of the following events:

(A) Such Party's failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within fifteen (15) Business Days after written notice is received by the Party failing to make such payment;

(B) Any representation or warranty made by such Party is false or misleading in any material respect (provided that (i) if the misrepresentation or breach of warranty is capable of a cure, an Event of Default will be deemed to occur only if the misrepresentation or breach of warranty is not remedied within thirty (30) days after notice and (ii) if the misrepresentation or breach of warranty is not capable of a cure, but the non-breaching Party's damages resulting from the inaccuracy can reasonably be ascertained, an Event of Default will be deemed to occur only if the payment of such damages is not made within fifteen (15) Business Days after a notice of such damages is provided by the Non-Defaulting Party to the Defaulting Party);

(C) The failure of such Party to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default), if such failure is not remedied within thirty (30) days after notice, provided that such thirty (30) day period shall be extended for up to an additional ninety (90) days if such Party reasonably commences the cure of such failure and diligently pursues the same;

(D) Such Party (i) admits in writing its inability to pay its debts generally as they become due, (ii) files a petition or answer seeking reorganization or arrangement under the federal bankruptcy laws or any other applicable law or statute of the United States of America or any State, district or territory thereof; (iii) makes an assignment for the benefit of creditors, (iv) consents to the appointment of a receiver of the whole or any substantial part of its assets or (v) has a petition in bankruptcy filed against it, and such petition is not dismissed within ninety (90) days after the filing thereof;

(E) Such Party's assignment of this PPA except as permitted in accordance with Article 19;

(F) In the case of Seller, its failure to declare or otherwise achieve the Commercial Operation Date on or before the Guaranteed Commercial Operation Date (as extended hereunder);

(G) In the case of Seller, abandonment of operation of the Facility, which means the relinquishment of all possession and control of the Facility by Seller, other than as permitted under this PPA, but only if such relinquishment or cessation is not caused by or attributable to an Event of Default of, or request by, Buyer, or an event of Force Majeure or Seller Delivery Excuse;

(H) In the case of Seller, the Facility fails to deliver fifty percent (50%) of the Expected Solar Output in any rolling twenty-four (24) month period for reasons other than Interconnection Provider outages, Seller Delivery Excuse, events of Force Majeure, curtailment or other reasons outside the control of Seller; or

12.2 Damages Prior to Termination. Upon the occurrence of an Event of Default, and subject in each case to the limitation on damages set forth in Section 12.7, the non-defaulting Party shall have the right to suspend its performance of this Agreement and collect damages accruing prior to the termination of this PPA from the defaulting Party, and the payment of any such damages accruing prior to the cure of an Event of Default shall constitute an element of any respective cure. If the Buyer has committed an Event of Default, then Seller may suspend its performance hereunder and sell the Solar Energy Output and Renewable Energy Benefits to a third party in an effort to mitigate the damages payable by Buyer.

12.3 Termination. Upon the occurrence of an Event of Default, the non-defaulting Party shall have the right to declare a date, which shall be between fifteen (15) and thirty (30) Days after the notice thereof, upon which this PPA shall terminate. Neither Party shall have the right to terminate this PPA except as provided for upon the occurrence of an Event of Default as described above or as may be otherwise explicitly provided for in this PPA. Following an Event of Default, the non-defaulting Party shall be entitled to receive from the Defaulting Party, subject to the applicable provisions of Section 12.4 and the limitation on damages set forth in Section 12.7 and the mitigation of damages, all of the damages incurred by the non-defaulting Party in connection with such Event of Default and to exercise any other remedy available at law or in equity.

12.4 Calculation of Termination Payment. In the event of termination by either Party due to an Event of Default, the defaulting Party shall pay to the non-defaulting Party a Termination Payment as provided in this Section. The non-defaulting Party shall calculate, in a commercially reasonable manner, a Termination Payment and provide written notice of such Termination Payment to the defaulting Party. The notice shall include a written statement explaining in reasonable detail the calculation of such amount and the sources for such calculation. If the defaulting Party disputes the non-defaulting Party's calculation of the

Termination Payment, the defaulting Party shall, within ten (10) Business Days of receipt of the non-defaulting Party's notice, provide to the non-defaulting Party a detailed written explanation of the basis for such dispute. Following delivery of such a notice, disputes regarding the Termination Payment shall be resolved in accordance with this Section 12.4. Unless the Parties mutually agree upon the Termination Payment within ten (10) Business Days of the non-defaulting Party's receipt of the defaulting Party's explanation of a dispute, or such longer period to which the Parties may mutually agree, the Termination Payment shall be determined through binding arbitration in accordance with the rules for Non-Administered Arbitration of the International Institute for Conflict Prevention and Resolution ("CPR") then in effect, using the screened process provided in the CPR rules ("CPR Rules"). The arbitration shall be conducted before a panel of three arbitrators selected using the screened process provided in the CPR Rules. The arbitrators shall have at least ten (10) years of experience working in a United States energy market, with at least five (5) years of recent experience in the utility-scale solar energy market. The arbitrators shall be neutral arbitrators and shall be subject to the CPR Rules of conflicts and disclosures. The Parties shall be entitled to reasonable discovery on the basis and support for the Termination Payment hereunder. The arbitration hearing(s) shall take place in Clark County, Nevada, or such other location as mutually agreed by the Parties. The arbitrators shall render a detailed, written determination of the Gains and Losses to be used for the Termination Payment and the Termination Payment, which shall be final and binding on the Parties to the arbitration. Judgment upon the award may be entered in any court of competent jurisdiction. The defaulting Party shall not have to enter into replacement transactions to establish a Termination Payment. The Termination Payment shall be made to the non-defaulting Party within fifteen (15) Business Days after notice of the Termination Payment; provided, however, If the Termination Payment is disputed and submitted to arbitration, the Termination Payment ultimately determined to be due shall be paid within fifteen (15) Business Days of issuance of a decision by the arbitrator and shall include accrued interest at the Default Rate from the original due date.

12.5 [Intentionally left blank.]

12.6 Remedies Cumulative. Subject to Section 12.4 and the limitations on damages set forth in Section 12.7, each right or remedy of the Parties provided for in this PPA shall be cumulative of and shall be in addition to every other right or remedy provided for in this PPA, and the exercise, or the beginning of the exercise, by a Party of any one or more of the rights or remedies provided for herein shall not preclude the simultaneous or later exercise by such Party of any or all other rights or remedies provided for herein.

12.7 Waiver and Exclusion of Other Damages. The Parties confirm that the express remedies and measures of damages provided in this PPA satisfy the essential purposes hereof. If no remedy or measure of damages is expressly herein provided, the obligor's liability shall be limited to direct, actual damages only, which shall include cover damages and the related costs to procure alternative arrangements. Notwithstanding any other provision, neither Party shall be liable to the other Party for consequential, incidental, punitive, exemplary or indirect damages, lost profits or other business interruption damages by statute, in tort or contract, provided, that the foregoing limitation shall not apply to (i) Termination Payments calculated in accordance with the provisions of this Agreement; or (ii) if either Party is held liable to a third party for such damages, and the Party held liable for such damages is entitled

to indemnification therefor from the other Party hereto, the indemnifying Party shall be liable for, and obligated to reimburse the indemnified Party for, such damages, all in accordance with the indemnification provisions of Article 17 hereof. To the extent any damages are required to be paid hereunder are deemed liquidated, the Parties acknowledge that the damages are difficult or impossible to determine, that otherwise obtaining an adequate remedy is inconvenient, and that the liquidated damages constitute a reasonable approximation of the harm or loss.

12.8 Payment of Amounts Due. Without limiting any other provisions of this Article 12 and at any time before or after termination of this PPA, and subject to the requirements of Section 12.4 with regard to Termination Payments, either Party may send the other Party an invoice for such damages or other amounts as are due and payable under this PPA to such Party at such time from the other Party, and such invoice shall be payable in the manner, and in accordance with the applicable provisions, set forth in Article 9, including the provision for late payment charges. Either Party may withdraw funds from the security described in Article 11 as needed to provide payment for such invoice if the invoice is not paid by the other Party on or before the tenth (10th) Business Day following the invoice due date.

12.9 Duty to Mitigate. Each Party agrees that it has a duty to mitigate damages and covenants that it will use commercially reasonable efforts to minimize any damages it may incur as a result of the other Party's performance or non-performance of this PPA.

12.10 Non-Recourse. Buyer acknowledges and agrees that no owner, member, investor, lender, lessor, officer, director, employee, or agent of Seller shall have any obligation to Buyer arising under this PPA, and that Buyer shall seek recourse solely against Seller and its assets in the event of any breach of this PPA by Seller.

Article 13 - Article 13 - Contract Administration and Notices

13.1 Notices in Writing. Notices required by this PPA shall be addressed to the other Party at the addresses noted in Exhibit A as either Party updates them from time to time by written notice to the other Party. Any notice, request, consent, or other communication required or authorized under this PPA to be given by one Party to the other Party shall be in writing. It shall either be hand delivered or mailed via overnight service with signature required upon receipt, to the representative of said other Party. If delivered, the notice, request, consent, or other communication shall be simultaneously sent by facsimile or other electronic means. Any such notice, request, consent, or other communication shall be deemed to have been received upon receipt. Real-time or routine communications concerning Facility operations shall be exempt from this Section.

13.2 Records. Seller and Buyer shall each keep and maintain complete and accurate records and all other data required by each of them for the purposes of proper administration of this PPA, including such records as may be required by any Governmental Authority or pursuant to Applicable Law. All records of Seller and Buyer pertaining to the operation of the Facility and/or this PPA as specified herein or otherwise shall be maintained at the Facility or in an office of Seller or Buyer, as applicable, in such format as may be required by Applicable

Law and/or any Governmental Approval. Each Party shall have the right, upon reasonable prior written notice to the other Party and at its own expense, during normal business hours, to examine and/or make copies of the records and data of such other Party relating to this PPA (including all records and data relating to or substantiating any charges paid by or to such other Party, MWh generated, Seller's operating procedures, the Facility equipment manuals, and O&M Records).

(A) Operating and Maintenance Records. Seller shall maintain an accurate and up-to-date operating log, in electronic format, at the Facility with records of solar irradiation and energy production (by individual power block or Unit) for each clock hour; changes in operating status; meteorological data; maintenance; any other operating or maintenance records as may be required by Governmental Authorities; Forced Outages, agreements associated with the Facility, operating logs, blueprints for construction, operating manuals, all warranties on equipment, and all documents, including supply contracts, whether in printed or electronic format, that Seller uses or maintains for the operation of the Facility (collectively, the "O&M Records").

(B) Billing and Payment Records. To facilitate payment and verification, Seller and Buyer shall keep all books and records necessary for billing and payments in accordance with the provisions of Article 9 and grant the other Party reasonable access to those records. All records of Seller pertaining to the operation of the Facility shall be maintained at the Site in accordance with Section 13.2(A) or in an office of Seller and Buyer shall be provided reasonable access to those records.

13.3 Provision of Real Time Data. Upon request from Buyer, Seller shall provide real-time electronic access to Buyer of all solar irradiance and meteorological data collected at the Facility and corresponding unit availability data as well.

13.4 Dispute Resolution. With respect to any disputes arising out of or related to this PPA, the Parties consent to the exclusive jurisdiction of, and venue in, the state or federal courts located in Las Vegas, Nevada.

Article 14 - Force Majeure

14.1 Definition of Force Majeure Event.

(A) "Force Majeure" or "Force Majeure Event" shall mean an act beyond the affected Party's reasonable control, but only if and to the extent such event is not the fault of the Party affected, including: (a) acts of God; (b) flood, fire, earthquake, or explosion; (c) war (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest, with a direct impact on this Agreement; (d) if site access is necessary to perform under this Agreement, site restrictions for elevated security risks; and (e) industry wide strikes with a direct impact on this Agreement. Buyer or Seller's economic hardship and changes in market conditions are not considered Force Majeure Events.

(B) Both Buyer and Seller have evaluated the effects of COVID-19 on this Agreement. Buyer and the Seller expressly agree that COVID-19 and what is known about COVID-19 as of the execution of this Agreement are not considered Force Majeure Events.

(C) “Force Majeure” (and “Force Majeure Event”) shall not include: (i) any failure of, or delay in performance, or any full or partial curtailment in the electric output of the Facility that is caused by a labor dispute or strike by Seller’s employees or any employees of Seller’s contractors or its Affiliates employed at the Facility (except to the extent arising out of a strike or labor action not directed specifically at the Seller or the Facility, including without limitation, a national or regional strike), (ii) market changes in, or that otherwise effect, the price of energy, capacity or Renewable Energy Benefits or the cost of the Facility, or (iii) any Change in Applicable Law, including one that affects the cost of the Facility, value or existence of Renewable Energy Benefits or Tax Credits, or other tax incentives existing now or in the future associated with the construction, ownership or operation of the Facility, or (iv) a Party’s economic hardship.

14.2 Effect of Force Majeure.

(A) In no event will any delay or failure of performance caused by Force Majeure Event extend this PPA beyond its stated Term. Notwithstanding any other provision in this PPA to the contrary, in the event that any delay or failure of performance caused by a Force Majeure Event affecting Seller continues for an uninterrupted period of twenty four (24) months from its inception, or on an interrupted basis for a total of thirty six (36) months, the Party not claiming a Force Majeure Event may, at any time following the end of such period if the Force Majeure Event is still in effect, terminate this PPA upon written notice to the affected Party, without further obligation by either Party except as to costs and balances incurred prior to the effective date of such termination.

(B) Except as otherwise provided in this PPA, each Party shall be excused from performance when non-performance was caused, directly or indirectly, by a Force Majeure Event but only and to the extent thereof, and only if: (i) the non-performing Party gives the other Party notice describing the occurrence of the Force Majeure Event as described in Section 14.3; (ii) the non-performance is of no greater scope and of no longer term than is required by the Force Majeure Event; and (iii) the non-performing Party uses commercially reasonable efforts to remedy its inability to perform.

(C) The existence of a condition of Force Majeure Event shall not relieve the Parties of obligations under this PPA (including payment obligations) to the extent that such performance of such obligations is not precluded by the condition or Force Majeure Event.

14.3 Notification Obligations. In the event of any delay or nonperformance resulting from a Force Majeure Event, the Party claiming that a Force Majeure Event has

occurred shall notify the other Party immediately by telephone and/or email, and in writing, within twenty-four (24) hours of such occurrence, of the nature, cause, date of commencement thereof, and the anticipated duration, and shall indicate whether any deadlines or date(s) imposed hereunder may be affected thereby. The suspension of performance shall be of no greater scope and of no greater duration than the cure for the Force Majeure Event requires. A Party claiming that a Force Majeure Event has occurred shall not be entitled to any relief therefor unless and until conforming notice is provided. The Party claiming that a Force Majeure Event has occurred shall notify the other Party of the cessation of the Force Majeure Event or of the conclusion of the affected Party's cure for the Force Majeure Event, in either case within twenty-four (24) hours thereof.

14.4 Duty to Use Best Efforts. The Party claiming that a Force Majeure Event has occurred shall use its best efforts to cure the cause(s) preventing its performance of this PPA and shall provide to the other Party weekly progress reports describing actions taken to end the Force Majeure Event and perform its obligations pursuant to Section 14.5 below; provided, however, that the settlement of strikes, lockouts and other labor disputes shall be entirely within the discretion of the affected Party, and such Party shall not be required to settle such strikes, lockouts or other labor disputes by acceding to demands which such Party deems to be unreasonable.

14.5 Force Majeure Restoration.

(A) In the event that, as a result of one or more Force Majeure Event(s) or its or their effects or by any combination thereof, the construction or operation of the Facility or any part thereof is affected and is not restored or remedied within thirty (30) Days following the date the Force Majeure Event(s) began, then Seller shall prepare and deliver to Buyer a Restoration Report pursuant to Section 14.7 and provisions (C)-(E) of this Section 14.5 shall apply.

(B) Subject to the terms of the Financing Documents and clauses (C) and (D) below, Seller shall proceed with the remedying of the construction or operation of the Facility ("Restoration") in accordance with a schedule contained in the relevant Restoration Report, as defined in Section 14.7 hereof (the "Restoration Schedule"). The cost of such Restoration shall be the sole responsibility of Seller and no compensation shall be payable by Buyer to Seller with respect to any damage to the Facility as a result of the Force Majeure Event.

14.6 Restoration Consents. Notwithstanding anything herein to the contrary, Seller shall not be required to proceed with any Restoration unless and until it shall have received all necessary Governmental Approvals required therewith. If Seller does not receive any such Governmental Approvals required therewith for any reason (other than an act, omission or default of Seller) within six (6) Months after the date that it becomes obligated to proceed with such Restoration, then either Seller or Buyer shall have the right to terminate this PPA upon notice to the other Party, without further obligation by either Party except as to costs and balances incurred prior to the effective date of such termination.

14.7 Preparation of Restoration Report. When required by Section 14.5, Seller shall commence the preparation of an appraisal report (the "Restoration Report") within thirty (30) Days after the date it was required to provide a notice under Section 14.3 and shall deliver a copy of such Restoration Report to Buyer within sixty (60) Days after provision of such notice was required. Buyer shall provide Seller such information as it reasonably requires to prepare such Restoration Report. The Restoration Report shall be accompanied by reasonable supporting data and certificates and reports of financial and technical advisers of Seller, as appropriate or as reasonably requested by Buyer, in support of the Force Majeure Event in question, and shall include (A) a description of such Force Majeure Event and its impact on the Facility, (B) an estimate in good faith of the time required to restore the Facility (insofar as practicable) to its condition immediately prior to the occurrence of the Force Majeure Event, and (C) a proposed Restoration Schedule.

14.8 Discussion of Restoration Report. Within fifteen (15) Days of the delivery of a Restoration Report to Buyer or such further time as the Parties may agree, the Parties shall meet to discuss the Restoration Report and any action to be taken.

Article 15 - Representations, Warranties and Covenants

15.1 Seller's Representations, Warranties, and Covenants. Seller hereby represents and warrants as of the Effective Date as follows:

(A) Seller is a limited liability company duly organized, validly existing and in good standing under the laws of the state of Delaware. Seller is qualified to do business in each other jurisdiction where the failure to so qualify would have a material adverse effect on the business or financial condition of Seller; and Seller has all requisite power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this PPA.

(B) The execution, delivery, and performance of its obligations under this PPA by Seller have been duly authorized by all necessary corporate action, and do not and will not:

(i) require any consent or approval by any governing body of Seller, other than that which has been obtained and is in full force and effect (evidence of which shall be delivered to Buyer upon execution of this PPA);

(ii) violate any Applicable Law, or violate any provision in any formation documents of Seller, the violation of which could have a material adverse effect on the ability of Seller to perform its obligations under this PPA;

(iii) result in a breach or constitute a default under Seller's formation documents or bylaws, or under any agreement relating to the management or affairs of Seller or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which Seller is a party or by which Seller or its properties or assets may be bound or affected, the breach or default

of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligations under this PPA; or

(iv) result in, or require the creation or imposition of any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature (other than as may be contemplated by this PPA) upon or with respect to any of the assets or properties of Seller now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligations under this PPA.

(C) The obligations of Seller under this PPA are valid and binding obligations of Seller, enforceable against the Seller by the Buyer, subject to customary exceptions for public policy and bankruptcy.

15.2 Seller's Representations, Warranties, and Covenants. Seller hereby represents and warrants as of the Effective Date and for the duration of the Term as follows:

(A) Seller shall comply with all Applicable Laws in effect or that may be enacted during the Term.

(B) The execution and performance of this PPA will not conflict with or constitute a breach or default under any contract or agreement of any kind to which Seller is a party or any judgment, order, statute, or regulation that is applicable to Seller or the Facility.

(C) Except for those Governmental Approvals identified in writing by Seller to Buyer, all Governmental Approvals necessary for Seller's execution and delivery of this PPA have been duly obtained and are in full force and effect. All Governmental Approvals necessary for Seller's performance of its obligations under this Agreement shall be duly and timely obtained during the Term.

(D) The energy source from which the Solar Energy Output will be sold to Buyer has been designed to qualify as a Renewable Energy System.

(E) Seller is a "Forward Contract Merchant" within the meaning of the Bankruptcy Code.

15.3 Buyer's Representations, Warranties, and Covenants. Buyer hereby represents and warrants as of the Effective Date as follows:

(A) Buyer is a political subdivision of the state of Nevada and is qualified in each other jurisdiction where the failure to so qualify would have a material adverse effect upon the business or financial condition of Buyer. Buyer has all requisite power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this PPA.

(B) The execution, delivery, and performance of its obligations under this PPA by Buyer have been duly authorized by all necessary corporate action, and do not and will not:

- (i) require any further consent or approval, including from Buyer's Board of Directors or other governing body;
- (ii) violate any Applicable Law, or violate any provision in any corporate documents of Buyer, the violation of which could have a material adverse effect on the ability of Buyer to perform its obligations under this PPA;
- (iii) result in a breach or constitute a default under Buyer's corporate charter or bylaws, or under any agreement relating to the management or affairs of Buyer, or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which Buyer is a party or by which Buyer or its properties or assets may be bound or affected, the breach or default of which could reasonably be expected to have a material adverse effect on the ability of Buyer to perform its obligations under this PPA; or
- (iv) result in, or require the creation or imposition of, any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature (other than as may be contemplated by this PPA) upon or with respect to any of the assets or properties of Buyer now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of Buyer to perform its obligations under this PPA.

(C) The obligations of Buyer under this PPA are valid and binding obligations of Buyer, enforceable against the Buyer by the Seller, subject to customary exceptions for public policy and bankruptcy.

(D) The execution and performance of this PPA will not conflict with or constitute a breach or default under any contract or agreement of any kind to which Buyer is a party or any judgment, order, statute, or regulation that is applicable to Buyer.

(E) To the best knowledge of Buyer, all required Governmental Approvals necessary for Buyer's execution, delivery and performance of this PPA, have been duly obtained and are in full force and effect.

Article 16 - Insurance

16.1 Evidence of Insurance.

(A) Seller shall, at least thirty (30) Days prior to the commencement of any work on the Facility, and thereafter, on or before June 1 of each year of the Term, provide Buyer with one (1) copy of insurance certificates reasonably

acceptable to Buyer evidencing the insurance coverages required to be maintained by Seller in accordance with Exhibit B and this Article 16. Such certificates shall (a) provide that Buyer shall receive thirty (30) days prior written notice of non-renewal, cancellation of, or significant modification to any of the above policies (except that such notice shall be ten (10) days for non-payment of premiums); (b) provide a waiver of any rights of subrogation against Buyer and its Affiliates and their respective officers, directors, agents, subcontractors, and employees; and (c) contain such other endorsements and terms as required hereunder. All policies shall be written with insurers that Buyer, in its reasonable discretion, deems acceptable (such acceptance shall not be unreasonably withheld or delayed by Buyer). Seller's liability under this PPA shall not be limited to the amount of insurance coverage required herein.

16.2 Term and Modification of Insurance.

(A) All liability insurance required under this PPA shall cover occurrences during the term of this PPA. In the event that any insurance as required herein is commercially available only on a "claims-made" basis, such insurance shall provide for a retroactive date not later than the Effective Date.

(B) Upon a showing satisfactory to Buyer in its reasonable discretion that Seller or its Affiliate(s) has sufficient net worth to self insure Seller hereunder, either directly or through an Affiliate, Seller may self insure either all or any portion of the foregoing coverages so long as there is no material decrease in said net worth, or means, that renders the same insufficient for purposes of self insurance. If at any time during the Term Buyer, in its reasonable discretion, determines that it will no longer accept self insurance from Seller, Buyer shall provide notice to Seller and Seller shall obtain the insurance coverages required by Exhibit B within sixty (60) days.

16.3 Endorsements and Other Requirements.

(A) Insurers shall waive all rights of subrogation against Buyer and its Affiliates and their respective officers, directors, agents, subcontractors, and employees.

(B) The insurance required under this PPA shall be primary insurance. Any other insurance carried by Buyer shall be excess and not contributory with respect to the insurance required hereunder.

(C) The liability insurance required pursuant Exhibit B shall be endorsed to include Buyer, its Affiliates, and their respective officers, directors, and employees as additional insureds. The liability insurance required pursuant to paragraphs (B) and (D) of Exhibit B shall state, that with respect to coverage of more than one insured, all terms, conditions, insuring agreements, and endorsements, with the exception of limits of liability, shall operate in the same manner as if there were a separate policy covering each insured.

Article 17 - Indemnity

17.1 Facilities Indemnification.

(A) Responsibilities. Each of Buyer and Seller shall be responsible for its own facilities and systems. Buyer and Seller shall each be responsible for ensuring adequate safeguards for Buyer, Buyer's customers, and personnel and equipment belonging to Buyer, and for the protection of their own facilities and systems.

(B) Facilities and Systems Indemnification. Each Party (the "Indemnifying Party") agrees, to the extent permitted by Applicable Law, to indemnify, pay, defend, and hold harmless the other Party (the "Indemnified Party"), its Affiliates, their respective officers, directors, employees, agents, and contractors from and against any and all claims, demands, costs, or expenses for loss, damages, or injury to persons or property of the Indemnified Party (or to third parties) to the extent resulting from, arising out of, or in any way connected with the following, except to the extent caused by the negligence or willful misconduct of the Indemnified Party:

- (i) a breach or non-performance by the Indemnifying Party of its covenants, representations, and warranties or obligations hereunder;
- (ii) the construction, ownership or leasing, operation or maintenance of the Indemnifying Party's facilities and systems (including Indemnifying Party's Interconnection Facilities), including the delivery of Solar Energy Output to or from the Delivery Point, as applicable;
- (iii) a violation or alleged violation of any Applicable Law by the Indemnifying Party or the Indemnifying Party's contractors, agents, servants or employees;
- (iv) the negligence or willful misconduct of the Indemnifying Party or its contractors, agents, servants or employees.

17.2 Indemnification for Fines and Penalties. Notwithstanding the foregoing, any fines or other penalties incurred by a Party (other than fines or penalties due to the negligence or intentional acts or omissions of the other Party) for non-compliance with any municipal, state or federal laws shall be the sole responsibility of the non-complying Party.

17.3 Notice of Proceedings. Each Party shall promptly notify the other Party of any loss or proceeding in respect of which such notifying Party is or may be entitled to indemnification pursuant to Section 17.1. Such notice shall be given as soon as reasonably practicable after the relevant Party becomes aware of the loss or proceeding and that such loss or proceeding may give rise to an indemnification. The delay or failure of such Indemnified Party to provide the notice required pursuant to this Section 17.3 to the other Party shall not release the other Party from any indemnification obligation it may have to such Indemnified Party except (i) to the extent that such failure or delay materially

and adversely affected the Indemnifying Party's ability to defend such action or increased the amount of the loss, and (ii) that the Indemnifying Party shall not be liable for any costs or expenses of the Indemnified Party in the defense of the claim, suit, action or proceeding during such period of failure or delay.

17.4 Defense of Claims.

(A) The Indemnifying Party shall be entitled, at its option, to assume and control the defense of such claim, action, suit or proceeding at its expense with counsel of its selection, subject to the prior approval of the Indemnified Party, which shall not be unreasonably withheld.

(B) Unless and until the Indemnifying Party assumes control of the defense of a claim, suit, action or proceeding in accordance with clause (A) above, the Indemnified Party shall have the right, but not the obligation, to contest, defend and litigate, with counsel of its own selection, any claim, action, suit or proceeding by any third party alleged or asserted against such Party in respect of, resulting from, related to or arising out of any matter for which it is entitled to be indemnified hereunder, and the reasonable costs and expenses thereof shall be subject to the indemnification obligations of the Indemnifying Party hereunder.

(C) Neither the Indemnifying Party nor the Indemnified Party shall be entitled to settle or compromise any such claim, action, suit or proceeding without the prior consent of the other; provided, however, that after agreeing in writing to indemnify the Indemnified Party, the Indemnifying Party may, subject to clause (D) below, settle or compromise any claim without the approval of such Indemnified Party; provided, however, that the Indemnifying Party shall not conclude any settlement which requires any action or forbearance from action or admission by an Indemnified Party or any of its Affiliates without the prior approval of the Indemnifying Party (which shall not be unreasonably withheld). If a Party settles or compromises any claim, action, suit or proceeding in respect of which it would otherwise be entitled to be indemnified without the prior consent of the Indemnifying Party, the Indemnifying Party shall be excused from any indemnification obligation in respect of such settlement or compromise.

(D) Following the acknowledgement of the indemnification and the assumption of the defense by the Indemnifying Party pursuant to clause (A) above, the Indemnified Party shall have the right to employ its own counsel, and such counsel may participate in such action, but the fees and expenses of such counsel shall be at the expense of the Indemnified Party, when and as incurred, unless: (i) the Indemnified Party shall have reasonably concluded and specifically notified the Indemnifying Party that there may be a conflict of interest between the Indemnifying Party and the Indemnified Party in the conduct of the defense of such action; or (ii) the Indemnifying Party shall not in fact have employed independent counsel reasonably satisfactory to the Indemnified Party to assume the defense of such action and shall have been so notified by the Indemnified Party.

17.5 Subrogation.

Upon payment of any indemnification pursuant to Section 17.1 above, the Indemnifying Party, without any further action, but subject to such limits as may be imposed below, shall be subrogated to any and all Claims that the Indemnified Party may have relating thereto, and the Indemnified Party shall, at the request and expense of the Indemnifying Party, cooperate with the Indemnifying Party and give at the request and expense of the Indemnifying Party such further assurances as are necessary or advisable to enable the Indemnifying Party vigorously to pursue such Claims.

Article 18 - Legal and Regulatory Compliance

18.1 Applicable Laws. Each Party shall at all times comply with all Applicable Laws, except for any non-compliance which, individually or in the aggregate, could not reasonably be expected to have a material effect on the business or financial condition of the Party or its ability to fulfill its commitments. Seller shall promptly notify Buyer of any investigations, notices, or findings of violation of Applicable Law from any Governmental Authority, including any audit, notification, inspection, or inquiry that has been commenced by any Governmental Authority in respect of a potential or possible violation of Applicable Law.

18.2 Governmental Approvals. Each Party shall timely and lawfully procure and maintain in good standing, at its own cost and expense, all Governmental Approvals and shall timely and properly pay its respective charges and fees in connection therewith.

18.3 Compliance. To the extent that Seller contributes in whole or in part to actions that result in monetary penalties being assessed to Buyer by any Governmental Authority for lack of compliance, Seller shall indemnify Buyer for such monetary penalties.

18.4 Change in Applicable Law. No Change in Applicable Law that eliminates, reduces or otherwise modifies any obligations of Buyer to obtain Renewable Energy Benefits to comply with Applicable Law, nor any Change in Applicable Law that eliminates, reduces or otherwise modifies any of Seller's ability to obtain Tax Credits, or other tax incentives existing now or in the future associated with the construction, ownership or operation of the Facility or increases the cost of the Facility, shall, in any such case, modify the obligations of the Parties hereunder.

Article 19 - Assignment and Other Transfer Restrictions

19.1 No Assignment Without Consent. Except as permitted in this Article 19, neither Party shall assign this PPA or any portion thereof, without the prior written consent of the other Party, which consent shall not be unreasonably withheld. Any assignment of this Agreement in violation of the foregoing shall be void and not merely voidable. In the event of any assignment under this Section 19.1, (i) at least thirty (30) Days prior notice of any such assignment shall be given to the other Party; (ii) any assignee shall expressly assume the assignor's obligations hereunder; (iii) no assignment shall relieve the assignor of its obligations hereunder in the event the assignee fails to perform, except as

otherwise provided in Section 19.2 below; (iv) no assignment shall impair any security given by Buyer hereunder; and (v) before this PPA is assigned by Seller, the assignee must first obtain such approvals as may be required by all applicable regulatory bodies.

19.2 Permitted Assignments. Notwithstanding Section 19.1, Seller may assign, pledge (including as collateral security), hypothecate, or otherwise transfer this PPA (including, for purposes of clarity, the Interconnection Terms), in connection with any debt or equity financing or the refinancing of the Facility or Seller including in connection with any Financing Documents or for the purpose of any Financial Closing, provided, that, in the event that ownership of the Facility is transferred, any such transferee or assignee (i) has demonstrably significant experience in the solar generation industry and the technical expertise and capability to perform Seller's obligations under this Agreement, or has arrangements in place with another Person to provide such expertise, (ii) provides Buyer with adequate assurance, in Buyer's reasonable discretion, of creditworthiness (provided that if such assignee/transferee has creditworthiness that is the same or better than Seller's creditworthiness as of the Effective Date, such assignee's/transferee's creditworthiness shall be deemed to be adequate for purposes of this clause) and (iii) ownership of the Facility is transferred to the assignee or transferee. In the event of any assignment, pledge or transfer by Seller pursuant to this Section 19.2 (i) at least thirty (30) Days prior notice of any such assignment, pledge or transfer shall be given to Buyer; (ii) any assignee or transferee shall expressly assume the assignor's or transferor's obligations hereunder; (iii) no assignment, pledge or transfer shall relieve the assignor or transferor of its obligations hereunder in the event the assignee or transferee fails to perform; and (v) before this PPA is assigned or transferred by Seller, the assignee or transferor must first obtain such approvals as may be required by all applicable regulatory bodies. In connection with any such permitted assignment or transfer by Seller, Buyer, at Seller's cost, agrees to execute a written consent to such collateral assignment as may be reasonably requested, which collateral assignment may include, among other terms, Buyer's agreement not to terminate this PPA on account of any Event of Default without written notice to the Financing Parties and first providing the Financing Parties with opportunity to cure such Event of Default. If such written consent is not requested, Seller shall notify Buyer of any such assignment to the Financing Parties no later than thirty (30) Days after the assignment. Seller may subcontract its duties or obligations under this PPA without the prior written consent of Buyer, provided, that no such subcontract shall relieve Seller of any of its duties or obligations hereunder.

Article 20 - Miscellaneous

20.1 Waiver. The failure of either Party to enforce or insist upon compliance with or strict performance of any of the terms or conditions of this PPA, or to take advantage of any of its rights thereunder, shall not constitute a waiver or relinquishment of any such terms, conditions, or rights, but the same shall be and remain at all times in full force and effect.

20.2 Rate Changes.

(A) The terms and conditions and the rates for service specified in this PPA are market-based and shall remain in effect for the term of the transaction described herein. Absent the Parties' written agreement, this PPA shall not be subject to change by application of either Party pursuant to Section 205 or 206, or any additional or successor statutory provision, of the Federal Power Act.

(B) To the extent all or any part of this Agreement is subject to regulation by FERC or any other regulatory body, the standard of review for any changes proposed by any Party to the Agreement shall be the "public interest" standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956) and *Federal Power Comm'n v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956) (the Mobile-Sierra doctrine), as clarified in *Morgan Stanley Capital Group, Inc. v. Pub. Util. Dist. No. 1 of Snohomish County, Washington*, 128 S. Ct. 2733 (2008), and refined in *NRG Power Mktg. v. Maine Pub. Utils. Comm'n*, 130 S. Ct. 693 (2010). Any changes proposed by FERC acting *sua sponte* or by a non-party shall be the most stringent standard available under Law.

20.3 Disclaimer of Third-Party Beneficiary Rights. In executing this PPA, Buyer does not, nor should it be construed to, extend its credit or financial support for the benefit of any third parties lending money to or having other transactions with Seller. Nothing in this PPA shall be construed to create any duty to, or standard of care with reference to, or any liability to, any Person not a party to this PPA.

20.4 Relationship of the Parties.

(A) This PPA shall not be interpreted to create an association, joint venture, or partnership between the Parties nor to impose any partnership obligation or liability upon either Party. Neither Party shall have any right, power, or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as an agent or representative of, the other Party.

(B) Each Party shall be solely liable for the payment of all wages, taxes, and other costs related to the employment of persons to perform services for such Party, including all federal, state, and local income, social security, payroll, and employment taxes and statutorily mandated workers' compensation coverage. None of the persons employed by a Party shall be considered employees of the other Party for any purpose; nor shall a Party represent to any person that he or she is or shall become an employee of the other Party.

20.5 Survival of Obligations. Cancellation, expiration, or earlier termination of this PPA shall not relieve the Parties of obligations that by their nature should survive such cancellation, expiration, or termination, prior to the term of the applicable statute of limitations, including warranties, remedies, or indemnities which obligation shall survive for the period of the applicable statute(s) of limitation.

20.6 Severability. In the event any of the terms, covenants, or conditions of this PPA, its Exhibits or Schedules, or the application of any such terms, covenants, or conditions,

shall be held invalid, illegal, or unenforceable by any court or administrative body having jurisdiction, all other terms, covenants, and conditions of this PPA and their application not adversely affected thereby shall remain in force and effect; provided, however, that Buyer and Seller shall negotiate in good faith to attempt to implement an equitable adjustment in the provisions of this PPA with a view toward effecting the purposes of this PPA by replacing the provision that is held invalid, illegal, or unenforceable with a valid provision the economic effect of which comes as close as possible to that of the provision that has been found to be invalid, illegal or unenforceable.

20.7 Complete Agreement; Amendments. The terms and provisions contained in this PPA constitute the entire agreement between Buyer and Seller with respect to the Facility and shall supersede all previous communications, representations, or agreements, either oral or written, between Buyer and Seller with respect to the sale of Solar Energy Output from the Facility. This PPA may be amended, changed, modified, or altered, provided that such amendment, change, modification, or alteration shall be in writing and signed by both Parties hereto, and provided further, that the Exhibits and Schedules attached hereto may be changed according to the provisions of Section 13.7. If a conflict arises between this PPA and the Interconnection Terms, the Interconnection Terms shall prevail.

20.8 Binding Effect. This PPA, as it may be amended from time to time pursuant to this Article, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors-in-interest, legal representatives, and assigns permitted hereunder.

20.9 Headings. Captions and headings used in this PPA are for ease of reference only and do not constitute a part of this PPA.

20.10 Counterparts. This PPA or any supplement, modification, amendment, or restatement hereof may be executed in two or more counterpart copies of the entire document or of signature pages to the document, each of which may have been executed by one or more of the signatories hereto and thereto and deliveries by mail, courier, telecopy or other electronic means, but all of which taken together shall constitute a single agreement, and each executed counterpart shall have the same force and effect as an original instrument.

20.11 Governing Law. The interpretation and performance of this PPA and each of its provisions shall be governed and construed in accordance with the laws of the State of Nevada notwithstanding its conflict of laws rules or any principles that would trigger the application of any other law.

20.12 Confidentiality. Parties will safeguard Confidential Information against disclosure by employing the same means to protect such Confidential Information as that Party uses to protect its own non-public, confidential or proprietary information, and otherwise in accordance with the provisions of this Section 20.12. "Confidential Information" means information provided by one Party to the other in connection with the negotiation or performance of this Agreement that is clearly labeled or designated by the disclosing party as "confidential" or, if disclosed orally, clearly identified as confidential

with that status confirmed promptly thereafter in writing. Confidential Information shall be deemed not to include (i) information which is or becomes generally available to the public other than as a result of a disclosure by the receiving party, (ii) information which was available to the receiving party on a non-confidential basis prior to its disclosure by the disclosing party or (iii) information which becomes available to the receiving party on a nonconfidential basis from a Person other than the disclosing party or its representative who is not otherwise bound by a confidentiality agreement with disclosing party or its agent or is otherwise not under any obligation to disclosing party or its agent not to disclose the information to the receiving party.

Subject to the following paragraph, no receiving Party shall itself, or permit its employees, consultants and/or agents to disclose to any person, corporation or other entity the Confidential Information without the prior written consent of the Party providing the Confidential Information, except a receiving Party may distribute the Confidential Information to its board members, officers, employees, agents, consultants, investors and lenders (including potential investors and lenders, including Financing Parties) and others who have a need for such Confidential Information. In the event that any Party receiving the Confidential Information becomes legally compelled (by deposition, interrogatory, request for documents, subpoena, civil investigative demand or similar process) to disclose any of the Confidential Information, the legally compelled Party shall give the other Party providing the Confidential Information prompt prior written notice of such requirement so that the providing Party may seek a protective order or other appropriate remedy and/or waive compliance with the terms of this Agreement. In the event that such protective order or other remedy is not obtained, the providing Party waives compliance with the terms hereof. Subject to the following paragraph, each Party acknowledges that the unauthorized disclosure of any Confidential Information may cause irreparable harm and significant injury that may be difficult to ascertain. Each Party therefore agrees that specific performance or injunctive relief, in addition to other legal and equitable relief, are appropriate remedies for any actual or threatened violation or breach of this Section 20.12, although neither Party shall be entitled to any special, consequential, indirect or punitive damages as a result of a breach of this Section 20.12, whether a claim is based in contract, tort or otherwise. The Parties agree that the respondent in any action for an injunction, specific performance decree or similar relief shall not allege or assert that the initiating Party has an adequate remedy at law in respect to the relief sought in the proceeding, nor shall the respondent seek the posting of a bond by the Party initiating the action. Under no circumstances will either Party's directors, management, employees, agents or consultants be individually liable for any damages resulting from the disclosure of Confidential Information in violation of the terms of this Agreement.

The Parties recognize Buyer's duties under the Nevada Public Records Act and do not, by this Agreement, intend to alter Buyer's duties thereunder or to require Buyer to do, or refrain from doing, anything contrary to the Nevada Public Records Act. Buyer's Office of General Counsel shall be permitted to make an independent determination as to whether any document or record marked "confidential" is confidential or is a public record, pursuant to the Nevada Public Records Act. If Buyer's Office of General Counsel determines that any document or record supplied by Seller and marked "confidential" is determined to be a public record, Buyer may disclose that document or record to the

extent required by the Nevada Public Records Act with prior written notice to Seller. Upon receipt of any request for Confidential Information, this Agreement, or any part thereof, Buyer will promptly forward the request to Seller and work with Seller in good faith to minimize the extent of the disclosure to the extent requested by Seller and permitted by the Nevada Public Records Act.

20.13 Press Releases and Media Contact. Upon the request of either Party, the Parties shall develop a mutually agreed joint press release to be issued describing the location, size, type and timing of the Facility, the long-term nature of this PPA, and other relevant factual information about the relationship. In the event during the Term, either Party is contacted by the media concerning this PPA or the Facility, the contacted Party shall inform the other Party of the existence of the inquiry and shall jointly agree upon the substance of any information to be provided to the media.

20.14 PURPA. If this Agreement is terminated for any reason other than default by Buyer, including termination at the end of the Term, a Seller, an Affiliate of Seller, or any successor to Seller with respect to the ownership of the Facility, may thereafter require or seek to require Buyer to purchase energy or capacity from the Facility under the Public Utilities Regulatory Policy Act of 1978, as amended ("PURPA"), or any other requirements of law, for any periods that would have been within the Term had this Agreement remained in effect. Seller, on behalf of itself, its Affiliates, its successors and on behalf of any other entity on whose behalf it may act, hereby waives its rights to require Buyer to do so.

20.15 Forward Contract. The Parties hereby expressly acknowledge and agree that:

A. The transaction contemplated under this PPA constitutes a Forward Contract;

B. Seller is a Forward Contract Merchant; and

C. The Termination Payments represent damages that are based on a commercially reasonable determinant of value, consistent with Bankruptcy Code § 562.

[remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the Parties have executed this PPA.

Seller:

Boulder Flats Solar, LLC

By: _____

Name:

Title:

Buyer:

Southern Nevada Water Authority

By: _____

Name: John J. Entsminger

Title: General Manager

EXHIBIT A
(to PPA)

**NOTICE ADDRESSES, DESIGNATION OF OPERATING COMMITTEE
REPRESENTATIVES AND BILLING CONTACTS**

Buyer	Seller
<p>Notices: Scott Krantz Director Energy Management Southern Nevada Water Authority 100 City Parkway, Suite 700 Las Vegas, NV 89106 Phone: 702-281-5196 Email: Scott.Krantz@snwa.com</p> <p>With a copy to: Southern Nevada Water Authority Attention: General Counsel 1001 S Valley View Blvd. Las Vegas, NV 89153 generalcounsel@lvvwd.com</p>	<p>Notices: Timothy Kim Boulder Flats Solar, LLC c/o ibV Energy Partners LLC 777 Brickell Ave., Suite 500 Miami, FL 33131 Phone: 786-575-8005 Email: timothy.kim@ibvenergy.com</p> <p>With a copy to: Nick Olmsted Algorithm Law 1714 Franklin Street #100-241 Oakland, CA 94612 Phone: 415-730-7705 Email: nick.olmsted@algo-law.com</p>

<p>Operating Committee Representative</p> <p>Scott Krantz Director Energy Management Southern Nevada Water Authority 100 City Parkway, Suite 700 Las Vegas, NV 89106 Phone: 702-281-5196 Email: Scott.Krantz@snwa.com</p> <p>Alternate:</p> <p>Gary Wood Renewable Energy Program Manager Southern Nevada Water Authority 100 City Parkway, Suite 700 Las Vegas, NV 89106 Phone: 702-994-6574 Email: Gary.Wood@snwa.com</p>	<p>Operating Committee Representative</p> <p>Timothy Kim Boulder Flats Solar, LLC c/o ibV Energy Partners LLC 777 Brickell Ave., Suite 500 Miami, FL 33131 Phone: 786-575-8005 Email: timothy.kim@ibvenergy.com</p> <p>Alternate:</p> <p>Robin Saiz Boulder Flats Solar, LLC c/o ibV Energy Partners LLC 777 Brickell Ave., Suite 500 Miami, FL 33131 Phone: 561-568-6766 Email: robin.saiz@ibvenergy.com</p>
<p>Real-Time Contact Information</p> <p>WAPA Real Time Desk Phone: 602-605-2557 Email: dswrealtimemkt@WAPA.GOV</p>	<p>Real-Time Contact Information</p> <p>Robin F. Saiz VP, Development (561) 568-6766 robin.saiz@ibvenergy.com</p>

- EXHIBIT B -
(to PPA)

INSURANCE COVERAGES

Commercial General Liability Insurance

Seller shall maintain commercial general liability insurance, contractual liability, protective liability from independent contractors, property damage liability, bodily injury liability, and personal injury liability with limits of not less than \$1,000,000 per occurrence, and \$2,000,000 annual aggregate. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

Business Automobile Insurance

Seller shall maintain business auto insurance for any owned, non-owned, hired, or rented vehicle with a limit of not less than \$1,000,000 combined single limit for bodily injury and property damage liability. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

Workers Compensation & Employers Liability Insurance

Seller shall maintain statutory workers compensation insurance in accordance with the laws of the state where such compensation is payable. In addition, the insurance the Vendor maintains shall comply with Nevada Industrial Insurance Act, NRS Chapters 616 and 617, for all of its employees working on the Project as described in this contract.

Seller shall maintain employers' liability insurance with limits of not less than \$1,000,000 per accident and \$1,000,000 each employee for injury by disease.

In the event the Seller is permissibly self-insured for workers' compensation insurance in the State of Nevada, the Vendor shall deliver to the Owner a copy of the Certificate of Consent to self-insure issued by the State of Nevada.

- EXHIBIT C -
(to PPA)

Interconnection Terms

1. PURPOSE OF INTERCONNECTION AND REPRESENTATIONS

The purpose of this document ("Interconnection Terms") is to ensure the Parties to the Agreement understand the mutual requirements associated with the interconnection and operation of the Facility in parallel with the Interconnection Provider. For purposes of clarity, terms used but not defined herein have the meaning given to such terms in the Solar Energy Power Purchase Agreement between Boulder Flats Solar, LLC and the Southern Nevada Water Authority dated as of [] (the "PPA" or "Agreement") and these Interconnection Terms form a part of and are incorporated into the PPA.

2. DESCRIPTION OF THE RENEWABLE ENERGY GENERATING FACILITIES

The Facility to be interconnected is generally described as follows:

Solar Photovoltaic 113 MW_{AC}

3. INTERCONNECTION

- 3.1 The Facility shall not be interconnected to the Interconnection Provider's System until the requirements of the Interconnection Terms have been met.
- 3.2 Interconnection Provider shall for the duration of the Term provide interconnection service interconnecting the Facility to the Interconnection Provider's Interconnection Facilities enabling the Interconnection Provider's Interconnection Facilities to receive electric energy from the Facility at the Point of Delivery in accordance with the PPA.
- 3.3 In accordance with these Interconnection Terms and the other provisions of this PPA, Seller shall:
 - 3.3.1 provide to Interconnection Provider a copy of the final inspection clearance from the Governmental Authority having jurisdiction over the Facilities; and
 - 3.3.2 if the Facility has changed from the installation originally described and agreed to or will have a possible effect on the interconnection and protection equipment, submit a written, detailed explanation describing the changes and what necessitated the changes.

- 3.4 Seller agrees to notify Interconnection Provider or its representative five (5) Business Days prior to initial testing. Interconnection Provider shall have the right to have a representative present at the initial testing of Seller's protective apparatus.
- 3.5 To the extent that studies, upgrades or modifications to the Interconnection Provider's System are reasonably identified by Seller or Interconnection Provider as necessary for the Facility to interconnect with the Interconnection Provider's System in accordance with the terms of this Agreement including these Terms, Buyer, in its capacity as Interconnection Provider, will use commercially reasonable efforts to complete such work (including design, engineering, procurement and construction) promptly and in accordance with Prudent Industry Practices. Interconnection Provider will keep Seller advised regularly as to the progress of the foregoing activities.

4. DESIGN, CONSTRUCTION AND COMMISSIONING REQUIREMENTS FOR THE INTERCONNECTION FACILITIES

- 4.1 Seller will design and maintain Seller's Interconnection Facilities, and Interconnection Provider will design and maintain Interconnection Provider's Interconnection Facilities, to meet all applicable safety, reliability and power quality standards established by:
 - a) The National Electrical Code (NEC);
 - b) Underwriters Laboratories Inc. (UL);
 - c) The Institute of Electrical and Electronic Engineers (IEEE) and
 - d) Prudent Industry Practices.
- 4.2 Seller shall maintain continuous rated power output at the Point of Delivery at a power factor within the range of 0.95 leading to 0.95 lagging.
- 4.3 Seller, at Seller's cost and expense, will design and construct the Seller's Interconnection Facilities in accordance with the terms and conditions of the Agreement including these Terms and Interconnection Provider, at Interconnection Provider's cost and expense, will design and construct Interconnection Provider's Interconnection Facilities in accordance with the terms and conditions of the Agreement including these Terms. Buyer, in its capacity as Interconnection Provider, and Seller each will make commercially reasonable efforts to assist the other Party at such Party's request. Each Party's design of its respective Interconnection Facilities, including any changes to the Interconnection Facilities proposed following Commercial Operation and during the Term, shall be subject to the reasonable review and approval of the other Party, such approval not to

be unreasonably withheld, conditioned or delayed, and otherwise consistent with the terms and conditions of the Agreement.

- 4.4 Interconnection Provider, with Seller, will clearly establish the Point of Delivery as part of the final design of the Interconnection Facilities and will define, approve and maintain system protection and metering systems at the Facility at Point of Delivery. Any failure of such equipment not arising from the actions or inactions of Interconnection Provider will be replaced by Interconnection Provider at Seller's expense.
- 4.5 Seller will be responsible for commissioning of the protection equipment and energization of the Facility, in cooperation with the Interconnection Provider.
- 4.6 Seller and the Interconnection Provider will amend these procedures and the Agreement as necessary to accommodate the final design of the Interconnection Facilities. If a Party intends to effect changes that reasonably may be expected to affect the other Party's Interconnection Facilities, that Party shall provide to the other Party sufficient information regarding such modification so that the other Party may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential.

5. MAINTENANCE AND PERMITS FOR THE INTERCONNECTION FACILITIES

5.1 Each Party shall:

5.1.1 In cooperation with the other Party, obtain any governmental authorizations and permits required for the construction and commissioning of the Interconnection Facilities for which such Party is responsible; and

5.1.2 Reimburse each other for any and all claims, losses, and/or penalties it incurs as a result of such Party's failure to maintain any governmental authorizations and permits required for construction of the Interconnection Facilities for which such Party is responsible.

5.1.3 Perform routine inspection and testing of its facilities and equipment in accordance with Prudent Industry Practices as may be necessary to ensure the continued interconnection of the Facility with the Interconnection Facilities and River Mountains System in a safe and reliable manner.

5.2 Buyer shall:

5.2.1 Maintain and operate the Interconnection Provider's Interconnection Facilities in a safe and prudent manner and in conformance with all

applicable standards, laws and regulations and Prudent Industry Practices;

5.2.2 Obtain and maintain any governmental authorizations and permits required for the operation and maintenance of the Interconnection Provider's Interconnection Facilities; and

5.2.3 Prior to the Commercial Operation Date, in cooperation with Seller, test Interconnection Provider's Interconnection Facilities to ensure safe and reliable operation.

6. ACCESS TO INTERCONNECTION FACILITIES

6.1 A Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to the lands owned or controlled by Granting Party or its Affiliates, that are necessary:

6.1.1 Upon reasonable notice and supervision by a Party, to inspect the Interconnection Facilities and, if applicable, to read, maintain, or test meters;

6.1.2 At all times, for the Interconnection Provider to disconnect the Interconnection Facilities from the River Mountains System in the event of an Event of Force Majeure, emergencies on the River Mountains System, or a Forced Outage; and

6.1.3 At all times, to address any Emergency Condition.

7. INTERRUPTION OR REDUCTION OF DELIVERIES

7.1 Interconnecting Provider may require Seller to interrupt or reduce deliveries of Solar Energy Output:

7.1.1 When necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or part of the Interconnection Provider's System; or

7.1.2 If the Interconnecting Provider determines that curtailment, interruption, or reduction is necessary because of emergencies, Forced Outages or Force Majeure in compliance with Prudent Industry Practices.

7.2 Notwithstanding any other provision of this Agreement, if at any time Interconnection Provider determines that either 1) the Facility or its operation may endanger Interconnection Provider personnel or 2) the continued operation of the Facility may endanger the integrity of the Interconnection Provider's System, Interconnection Provider shall have the right to disconnect the Facility from the Interconnection Provider's

System. The Facility shall remain disconnected until such time as Interconnection Provider is satisfied that the condition(s) referenced in this Section have been corrected and has provided Seller with written authorization to reconnect the Facilities.

- 7.3 Interconnection Provider shall make a reasonable attempt to provide notice to Seller prior to disconnection of Facilities. When it is not reasonable to provide notice prior to disconnection, Interconnection Provider shall provide notice to the Seller within six (6) hours of disconnecting the Facilities.

Any interrupted, curtailed or reduced Solar Energy Output occurring pursuant to or as a result of Section 7.1.1, except where due to actions or inactions of Seller or its Affiliates or the conditions set forth in Section 7.1.2 or Section 7.2, shall constitute Curtailed Energy for purposes of the PPA unless curtailed as a result of an Emergency Condition.

8. NOTICES FROM SELLER RELATED TO INTERCONNECTION OR THE INTERCONNECTION FACILITIES

- 8.1 All notices must be in writing and shall be directed to the appropriate Interconnection Provider representative at the following address:

Scott Krantz
Director Energy Management
Southern Nevada Water Authority
100 City Parkway, Suite 700
Las Vegas, NV 89106
Phone: 702-281-5196
Email: Scott.Krantz@snwa.com

With a copy to:
Southern Nevada Water Authority
Attention: General Counsel
1001 S Valley View Blvd.
Las Vegas, NV 89153generalcounsel@lvvwd.com

EXHIBIT D
Interconnection and Transmission Facility and Communications Diagram



**EXHIBIT E -
Project Milestones**

<u>MILESTONE</u>	<u>COMPLETION DATE</u>
Seller Achieves Site Control	Completed
Execution of EPC Contract	6/3/2021
Notice to Proceed	3/01/2022
Purchase Order of Major Project Components (Solar Panels, Inverters and Trackers)	3/15/2022
Delivery of Major Project Components to Project Site	4/01/2022
Final Testing Schedule	10/31/2022
Substantial Completion	12/31/2022

- EXHIBIT F
Interconnection Provider's Interconnection Facility Milestones

<u>MILESTONE</u>	<u>COMPLETION DATE</u>
Execution of Engineering Contract	6/10/2021
Execution of Construction Contract and Notice to Proceed	4/15/2022
Purchase Order of Major Project Components (Poles, Conductors, Breakers and Switches)	2/18/2022
Delivery of Major Project Components to Project Site	6/17/2022 – 9/19/2022
Substantial Completion	11/30/2022

EXHIBIT G

Form of Letter of Credit

SCHEDULE 1

SOLAR ENERGY RATE

Solar Energy Payment Rate (\$/MWh)
24.14

SCHEDULE 2

ESTIMATED SOLAR OUTPUT (MWhs)

Estimated Solar Output			
Q1	Q2	Q3	Q4
61,806	104,603	92,269	55,006
60,328	102,101	90,062	53,690
60,086	101,692	89,702	53,475
59,846	101,286	89,343	53,262
59,607	100,881	88,985	53,049
59,368	100,477	88,630	52,836
59,131	100,075	88,275	52,625
58,894	99,675	87,922	52,415
58,659	99,276	87,570	52,205
58,424	98,879	87,220	51,996
58,190	98,484	86,871	51,788
57,957	98,090	86,524	51,581
57,726	97,697	86,178	51,375
57,495	97,306	85,833	51,169
57,265	96,917	85,489	50,964
57,036	96,530	85,148	50,761
56,808	96,143	84,807	50,557
56,580	95,759	84,468	50,355
56,354	95,376	84,130	50,154
56,129	94,994	83,793	49,953
55,904	94,614	83,458	49,753
55,680	94,236	83,124	49,554
55,458	93,859	82,792	49,356
55,236	93,484	82,461	49,159
55,015	93,110	82,131	48,962

SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
AGENDA ITEM

April 15, 2021

Subject:

Agreement

Petitioner:

Doa J. Ross, Deputy General Manager, Engineering

Recommendations:

That the Board of Directors approve and authorize the General Manager to sign, in substantially the same form as attached hereto, an agreement between Black & Veatch Corporation and the Authority to provide professional engineering design services for the Horizon Lateral Project for an amount not to exceed \$55,900,000.

Fiscal Impact:

Funds requested for current year expenditures are available in the Authority's Capital Budget. Funds for future year expenditures will be budgeted accordingly.

Background:

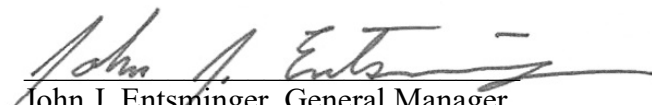
On November 19, 2020, the Board of Directors approved the amended Major Construction and Capital Plan, which includes the Horizon Lateral Project (Project). The Project, as generally shown on Attachment A, will provide redundancy, reliability and capacity to serve current and future water demands.

On November 23, 2020, the Authority issued a request for qualifications soliciting proposals for professional engineering design services for the Project. On December 21, 2020, two responsive proposals were received, which were then reviewed by an evaluation committee (Committee) comprised of City of Henderson, Las Vegas Valley Water District and Authority members. Interviews were then initiated by the Committee on February 11, 2021, which evaluated criteria including personnel experience and qualifications, experience with projects of similar size and scope, and the understanding of, and approach for, the Project. Based on the results of the Committee evaluations, Black & Veatch Corporation (B&V) is considered the top-ranked applicant and staff recommends the selection of B&V for the Project.

If approved, the attached Agreement to Provide Professional Services would provide the terms and conditions necessary for B&V to complete the preliminary design of the Project. Additional agreements for final design services and design support services during construction will be necessary for this Project and will be brought to the Board in the future for approval.

This agreement is being entered into pursuant to NRS 332.115(1)(b) and Section 5(d), 5(e), 5(g), 6(e), and 6(j) of the SNWA 1995 Amended Cooperative Agreement. The office of the General Counsel has reviewed and approved the agreement.

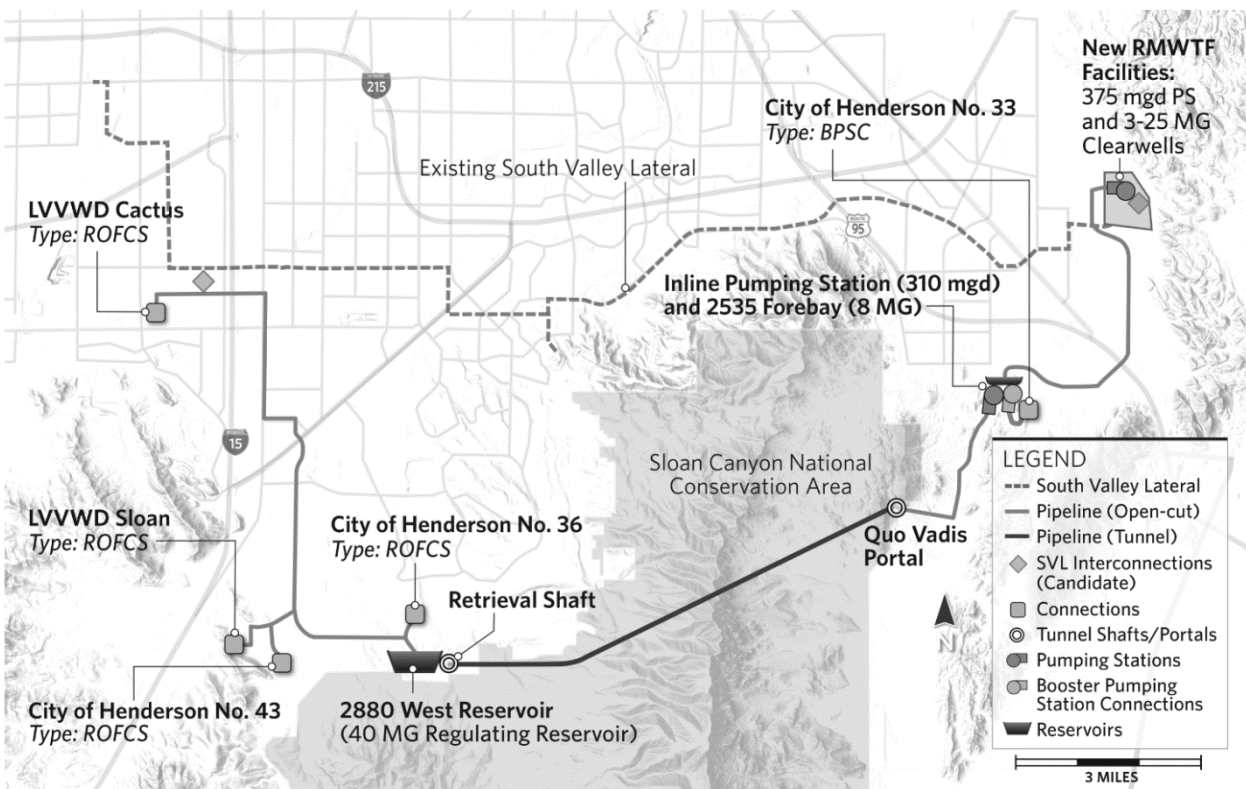
Respectfully submitted:


John J. Entsminger, General Manager
JJE:DJR:PJJ:AV:an
Attachments

AGENDA
ITEM #

3

ATTACHMENT A



SOUTHERN NEVADA WATER AUTHORITY VICINITY MAP

NOT
TO
SCALE

HORIZON LATERAL
PREDESIGN MAP

DISCLOSURE OF OWNERSHIP/PRINCIPALS

Business Entity Type (Please select one)						
<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Partnership	<input checked="" type="checkbox"/> Limited Liability Company	<input type="checkbox"/> Privately Held Corporation	<input type="checkbox"/> Publicly Held Corporation	<input type="checkbox"/> Trust	<input type="checkbox"/> Non-Profit Organization
Business Designation Group (Please select all that apply)						
<input type="checkbox"/> MBE	<input type="checkbox"/> WBE	<input type="checkbox"/> SBE	<input type="checkbox"/> PBE	<input type="checkbox"/> VET	<input type="checkbox"/> DVET	<input type="checkbox"/> ESB
Minority Business Enterprise	Women-Owned Business Enterprise	Small Business Enterprise	Physically Challenged Business Enterprise	Veteran Owned Business	Disabled Veteran Owned Business	Emerging Small Business
Number of Clark County Nevada Residents Employed: 31						
Corporate/Business Entity Name: Black & Veatch Corporation						
(Include d.b.a., if applicable)						
Street Address:		8400 Ward Street		Website: www.bv.com		
City, State and Zip Code:		Kansas City, MO 64114		POC Name: Jim Morley		
				Email: morleyjp@bv.com		
Telephone No:		913-458-2200		Fax No: 913-458-9392		
Nevada Local Street Address: (If different from above)		8965 South Eastern Ave, Suit 325		Website: www.bv.com		
City, State and Zip Code:		Las Vegas, NV 89123		Local Fax No: 702-434-9978		
Local Telephone No:		702-894-4509		Local POC Name: Jim Morley		
				Email: morleyjp@bv.com		

All entities, with the exception of publicly-traded corporations and non-profit organizations, must list the names of individuals, either directly or indirectly, holding more than five percent (5%) ownership or financial interest in the business entity appearing before the Board of Directors.

Publicly-traded corporations and non-profit organizations shall list all Corporate Officers and Directors in lieu of disclosing the names of individuals with ownership or financial interest.

Entities include all business associations organized under or governed by Title 7 of the Nevada Revised Statutes, including but not limited to private corporations, close corporations, foreign corporations, limited liability companies, partnerships, limited partnerships, and professional corporations.

Full Name	Title	% Owned (Not required for Publicly Traded Corporations/Non-profit organizations)
see attached	see attached	see attached

This section is not required for publicly-traded corporations.

- Are any individual members, partners, owners or principals, involved in the business entity, an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please note that the employee(s), or appointed/elected official(s) may not perform any work on professional service contracts, or other contracts, which are not subject to competitive bid.)
- Do any individual members, partners, owners or principals have a spouse, registered domestic partner, child, parent, in-law or brother/sister, half-brother/half-sister, grandchild, grandparent, related to an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please complete the Disclosure of Relationship form on Page 2. If no, please print N/A on Page 2.)

I certify under penalty of perjury, that all of the information provided herein is current, complete, and accurate. I also understand that the Board will not take action on any item without the completed disclosure form.

<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> Morley, Jim P Signature </div> <div style="font-size: small;"> Digitally signed by Morley, Jim P Date: 2021.03.02 10:17:52-08'00' </div> </div>	<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> Jim Morley Print Name </div> <div style="border-top: 1px solid black; width: 100%;"></div> </div> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="text-align: center; margin-right: 10px;"> Client Director Title </div> <div style="border-top: 1px solid black; width: 100%;"></div> </div>
	<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> 2 Mar 21 Date </div> <div style="border-top: 1px solid black; width: 100%;"></div> </div>

DISCLOSURE OF RELATIONSHIP

List any disclosures below:
(Mark N/A, if not applicable.)

NAME OF BUSINESS OWNER/PRINCIPAL	NAME OF ENTITY* EMPLOYEE/OFFICIAL AND JOB TITLE	RELATIONSHIP TO ENTITY* EMPLOYEE/ OFFICIAL	ENTITY* EMPLOYEE'S/ OFFICIAL'S DEPARTMENT
N/A	N/A	N/A	N/A

* Entity employee means an employee of Las Vegas Valley Water District, Southern Nevada Water Authority, or Silver State Energy Association .

“Consanguinity” is a relationship by blood. “Affinity” is a relationship by marriage.

“To the second degree of consanguinity” applies to the candidate’s first and second degree of blood relatives as follows:

- Spouse – Registered Domestic Partners – Children – Parents – In-laws (first degree)
- Brothers/Sisters – Half-Brothers/Half-Sisters – Grandchildren – Grandparents – In-laws (second degree)

For Entity Use Only:

If no Disclosure or Relationship is noted above or the section is marked N/A, please check this box.

☒ No Disclosure

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the Entity employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the Entity employee(s) noted above involved in any way with the business in performance of the contract?

Notes/Comments:

Signature

Adriana Ventimiglia

Print Name

Authorized Department Representative

Disclosure of Ownership/Principals

2 March 2021

Black & Veatch Corporation is a wholly owned subsidiary of Black & Veatch Holding Company (BVHC). The Black & Veatch Retirement Program, or Employee Stock Ownership Program (ESOP), holds 100% of the common shares of BVHC. The ESOP shares are held in trust and registered to the program's trustee, GreatBanc Trust Company. Individual beneficial holder data within the ESOP trust is confidential and not available to the Company without prior written consent from the individual; however, shareholdings are broadly dispersed among the 6,000 employee participants. Aside from the ESOP, no one individual currently holds over 5% of the common shares of BVHC. The Business Address and phone number is: 8400 Ward Parkway, Kansas City, MO 64114, (913) 458 - 2000.

Jim Morley

Digitally signed by
Morley, Jim P
Date: 2021.03.02
10:18:23-08'00'

AGREEMENT TO PROVIDE PROFESSIONAL SERVICES

This Agreement is made and entered into by and between Black & Veatch Corporation, hereinafter called "CONSULTANT," and the Southern Nevada Water Authority, a political subdivision of the State of Nevada, hereinafter called the "AUTHORITY." CONSULTANT and AUTHORITY are sometimes hereinafter referred to individually as "Party" and collectively as the "Parties." The term "AUTHORITY" also refers to staff of AUTHORITY acting within their designated authority and duties. The "Effective Date" is the date of last signature on this Agreement.

WITNESSETH:

WHEREAS, AUTHORITY desires to obtain professional services as more specifically described herein, and

WHEREAS, CONSULTANT is properly qualified and desires to provide the professional services required by AUTHORITY, and

WHEREAS, AUTHORITY, in reliance on CONSULTANT's representations and proposals, agrees to retain CONSULTANT, and CONSULTANT agrees to furnish professional services to AUTHORITY, on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein, the Parties hereto agree as follows:

1. SCOPE OF SERVICES:

- 1.1. CONSULTANT shall provide any requested services, hereinafter referred to as "Services" or "Work," as described and within the time indicated in **Exhibit A**, which is attached herewith and made a part of this Agreement. Except as otherwise provided in this Agreement, if any provision contained in this Agreement conflicts with any provision in any of the attached Exhibits, the provision contained in this Agreement shall govern and control.
- 1.2. All Services performed shall be subject to the cost ceiling contained in Paragraph 4 hereof and subject to AUTHORITY's directions respecting priorities. CONSULTANT will furnish professional Services in the amount necessary to complete, promptly and effectively, the Work assigned under this Agreement. All of the Services shall be performed by CONSULTANT or an approved subcontractor.
- 1.3. In performing Services under this Agreement, CONSULTANT shall observe and abide by the terms and conditions of all applicable laws, regulations, ordinances, or rules of the United States, of the State of Nevada, of any political subdivision thereof, and of any other duly constituted public authority or agency. CONSULTANT shall be responsible for obtaining any license, permit or other approval as required by law or otherwise, arising out of the Services to be performed hereunder.
- 1.4. CONSULTANT has, or will secure at its own expense, the qualified personnel required to perform the Services assigned under this Agreement. Such personnel shall not be employed by the United States; the State of Nevada; Clark County, Nevada; Las Vegas Valley Water District, Southern Nevada Water Authority, or any other political subdivision of the State of Nevada.

2. PERIOD OF PERFORMANCE:

This Agreement shall become effective as of the Effective Date and shall remain in effect until all Services authorized by AUTHORITY to be performed are completed by CONSULTANT, unless terminated in accordance with the terms of this Agreement. This Agreement may not extend more than seven years from Effective Date. During this period, CONSULTANT agrees to provide Services as required by AUTHORITY within the scope of this Agreement.

3. COMPENSATION:

- 3.1. In consideration for completion of all duties and responsibilities under this Agreement, AUTHORITY agrees to pay CONSULTANT, in accordance with Exhibit A, for Work completed to AUTHORITY's satisfaction.
- 3.2. Travel expenses will be reimbursed as set forth in **Exhibit B**, which is attached herewith and made a part of this Agreement.

- 3.3. CONSULTANT shall provide itemized monthly invoices for Services performed during the previous month. Invoices are to be submitted to AUTHORITY in accordance with the Notice provisions of this Agreement and must reference the name and Effective Date of the Agreement. A copy of any invoice received from subcontractors used by CONSULTANT shall be included.
- 3.4. AUTHORITY shall pay invoiced amounts from CONSULTANT based on tasks completed as set forth in **Exhibit A** within 30 calendar days after the date the invoice is received and approved by AUTHORITY.
- 3.5. AUTHORITY may dispute a payment or portion thereof that is due before or after AUTHORITY pays the invoice.
4. LIMITATION ON COSTS:
- The total cost of Services provided under this Agreement shall not exceed \$55,900,000.00.
5. RESPONSIBILITIES OF CONSULTANT:
- 5.1. CONSULTANT shall appoint a Manager who will manage the performance of Services. All of the Services specified by this Agreement shall be performed by the Manager, or by CONSULTANT's associates and employees under the personal supervision of the Manager. Should the Manager, or any key employee of CONSULTANT be unable to complete his or her responsibility for any reason, CONSULTANT must obtain written approval by AUTHORITY prior to replacing him or her with another equally qualified person. If CONSULTANT fails to make a required replacement within 30 calendar days, AUTHORITY may terminate this Agreement. The following employees of CONSULTANT will be considered "key employees" for purposes of this section:
- Jim P. Morley
 - Jeff McMullen
- 5.2. CONSULTANT agrees that its officers and employees will cooperate with AUTHORITY in the performance of Services under this Agreement and will be available for consultation with AUTHORITY at such reasonable times with advance notice as to not conflict with their other responsibilities.
- 5.3. CONSULTANT shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all Services furnished by CONSULTANT, its subcontractors and their principals, officers, employees and agents under this Agreement. In performing the Services, CONSULTANT shall follow practices consistent with generally accepted professional and technical standards.
- 5.4. It shall be the duty of CONSULTANT to assure that all products of its effort are in accordance with the standards of section 5.3 and in conformance with all pertinent Federal, State and Local statutes, codes, ordinances, resolutions and other regulations. CONSULTANT will not produce a work product which violates or infringes on any copyright or patent rights. CONSULTANT shall, without additional compensation, correct or revise any errors or omissions in its work products.
- 5.4.1. Permitted or required approval by AUTHORITY of any products or services furnished by CONSULTANT shall not in any way relieve CONSULTANT of responsibility for the professional and technical accuracy and adequacy of its work.
- 5.4.2. AUTHORITY's review, approval, acceptance, or payment for any of CONSULTANT's Services herein shall not be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and CONSULTANT shall be and remain liable in accordance with the terms of this Agreement and applicable law for all damages to AUTHORITY caused by CONSULTANT's performance or failures to perform under this Agreement.
- 5.5. The rights and remedies of AUTHORITY provided for under this section are in addition to any other rights and remedies provided by law or under other sections of this Agreement.
6. RESPONSIBILITIES OF AUTHORITY:
- 6.1. AUTHORITY agrees that its officers and employees will cooperate with CONSULTANT in the performance of the Services and will be available for consultation with CONSULTANT at such reasonable times with advance notice as to not conflict with other responsibilities.

- 6.2. The Services performed by CONSULTANT under this Agreement shall be subject to review for compliance with the terms of this Agreement by AUTHORITY's representative, Adriana Ventimiglia, Engineering, telephone number 702-822-3301 or their designee. AUTHORITY's representative may delegate any or all of his/her responsibilities under this Agreement to appropriate staff members.
- 6.3. AUTHORITY shall assist CONSULTANT in obtaining data on documents from public officers or agencies, and from private citizens and/or business firms, whenever such material is necessary for the completion of the Services.
- 6.4. CONSULTANT will not be responsible for accuracy of information or data supplied by AUTHORITY or other sources to the extent such information or data would be relied upon by a reasonably prudent CONSULTANT.

7. TRUTH-IN-NEGOTIATION CERTIFICATION:

Signing of this Agreement by CONSULTANT shall constitute a truth-in-negotiation certification by CONSULTANT that wage rates and other factual unit costs supporting the compensation of this Agreement are accurate, complete, and current at the time of execution of this Agreement. The original Agreement price and any additions thereto shall be adjusted to exclude any significant sums by which AUTHORITY determines the Agreement price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such Agreement adjustments shall be made within one year following the end of the term of this Agreement.

8. INDEPENDENT CONTRACTOR – NO JOINT VENTURE:

The relationship of CONSULTANT to AUTHORITY hereunder shall be that of an Independent Contractor as defined by NRS 616A.255 or Nevada state law. Nothing herein shall be construed to imply an employer and employee relationship, a joint venture, or principal and agent relationship.

9. INTELLECTUAL PROPERTY ACKNOWLEDGMENT:

In consideration of the covenants, representations and warranties set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CONSULTANT hereby covenants, represents and warrants the following:

- 9.1. All project specific materials, information, and documents which are drafted, developed, prepared, completed, or acquired by CONSULTANT for AUTHORITY relating to the Services and not otherwise used or useful in connection with services previously rendered by CONSULTANT to parties other than AUTHORITY are instruments of service with respect to the Services to be provided pursuant to this Agreement and are not intended to be modified nor represented to be suitable for use on other projects. They shall become the property of AUTHORITY upon payment for same to CONSULTANT and shall be delivered to AUTHORITY's representative upon completion or termination of this Agreement, whichever comes first. CONSULTANT shall not be liable for damages, claims, and losses arising out of any reuse of any such materials, information or documents on any other project conducted by AUTHORITY. AUTHORITY shall have the right to reproduce all documentation supplied pursuant to this Agreement for the purpose of operating, constructing, altering, improving and maintaining the Project. CONSULTANT and its subconsultants shall retain ownership of CONSULTANT's and subconsultants' proprietary and other intellectual property used, modified or developed in the performance of the Services ("CONSULTANT IP"). Without limiting the foregoing, and notwithstanding anything in this Agreement to the contrary, AUTHORITY shall not obtain any rights to CONSULTANT's, subconsultants' or third party software, except as may be separately agreed. Nothing in this Agreement shall be construed as limiting CONSULTANT's and its subconsultants' rights to use their respective skills and knowledge to provide services for themselves or others, regardless of whether such services are similar to the Services provided hereunder.

10. INTELLECTUAL PROPERTY LICENSE:

Upon payment of consideration in accordance with this Agreement, CONSULTANT hereby grants the AUTHORITY an irrevocable, nonexclusive, royalty-free license for use solely in connection with operation, maintenance, repair, or alteration of the Authority's facilities in respect of any CONSULTANT IP included in the work products.

11. INTERPRETATION:

The Parties agree that neither Party shall be deemed the drafter of this Agreement and, in the event this Agreement is ever construed by a court of law or equity, such court shall not construe this Agreement or any provision hereof against either Party as drafter of this Agreement.

12. CONFLICT OF INTEREST:

During the course of performance of this Agreement, CONSULTANT will not contract with any client whose interest is adverse to or would require CONSULTANT to take a position contrary to that of the Las Vegas Valley Water District and/or the Southern Nevada Water Authority.

13. PROHIBITION AGAINST COMMISSION FOR OBTAINING AGREEMENT:

CONSULTANT warrants that no person or company has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees; nor has CONSULTANT paid or agreed to pay any person, company, corporation, individual or firm other than a partner or bona fide employee, any fee, commission, contribution, donation, percentage, gift, or any other consideration, contingent upon or resulting from award of this Agreement. For any breach or violation of this warranty, AUTHORITY shall have the right to terminate this Agreement without liability, or at its discretion, to deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration and any other damages.

14. PROHIBITION AGAINST INTEREST BY GOVERNMENT EMPLOYEES:

14.1. No officer, employee, or member of the governing body of AUTHORITY shall (1) participate in any decision relating to this Agreement which affects his or her personal interest or the interest of any corporation, partnership, or association in which he or she is, directly or indirectly, interested or (2) have any interest, direct or indirect, in this Agreement or the proceeds thereof.

14.2. CONSULTANT represents that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of Services required to be performed under this Agreement. CONSULTANT further covenants that in the performance of said Services, no person having any such interest shall be employed.

14.3. No member of, delegate to, or officer or employee of the legislative, executive or judicial branches of the government of the United States, of the State of Nevada or any of its political subdivisions shall be entitled to any share or part hereof or to any benefit to arise therefrom.

15. COMPLETENESS AND ACCURACY OF CONSULTANT'S WORK:

15.1. CONSULTANT shall be responsible for the completeness and accuracy of its research, supporting data, and any final reports or other deliverables prepared or compiled pursuant to this Agreement and shall correct, at its expense, all errors or omissions therein.

15.2. The cost necessary to correct those errors attributable to CONSULTANT and any damage incurred by AUTHORITY as a result of additional costs caused by such errors shall be chargeable to CONSULTANT. The fact that AUTHORITY has accepted or approved CONSULTANT's Work shall in no way relieve CONSULTANT of any of its responsibilities.

16. INDEMNIFICATION:

16.1. For all claims based upon or arising out of the Services or Work of CONSULTANT, CONSULTANT shall indemnify and hold harmless, without cost to AUTHORITY, its Board of Directors and its officers, agents, and employees (the "AUTHORITY Parties"), against any and all losses, claims, costs, damages, actions, proceedings, and liability to the extent that such losses, claims, costs, damages, actions, proceedings, and liability are caused by the negligence, errors, omissions, recklessness or intentional misconduct of CONSULTANT or the employees of CONSULTANT. This indemnification includes, but is not limited to, reasonable attorneys' fees and costs and claims for or by reason of any death or deaths of, or any physical injury or injuries to, any person or persons or damage to real or personal property of any kind whatsoever, whether the person(s) or property of CONSULTANT, its agents, or of third parties; harassment or discrimination or any theory of joint or dual employment by CONSULTANT's employees, agents,

subcontractors, arising out of the Services or Work under this Agreement; or infringement on any U.S. patent (issued as of the Effective Date) or any copyright or trademark.

If such claim(s) results in a trier of fact's adjudication of CONSULTANT as liable, CONSULTANT shall pay to AUTHORITY the reasonable attorneys' fees and costs which are determined to equate to the proportionate liability of CONSULTANT, as reimbursement for the attorneys' fees and costs incurred by the AUTHORITY in defending the claim.

- 16.2. For all claims not based upon or arising out of the Services or Work of CONSULTANT, CONSULTANT shall indemnify, hold harmless, and defend, without cost to the AUTHORITY Parties, against any and all losses, claims, costs, damages, actions, proceedings, and liability to the extent that such losses, claims, costs, damages, actions, proceedings, and liability are caused by the negligence, errors, omissions, recklessness or intentional misconduct of CONSULTANT or the employees of the CONSULTANT. This indemnification includes, but is not limited to, reasonable attorneys' fees and costs and claims for or by reason of any death or deaths of, or any physical injury or injuries to, any person or persons or damage to real or personal property of any kind whatsoever, whether the person(s) or property of CONSULTANT, its agents, or of third parties; harassment or discrimination or any theory of joint or dual employment by CONSULTANT's employees, agents, subcontractors, arising out of the Services or Work under this Agreement; or infringement on any U.S. patent (issued as of the Effective Date) or any copyright or trademark. The AUTHORITY Parties may assume, at their sole option, control of the defense, appeal or settlement of any third-party claim for which CONSULTANT has indemnified the AUTHORITY Parties by giving written notice of the assumption to CONSULTANT. The AUTHORITY Parties may not settle or compromise any claim or consent to the entry of any judgment regarding claims for which CONSULTANT has indemnified the AUTHORITY Parties without the prior written consent of CONSULTANT, which consent shall not be unreasonably withheld, conditioned or delayed. The indemnification provided by CONSULTANT to the AUTHORITY Parties applies to all insurance policies of CONSULTANT, whether primary, excess or umbrella coverage is provided to CONSULTANT.

17. SCHEDULE FOR PERFORMANCE OF SERVICES:

17.1. Time is of the essence in this Agreement.

17.2. If CONSULTANT's performance of Services is delayed or if CONSULTANT's sequence of tasks is changed, CONSULTANT shall notify AUTHORITY's representative in writing of the reasons for the delay and prepare a revised schedule for performance of Services. The revised schedule is subject to AUTHORITY's written approval.

18. INSURANCE:

18.1. General:

18.1.1. CONSULTANT shall not commence Work under this Agreement until it has obtained all insurance required under this Agreement with insurance companies reasonably acceptable to AUTHORITY, nor shall CONSULTANT allow any subcontractor to commence Work until all similar insurance required of the subcontractor has been so obtained. CONSULTANT shall continue to pay all premiums due for the insurance required under this Agreement during the applicable policy periods and shall notify AUTHORITY of any changes to their insurance coverage.

AUTHORITY shall be named as an additional insured, under CONSULTANT's commercial general liability, automobile liability, excess and/or umbrella liability policies. The Southern Nevada Water Authority shall be named as an additional insured by written contract between the Consultant and their Subcontractor. The subcontractor shall provide Southern Nevada Water Authority with a certificate of insurance. In the event of a loss arising out of or related to the performance of the Work by CONSULTANT or its subcontractor(s) hereunder, all insurance required under this Agreement shall be primary (pay first) with respect to any other insurance which may be available to AUTHORITY, regardless of how the "other insurance" provisions may read. CONSULTANT agrees to waive its rights of subrogation against AUTHORITY, and CONSULTANT's insurers shall also waive their rights to recover, as evidenced by an endorsement. The additional insured and waiver of subrogation language shall read as follows:

The Southern Nevada Water Authority, its members and affiliated companies, successors or assigns, including their directors, officers and employees individually and collectively when acting in the scope of the employment. Also, all owners of the property where the Work will be performed.

The parties hereby shall require their insurers to waive subrogation rights against the other party under any applicable policy of property insurance.

18.1.2. AUTHORITY shall also be named as an additional insured under the subcontractor's insurance policies. Any deviation from the required insurance requirements will need to be approved by AUTHORITY in writing. Nothing contained in this Paragraph is to be construed as limiting the extent of CONSULTANT's or subcontractor's liability for claims arising out of this Agreement. CONSULTANT and subcontractor shall be responsible for insuring all of its own personal property, tools and equipment.

18.1.3. With respect to all insurance required under this Agreement, the deductible shall not exceed \$1,000,000 without the prior written approval of the Risk Manager of AUTHORITY.

18.2. Evidence of Insurance:

18.2.1. CONSULTANT's insurance shall be written with a property and casualty insurance company with an AM Best Financial Strength Rating of A- or higher and an AM Best Financial Size Category of Class VIII or higher.

18.2.2. Within 10 working days after the Effective Date, CONSULTANT shall deliver to the AUTHORITY a certificate of insurance documenting the required insurance coverage. Upon request of AUTHORITY, CONSULTANT agrees to make available at CONSULTANT's local office, a copy of all insurance policies required under this Agreement.

18.2.3. Renewal certificates shall be provided to AUTHORITY not later than 15 days prior to the expiration of policy coverage.

18.2.4. All insurance policies shall require the insurer to provide a minimum of 30 calendar days' prior notice to AUTHORITY for any material change in coverage, cancellation, or non-renewal, except for non-payment of premium, for which the insurer shall provide 10 days' prior notice.

18.3. Insurance Coverages:

18.3.1. Commercial General Liability Insurance: CONSULTANT shall maintain commercial general liability insurance, contractual liability, protective liability from independent contractors, property damage liability, bodily injury liability, and personal injury liability with limits of \$1,000,000 per occurrence, and \$2,000,000 annual aggregate. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

18.3.2. Business Automobile Insurance: CONSULTANT shall maintain business auto insurance for any owned, non-owned, hired, or rented vehicle with a limit of \$1,000,000 combined single limit for bodily injury and property damage liability. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

18.3.3. Workers Compensation & Employers Liability Insurance: CONSULTANT shall maintain statutory workers compensation insurance in accordance with the laws of the state where such compensation is payable. In addition, the insurance CONSULTANT maintains shall comply with Nevada Industrial Insurance Act, NRS Chapters 616 and 617, for all of its employees performing Services or Work pursuant to this Agreement.

CONSULTANT shall maintain employers' liability insurance with limits of \$1,000,000 per accident and \$1,000,000 for each employee for injury by disease. CONSULTANT shall maintain insurance for benefits payable under the U.S. Longshore and Harbor Workers Act and the Jones Act, for exposures that may exist.

In the event CONSULTANT is permissibly self-insured for workers' compensation insurance in the State of Nevada, CONSULTANT shall deliver to the AUTHORITY a copy of the Certificate of Consent to self-insure issued by the State of Nevada.

18.3.4. Professional Liability Insurance: CONSULTANT shall maintain professional liability insurance applicable to CONSULTANT's Services or Work as set forth in this Agreement, with limits of not less than \$10,000,000 for each occurrence and in the aggregate. This coverage should be maintained for a period of not less than two years after completion of CONSULTANT's Work as set forth in this Agreement.

18.3.5. Cyber and Technology Liability Insurance: CONSULTANT shall maintain Cyber and Technology liability insurance providing coverage for technology and professional services; privacy and cyber security; and privacy regulatory defense, awards and fines with limits of \$1,000,000 per occurrence and \$1,000,000 annual aggregate.

18.3.6. Aircraft Liability Insurance: If required, CONSULTANT shall procure and maintain, at its own expense, Aircraft liability insurance with limits of no less than \$5,000,000 per occurrence. The coverage shall apply to bodily injury, death, damage or destruction of property or persons which arise out of or in connection with the activities under this Agreement the AUTHORITY as additional insured.

19. TERMINATION:

AUTHORITY'S General Manager or his/her designee may terminate this Agreement on 30 days prior written notice. In the case of termination by the AUTHORITY, the AUTHORITY shall pay CONSULTANT for all Work performed to the effective date of termination and the reasonable costs of transferring all documentation of all Work to AUTHORITY.

20. REVIEWS:

20.1. CONSULTANT shall submit draft reports and other materials for review by AUTHORITY prior to the submission of a final report on materials. Due dates will be negotiated, but in every instance, earlier submittal is encouraged.

20.2. AUTHORITY will review the submittals and any pertinent attachments and mark all required changes. All reviews will be completed within 10 working days after receipt of the submission package, and the package will be returned to CONSULTANT. Corrections and changes to the submission will be made by CONSULTANT and resubmitted to AUTHORITY for approval within 10 working days after receipt. The final approval will be submitted to CONSULTANT within 5 working days after receipt of the corrected document and any attachments. Alternate review schedules may be negotiated by mutual agreement of the Parties.

21. CONFIDENTIALITY AND RELEASE OF INFORMATION:

Through the terms of this Agreement, CONSULTANT may furnish AUTHORITY with information that CONSULTANT has independently determined to be confidential under Nevada law and that CONSULTANT will label "Confidential Information". "Confidential Information" means confidential and proprietary information of CONSULTANT that is disclosed to AUTHORITY which, in the case of written information, is marked "confidential" and which, in the case of information disclosed orally, is identified at the time of the disclosure as confidential and will be summarized and confirmed in writing as such by CONSULTANT to AUTHORITY within 30 calendar days of the disclosure. Confidential Information shall not include information that: (1) is now or subsequently becomes generally available to the public through no fault or breach of AUTHORITY; (2) AUTHORITY can demonstrate to have had rightfully in its possession prior to disclosure by CONSULTANT; (3) is independently developed by AUTHORITY without the use of any Confidential Information; or (4) AUTHORITY rightfully obtains from a third party who has the right to transfer or disclose it.

AUTHORITY and CONSULTANT recognize AUTHORITY's duties under the Nevada Public Records Act and do not, by this Agreement, intend to alter AUTHORITY's duties thereunder or to require AUTHORITY to do, or refrain from doing, anything contrary to the Nevada Public Records Act. AUTHORITY's Office of General Counsel shall be permitted to make an independent determination as to whether any document or record marked "confidential" is confidential or is a public record, pursuant to the Nevada Public Records Act. If AUTHORITY's Office of General Counsel determines that any document or record supplied by CONSULTANT and marked "confidential" is determined to be a public record AUTHORITY may disclose that document or record to the extent required by the Nevada Public Records Act with prior notice to CONSULTANT. Upon receipt of any

request for Confidential Information, this Agreement, or any part thereof, the AUTHORITY will promptly forward the request to CONSULTANT and work with CONSULTANT in good faith to minimize the extent of the disclosure to the extent requested by CONSULTANT and permitted by the Nevada Public Records Act.

Further, CONSULTANT shall make public information releases only as provided for and in accordance with this Agreement. Any and all other public releases of information gathered, obtained, or produced during the performance of this Agreement must be specifically approved in writing by AUTHORITY prior to release. Such information shall include, but is not limited to, all products, intellectual property, Work Product, ideas, data, reports, background materials, and any and all other materials belonging to AUTHORITY. Such public releases of information shall include, but are not limited to, publication in any book, newspaper, magazine, professional or academic journal, the Internet, radio, television, and presentations to professional, academic, and/or other groups or conferences.

22. USE OF MATERIALS:

22.1. AUTHORITY shall make available to CONSULTANT such materials from its files as may be required by CONSULTANT in connection with its performance of Services under this Agreement. Such materials shall remain the property of the AUTHORITY while in CONSULTANT's possession.

22.2. Upon termination of this Agreement, CONSULTANT shall turn over to AUTHORITY any property of AUTHORITY in its possession and any calculations, notes, reports, or other materials prepared by CONSULTANT in the course of performing this Agreement. Any proprietary software or other tools of CONSULTANT used to execute the Work shall remain the property of CONSULTANT.

23. PROJECT MANAGEMENT INFORMATION SYSTEM TERMS OF USE:

23.1. Due to the sensitive nature of information contained within the project management information system (PMIS), AUTHORITY requires that CONSULTANT agree to the PMIS terms of use. By entering into this Agreement, CONSULTANT agrees to be bound by and to bind its employees to the following terms of use ("Terms of Use").

23.1.1. Access to PMIS provided by AUTHORITY is for authorized users and organizations only. To protect this software from unauthorized use and to ensure that the software functions properly, activities on PMIS and use of this application, related data, and/or related services (collectively "PMIS Services") are monitored and recorded and subject to audit.

23.1.2. CONSULTANT and its employees will abide by the typical use of protected applications/software, including but not limited to:

23.1.2.1. Authorized users cannot give out their login information to another party.

23.1.2.2. Authorized users shall notify AUTHORITY within 2 business days of any changes in their employment to allow for an appropriate adjustment in their access privileges.

23.1.2.3. Access to PMIS will be revoked upon completion of the work, termination of the agreement, or the individual user's separation from performing duties associated with the work, whichever comes first.

23.1.2.4. These PMIS Services are provided for the convenience of contractors and engineering firms. AUTHORITY is not responsible for any issues created by a malfunction of these PMIS Services.

23.1.2.5. CONSULTANT agrees to use PMIS for work related content. The use of PMIS as a document management system to store unrelated documents or files is expressly prohibited.

23.1.2.6. CONSULTANT agrees not to remove or modify any copyright or other intellectual property notices that appear in PMIS or associated PMIS Services.

23.1.3. CONSULTANT agrees not to use the PMIS Services in any way that is unlawful, or harms AUTHORITY, its' service providers, suppliers or any other user. CONSULTANT agrees not to use the PMIS Services in any way that breaches any other policy or notice on the PMIS Services.

AUTHORITY's failure to act with respect to a breach by CONSULTANT or others does not waive its right to act with respect to subsequent or similar breaches.

- 23.1.4. NO WARRANTY. AUTHORITY provides the PMIS Services "As Is," "With All Faults" and "As Available," and the entire risk as to satisfactory quality, performance, accuracy, and effort is with CONSULTANT, to the maximum extent permitted by applicable law. AUTHORITY and its suppliers make no representations, warranties or conditions, express or implied. AUTHORITY and its suppliers expressly disclaim any and all warranties or conditions, express, statutory and implied, including without limitation (a) warranties or conditions of merchantability, fitness for a particular purpose, workmanlike effort, accuracy, title, no encumbrances, no liens and non-infringement, (b) warranties or conditions arising through course dealing or usage of trade, and (c) warranties or conditions of uninterrupted or error-free access or use.
- 23.1.5. LIABILITY LIMITATION; EXCLUSIVE REMEDY. In addition to applicable Nevada laws regarding sovereign immunity, in no event will AUTHORITY or any supplier be liable for any damages including, without limitation, any indirect, consequential, special, incidental, or punitive damages arising out of, based on, or resulting from these Terms of Use or CONSULTANT's use of the PMIS Services, even if such party has been advised of the possibility of such damages. The exclusion of damages under this paragraph is independent of the user's exclusive remedy and survives in the event such remedy fails of its essential purpose or is otherwise deemed unenforceable. These limitations and exclusions apply without regard to whether the damages arise from (a) breach of contract, (b) breach of warranty, (c) negligence, or (d) any other cause of action, to the extent such exclusion and limitations are not prohibited by applicable law. If CONSULTANT has any dispute or claim against AUTHORITY or its suppliers with respect to these Terms of Use or the PMIS Services, then CONSULTANT's sole and exclusive remedy is to discontinue using the PMIS Services.
- 23.1.6. AUTHORITY reserves the right to change the Terms of Use and will provide notice of any change to CONSULTANT. Continued use of the PMIS Services after the effective date of such changes will constitute acceptance of and agreement to any such changes. AUTHORITY may change, suspend or discontinue the PMIS Services associated with PMIS at any time without notice to all or selected users. AUTHORITY may assign these Terms of Use, in whole or in part, at any time with or without notice to CONSULTANT. CONSULTANT may not assign these Terms of Use, or assign, transfer or sublicense its rights, if any, in the PMIS Services.
- 23.1.7. These Terms of Use are governed by the laws of the State of Nevada, without giving effect to its conflict of laws provisions. CONSULTANT agrees to submit to exclusive jurisdiction and venue in the state and federal courts sitting in Clark County, Nevada, for any and all disputes, claims and actions arising from or in connection with the Services and/or these Terms of Use.
- 23.1.8. If any part of these Terms of Use is determined to be invalid or unenforceable, then the invalid or unenforceable provision will be replaced with a valid, enforceable provision that most closely matches the intent of the original provision and the remainder of these Terms of Use will continue in effect.
- 23.1.9. Except as expressly stated herein, these Terms of Use constitute the entire agreement between AUTHORITY and CONSULTANT with respect to the PMIS Services and supersede all prior or contemporaneous communications of any kind between AUTHORITY and CONSULTANT with respect to the PMIS Services.
- 23.1.10. The PMIS Services are subject to the intellectual property rights of AUTHORITY and to the Nevada public records law.

24. DATA PRIVACY AND SECURITY:

- 24.1. During the course of this Agreement, CONSULTANT will create, receive or have access to the AUTHORITY's Facility Information. Facility Information means drawings, maps, plans or records that reveal the AUTHORITY's critical infrastructure of primary buildings, facilities and other structures used for storing, transporting or transmitting water or electricity, other forms of energy, fiber optic cables, or

vertical assets used for the transmission or receipt of data or communications used by the AUTHORITY. Facility Information is deemed to be Confidential Information of the AUTHORITY.

24.2. CONSULTANT shall:

- 24.2.1. Keep and maintain all Facility Information in strict confidence, using such degree of care as is appropriate to avoid unauthorized access, use, or disclosure;
- 24.2.2. Ensure that all Facility Information is stored only in data center(s) that are subject to United States federal jurisdiction;
- 24.2.3. Not create, collect, receive, access, or use Facility Information in violation of law;
- 24.2.4. Use and disclose Facility Information solely and exclusively for the purposes for which the Facility Information, or access to it, is provided pursuant to the terms and conditions of this Agreement;
- 24.2.5. Not use, sell, rent, transfer, distribute, or otherwise disclose or make available Facility Information for their own purposes or for the benefit of anyone other than the AUTHORITY without the AUTHORITY's prior written consent; and
- 24.2.6. Not, directly or indirectly, disclose Facility Information to any person other than its Authorized Persons, without the AUTHORITY's prior written consent. Authorized Persons means CONSULTANT's employees, contractors, subcontractors, consultants, subconsultants, agents, or auditors who have a need to know or otherwise access Facility Information to enable CONSULTANT to perform its obligations under this Agreement, and who are bound in writing by confidentiality and other obligations sufficient to protect Facility Information in accordance with the terms and conditions of this Agreement.

24.3. Security Breach means any act or omission that compromises either the security, confidentiality, or integrity of Facility Information or the physical, technical, administrative, or organizational safeguards put in place by CONSULTANT or by the AUTHORITY to the extent that CONSULTANT has access to the AUTHORITY's systems, that relate to the protection of the security, confidentiality, or integrity of Facility Information. Without limiting the foregoing, a compromise shall include any unauthorized access to or disclosure or acquisition of Facility Information.

24.4. CONSULTANT shall:

- 24.4.1. Notify the AUTHORITY of any Security Breach as soon as practicable, but no later forty-eight (48) hours after the CONSULTANT becomes aware of it, by telephone at the following number: 702-822-8390 and by email to james.curbeam@lvvwd.com and brent.gunson@lvvwd.com, with a copy by email to the AUTHORITY's contacts listed in the Notices Section below;
 - 24.4.2. At its own expense, coordinate and fully cooperate with the AUTHORITY in the AUTHORITY's handling of the matter;
 - 24.4.3. Use its best efforts to immediately contain and remedy any Security Breach and prevent any further Security Breach;
 - 24.4.4. Maintain and preserve all documents, records, and other data related to any Security Breach; and
 - 24.4.5. Reimburse the AUTHORITY for all actual costs incurred by the AUTHORITY in responding to and mitigating damages caused by any Security Breach.
- 24.5. CONSULTANT acknowledges that any breach of its covenants or obligations set forth in this Data Privacy and Security Section may cause the AUTHORITY irreparable harm for which monetary damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the AUTHORITY is entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance, and any other relief that may be available from any court, in addition to any other remedy to which the AUTHORITY may be entitled at law or in equity. Such remedies shall not be deemed to be exclusive but shall be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Agreement to the contrary.

- 24.6. CONSULTANT has completed and provided to AUTHORITY the Business Partner Security Checklist providing accurate information on its security program including appropriate policies and procedures. CONSULTANT agrees to maintain a comparable or better information security program throughout the course of this Agreement that is reviewed for new risk assessments at least annually.
- 24.7. CONSULTANT shall implement administrative, physical and technical safeguards to protect Facility Information from unauthorized access, acquisition or disclosure, destruction, alteration, accidental loss, misuse or damage that are no less rigorous than accepted industry practices, and shall ensure that all such safeguards, including the manner in which Facility Information is collected, accessed, used, stored, processed, disposed of and disclosed, comply with applicable data protection and privacy laws, as well as the terms and conditions of this Agreement.
- 24.8. CONSULTANT agrees to notify the AUTHORITY without unreasonable delay and in the most expedient time possible of a security breach where unencrypted Personal Information transferred to CONSULTANT by the AUTHORITY was or is reasonably believed to have been acquired by an unauthorized person.

25. RECORDS:

CONSULTANT shall retain financial and other records related to this Agreement for six years after the completion or termination of this Agreement, and shall make available to AUTHORITY for inspection, all books, records, documents, and other evidence directly pertinent to performance under this Agreement upon reasonable notice.

26. ASSIGNMENT:

CONSULTANT shall not assign or transfer its interest in this Agreement without the prior written consent of AUTHORITY. If CONSULTANT assigns or transfers without prior written approval, the assignment or transfer shall be void, and not merely voidable.

27. SEVERABILITY:

If any term of this Agreement is to any extent illegal, invalid, or unenforceable, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms of this Agreement shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term. If application of this Paragraph should materially and adversely affect the economic substance of the transactions contemplated in this Agreement, the Party adversely impacted shall be entitled to compensation for such adverse impact.

28. NON-DISCRIMINATORY EMPLOYEE PRACTICES:

- 28.1. CONSULTANT and any subcontractor working under the authority of CONSULTANT, who is responsible for the selection, referral, hiring, or assignment of workers for the Services provided pursuant to this Agreement, is required to comply with all applicable provisions of Title VII of the Civil Rights Act of 1964, Age Discrimination in Employment Act, the Civil Rights Act of 1991, the Equal Pay Act, Title I of the Americans with Disabilities Act and all associated rules and regulations.
- 28.2. CONSULTANT recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status, the AUTHORITY may declare CONSULTANT in breach of the Agreement, terminate the Agreement, and designate CONSULTANT as non-responsible.

29. EQUAL EMPLOYMENT OPPORTUNITY:

- 29.1. CONSULTANT and any subcontractor working under the authority of CONSULTANT, who is responsible for the selection, referral, hiring, or assignment of workers for the Services provided pursuant to this Agreement, is required to comply with all applicable provisions of Title VII of the Civil Rights Act of 1964. This requirement includes compliance with Equal Employment Opportunity Commission regulations that prohibit discrimination based upon race, color, religion, sex, or national origin. Furthermore, CONSULTANT shall in all relevant manners comply with the Age Discrimination in Employment Act, the Civil Rights Act of 1991, the Equal Pay Act, and Title I of the Americans with Disabilities Act.

29.2. CONSULTANT shall make all necessary documentation as required to comply with the Acts referred to above and shall make such documentation immediately available to AUTHORITY upon AUTHORITY's request. CONSULTANT is solely liable for failure to comply with this provision.

30. APPLICABLE LAW:

Nevada law shall govern the interpretation of this Agreement, without reference to its choice of law provisions.

31. VENUE:

The Parties agree that venue for any dispute arising from the terms of this Agreement shall be the state or federal courts located in Clark County, Nevada.

32. ATTORNEY'S FEES:

In the event that any Party commences an action to enforce or interpret this Agreement, or for any other remedy based on or arising from this Agreement, the prevailing party therein shall be entitled to recover its reasonable and necessary attorneys' fees and costs incurred.

33. NO THIRD-PARTY RIGHTS:

This Agreement is not intended by the Parties to create any right in or benefit to parties other than AUTHORITY and CONSULTANT. This Agreement does not create any third-party beneficiary rights or causes of action.

34. WAIVER:

The failure of either Party to enforce at any time, or for any period of time, the provisions hereof shall not be construed as a waiver of such provisions or of the rights of such Party to enforce each and every such provision.

35. CAPTIONS:

The captions contained in this Agreement are for reference only and in no way to be construed as part of this Agreement.

36. COUNTERPARTS:

This Agreement may be executed in any number of counterparts and by the different Parties on separate counterparts, each of which, when so executed, shall be deemed an original, and all counterparts together shall constitute one and the same instrument.

37. INTEGRATION:

This Agreement contains the entire understanding between the Parties relating to the transactions contemplated by this Agreement, notwithstanding any previous negotiations or agreements, oral or written, between the Parties with respect to all or any part of the subject matter hereof. All prior or contemporaneous agreements, understandings, representations and statements, oral or written, regarding the subject matter of this Agreement are merged in this Agreement and shall be of no further force or effect.

38. NOTICES:

Any and all notices, demands or requests required or appropriate under this Agreement (including invoices) shall be given in writing and signed by a person with authorization to bind CONSULTANT or AUTHORITY, either by personal delivery, via a scanned document sent via email, or by registered or certified mail, return receipt requested, addressed to the following addresses:

To CONSULTANT:

Black & Veatch Corporation
Attention: Jim Morley
8965 S. Eastern Avenue
Las Vegas, NV 89123
morleyjp@bv.com

To AUTHORITY:

Southern Nevada Water Authority
Attention: Peter Jauch
1001 S. Valley View Blvd.
Las Vegas, Nevada 89153
peter.jauch@lvvwd.com

With copy to:
(excluding invoices)

Southern Nevada Water Authority
Attention: General Counsel
1001 S. Valley View Blvd.
Las Vegas, Nevada 89153
generalcounsel@lvvwd.com

When notice is given by mail, it shall be deemed served three business days following deposit, postage prepaid in the United States mail. When notice is given by email transmission, it shall be deemed served upon receipt of confirmation of transmission if transmitted during normal business hours or, if not transmitted during normal business hours, on the next business day following the email transmission.

The Parties may designate a new contact person under this provision for notices or invoices or change the addresses or email addresses identified above by notifying the other Party in writing.

39. AMENDMENT:

This Agreement may only be amended or modified in a writing stating specifically that it amends this Agreement and is signed by an authorized representative of each party.

40. AUDITS:

The performance of this Agreement by CONSULTANT is subject to review by AUTHORITY to ensure contract compliance at the discretion of AUTHORITY. CONSULTANT agrees to provide AUTHORITY any and all information requested that relates to the performance of this Agreement. All requests for information will be in writing to CONSULTANT. Time is of the essence during the audit process. Failure to provide the information requested within the timeline provided in the written information request may be considered a material breach of contract and be cause for suspension and/or termination of the Agreement.

41. SURVIVAL:

Subject to the limitations and other provisions of this Agreement, the obligations contained in: (a) Paragraph 40 (Audits) of this Agreement will survive the expiration or earlier termination of this Agreement for a period of 12 months after such expiration or termination; and, (b) Paragraphs 9 (Intellectual Property Acknowledgment), 10 (Intellectual Property License), 16 (Indemnification), 21 (Confidentiality and Release of Information), 24 (Data Privacy and Security), 30 (Applicable Law), 31 (Venue), and 32 (Attorney's Fees) of this Agreement, as well as any other provision that, in order to give proper effect to its intent, should survive such expiration or termination, will survive the expiration or earlier termination of this Agreement indefinitely.

42. FORCE MAJEURE:

42.1. A Force Majeure Event is defined as an act beyond the affected party's reasonable control, including: (a) acts of God; (b) flood, fire, earthquake, or explosion; (c) war (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest, with a direct impact on this Agreement; (d) if site access is necessary to perform the Work under this Agreement, site restrictions for elevated security risks; and (e) industry-wide strikes with a direct impact on this Agreement. CONSULTANT's economic hardship and changes in market conditions are not considered Force Majeure Events.

42.2. Both the AUTHORITY and the CONSULTANT have evaluated the effects of COVID-19 on this Agreement. The AUTHORITY and the CONSULTANT expressly agree that COVID-19 and what is known about COVID-19 as of the execution of this Agreement are not considered Force Majeure Events. Notwithstanding the following, the Parties acknowledge that the circumstances of COVID-19 are subject to change and that such changed circumstances may result in a delay constituting a Force Majeure Event.

42.3. Where CONSULTANT is prevented from completing any part of the Work under the Agreement due to a Force Majeure Event, the AUTHORITY and CONSULTANT shall agree to an extension of time in an amount equal to the time lost due to such delay, the agreed extension shall be the CONSULTANT's sole and exclusive remedy for such delay, and CONSULTANT shall not be entitled to an increase in the sums due under Agreement. CONSULTANT shall provide a revised schedule for performance in accordance with Paragraph 17.2.

42.4. The Party suffering a Force Majeure Event shall give notice within 5 days of the Force Majeure Event to the other Party, stating the period of time the occurrence is expected to continue and shall use diligent efforts to end the failure or delay and ensure the effects of such Force Majeure Event are minimized.

43. COMPANIES THAT BOYCOTT ISRAEL:

CONSULTANT certifies that it is not engaged in, and agrees for the duration of the Agreement and any renewal terms, not to engage in, a boycott of Israel. Boycott of Israel means, refusing to deal or conduct business with, abstaining from dealing or conducting business with, terminating business or business activities with or performing any other action that is intended to limit commercial relations with Israel; or a person or entity doing business in Israel or in territories controlled by Israel, if such an action is taken in a manner that discriminates on the basis of nationality, national origin or religion. It does not include an action which is based on a bona fide business or economic reason; is taken pursuant to a boycott against a public entity of Israel if the boycott is applied in a nondiscriminatory manner; or is taken in compliance with or adherence to calls for a boycott of Israel if that action is authorized in 50 U.S.C. § 4607 or any other federal or state law.

44. ELECTRONIC SIGNATURES:

Each Party agrees that the electronic signatures, whether digital or encrypted, of the Parties are intended to authenticate this writing and to have the same force and effect as manual signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed the day and year last entered below.

BLACK & VEATCH CORPORATION

SOUTHERN NEVADA WATER AUTHORITY

Signature

Signature

Print Name

Print Name

Title

Title

Date

Date

EXHIBIT A
SCOPE OF SERVICES

WORK AUTHORIZATION NO. 01

SCOPE OF WORK

I. INTRODUCTION

CONSULTANT will provide Professional Services for the predesign of the two alignment alternatives and their associated facilities described in the Horizon Lateral Feasibility Study, dated January 27, 2021. The professional services requested include engineering and technical services in pipelines, tunnels, pumping stations, reservoirs and rate of flow control stations design. Additional engineering services include aerial mapping, field survey, rights of way, easement and land acquisition support, geotechnical investigations, subsurface utility explorations, electric power supply, cathodic protection, hydraulic and transient evaluations, SCADA and telemetry, NEPA compliance support, sustainability, public outreach support, contract packaging and delivery options, opinion of probable project costs, and start-up and commissioning concepts.

II. DEFINITIONS

Throughout this document the following definitions shall apply:

- AGREEMENT refers to the Professional Services Agreement No. SNWA 0680.0.0
- AUTHORITY refers to the Southern Nevada Water Authority
- Feasibility Study refers to the Horizon Lateral Feasibility Study, submitted January 27, 2021.
- HL refers to the Horizon Lateral
- PROJECT refers to the Horizon Lateral
- REPORT refers to the final predesign study report submitted by the CONSULTANT to the AUTHORITY encompassing the findings and recommendations to the AUTHORITY
- RMWTF refers to the River Mountains Water Treatment Facility
- SVL refers to the South Valley Lateral
- Work Day – AUTHORITY working hours are Monday through Thursday 7:00 A.M to 6:00 P.M.

III. PROJECT DESCRIPTION

The AUTHORITY currently operates and maintains the South Valley Lateral (SVL) with the capacity to provide 306 MGD to the City of Henderson (COH) and the Las Vegas Valley Water District (LVVWD). The AUTHORITY has determined that additional transmission facilities will be required to meet the projected long range demands of both the COH and LVVWD.

To improve the system capacity, reliability and redundancy to deliver water to new purveyor locations in the southern portion of the COH and LVVWD services areas, the AUTHORITY is pursuing the HORIZON

LATERAL PROJECT. The Horizon Lateral (HL), consists of new pumping facilities, transmission main, inline pumping facilities, reservoir, rate of flow control stations, interconnections between the SLV and HL and other appurtenances associated with these facilities to support a functional new delivery system.

The preliminary design will expand upon the Horizon Lateral Feasibility Study, dated January 27, 2021 in which two alternative alignments have been selected by the stakeholders to advance into preliminary design. The North Corridor Alternative and the South Corridor Preferred Alternative scope of services are defined below.

IV. DESCRIPTION OF SERVICES FOR THE HORIZON LATERAL PROJECT

1. GENERAL

- a. The Engineering services provided by the CONSULTANT shall include all managerial, technical, administrative, and support services necessary to complete the studies, investigations, calculations, analyses, and comparisons; and coordination necessary to develop and deliver to the AUTHORITY a final report on the Horizon Lateral including pipeline corridor alignment alternatives, required support facilities for the PROJECT, and all of the Engineering design data and reports required to further the planning and design of the PROJECT components as described in the REPORT.
- b. All work and services performed by the CONSULTANT shall be in accordance with and conform to the requirements of the CONSULTANT Quality Assurance and Quality Control (QA/QC) Plan.
- c. The professional services requested include preliminary engineering and technical services for both the North and South Corridor Alternatives. Engineering level of effort shall be 30 percent for both the North and South alignments and associated facilities as defined within the Feasibility Study. The associated facilities include the following components: pipeline, tunnel, pumping stations, reservoirs, rate of flow control stations and interconnections design. Additional engineering services include aerial mapping, field survey, rights of way, easement and land acquisition support, geotechnical investigations, subsurface utility explorations, electric power supply, cathodic protection, hydraulic and transient evaluations, SCADA and telemetry, NEPA compliance support, risk analysis, sustainability, public outreach support, contract packaging and delivery options, opinion of probable project costs, and start-up and commissioning concepts.
- d. It is the responsibility of the CONSULTANT to coordinate the location of the pipeline connection points at existing or concurrently constructed facilities and proposed future facilities. It is also the CONSULTANT 's responsibility to verify the location and configuration of all known existing major utilities, special crossings and turnouts.
- e. All submittals will be provided both in paper and electronic format using the latest versions of Microsoft Office, Bluebeam (PDF) and AutoCAD Civil 3D for Pipelines and REVIT for facilities , Autodesk Plant 3D for Instrumentation and Control formats. Any other format shall be approved by AUTHORITY before submitting to the AUTHORITY. The paper documentation will be considered

the primary source document and the CONSULTANT will be responsible for consistency. Drawings will be drafted using CADD and submitted in both CADD and PDF formats.

- f. The CONSULTANT will obtain the AUTHORITY's permission prior to contacting any public agency. The CONSULTANT will document all meetings and telephone calls and or email correspondence with outside parties by providing timely contact reports to the AUTHORITY.
- g. All of the CONSULTANT and the CONSULTANT's sub-consultant(s) or subcontractor(s) personnel will be required to undergo the AUTHORITY tortoise training prior to visiting any federal lands around the PROJECT site. The AUTHORITY will provide training, which typically lasts from 20 — 30 minutes. Personnel who have previously undergone training within the last three years need not attend.

2. SCOPE OF SERVICES

The work under this Work Authorization No. 01 (WA 01) includes the following types of services and scope:

Activity Work Breakdown Structure (WBS)

The CONSULTANT's efforts for the PROJECT's activities will be controlled by separate components identified as Work Activities as follows:

Activities are classified as Cost Reimbursable Activities. CONSULTANT shall submit an Activity Funding Summary with Not-To-Exceed price for each activity. CONSULTANT shall be compensated for Work for each activity the amount not-to-exceed in the Activity Funding Summary for that activity and in accordance with Exhibit D – Basis of Compensation and Schedule. Work activities under this Scope of Work are the following:

- Work Activity 2.1 Project Management, Administration and Controls
- Work Activity 2.2 Risk Management
- Work Activity 2.3 Basis of Design and Standards
- Work Activity 2.4 Information and Data Management
- Work Activity 2.5 Modeling: Hydraulic, Transient, CFD, and Physical
- Work Activity 2.6 Aerial Mapping, Survey, and Right of Way
- Work Activity 2.7 Geotechnical Services: Pipeline, Trenchless Crossings and Facilities
- Work Activity 2.8 Geotechnical Services for Tunnel Analysis
- Work Activity 2.9 Subsurface Utility Explorations
- Work Activity 2.10 NEPA Permitting and Environmental Support

Work Activity 2.11	Sustainability
Work Activity 2.12	Pipelines: North Corridor Alternative and the South Corridor Preferred Alternative
Work Activity 2.13	Tunnels: North Corridor Alternative and the South Corridor Preferred Alternative
Work Activity 2.14	Facilities: River Mountains Pumping Station and Clearwells; Inline Pumping Station and Forebay (north and south alternatives); Booster Pumping Stations and Forebay; Reservoir; Rate of Flow Control Stations; SVL to HL Interconnections.
Work Activity 2.15	SCADA and Telemetry
Work Activity 2.16	Cathodic Protection
Work Activity 2.17	Start-up and Commissioning Concepts
Work Activity 2.18	Opinions of Probable Construction Cost (Monte Carlo Analysis)
Work Activity 2.19	Construction Packaging, Phasing and Schedule
Work Activity 2.20	Land Acquisition Support
Work Activity 2.21	Permitting Support
Work Activity 2.22	Public Outreach Support
Work Activity 2.23	Predesign Report
Work Activity 2.24	Deliverables
Work Activity 2.25	Unallocated

Task 1 - Project Management Plan, Administration and Controls (Activity 2.1)

CONSULTANT to administer and control work of the required quality and within budget and time allotted. Project Administration includes oversight by the CONSULTANT's key personnel so that the requirements of this Agreement are fully met. In addition, the CONSULTANT shall:

- Develop Project Management Plan (PMP)
- Provide the necessary project records, reports, and technical data.
- Maintain records of financial management data, schedules, reports, and analyses of the project.
- CONSULTANT shall provide a written record of all meetings in a format acceptable to the AUTHORITY.
- Develop a Quality Assurance/Quality Control Plan and implement the plan through-out the PROJECT duration.

- Develop Project Risk Register
- Provide progress reports of all work undertaken under this AGREEMENT.

1.1 General - Project Administration / Project Management

The CONSULTANT will plan and control the work in such a manner that he completes the Work within the time frames specified in the accepted schedule. If the CONSULTANT is behind schedule, they will provide additional resources to meet the accepted schedule.

All Work Activities and sub-activities will be organized, coded and managed referencing the specific Work Activity Codes identified in this WA 01. Further Work Activity Code Numbers and funding can be developed by mutual agreement. All schedules, estimates, and costs for the CONSULTANT's performance will define the Work in accordance with the Work Activity Codes.

All schedules, cost analyses, and reports will utilize the last Friday of the month as the data for that month's report. The CONSULTANT will define and implement procedures to integrate the scheduling, estimating, and design cost engineering work on the PROJECT; such that the data is consistent between the disciplines.

1.2 Quality Assurance and Quality Control Plan

All work and services performed by the CONSULTANT and the CONSULTANT's subconsultants and subcontractors will be in accordance with and conform to the requirements of the CONSULTANT's QA/QC Plan.

The CONSULTANT will appoint a QA/QC manager that will be responsible for managing all QA/QC activities. The CONSULTANT will prepare a QA/QC Plan for this and all future Work Authorizations associated with the PROJECT. The plan will describe review, checking, and documentation procedures for planning criteria, engineering calculations, drawings, and report preparation. The CONSULTANT will perform an internal audit(s) for compliance with the QA/QC Plan and provide a memorandum to the Project Coordinator accordingly. The CONSULTANT will appoint an internal panel of senior advisors, representing the primary disciplines involved in the development and execution of the PROJECT, who will participate in periodic reviews as part of the Quality Assurance process.

1.3 Schedule Control

1.3.1 Format. The CONSULTANT will use a computerized scheduling system to produce schedule documents. All schedules will be submitted to the AUTHORITY in hard copy and electronic format indicating scheduling information at the Work Activity and sub-activity levels.

1.3.2 Schedule Submittals and Activity Funding Summary. Schedule — Baseline Schedule - Within 45 calendar days from the issuance of the Notice to Proceed, the CONSULTANT shall submit its initial detailed schedule in PDF format and hard copy for review and comment. This initial schedule will include all Activities and sub-activities and will be cost loaded. Activity Funding

Summary will include a not-to-exceed amount for reimbursable services rendered in accordance with the AGREEMENT and at the sole discretion of the AUTHORITY. This initial schedule and Activity Funding Summary submittal, when accepted by the AUTHORITY, will constitute the "CONSULTANT's Accepted Schedule" and the CONSULTANT's Accepted Not-To-Exceed Price for each Work Activity, upon which compensation for Work will be made in accordance with the procedure outlined in Paragraph 4.0 Basis of Compensation and Budget of this WA 01.

Cost-loaded Activities will be consistent with the fee breakdown shown in Exhibit D – Activity Funding Summary and will not exceed the CONSULTANT's authorized not-to-exceed fee for that Activity.

- 1.3.3 Schedule Activity Description. All Work Activities have been defined in the Scope of Work of this WA 01. When required to further define the Work, activities will be further broken down, including funding of the activity, to sub-activities. Sub-activities will be summarized to the Activity level.

The CONSULTANT's accepted schedule will sequence the Work, comply with time constraints, and optimize the work within the available time. The schedule will be prepared in 'Work Days' and show the sequence of all scheduled Activities and sub-activities required to complete the CONSULTANT's Scope of Work through Final Acceptance. Review and acceptance of the schedule by the AUTHORITY will not relieve the CONSULTANT of their responsibility for compliance with the time requirements in this Scope of Work and adhering to those sequences of work indicated in, or required by the Scope of Work, or from completing any omitted work within the time allowed.

If at any time the CONSULTANT falls behind the accepted schedule and cannot prosecute the work as planned within the established time frames and resources, or if the accepted schedule no longer represents the actual prosecution of the work, the CONSULTANT will, at the request of the AUTHORITY, submit within fifteen (15) work days, a revised schedule supported by a narrative explaining the recovery plan methods intended to recover the lost time. The preliminary design effort will be completed within the contract performance period. The revised schedule will show the schedule impact before and after the revision. When this revised schedule is reviewed and accepted by the AUTHORITY, the CONSULTANT will incorporate the revision into the new CONSULTANT's accepted schedule.

Schedule Changes: All changes to the accepted schedule must be approved by the AUTHORITY prior to the CONSULTANT making any changes. Any approved change, or the AUTHORITY's directed change, will be reflected in the next schedule submittal by the CONSULTANT or other schedule update submittal as directed by the AUTHORITY. Any changes to the Not-To-Exceed amount for any activity in the Activity Funding Summary shall be in accordance with Exhibit D

– Basis for Funding and Compensation of this WA 01.

The CONSULTANT will submit a Monthly Schedule Update as part of the monthly reporting requirements.

The date of commencement of the work is stated in the Notice to Proceed.

If an updated (revised) schedule is proposed, cite the new PROJECT completion date, PROJECT status and date of status on each revision.

1.4 Basis for Progress Measurement

The CONSULTANT will submit a proposed reporting format to the AUTHORITY for approval. The format for reporting progress of Activities will be consistent with the AUTHORITY's Standard of Operation Procedure unless modified by the AUTHORITY's PM. The overall progress of the Work will be based on the Not-To-Exceed Price Activities in the Activity Funding Summary. As a basis for monthly schedule progress reporting to the AUTHORITY, the CONSULTANT will measure and report the actual work-hours and costs against planned work hours and costs for each Cost Reimbursable Sub-activity in the schedule.

1.5 Performance Measurement

Based on progress measured, as defined above, the CONSULTANT shall prepare and submit variance analyses identifying the source and cause of any significant variance and the CONSULTANT's plans to recover any significant impact to the Schedule's Completion Dates. Significant variance is defined as 5% or more of variance between planned and actual expenditure. Variance analyses shall be prepared against the current CONSULTANT's Baseline Schedule. The CONSULTANT will submit a schedule recovery plan to the AUTHORITY where the variance is due to the CONSULTANT's actions. The CONSULTANT will also provide a schedule recovery plan if the variance is less than 5% but the CONSULTANT is unlikely to meet the deliverables schedule in the opinion of the AUTHORITY.

1.6 Monthly Progress Reports

On the last Friday of each month, the CONSULTANT will submit a Monthly Progress Report. The Monthly Progress Report will include at a minimum:

- Actual cost and manpower expenditures to date of each Cost Reimbursable Activity and sub-activity.
- A plot of the actual expenditure and actual man-hour curves for each Cost Reimbursable Activity. Each Activity curve shall include the planned expenditure (Earned Value) baseline curve as a comparison.
- A written analysis of the budget, cost, and schedule status in narrative and report format.
- A description of the cause of any significant schedule variance or outstanding issues and the action

taken by the CONSULTANT to address any projected problems with schedule, budget, cost or manpower. The CONSULTANT will provide details of any outstanding information required from the AUTHORITY to meet the schedule.

- A list of work changes and the status of those changes and revisions to cost, schedule or scope of work.
- A list of the CONSULTANT's personnel who have worked on the PROJECT during the month, a short description of their work and the hours (broken weekly) they have worked on the PROJECT (Cost Reimbursable Activities).

1.7 Progress Review Meetings

A progress review meeting will be held on a bi-weekly basis, or as agreed to by the AUTHORITY and the CONSULTANT, to review work progress, review scheduled work activities for the succeeding period, and issue action items. The CONSULTANT shall prepare and distribute the meeting agenda and notes.

1.8 Agencies Meetings and Support

The CONSULTANT will support the AUTHORITY in attending agency meetings. The CONSULTANT may be asked to prepare project related material such as Power Point Presentation and or exhibits. The CONSULTANT shall prepare and distribute the meeting agenda and notes. Outside agencies may include:

- City of Henderson (COH)
- Bureau of Land Management (BLM)
- Bureau of Reclamation (BOR)
- Valley Electric Association (VEA)
- Nevada Department of Transportation (NDOT)
- NV Energy
- Clark County Public Works (CCPW)
- Regional Transportation Commission (RTC)

1.9 Workshops

The CONSULTANT will facilitate a series of workshops for items that require AUTHORITY and stakeholder input. Preliminary design items identified that require a workshop include the following:

- Project Kickoff
- Basis of Design and Standards

- Surveying and Project Control
- North and South Corridor Alternative Evaluations
- Final Route Confirmation Workshop
- Tunneling Evaluations
- System Operation and Control Strategies
- Modeling: Hydraulic, Transient, CFD, and Physical
- Facility Spatial Layout Concepts
- Pumping Station Configurations and siting
- Pumping Station Architectural and Structural
- Pumping Station Hydraulics
- Pumping Station HVAC
- Pumping Station Electrical
- Corrosion control, materials of construction, linings, and coatings
- Technical Topics (Pipeline Optimization, Hydraulics, Tunnels, Pump and Equipment Selection, Sustainability, Operations, Security, etc.
- Contract Packaging, Cost, and Schedule
- Land Acquisitions
- Quarterly Project Updates
- Review Sessions (Pre-submittal walk-through sessions)

The CONSULTANT will present required documentation to convey either technical and or construction considerations of the various proposed workshop topics. The purpose of each workshop is to gain consensus on the various topics. Subsequent to receiving the AUHORITY'S direction, a technical memorandum (TM) will be prepared to document the decision process.

1.10 Travel and Expenses

The CONSULTANT will utilize the AUTHORITY'S travel and expense policy for the duration of predesign.

Task 2 – Risk Management (Activity 2.2)

The CONSULTANT will identify and manage risks related to project implementation. In addition, the CONSULTANT will integrate the risk-based decision model developed during the Feasibility Study to evaluate and confirm specific design elements when considering the additional information that will be gained throughout the predesign phase. Use of the risk model will serve as a repository to memorialize key predesign decisions so that they are auditable, repeatable and transparent.

2.1 Risk Management

THE CONSULTANT will work with the AUTHORITY to implement a proactive risk management process that systematically identifies and tracks potential mitigation of risk at each phase of the project. The process will be developed in accordance with the ISO 31000 Risk Management, which includes the following steps:

- Risk Identification
- Risk Assessment/Analysis
- Risk Response
- Risk Monitoring and Control

CONSULTANT will facilitate a Risk Identification workshop to be attended by the AUTHORITY and other key stakeholders. The purpose of the workshop will be to identify and document in a Risk Register the key risks as well as their likelihood and consequences. Risk types evaluated will include but not be limited to the following:

1. Development Risks

- Right-of-way (ROW)/Easements
- Environmental and Permits
- Public and Stakeholder
- Legal/Funding

2. Design Risks

- Engineering (General)
- Specifications
- Scope Changes
- Subsurface Constructability
- Design Cost Estimates

- Construction Impacts
- Constructability
- Cost and Schedule

CONSULTANT will develop the Risk Register in a Power BI format that is organized to document risks for the pre-design phase as well as all subsequent stages of the project. The Risk Register will be regularly updated and will be reviewed monthly as a standing item at scheduled progress meetings.

CONSULTANT will utilize the Risk Register to undertake a structured risk assessment and analyze and document identified risks. Once probable risks have been identified, Consultant will analyze them in terms of their likelihood and consequence of occurrence. Where possible, risks will be analyzed using quantitative methods, including decision tree analysis, fault tree analysis and Monte Carlo analysis. Where quantitative data are not available or are cost prohibitive to obtain, qualitative analyses will be utilized, such as expert judgement.

CONSULTANT will collaborate with AUTHORITY to develop appropriate responses for risks identified at the start of the predesign phase. Thereafter, risk responses will be developed for emergent risks at specifically arranged risk management meetings. The timing of these meetings will be on an as needed basis, dependent on the identification of new or changing risks. Typical risk responses fall into four main categories:

- Risk Avoidance
- Risk Transfer
- Risk Mitigation
- Risk Acceptance

Decisions on appropriate risk responses will be documented in the Risk Register, including assigned risk level pre- and post-mitigation, along with associated costs. CONSULTANT will actively manage the risk register to ensure it is current and that it evolves in parallel with predesign activities. CONSULTANT will work with AUTHORITY to develop the risk register ‘look and feel’ so that it can be used for visualization of risk for both the CONSULTANT and AUTHORITY technical teams, as well as making risk information accessible to external stakeholders. The Risk Register will be located on the project intranet site and made accessible to core project team.

Deliverable

- ISO 31000 compliant risk management approach
- Power BI based Risk Register

2.2 Continuity of Risk Model in Predesign Phase

The CONSULTANT will update and maintain the risk-based decision model to assist in the evaluation of specific design elements. To ensure continuity, the model will retain original Investment Planning Criteria (IPC), updated as appropriate with hydraulic performance and cost data. As additional information is collected and more detailed analysis is undertaken, the IPC may be further expanded to inform predesign decisions.

CONSULTANT will utilize the risk model to support predesign phase alignment decisions, proposed construction types, costing assumptions and when design modifications propose risk and/or cost modifications.

The process to memorialize predesign decisions will mirror that adopted in the Feasibility Study stage. CONSULTANT shall maintain the risk model visualization capabilities so that results will be current and available for use in stakeholder discussions as needed.

Deliverable

- Updated Risk Model for use in Pre-design decision making
- Memorialization of key pre-design decisions in model.

Task 3 – Basis of Design and Standards (Activity 2.3)

3.1 Engineering Design Standards

The CONSULTANT will review the AUTHORITY'S Engineering Design Standards (EDS) with the AUTHORITY'S Engineering and Operations Departments and develop a PROJECT specific basis of design manual. The CONSULTANT shall identify and recommend additional items and discuss with the AUTHORITY in a review workshop.

3.2 Design Code Classification and Workshop

The CONSULTANT will define the Codes to be used for the project, the means to move between code years and various adoption of codes by local agencies. The outcome will be the development of a code classification table

The CONSULTANT will hold a workshop with the AUTHORITY's design engineering and operations teams as well as Construction Manager to discuss and agree upon the code requirements and how to address codes for the duration of the project predesign and final design.

Deliverable

- Code Classification Table

3.3 Basis of Design

The CONSULTANT will prepare the basis of design manual that will be used for the predesign and basis for

final design of the following facilities:

- Pipelines
- Tunnels
- Main Pumping Station and Clearwells
- Inline Pumping Station and Forebay
- Booster Pumping Station and potential Forebay
- Reservoir
- Rate of Flow Control Stations
- SVL to HL Interconnections

The CONSULTANT will prepare the criteria for the following design elements:

- Aerial Mapping and Survey
- Utility Coordination and Base Map Preparation
- Geotechnical
- Civil/Site Development
- Permitting and Right-of-Way
- Architectural
- Structural
- Mechanical
- Electrical
- Instrumentation and Controls
- Cathodic Protection

3.4 Utility and Base Map Design Standards

The CONSULTANT will define the standards and level of utility information collected for both dry and wet utilities over both project alignments. The task will include setting up the project base sheet standards and scales, along with suggestions for pipelines and facilities. The task includes survey standards, aerial imagery, working in GIS and Civil 3D environments.

3.5 Boundary, Right-of-Way, Permitting Standards

The CONSULTANT will defined the standards and level of information collected for the boundary survey, right-of-way documentation and permitting to be used throughout the life of the project.

Deliverable

- Basis of Design Draft TM
- Basis of Design Final TM

Task 4 – Information and Data Management (Work Activity 2.4)

4.1 Background and Basis

CONSULTANT will build upon the information collected during the Feasibility Study by creating a database management system to store, verify, catalog and disseminate collected information to project teams and outside users (AUTHORITY or Construction Manager). The database will be built from a combination of GIS files, field verified surveys, as-built drawings, right-of-way, parcel and owner information, permits, utility information and subsurface utility explorations.

CONSULTANT Develop a system for the management of data collection.

- Prioritize utilities to distribute and optimize timing/methodology for receipt.
- Establish workflow for distributing data for as-built verification, field verification and collaboration of collection cad design.
- Establish escalation methods & tracking from task assignee to supervisor and/or signoff.
- Establish workflow timelines for validation and ultimate tracking of completion vs goal.
- Develop metrics for the capability to flex resource assignment vs project timelines.
- Includes training and granting of access/permission roles by engineer/supervisor.
- Establish a workflow for the distribution of utility verification data to CAD design team.
- Power Bi
 - Design/Develop/Implement Project dashboards to track project KPI's for collection, validation, resource deployment, quantification of progress, escalation points, timelines, daily/weekly/monthly reporting.
 - Develop standardized report forms, for exporting data from the database into a paginated format.
 - Integrate Dashboards with Teams as a collaboration hub.

4.2 System Construction and Maintenance

CONSULTANT will perform and coordinate collection of data periodically throughout the design life of the project. This effort may include research of City of Henderson, Regional Transportation Commission (RTC),

Nevada Department of Transportation (NDOT), Clark County and all applicable Flood Control, Water, Sewer, Fiber Optic, Gas, Fuel, Cable TV, Telephone, Electrical (Distribution and Transmission) and any other pertinent information in the project corridors.

A centralized approach for overall data management will be implemented by the CONSULTANT and utilized throughout the predesign, design, construction and start-up project phases. The data management system will address collection, storage, ongoing validation, and visual representations shared to measure progress. Documentation of workflows between various stakeholders will be developed to ensure that project contributors clearly understand their roles. Standardized templates and forms will be created to automate and drive consistency across third parties and field engineering staff. The prioritization, collection and validation of data records will be scalable and serve as “real time” inputs to centralized reporting via dashboards. Key metrics will be established for regular tracking of utility collection and validation efforts and procedures for identifying new or complex issues will be captured and escalated as necessary.

4.3 Utilities

Utility information will be managed and classified in accordance with the American Society of Civil Engineers (ASCE) Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data number 38-02. CONSULTANT will approach collection and review of existing utility data and reports as an iterative process, with two general information gathering phases. The initial information phase will involve collection of the data sets applicable to the pipeline alignments, including GIS data and utility coordination requests for all existing facilities within the primary alignment corridors. The information obtained will be logged, reviewed and uploaded to the database management system.

Following compilation of the received data, CONSULTANT will provide additional coordination with utility purveyors that consists of the identification of construction conflicts and meetings to evaluate in greater detail information related to removals, relocations, identification of rights-of-way and prior rights, and other topics as may be pertinent to coordination and resolution of identified utility conflicts, with the goal of arriving at common agreement between the AUTHORITY and utility purveyors regarding measures to be taken during design and construction to resolve the identified conflicts.

4.4 Right-of-Way and Parcel Data

CONSULTANT will perform right-of-way research and land ownership information along the pipeline corridor alignments, collection and review of existing information. The information obtained will be logged, reviewed and uploaded to the database management system.

4.5 Traffic

CONSULTANT will log the traffic information along the pipeline corridor alignments. The information obtained will be logged, reviewed and uploaded to the database management system.

4.6 Geotechnical

CONSULTANT will log the geotechnical information along the pipeline corridor alignments and facilities. The information obtained will be logged, reviewed and uploaded to the database management system.

4.7 Permitting

CONSULTANT will develop, maintain and track project permits associate with each project component. The information obtained will be logged, reviewed and uploaded to the database management system.

4.8 Documentation

A centralized approach for overall data management will be implemented by the CONSULTANT and utilized throughout the design, construction and start-up project phases. The data management system will address collection, storage, ongoing validation, and visual representations shared to measure progress. Documentation of workflows between various stakeholders will be developed to ensure that project contributors clearly understand their roles. Standardized templates and forms will be created to automate and drive consistency across third parties and field engineering staff. The prioritization, collection and validation of data records will be scalable and serve as “real time” inputs to centralized reporting via dashboards. Key metrics will be established for regular tracking of utility collection and validation efforts and procedures for identifying new or complex issues will be captured and escalated as necessary.

The CONSULTANT will document their findings and recommendations in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Utility Data Draft TM
- Utility Data Final TM

Task 5 – Modeling: Hydraulic, Transient, CFD, and Physical (Work Activity 2.5)

The CONSULTANT will expand upon the InfoWater hydraulic modeling completed during the Feasibility Study for the two corridor alternatives. Additionally, the CONSULTANT will perform preliminary Transient, Computational Fluid Dynamics (CFD), and Physical modeling to further plan and support various elements of the Horizon Lateral (HL) system predesign. It is understood and agreed that the CONSULTANT will not release the AUTHORITY model and facility data to any outside entity or use it beyond the scope of this WA 01 without prior written consent from the AUTHORITY.

5.1 Hydraulic Modeling

The proposed two corridor alternatives for the HL will be analyzed to further plan and support development of system predesign criteria. The existing InfoWater hydraulic model will be used to analyze system hydraulics (flows and pressures), interconnections with the SVL, system outage and emergency scenarios, system operations and scenarios, and water quality (age) for each corridor alternative with representative

facilities included.

CONSULTANT will work with the AUTHORITY in verifying existing and establishing any new predesign criteria and system performance objectives:

- Feasibility Study hydraulic criteria
 - a) System demand requirements
 - b) Maximum pipeline velocity
 - c) Maximum/minimum system pressures
- SVL interconnection criteria/objectives
 - a) Normal system operations
 - b) Emergency (outage) system operations
- System (HL and SVL) operations and water quality (age) criteria/objectives
 - a) Maximum day system demands
 - b) Average day system demands
 - c) Minimum day system demands

Work will include a Workshop with AUTHORITY to finalize the predesign criteria and system performance objectives which will be used during the hydraulic modeling. Preparation of Workshop materials (i.e. PowerPoint presentations) are included in this task.

CONSULTANT will update the existing InfoWater hydraulic model to reflect changes to system demand requirements or other system configuration assumptions that may have been made since the Feasibility Study was completed.

CONSULTANT will then utilize the model to perform the following system analyses for each corridor alternative:

- Peak System Demand Analysis – Will verify system (pipelines and pumping stations) sizing from Feasibility Study. Hydraulic model runs for peak system demand conditions will be performed with the updated model to assess and potentially modify the sizing of HL pipelines and pumping stations. The existing Optimatics Optimizer model will also be run in parallel to update the economic analysis of capital and operating costs. The Optimizer model will also update the selection of pressure class for all HL pipeline segments based on the latest maximum pressure results.
- SVL Interconnection Analysis – Will assess operational and facility needs with the HL and SVL operating as a continuously interconnected system or as a continuously separated system that is only interconnected under system outage or other emergency system conditions. Hydraulic model

runs for peak and minimum demand conditions will be performed with the updated model to assess typical system operations and potentially modify the design criteria for the RMPS, inline pumping stations and forebays, and booster pumping stations of both the North and South Corridor alternatives. Final recommended design criteria will heavily depend on whether SNWA intends to operate the HL and SVL as a continuously interconnected system. Hydraulic analyses and workshop sessions during pre-design will support SNWA decision on typical operation of interconnections.

- System Outage and Emergency Response Analysis – Will assess various system outage scenarios with and without continuous interconnection between the HL and SVL. Hydraulic model runs for average demand conditions will be performed with the updated model to assess system performance during various system outage scenarios (i.e. pipe segments or pumping stations) and potentially modify the system design to meet SNWA outage/emergency system performance objectives. These analyses will also address where isolation valves should be included in the HL design and potentially added to the existing SVL.
- System Operations and Water Quality (Age) Analysis – Will assess system operations and water quality (age) for start-up through build-out conditions. Hydraulic model runs for minimum, average, and peak demand conditions will be performed with the updated model to assess system operations and water quality (age) versus the system performance objectives established above. It is possible that the results of these analyses will result in refinements to the system design.
- Preliminary System Phasing and Implementation Plan – Will assess potential construction phasing for HL pipelines and pumping stations and determine recommended implementation plan.

The above analyses will determine system sizing/design requirements and potential changes to the system design that was defined in the Feasibility Study that are needed to meet the predesign criteria and system performance objectives.

CONSULTANT will conduct a Workshop with AUTHORITY to explain the results and findings of each of the above hydraulic modeling analyses and solicit input from the AUTHORITY. It is anticipated that up to two (2) additional rounds of hydraulic modeling analysis updates and subsequent meetings with AUTHORITY will be needed to incorporate AUTHORITY input and finalize the system sizing/design requirements. Preparation of Workshop materials (i.e. PowerPoint presentations) are included in this task.

5.2 Transient Modeling

Preliminary transient modeling of the proposed two corridor alternatives for the HL will be performed to assess transient conditions for each and identify the recommended transient control strategy and primary control facilities/equipment for each.

The existing InfoWater hydraulic model will be imported into Bentley HAMMER software and further updated and refined to include the additional existing and planned system information that is needed to perform transient

analyses, such as pipeline wave speeds, pump and motor inertias, and specialty valve characteristics. Additional model nodes will be added to the model if/as needed to adequately capture major high elevation and low elevation points along each of the preliminary pipeline routes.

Preliminary model runs will be performed for normal pump start-up and shut-down operations and for emergency (i.e. power loss) pump shut-down operations to assess the magnitude of resulting transient pressures and identify surge control facilities/equipment that will be needed to adequately control both high and low transient pressure conditions. It is anticipated that these preliminary analyses will conclude that additional hydro-pneumatic surge tank facilities will be needed at the RMWTF as well as additional surge control equipment along the transmission main system to control potential pressure transient that could be generated by operation of the RMWTF as well as the pumping stations along the transmission system.

The results of these preliminary transient analyses will help establish site layouts and costs for associated surge control facilities/equipment. The preliminary transient analyses will likely focus on sizing for hydro-pneumatic surge tank facilities at the RMWTF since these will likely be significant.

The CONSULTANT will document the results, findings, and recommendations in a Technical Memorandum (TM) to be included within the Report.

It should be noted that these preliminary transient analyses will be updated during the future final design phase after final pipeline alignments, pump and control valve selections, and other key system design decisions have been finalized to potentially refine and finalize design criteria for the recommended surge facilities/equipment.

5.3 Computational Fluid Dynamics Modeling (CFD) Modeling

CFD modeling will be performed to examine suction conditions of the pumps for the River Mountains Pumping Station and the Inline Pumping Stations. The modeling will be used to verify and optimize the suction conditions.

5.4 Physical Modeling

Hydraulic Institute (HI) ANSI 9.6.6 outlines physical modeling requirements to verify pump inlet conditions and make sure there are no unacceptable flow patterns at the pump suction. Six different criteria are listed. At least two of those criteria will likely be applicable to the River Mountains Pumping Station and the Inline Pumping Stations.

- The diameter of the inlet (suction) piping is greater than 24 inches or flows greater than 10,000 gpm.
- When the cost of remedy for improper pump operation or pump failure would be significantly more than the cost of the physical model study.

Based on these criteria, physical modeling is recommended and will be performed to verify proper suction conditions to the pumps and help prevent issues during pump startup and operation.

Deliverables

- Hydraulic Modeling Draft TM
- Hydraulic Modeling Final TM
- Preliminary Draft Transient Modeling TM (Final during design phase once profiles and alignment is selected)
- Laboratory Report for physical modeling.

Task 6 – Aerial Mapping, Survey, and Right of Way (Work Activity 2.6)

6.1 Develop Base Imagery

CONSULTANT will fly both the North Corridor Alternative and the South Corridor Preferred Alternative for the purpose of developing project aerial imagery and contour development. CONSULTANT will keep AUTHORITY informed as areas that are advanced into preliminary design.

Existing horizontal and vertical control monuments will be located throughout the project limits. Existing control monuments will be observed using Global Positioning System receivers. Horizontal and vertical datum will be based upon the North American Datum of 1983 [NAD83 (2011) Epoch 2010.0 (MYCS2)], and North American Vertical Datum of 1988. The initial control survey will be developed to a level of detail sufficient for all phases of the project from the alignment study to final design packages. A project coordinate system will be based on ties to existing control at the River Mountains Water Treatment Facility, to be established and documented with a record of survey.

6.2 Record of Survey

The Record of Survey will be filed with the Clark County Recorder's office during the design phase. The purpose of the record of survey is to ensure that all future work on the HL project is on a consistent horizontal and vertical datum by memorialize the survey control utilized for the project.

6.3 Survey Base Sheets

Provide a combination of aerial and LIDAR generated topography at 1-foot contours intervals with full planimetrics for a minimum 400-foot wide swath and maximum 1,000-foot wide swath. Exact width of the survey extents will vary based on design requirements specific to each identified phase of each corridor alternative, estimated to extend 31 miles for the South Corridor and 37 miles for the North Corridor. Enough survey coverage will be provided at each of the identified facilities to incorporate site boundaries and offsite tie-ins for rights-of-way, and property boundaries, with room for map population with the most probable off-site utilities. Each prepared AutoCAD Civil3D base map segment will consist of selected sections of the overall corridor alternatives. Field surveyor will set target positions and coordinate with aerial mapping for flight and mapping delivery schedules. Aerial topography and photo images will be provided in both project coordinate

systems compatible with AutoCAD Civil3D, and converted state plane coordinate system compatible with GIS software systems.

Project control points will be established throughout the project limits. The primary control will be set at approximately half (1/2) mile intervals. Controlling monuments and established project control points will be documented with a Record of Survey.

6.4 Field Surveys

Survey will be provided for the subsurface utility explorations and geotechnical exploration programs. Approximately 250 subsurface utility potholes and 176 pipeline and 45 facility geotechnical boring locations are estimated to be surveyed. Project coordinates will be provided for the locations in a point file format. Ten weeks of a two-person survey crew, plus office support has been allocated to this task.

Upon completion of the 1-foot aerial topography, additional field survey will be performed to verify that selected indications of surface utilities are shown correctly. Additional points necessary for design delineation will be surveyed request, to include existing gravity (sanitary sewer and stormwater system) utility manhole dipping, valve box confirmation, and other confirmations. Six months consisting of a three (3) two-person survey crews, plus office support has been allocated to this task.

6.5 Survey Support SNWA ROW / Land Group

CONSULTANT assumes up to fifteen 3-hour meetings with SNWA Survey and Land Acquisition Group will be required over the duration of the project. Field surveyor will evaluate and provide field safety precautions for survey field work to occur in heavily congested traffic areas including provisions for crash vehicle(s), traffic control, and diversion measures as may be applicable to the requested field activities.

Deliverable

- Aerial Photos
- Digitized Contours
- Field Surveys of Surface Utilities
- Record of Survey (Final Design once alignment is selected)

Task 7 – Geotechnical Services: Pipeline, Trenchless Crossings and Facilities (Work Activity 2.7)

Geotechnical Subconsultant shall perform the required, as determined and approved by the AUTHORITY, geotechnical evaluation.

7.1 Geotechnical Explorations and Testing

Laboratory tests performed on samples recovered from the borings at approximately the frequency outlined below provided assuming applicable soil type, quantity, and quality samples are recovered:

- In-Place Moisture Content and Dry Density – up to 1 test per 5 feet of each boring
- Sieve Analysis – up to 1 test per 15 feet of each boring
- Plasticity Index – up to 1 test per 15 feet of each boring
- Direct Shear – up to 1 test per 25 feet of total drilling footage
- Corrosivity Suite with as-is & wetted resistivity, sulfate and chloride ion concentration, carbonate, and pH tested – up to 1 test per 25 feet of total drilling footage
- Swell – up to 1 test per 100 feet of total drilling footage
- Collapse potential - up to 1 test per 100 feet of total drilling footage
- Consolidation – up to 1 test per 200 feet of total drilling footage
- Proctor - up to 1 test per 100 feet of total drilling footage
- R-Value - up to 1 test per 250 feet of total drilling footage
- CLSM samples - up to 1 test per 300 feet of total drilling footage
- DOT concrete samples - up to 1 test per 300 feet of total drilling footage

CONSULTANT will provide sample storage for up to 60 months.

7.2 Pipeline Geotechnical Explorations

CONSULTANT will develop exploration location plan for approval prior to drilling. CONSULTANT will develop exploration schedule for approval and tracking throughout field exploration program. CONSULTANT will obtain USA clearance, applicable encroachment permits, traffic control plans for permits, traffic control setup for each boring location, as necessary, request agency inspections and return to conditions post boring process. CONSULTANT will provide, daily, weekly, monthly status of project explorations.

Drilling areas common to both Alternatives will be spaced every 750 ft along the pipeline alignments, work to be authorized and approved by the AUTHORITY prior to field work. Drilling areas not common to both Alternatives will be spaced every mile. Drill depths of up to 35 feet for most pipeline areas, with depths up to 80 feet in the Amargosa Tunnel Area. In addition, drill up to 2 borings to depths of up to 50 feet at each trenchless crossing.

Drilling will consist of utilizing hollow-stem auger primarily. In areas where strongly cemented and or bedrock materials will be encountered, it is anticipated that mud-rotary and or air rotary techniques will be utilized. Rock coring or Sonic Drilling may be utilized for six borings in the area of Black Mountain, prior to entering or exiting the tunnel areas, covered under another task.

It is anticipated that 176 borings with a total footage of 8,000 lineal feet will be required.

Geophysical soil resistivity surveys (Wenner 4-pin with adequate supply current) will be performed at spacings of every 750 feet for areas that are “common” to both route alternatives or paralleling high voltage power lines and one survey per mile along portions of the route that are not common (uncommon areas) to both alternate routes. Testing will be performed along a straight line at least 3 times as long as the proposed pipe/tunnel depth to which resistivity is measured without paralleling existing underground metal structures. The surveys will characterize soil layers at and below the proposed pipe depth. Deeper tests will be performed at SNWA properties along each alignment to evaluate the potential for deep well systems.

7.3 Facilities Geotechnical Explorations

Borings for the River Mountains Pumping Station, Clearwells, access roads, vaults, and large equipment pads as required. The borings required at the River Mountains Pumping Station are two to a depth of 100 feet for the building footprint, two borings to a depth of 100 feet at each of the three clearwell sites, one boring to a depth of 40 feet for the electrical equipment foundation, two borings to a depth of 40 feet for the surge tank foundation and additional borings (if needed) at a set unit cost. Performance of two field resistivity tests (Wenner four-pin method) at the pumping station and clearwell locations (eight tests total). Soil resistivity will be measured at selected approximate “a” spacings to depths up to 70 feet. Resistivity tests along two perpendicular traverses will be performed at each of the test locations. Performance of laboratory tests to evaluate physical and engineering properties of the subsurface soils, including in-place moisture content and density, gradation, Atterberg limits, remolded direct shear, R value, Miller Box resistivity and chemical analysis (corrosion suite).

Borings for Inline Pumping Station, Forebay (North or South) as required once selection of final Alternative. The borings required at the Inline Pumping Station is two to a depth of 100 feet for the building footprint, one boring to a depth of 100 feet for the selected forebay site, one boring to a depth of 40 feet for the electrical equipment foundation, two borings to a depth of 40 feet for the surge tank foundation and additional borings (if needed) at a set unit cost. Performance of two field resistivity tests (Wenner four-pin method) at the pump station and forebay locations (four tests total). Soil resistivity will be measured at selected approximate “a” spacings to depths up to 60 feet. Resistivity tests along two perpendicular traverses will be performed at each of the test locations. Performance of laboratory tests including in-place moisture content and density, gradation, Atterberg limits, remolded direct shear, Miller Box resistivity and chemical analysis (corrosion suite).

Rate of Flow Control Stations (ROFCS), known sites and then any difference based on final alternative selected. Each ROFCS will require one boring to a depth of 30 feet at the location of the structure for each site. Five sites are anticipated. Performance of two field resistivity tests (Wenner four-pin method) at each of the ROFCS sites (10 tests total). Soil resistivity will be measured at selected approximate “a” spacings up to 30 feet. Resistivity tests along two perpendicular traverses will be performed at each site. Performance of laboratory tests including in-place moisture content and density, gradation, Atterberg limits, remolded direct

shear, Miller Box resistivity and chemical analysis (corrosion suite).

Reservoir site (North and/or South), based on selection of final Alternative. The reservoir would have five borings to a depth of 75 feet over the reservoir footprint. Performance of two field resistivity tests (Wenner four-pin method) at the reservoir location(s). Soil resistivity will be measured at selected approximate “a” spacings up to 35 feet. Resistivity tests along two perpendicular traverses will be performed at each of the test locations. Performance of laboratory tests to evaluate physical and engineering properties of the subsurface soils, including in-place moisture content and density, gradation, Atterberg limits, remolded direct shear, Miller Box resistivity and chemical analysis (corrosion suite).

Interconnection sites, based on selected options once determined how these connections will be located. One Interconnection site will require one boring to a depth of 45 feet and the second site will require one boring to a depth of 35 feet, two sites are anticipated. Performance of two field resistivity tests (Wenner four-pin method) at each site (four tests total). Soil resistivity will be measured at selected approximate “a” spacings up to 35 feet. Resistivity tests along two perpendicular traverses will be performed at each of the test locations. Performance of laboratory tests to evaluate physical and engineering properties of the subsurface soils, including in-place moisture content and density, gradation, Atterberg limits, remolded direct shear, Miller Box resistivity and chemical analysis (corrosion suite).

Booster Pumping Stations and Forebays (Cactus and No. 33 Sites). The borings required at each of the Booster Pumping Stations are three to a depth of 50 feet for the building footprint and one boring to a depth of 50 feet for the forebay, Performance of two field resistivity tests (Wenner four-pin method) at each pump station and forebay site (eight tests total). Soil resistivity will be measured at selected approximate “a” spacings up to 40 feet. Resistivity tests along two perpendicular traverses will be performed at each of the test locations. Performance of laboratory tests including in-place moisture content and density, gradation, Atterberg limits, remolded direct shear, Miller Box resistivity and chemical analysis (corrosion suite)

Deliverables

- Geotechnical Data Report Draft
- Preliminary Design Recommendation Report

Task 8 – Geotechnical Services for Tunnel Analysis (Work Activity 2.8)

8.1 Sloan Canyon Tunnel

Geotechnical information will be categorized by CONSULTANT, drilling will be performed by subconsultants. Three different tunneling options are discussed herein; Sloan Canyon, Black Mountain, and Amargosa Corridor and St Rose Parkway past the Saint Rose Dominican Hospital to the west.

Sloan Canyon – This task is supported under the existing BLM Plan of Development being submitted in March 2021 to the BLM.

Drilling Coordination and Permitting:

- Provide geotechnical management of all field activities.
- Develop investigation schedule for field and laboratory activities for tracking progress.
- Walk the access route for each boring with representative of drilling subcontractor to determine if it is accessible by ground and which type of drill rig is appropriate for the conditions.
- Attend meetings with SNWA and BLM for permitting approval (assume one meeting).
- Respond to questions and comments from BLM on proposed field activities described in the Plan of Development.
- Obtain any other required permits.
- Provide weekly updates on progress.

Geotechnical Investigation:

- Drill fifteen borings with 12 inside the SCNCA and 3 outside. The borings range in depth from 100 feet to 1,500 feet for a total of 8,300 feet of borehole. The drilling will be almost entirely core boring through rock.
- Downhole geophysics (acoustic and/or optical televiewer) will be completed on 8 of the borings to understand the fracture orientations for stability analysis.
- Downhole pressure meter testing or hydraulic fracturing will be performed on 3 borings to quantify in situ stresses.
- Three seismic refraction profiles will be done along the alignment where top of rock is of concern.
- Log core samples and photograph core in the field.
- Perform point load testing in the field.
- Coordinate surveying of the borehole locations.
- Detailed geologic mapping will be performed along the proposed southern alignment including areas adjacent to the alignment by our subconsultant Geoscience Consultants. Mapping includes the identification of units, description of rock lithology and mineralogy, their stratigraphic position, thickness of lava and pyroclastic flows, location and characterization of volcanic domes, and the variation in unit thickness along the alignment. Lateral continuity of the various units will be noted

and used in combination with the rock cores to determine feasibility of projecting individual units down to the tunnel elevation. Fracture density and orientation will be noted along with the location and orientation of faults, and the thickness of fault zones. Rock alteration, estimates of strength, and any mineralization will also be noted on the geologic maps. Along with the geologic maps, a geologic profile will be developed along the tunnel alignment.

Laboratory Testing

- Select samples will be sent for laboratory testing that will include:
- Unconfined compressive strength (ASTM D7012); 10 tests per boring
- Splitting tensile strength (ASTM D3967); 5 tests per boring
- Cerchar abrasivity index (ASTM D7625); 5 tests per boring
- Direct shear strength (ASTM D5607); 5 tests per boring
- Slake durability testing (ASTM D4644); 3 tests per boring
- Corrosivity testing; 2 per boring
- Thin-section petrography; 2 per boring

Deliverable

Draft Geotechnical Data Report to include:

- a) Regional and local geology
- b) Description and results of the field investigation
- c) Results of laboratory testing
- d) Summary of the subsurface conditions
- e) Boring logs and core photographs
- f) Televiewer imaging logs and stereonets
- g) Results of in situ stress tests

8.2 Black Mountain Tunnel

This task will commence upon approval by the AUTHORITY, if at such time it is deemed necessary to keep the project on schedule or at such time the selection of the north corridor alternative.

Drilling Coordination and Permitting:

- Provide geotechnical management of all field activities.
- Develop investigation schedule for field and laboratory activities for tracking progress.

- Walk the access route for each boring with representative of drilling subcontractor to determine accessibility.
- Attend meetings as necessary with SNWA and the City of Henderson for permitting approval (assume one meeting).
- Obtain other required permits.
- Provide weekly updates on progress.

Geotechnical Investigation:

- Drill four borings ranging in depth from 200 feet to 1,150 feet for a total of 2,550 feet of borehole. The drilling will be almost entirely core boring through rock in three of the borings, and mostly in soil on the fourth.
- Downhole geophysics (acoustic and/or optical televiewer) will be completed on 2 of the borings to understand the fracture orientations for stability analysis.
- Downhole pressuremeter testing or hydraulic fracturing will be performed on 1 boring to quantify in situ stresses.
- One seismic refraction profile will be done along the alignment where top of rock is of concern.
- Log core samples and photograph core in the field.
- Perform point load testing in the field.
- Coordinate surveying of the borehole locations.
- Detailed geologic mapping will be performed along the proposed northern alignment through Black Mountain including areas adjacent to the alignment by our subconsultant Geoscience Consultants. Mapping includes the identification of units, description of rock lithology and mineralogy, their stratigraphic position, thickness of lava and pyroclastic flows, location and characterization of volcanic domes, and the variation in unit thickness along the alignment. Lateral continuity of the various units will be noted and used in combination with the rock cores to determine feasibility of projecting individual units down to the tunnel elevation. Fracture density and orientation will be noted along with the location and orientation of faults, and the thickness of fault zones. Rock alteration, estimates of strength, and any mineralization will also be noted on the geologic maps. Along with the geologic maps, a geologic profile will be developed along the tunnel alignment.

Laboratory Testing

- Select samples will be sent for laboratory testing that will include:

- Unconfined compressive strength (ASTM D7012); 10 tests per boring
- Splitting tensile strength (ASTM D3967); 5 tests per boring
- Cerchar abrasivity index (ASTM D7625); 5 tests per boring
- Direct shear strength (ASTM D5607); 5 tests per boring
- Slake durability testing (ASTM D4644); 3 tests per boring
- Corrosivity testing; 2 per boring
- Thin-section petrography; 2 per boring

Deliverable

Draft Geotechnical Data Report to include:

- a) Regional and local geology
- b) Description and results of the field investigation
- c) Results of laboratory testing
- d) Summary of the subsurface conditions
- e) Boring logs and core photographs
- f) Televiewer imaging logs and stereonets
- g) Results of in situ stress tests

8.3 Amargosa Corridor Tunnel

This task will commence upon approval by the AUTHORITY, if at such time it is deemed necessary to keep the project on schedule or at such time the selection of the north corridor alternative.

Drilling Coordination and Permitting:

- Provide geotechnical management of all field activities.
- Develop investigation schedule for field and laboratory activities for tracking progress.
- Walk the access route for each boring with representative of drilling subcontractor to determine accessibility.
- Attend meetings as necessary with Valley Electric, NDOT and other landholders with SNWA and the City of Henderson for permitting approval (assume one meeting).
- Obtain other required permits.
- Provide weekly updates on progress.

Geotechnical Investigation:

- Drill six borings ranging in depth from 100 feet to 275 feet for a total of 1,425 feet of borehole. The drilling will be almost entirely through soil. Drilling methods may include some combination of HAS Auger, mud rotary, coring, and/or sonic drilling.
- Log soil samples in the field.
- Coordinate surveying of the borehole locations.

Laboratory Testing

- Select samples will be sent for laboratory testing that will include:
 - a) In-Place Moisture Content and Dry Density – up to 1 test per 5 feet of each boring
 - b) Sieve Analysis – up to 1 test per 15 feet of each boring
 - c) Plasticity Index – up to 1 test per 15 feet of each boring
 - d) Direct Shear – up to 1 test per 25 feet of total drilling footage
 - e) Corrosivity Suite with lab resistivity – up to 1 test per 25 feet of total drilling footage
 - f) Swell – up to 1 test per 100 feet of total drilling footage
 - g) Collapse potential - up to 1 test per 100 feet of total drilling footage
 - h) Consolidation – up to 1 test per 200 feet of total drilling footage
 - i) Proctor - up to 1 test per 100 feet of total drilling footage
 - j) R-Value - up to 1 test per 250 feet of total drilling footage
 - k) CLSM samples - up to 1 test per 300 feet of total drilling footage
 - l) DOT concrete samples - up to 1 test per 300 feet of total drilling footage

Deliverable

Draft Geotechnical Data Report to include:

- a) Regional and local geology
- b) Description and results of the field investigation
- c) Results of laboratory testing
- d) Summary of the subsurface conditions
- e) Boring logs

Task 9 – Subsurface Utility Exploration (Work Activity 2.9)

Subsurface Utility Exploration (SUE) will be performed along the given pipeline corridor alternatives, selective in common areas only until the final alignment is determined. SUE will be performed in accordance with ASCE Standard Guidelines 38-02.

9.1 North and South Corridor Alternative Boring Plan

SUE plans will be submitted to the AUTHORITY prior to commencing any work. Costs will be communicated to the AUTHORITY once locations of SUE is determined since rural versus urban costs change due to location, depth, permits, pavement repair, traffic control and other requirements not yet established.

9.2 Survey Coordination for SUE

This task will consist of a preliminary SUE plan targeting key areas along the alignments focusing on large utilities. Common areas will be executed first and then follow up with other areas as required.

9.3 SUE Incorporation into Utility X-Ref

This task will consist of adjusting known utilities and incorporating the SUE data into the CAD X-Ref.

9.4 SUE Data and information into Power Bi

This task will consist of recording the SUE data sheets into the Project Power Bi app for easy storage and field recall during construction.

9.5 Field Potholes

CONSULTANT will complete up to two hundred fifty (250) utility Test Holes, including required permits, via vacuum excavation methods.

Test hole Work includes the following:

- Produce and obtain necessary encroachment permits from local jurisdiction(s) to perform the Work within right-of-way.
- Coordinate with a local traffic control provider to produce traffic control plans and secure approved traffic control permits from local jurisdiction(s).
- Coordinate the set-up and breakdown of traffic control devices at test hole locations.
- Layout test hole locations in the field using various pieces of geophysical locating equipment and processes, i.e. electromagnetic, ground penetrating radar, asbuilt plans, etc.
- Notify USA North 811 Call-Before-You-Dig service 48 hours before any excavation.
- Removal of pavement and concrete surfaces will be accomplished by use of a 10" diameter core drilling process.
- Use air vacuum excavation methods to excavate and expose targeted utility.
- Record utility data: type, depth, size and material as readily obtainable. If the utility is a duct bank or encased, KCI will attempt to record top, bottom, width and configuration.

- Backfill test hole with native material excavated from the hole and compacted pneumatically in one-foot lifts – non paved surface areas.
- Backfill test hole with CLSM (slurry) as required by permitting agency –paved surface areas.
- Restoration of test holes within pavement/concrete core drilled surfaces will be accomplished by using the Clark County, Nevada, Regional Transportation Commission’s Standard Drawing #506 Type B Method specification using Utilicor Technologies; Utilibond™ bonding agent.
- Coordinate with project surveyor as needed for collection test hole reference points.

Deliverable

Provide a Test Hole Data Report in a Portable Document Format (.pdf) for each completed location. Such Report shall include the following information.

- a) Test hole number and date of completion.
- b) Approximate plan and section view (not to scale) of utility and test hole location in relationship to the existing roadway and ground surface.
- c) Collected utility data: type, depth, size and material as readily obtainable.
- d) Provide utility photos where obtainable at exposed locations.

Task 10 –NEPA Permitting and Environmental Support (Work Activity 2.10)

10.1 NEPA Permitting

THE CONSULTANT will perform technical studies and assist the AUTHORITY related to advancing and expediting the National Environmental Policy Act (NEPA) process and identifying the major steps towards securing NEPA approvals. Each technical study will include: a description of the present environmental setting; an analysis of potential impacts to human health or the environment; identification of appropriate mitigation that would avoid, reduce, eliminate or compensate for impacts; a comparison of potential impacts and benefits of alternative routes; and a discussion of cumulative impacts.

The process has generally been defined by a Plan of Development (POD) previously prepared by the CONSULTANT. It is anticipated that the BLM will review the POD and ROW application to determine whether preparation of an Environmental Assessment (EA) or Environment Impact Statement (EIS) is appropriate. For this task, it is assumed: (1) the technical studies are scoped to support preparation of an EIS document, (2) a contractor to prepare the EIS document will be selected separate from this Scope of Work, and (3) CONSULTANT will make no direct contact with federal regulatory agencies unless such contact is approved by the AUTHORITY.

- Air Quality Analysis. The CONSULTANT will estimate potential air emissions of criteria air pollutants during construction, operations, and decommissioning. Sources of emissions may

include combustion equipment (vehicle exhaust, generators, etc.) and fugitive dust created by site-preparation, travel on paved and unpaved roads, material handling, and wind erosion. Greenhouse gas emissions, in the form of carbon dioxide equivalent (CO₂e), will be calculated.

- Estimate Emissions - Calculate estimated emissions based on established emission factors and assumptions for quantity and type of equipment typically used for large pipeline construction projects.
- Draft Technical Report - Prepare a Draft Air Quality Technical Report suitable for inclusion as an appendix to the EIS and use in preparation of Draft Air Quality sections in Chapter 3 (Affected Environment) and Chapter 4 (Environmental Consequences).
- Assumptions - The air quality technical approach assumes that air emissions would be below de minimis thresholds and air dispersion modeling would not be required. Accuracy of the air emissions inventory is reliant upon site-specific equipment types and usage.
- Acoustic Analysis. The CONSULTANT will assess acoustic and vibration effects from construction (short-term) and operation (long-term) activities to determine if the generation of noise and vibrations levels at nearby sensitive areas (NSAs) during construction or operation of the Project would be are in excess of standards established by applicable Federal, state, and local jurisdictions.
 - Collection of Ambient Acoustic Data (Baseline Airborne Noise Survey) - The CONSULTANT will prepare an ambient acoustic analysis to: (1) determine the existing conditions or baseline ambient acoustic levels for which nearby sensitive areas (NSAs) are currently exposed, and (2) propose appropriate measures to mitigate potentially negative impacts and enhance any positive effects of the Project and recommend monitoring locations. Final monitoring locations will be determined through consultation with SNWA, BLM, BOR, and other applicable agencies. A sound level meter will be programmed to sample and store A-weighted sound level data, including both 1-hour and 1-minute equivalent sound levels (Leq) with supportive statistical parameters including Lmax and Lmin.
 - Modeling Acoustic Levels and Contours - DataKustic GmbH's CadnaA computer-aided noise software model will be used by the CONSULTANT to predict sound levels produced by construction and operation sound sources at discrete receptor locations to determine noise regulation compliance and mitigation needs. The model will incorporate site-specific inputs that account for reflection from surfaces, atmospheric absorption, topography, ground effects, and meteorological conditions including wind patterns and seasonality effects. The acoustic model will also be based on various source-specific inputs such as sound power levels, source directivity, and heights of both sources and receptors.

CONSULTANT will produce a three-dimensional rendering of project sources and received sound level contours will be produced. The contours will be used to identify compliance at any location within a pre-determined distance of the Project to secure resource agency coordination, concurrence, and acceptance. A GIS-based acoustic impact map will be developed that identifies recommended setbacks (if any) based on projected noise impacts.

- Acoustic Analysis Report - Draft and final reports will be prepared to document key acoustic concepts, applicable regulations, methodologies employed, survey analyses, and modeling outcomes of acoustic evaluations. Spatial data layers will be presented on relevant figures of specified parameters within the Study area of interest. Photographic documentation of the locations of survey points and data tables used to characterize noise impacts will be included.
- Assumptions - The acoustic survey will be conducted at NSAs, following consultation with BLM, BOR, and local agencies. For the purposes of this scope of work, it is assumed that surveys will be conducted at up to 10 locations. CONSULTANT has identified the following areas as potential locations for conducting noise surveys and monitoring: along Foothill Drive and East Paradise Hills Drive south of the River Mountains Water Treatment Plant, near the intersection of Lamprey Avenue and Arrowhead Trail, along Luberon Drive, along Gilespe Street and Barbara Lane. Costs assume one surveyor will perform surveys within a 5-day period and deploy one unattended acoustic meter setup. Acoustic modeling will include 4 scenarios (Day / Night; Construction / Operation).
- Visual Resources Analysis. CONSULTANT will provide a viewshed analysis to generate a digital elevation model of the project area and surroundings. The viewshed analyses will be used to locate six to eight key observation points (KOPs) that will be visible to the public, in consultation with relevant agencies. At each KOP, photographic visual simulations will be created illustrating the current view and simulated view of the disturbed areas. Up to two additional secondary KOPs of public concern that are not within the viewshed of the project may be added if requested by the land managing agencies.
 - Panoramic simulations will be created at an average human eye level (5 ft. 7 in.) above each KOP. Each panorama will be specifically created to provide a photo realistic understanding of the environment captured at the KOP. Up to 12 vertical images will be taken with a 30 percent overlap rotating around the no-parallax point (NPP) of the camera lens to create a panorama that depicts the full field of view of a person standing directly on the KOP. Project shape files of the area will then be loaded into GIS software, and viewed and edited in 3D to accurately aligning all physical features to give an accurate photorealistic view of what the

proposed site will look like from the viewpoint of each KOP. The visual analysis deliverables include:

- Viewshed Analyses of project site and surrounding areas
 - Proposed primary and secondary KOP locations
 - High-Resolution 105" x 18" digital panoramas of each KOP in .jpg file format
 - High-Resolution 105" x 18" digital panoramic simulations of each primary KOP after development in .jpg file format
 - PDF describing KOP location and direction with reduced before and after simulations
 - An aerial photo from each KOP
 - A short aerial video from each KOP
 - Contrast Rating Sheets from each KOP (BLM requirement)
 - Technical memorandum report describing the visual resources affected environment, KOP visual simulations, and recommended mitigation
- Waters of the U.S. Delineation Report. The CONSULTANT will evaluate drainages within the Project study area that may be considered jurisdictional waters of the United States (WOUS) under the federal Clean Water Act (CWA). Section 404 of the CWA regulates the placement of dredged or fill material into WOUS and adjacent wetlands, which are identified based on a Jurisdictional Determination (JD). If present, the United States Army Corps of Engineers (Corps) may issue a permit dependent on the acreage and linear feet of impacts to WOUS.
 - Field Investigations - Following review and compilation of the information supplied by SNWA and B&V, the CONSULTANT will complete a preliminary JD to identify and ascertain whether there are drainages that ultimately connect with downstream navigable waters (Lake Mead). The presence of jurisdictional waters will be determined by evaluating the Ordinary High Water Mark (OHWM) within existing drainages and ephemeral washes. Under Section 404 of the Clean Water Act, the OHWM defines the jurisdictional limits.
- The CONSULTANT will perform field surveys to identify drainage characteristics (such as definable bed and bank, OHWM, wetland vegetation, hydric soils, etc.) that would classify these areas as potential jurisdictional waters or wetlands. Bed and bank width, vegetation, wildlife, location, and other data will be recorded at sample points along each drainage and documented using a Global Positioning System (GPS) unit and digital photographs.

- Data Analysis and Report Preparation - The information on potentially jurisdictional waters will be incorporated into a GIS database to calculate total acreages and create maps for the report. The Draft JD report will describe the subject property, field methodology, and results of the field investigation. The report will provide a description of the potentially jurisdictional waters identified, the types of vegetation present, and a qualitative description of the habitat.
- Corps Verification - The CONSULTANT will coordinate with the Corps to obtain verification of jurisdictional drainages. The Corps typically prepares a letter verifying the results within approximately 120 days. The Corps verification letter is typically valid for 5 years and can be renewed. This task also includes time for responding to inquiries from the Corps during their review.
- Assumptions - Should the project disturb wetlands, a separate scope, budget, and schedule will be prepared for a Wetland Delineation.
- Hazardous Materials Evaluation. The CONSULTANT will perform a Phase I Environmental Site Assessment (ESA).
 - Phase 1 Environmental Site Assessment - The CONSULTANT will search computerized databases of federal and state environmental record sources for the site and for properties located within the search radii to evaluate locations where hazardous materials may have been used or stored and their possible effects on the site. Readily available site and site vicinity historical land use records will be reviewed to evaluate past uses that may have contributed to the presence of environmental concerns at the site. Visual surveys will also be conducted to evaluate site characteristics for possible contaminated surface soil or surface water, improperly stored hazardous materials, possible sources of polychlorinated biphenyls (PCBs), and possible risks of site contamination from activities at the site.
 - Deliverable – The CONSULTANT will prepare 1 Phase I ESA report that generally follows the recommended report format of ASTM E1527-05 and describes the scope of the services, the findings which identify known or suspected recognized environmental conditions on the property and in the surrounding area, opinions as to the impact on the property of those conditions identified in the findings, and conclusions summarizing the recognized environmental conditions and any other conditions deemed relevant associated with the subject property.
 - Cultural Resources Analysis. The CONSULTANT will support the BLM's

cultural resources evaluation of the project.

Identify Historic Properties and Properties of Cultural Significance - The CONSULTANT will conduct a Class I cultural resources review. Cultural resource records will be reviewed through Nevada Cultural Resources Information System (NVCRIS), the BLM Nevada Cultural Resource Management Database, the National Register of Historic Places (NRHP) database, Nevada GLO records, and any existing cultural resource reports. The CONSULTANT will then prepare a draft Class I report and submit for BLM review. BLM comments will be incorporated into a final report.

Assess Potential Adverse Impacts - The CONSULTANT will support BLM in the preparation of a Cultural Resources Inventory Needs Assessment (CRINA) and conduct a Class III archaeological inventory of the Area of Potential Effect to assess the potential for adverse impacts to identified historic properties and on resources not previously identified. For the purposes of budgeting this scope of work, it has been assumed that 840 acres will be intensively surveyed. Results of the survey will be documented in draft and final reports submitted to the BLM

10.2 Biological and Cultural Monitoring of Geotechnical Testing

The CONSULTANT may be requested to provide monitoring compliance services associated with the performance of geotechnical field investigations on federal lands that could occur during the predesign Scope of Work time period. The services would include biological and cultural resource monitors to ensure there is no take of federally protected species, such as the desert tortoise (*Gopherus agassizii*), and to avoid disturbance of historic and prehistoric resources.

- Biological Resource Monitoring. THE CONSULTANT may be requested to provide qualified biologist(s) that have been approved by the federal land managing agencies to conduct desert tortoise monitoring during geotechnical testing. Monitoring activities include coordination with the geotechnical professionals and drilling subcontractors to conduct pre-activity clearance surveys, monitoring on-site during drilling, and monitoring movements of personnel and equipment between drilling sites. The biological monitor will provide worker education program to all on-site personnel on the biology and distribution of the desert tortoise, desert tortoise activity patterns, and its legal status and occurrence in the proposed project area, and other topics required by the federal land managing agencies.
- Cultural Resource Monitoring. The CONSULTANT may be requested to provide a qualified cultural resource specialist(s) to conduct cultural resources monitoring during geotechnical testing. Monitoring activities include coordination with the geotechnical

professionals and drilling subcontractors to conduct pre-activity clearance surveys and monitoring on-site during drilling sites. Compliance Monitoring Reporting. A weekly monitoring report and a final letter report will be prepared both for biological and cultural monitoring. The reports will include documentation requested by the federal land managing agencies, including documenting the dates monitored, findings, and description of any encounters with sensitive resources. The biological monitoring report will also document the numbers of personnel trained in the worker education program.

- Assumptions. For the purposes of budgeting this scope of work, it has been assumed that biological and cultural monitors would be provided for:

Sloan Canyon tunnel: 15 sites, total of 15 days of pre-activity clearance surveys and 324 days of drilling activity

- 10.3 Plan of Development (POD) Updates. The POD may need to be updated during the Predesign period covered by this Scope of Work to meet the requirements of the BLM and other agencies. The POD will be evaluated when the AUTHORITY identifies a substantial change in the project description and determines revisions and updates are warranted.

Each update of the POD will involve producing one new draft for review and comment by SNWA, producing a new draft for review by BLM and other agencies, and one round of revisions responding to agency comments to produce a final draft. For the purposes of this scope of work, it is assumed there will be four (4) POD updates.

- 10.4 Agency Coordination. The CONSULTANT will support the AUTHORITY in initial coordination with BLM and cooperating agencies to support the NEPA process. Up to eight agency coordination meetings are anticipated. Potential agency meetings include:

- BLM Interdisciplinary Team Internal Scoping
- Cooperating agency meetings
- Public Scoping meetings

- 10.5 Tribal Consultation Support. If requested by the BLM, the CONSULTANT may provide support for Tribal consultation. The CONSULTANT's tribal consultation experts will support BLM staff in identifying and communicating with federally recognized and potentially interested Sovereign Tribal Nations and organizations. THE CONSULTANT will prepare letters and notices to identified Tribal Nations and organizations with historical and cultural ties to the region that describes the scope of the project and its potential to affect cultural resources in the area, inviting them to attend BLM Tribal Coordination meetings to comment publicly about the project and voice concerns. All contacts and communications with tribal representatives will be documented for the tribal consultation record.

- The CONSULTANT will organize, schedule, and participate in up to 8 meetings to obtain Tribal

input. Comments from Tribal representatives will be documented for the record.

- The CONSULTANT will document the results of the Tribal consultation in draft and final reports submitted to the BLM.
- NEPA Process Support – CONSULTANT will provide support for the NEPA process as requested by SNWA in coordination with BLM, BOR and other participating agencies. This may include: providing additional information and analysis in support of NEPA analyses; support for the public outreach and agency coordination process during the scoping and EIS review processes, including preparation of meeting materials, logistic support for identifying and securing meeting locations, facilitating and recording meetings, producing scoping and response to comment reports; support for the notification process including drafting notices for mailing to residences and publishing in the local newspaper of record; and preparation of documents at the request of SNWA, BLM, BOR and other participating agencies, such as Record of Decision and Finding of No Significant Impact documents.

Task 11 – Sustainability (Work Activity 2.11)

The CONSULTANT will develop sustainability concepts for the entire project.

11.1 Envision Goal Setting Workshop, Follow-up Summary.

CONSULTANT will lead an Envision Workshop and include representatives from the AUTHORITY to discuss the use of Envision for the project. Discussion topics at the Workshop will include:

- Envision Overview and Process
- Project Sustainability/Envision Goals and Outcomes
- Category and Credit Review

The Envision effort will be initiated with the Institute of Sustainable Infrastructure (ISI) by registering the project with ISI. The AUTHORITY will be responsible for paying a Registration Fee (\$2,000). The CONSULTANT will assist in filling out project details and information needed for ISI Envision project registration.

11.1.1 Envision Self-Assessment Workshop and Project Framework Development.

To ensure that all parties have a clear understanding of their expectations related to the implementation of Envision, the CONSULTANT will facilitate a project self-assessment in collaboration with the AUTHORITY and then develop a framework for the responsible parties to support achieving the Project's Envision goals. The sustainability goals developed in this task and the self-assessment will guide the development of the Envision Framework and corresponding input

provided to the various project parties. CONSULTANT will use the Envision Framework to help guide the sustainability of the project, including climate and resilience related elements.

11.2 Envision Verification and Support.

The CONSULTANT will facilitate the project Verification process with ISI and the AUTHORITY will be responsible for paying the ISI Envision Verification fee. The required fee is determined by ISI on a project by project basis.

For verification, each Envision credit requires: a cover letter that describes the credit, the selected Level of Achievement along with a narrative justifying the score, and various supporting materials required to meet that Envision requirements. The CONSULTANT will be responsible for compiling the cover letter and documentation needed for verification in collaboration with the AUTHORITY, contractor(s), vendor(s) and other pertinent parties. Up to 64 possible credits (1,000 total points) can be submitted and assessed by ISI. The CONSULTANT will support drafting the pertinent credits, based on the goals and self-assessment performed in previous tasks, to facilitate the multistep review by ISI.

11.3 Ongoing Envision Project Support and Guidance. Throughout the project, documents, materials, and coordination activities will be required to successfully implement Envision. This effort will cover the various activities required to deliver Envision, and will likely include, but is not limited to, the following activities:

- Hold ongoing strategy meetings and discussions to facilitate the implementation of Envision with the AUTHORITY, contractor(s) and other pertinent parties.
- Compile documents, materials, meeting minutes, etc. for use during the Envision Verification process.
- Coordinate and provide guidance to the contractor(s), vendor(s) and other pertinent parties to support the Envision process
- Coordinate with ISI Envision Point of Contact to obtain clarifications and guidance as needed.

11.4 Additional Stakeholder Engagement. Additional stakeholder engagement may be necessary to satisfy reporting requirements of several credits. CONSULTANT shall provide necessary outreach associated with applicable credits. The Stakeholder Engagement efforts will be tailored to the goals and objectives developed herein.

Task 12 – Pipelines: North Corridor Alternative and the South Corridor Preferred Alternative (Work Activity 2.12)

12.1 Final Corridor Selection

The CONSULTANT will provide predesign (30%) evaluation for the following pipeline alignments:

- North Corridor Alternative
- South Corridor Preferred Alternative

12.2 Predesign of North Corridor

The CONSULTANT will provide predesign (30%) evaluation for the North Corridor Alternative. This task includes all the uncommon areas from the South Corridor Preferred Alternative described below. Pipeline alignments, aerial mapping, survey, contours, base sheets, right-of-way, land acquisition and ownership research, utilities, subsurface utility explorations, field surveys of wet and dry utilities, development of plan sheets and if requested by SNWA profile sheets. The North Corridor Alternative is approximately 37 miles in length. However, portions of the common areas will be covered in item 12.3.

12.3 Predesign of South Corridor

The CONSULTANT will provide predesign (30%) evaluation for the North Corridor Alternative. This task includes the entire alignment for the South Corridor Preferred Alternative. Pipeline alignments, aerial mapping, survey, contours, base sheets, right-of-way, land acquisition and ownership research, utilities, subsurface utility explorations, field surveys of wet and dry utilities, development of plan sheets and if requested by SNWA profile sheets. The South Corridor Preferred Alternative is approximately 31 miles in length.

The predesign evaluations for tasks 12.2 and 12.3 Pipeline will include:

- Final Route Confirmation Workshop
- Basis of Design Criteria
- Pipeline Optimization
- Alignment plan, profile in common area of alignments
- Low Point Drainage Concepts and Times
- Appurtenances (Isolation Vaults, Access Points, Drain Outlets, Air Vacuum Valves (if profile is developed)
- Cathodic Protection Recommendations
- Hydraulic Profile (in common areas)
- Permitting Table (NDOT, UPRR, Valley Electric, special provisions and crossing agreements)
- Maintenance-of-Traffic Analysis
- Land Acquisition, Temporary and Permit Easements, Access Grants (if any)

- Specification - Table of Content
- Opinion of Probable Construction Cost
- Other

12.4 Maintenance of Traffic (MOT)

The CONSULTANT will provide for the analysis, preparation and implementation of Maintenance of Traffic (MOT) to support the needs of proposed construction in support of efforts in the selected alignment corridor(s). MOT services shall include the following:

- Coordination and review of the requirements promulgated by the Authority Having Jurisdiction (AHJ) over the proposed public right-of-way including traffic management policies and procedures.
- Preparation of lane closure and traffic queue analysis models and development of lane closure planning documents.
- Coordination with the AHJs through review and approval of the MOT planning documents.
- Engineering services during construction related to MOT implementation, including updates and modifications that may be required due to changes in traffic, planned areas of work impact, adjacent work schedule changes or other similar needs.

The CONSULTANT will document findings and recommendations in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Pipeline Draft TM
- Pipeline Final TM

Task 13 – Tunnels: North Corridor Alignment and the South Preferred Corridor Alignment (Work Activity 2.13)

The CONSULTANT will complete tunnel and shaft evaluations and Predesign for the following alternative corridor alignments:

1. North Corridor Alternative:
 - a) Black Mountain Tunnel
 - b) Amargosa Corridor Tunnel and Saint Rose Parkway Tunnel
 - c) Trenchless Crossings
2. South Corridor Preferred Alternative:

- a) Sloan Canyon Tunnel
- b) Trenchless Crossings

13.1 Geotechnical Data Analysis (Common to all alternatives).

CONSULTANT will review and compile relevant geotechnical and groundwater data obtained from the field investigation and desktop studies to assist in evaluation of relevant tunnel and shaft excavation and lining methods.

13.2 Shaft and Tunnel Evaluation (Common to all alternatives).

A preliminary tunnel design memorandum will be prepared for the PROJECT on a variety of subjects to assist in making key decisions. The technical memoranda shall be a comprehensive document providing the background, purpose, development of alternatives, evaluation of alternatives, figures, photographs, drawings, summary of case studies (where applicable), opinion of probable construction costs, and summary of findings, conclusions and recommendations. The technical memoranda will be used for key decisions and information will be included in the Predesign Report as the basis of design for tunnels and shafts. CONSULTANT'S effort shall include all required research, investigations, evaluations and calculations for the following subjects for both alternatives:

- 13.2.1 Working Shaft Requirements: Present requirements for the working shaft including size, location, access, easements, haul routes, flood zones, etc.
- 13.2.2 Tunnel Spoils Handling, Routing, and Disposal: Identify likely handling sites, trucking routes and potential disposal locations for tunnel spoils. Develop preliminary traffic plans for spoils hauling from the working shaft sites. Identify special traffic maintenance issues and recommend mitigation measures to minimize adverse construction impacts. Evaluate reuse of tunnel spoils as fill or beneficial aggregate and long-term operations and maintenance of the tunnel system. For the Sloan Canyon Tunnel this will be done in coordination with the BLM.
- 13.2.3 Tunnel Alignment and Sizing: Based on review of geotechnical data, property and easement considerations, pipeline HGL, topography, maintenance, constructability the horizontal and vertical alignments will be finalized.
- 13.2.4 Shaft Siting and Staging Area Evaluation:
 - a. Evaluate and refine preliminary shaft site locations identified in feasibility study.
 - b. Identify easement needs for the shafts and appurtenant structures. Provide plan view showing permanent and temporary rights-of-way required at each shaft location, including access and staging areas for maintenance as well as access and temporary staging requirements during construction. Identify known utilities at shaft locations. Define requirements for utility crossings and utilities requiring relocation prior to or during construction.
 - c. Identify potential environmental impacts based on records review for each shaft location. Such impacts may include steep slopes, stream/river crossing or stream

buffer, floodplain, surface water and groundwater pollution, groundwater withdrawal, air and noise pollution, sedimentation and erosion, historical or archaeological sites, and possible impacts to wildlife. Indicate potential mitigation measures that may be required, and scopes required for the next assessment phase.

- 13.2.5 Identify social and community impacts for each shaft location. Such impacts include parkland encroachment, recreational area disturbances, traffic disruption, safety, noise, dust, long-term visual impact, residential and commercial access during construction, settlement, seismic monitoring, site security to minimize public endangerment and utility service disruptions. Define impacts that are permanent and temporary. Indicate potential mitigation measures that may be required.
- 13.2.6 Tunnel Excavation Methods (Rock and Soil Tunnels) Evaluation: Identify and recommend appropriate methods of construction for both hard rock and soft ground tunnels.
- 13.2.7 Tunnel Initial and Final Lining Analysis: Determine appropriate initial tunnel support for both hard rock and soft ground tunnels based off the recommended tunnel excavation methods. Tunnel final lining to be evaluated to determine interaction with geological findings.
- 13.2.8 Shaft Excavation Methods (Rock and Soil Shafts) and Initial Support Evaluation: Using data from the geotechnical investigations, evaluating applicable excavation and initial support methods for shaft construction.
- 13.2.9 Construction Utilities: Identify likely power and water needs and availability associated with the construction of the tunnels and shafts.
- 13.2.10 Groundwater Impacts: Identify impacts of dewatering on the existing wells within the surrounding areas of the shaft locations. Determine requirements for groundwater handling, treatment and disposal during shaft and tunnel construction.
- 13.2.11 Settlement Criteria (Soft Ground Tunnels): Develop shaft and tunnel settlement criteria based off buildings and facilities within proximity to the shafts and tunnel alignments. Identify critical facilities that will need to be protected during construction.
- 13.2.12 Ground Improvement Requirements: Determine appropriate ground improvement methods based on geology and facility type to protect sensitive infrastructure against settlement.
- 13.2.13 Geotechnical Instrumentation Provisions: Identify appropriate geotechnical instrumentation technologies for monitoring settlement and displacement.
- 13.2.14 Trenchless Crossings and Transitions to Open-Cut Segments: Establish criteria for determining trenchless crossings as well as determining methods for excavation and initial support of tunnels and shafts.

13.3 Tunnel Design Workshop. CONSULTANT will facilitate an initial Tunnel Evaluation Workshop that will allow for AUTHORITY and stakeholder input on items to include the following:

- Shaft Siting
- Tunnel Alignment
- Tunnel Excavation
- Trenchless Crossing Criteria
- Site Access and MOT
- Work Hours
- Public Impact / Risk

13.4 Tunnel Risk Register Development. CONSULTANT will contribute to the Project Risk Register design and construction specific risks related to tunnel and shaft predesign.

Deliverable

- Tunnel and Shaft Design Draft TM
- Tunnel and Shaft Design Final TM

Task 14 – Facilities: River Mountains Pumping Station and Clearwells; Inline Pumping Station and Forebay (North and South Alternatives); Booster Pumping Stations and Forebay; Reservoir; Rate of Flow Control Stations; SVL to HL Interconnections. (Work Activity 2.14)

14.1 River Mountains Pumping Station and Clearwells.

The CONSULTANT will provide predesign (30%) evaluation for the Main Pumping Station.

- Pumping Station (north or south alternative)– 375 mgd

The predesign evaluations for Main Pumping Station site will include:

- Development of Basis of Design Criteria
- Preliminary layout of applicable civil site features including footprints of clearwell, building and below grade structures, transient-surge protection facilities, access roads, walkways, access points, gates, security, noise attenuation, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Architectural: Architectural features, structure type, conceptual exterior renderings, surface treatments, colors/coatings, roofing, doors and fixtures. Interior space and room layout (pump floor, mezzanine, equipment storage, maintenance, restroom, janitorial, etc). Code review and identification (see permitting requirements below).

- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Mechanical-Pumps: Hydraulics and hydraulic modeling coordination, Flow steps (# of pumps), pump control valves, isolation valves, coordination with pump, motor and drive suppliers, preliminary pump curve selection, pump intake requirements, wire-to-water efficiency, horsepower, suction and discharge piping layout, materials selection, surge control, protective coatings and linings. Develop facility floor plans and sections
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operations and maintenance facilities, storage, compressed air systems, cranes and hoists. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution Functional Diagram. Coordination with SNWS regarding operational voltages, switchgear configuration, redundancy, and sole-source items, service outlets/voltages, lighting. Pump motor coordination, selection, and control. Determine electrical room layout needs, battery room. Develop plans and sections.
- Controls: develop process and instrumentation diagrams (P&ID), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs, identify preferred or sole source equipment. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)
- Valve vaults: Type of valve(s), instrumentation, controls, electrical requirements, lighting, access. Develop Plans and Sections.
- Flow Metering: Determine flow ranges, type of meter(s), control equipment, vault or building needs, structural, electrical, mechanical.
- Clearwells: Sizing, layout, point of connection to yard piping operational water level range, access, security, structural, mechanical, electrical, instrumentation. Develop preliminary plans and sections.
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)
- Specification - Table of Contents

- Opinion of Probable Construction Cost
- Other

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Main Pumping Station Draft TM
- Main Pumping Station Final TM

14.2 Inline Pumping Station and Forebay

The CONSULTANT will provide predesign (30%) evaluation for the following Inline Pumping Station and Forebay.

- South Inline Pumping Station – 310 mgd and 8 MG forebay
- North Inline Pumping Station – 190 mgd and 5 MG forebay

The predesign evaluations for each Inline Pumping Station site will include:

- Development of Basis of Design Criteria
- Civil: Preliminary layout of applicable civil site features including footprints of clearwells, building and below grade structures, transient-surge protection facilities, access roads, walkways, access points, gates, security, noise attenuation, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Architectural: Architectural features, structure type, conceptual exterior renderings, surface treatments, colors/coatings, roofing, doors and fixtures. Interior space and room layout (pump floor, mezzanine, equipment storage, maintenance, restroom, janitorial, etc). Code review and identification (see permitting requirements below).
- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Mechanical-Pumps: Hydraulics and hydraulic modeling coordination, Flow steps (# of pumps), pump control valves, isolation valves, coordination with pump, motor and drive suppliers, preliminary pump curve selection, pump intake requirements, wire-to-water efficiency, horsepower, suction and discharge piping layout, materials selection, surge control, protective coatings and linings. Develop facility floor plans and sections
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operation

and maintenance facilities, storage, compressed air systems, cranes and hoists. Develop floor plans and sections. Code review and identification (see permitting requirements below).

- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution Functional Diagram. Coordination with SNWS regarding operational voltages, switchgear configuration, redundancy, and sole-source items, service outlets/voltages, lighting. Pump motor coordination, selection, and control. Determine electrical room layout needs, battery room. Develop plans and sections.
- Controls: develop process and instrumentation diagrams (P&IDs), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs, identify preferred or sole source equipment. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)
- Valve vaults: Type of valve(s), instrumentation, controls, electrical requirements, lighting, access. Develop Plans and Sections.
- Flow Metering: Determine flow ranges, type of meter(s), control equipment, vault or building needs, structural, electrical, mechanical.
- Clearwells: Sizing, layout, point of connection to yard piping, operational water level range, access, security, structural, mechanical, electrical, instrumentation. Develop preliminary plans and sections.
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Inline Pumping Station Draft TM
- Inline Pumping Station Final TM

14.3 Booster Pumping Stations.

The CONSULTANT will provide predesign (30%) evaluation for the following Booster Pumping Stations.

- Site 33 (north or south alternative)– 65 mgd
- Site 18 (north alternative)– 60 mgd

- Cactus (north alternative) – 60 mgd

The predesign evaluations for each Booster Pumping Station site will include:

- Development of Basis of Design Criteria
- Civil: Preliminary layout of applicable civil site features including footprints of building and below grade structures, transient-surge protection facilities, access roads, walkways, access points, gates, security, noise attenuation, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Architectural: Architectural features, structure type, conceptual exterior renderings, surface treatments, colors/coatings, roofing, doors and fixtures. Interior space and room layout (pump floor, mezzanine, equipment storage, maintenance, restroom, janitorial, etc). Code review and identification (see permitting requirements below).
- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans. Code review and identification (see permitting requirements below).
- Mechanical-Pumps: Hydraulics and hydraulic modeling coordination, Flow steps (# of pumps), pump control valves, isolation valves, coordination with pump, motor and drive suppliers, preliminary pump curve selection, pump intake requirements, wire-to-water efficiency, horsepower, suction and discharge piping layout, materials selection, surge control, protective coatings and linings. Develop facility floor plans and sections
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operation and maintenance facilities, storage, compressed air systems, cranes and hoists. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution Functional Diagram. Coordination with SNWS regarding operational voltages, switchgear configuration, redundancy, and sole-source items, service outlets/voltages, lighting. Pump motor coordination, selection, and control. Determine electrical room layout needs, battery room. Develop plans and sections.
- Controls: develop process and instrumentation diagrams (P&IDs), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs, identify preferred or sole source equipment. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)

- Valve vaults: Type of valve(s), instrumentation, controls, electrical requirements, lighting, access. Develop Plans and Sections.
- Flow Metering: Determine flow ranges, type of meter(s), control equipment, vault or building needs, structural, electrical, mechanical.
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)
- Disinfection requirements as to footprint required for building space allocations.
- Land Acquisition (if any)
- Specification - Table of Contents
- Opinion of Probable Construction Cost
- Other

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Booster Pumping Station Draft TM
- Booster Pumping Station Final TM

14.4 Reservoir.

The CONSULTANT will provide predesign (30%) evaluation for the following reservoirs.

- 2880 West Reservoir (south alternative)– 40 MG
- 2805 West Reservoir (north alternative)– 40 MG

The predesign evaluations for each Reservoir will include:

- Development of Basis of Design Criteria
- Civil: Preliminary layout of applicable civil site features including footprints of reservoir and structures, valve vaults, overflow structure, access roads, walkways, access points, gates, security, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Architectural: Architectural features, structure type, conceptual exterior renderings, surface treatments, colors/coatings, roofing, doors and fixtures. Interior space and room layout (chemical room, maintenance, janitorial, etc). Code review and identification (see permitting requirements below).

- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans. Code review and identification (see permitting requirements below).
- Mechanical-Mixing: CFD to determine water age, disinfection characteristics, and any THM requirements. Valving, reservoir isolation and yard valving concepts.
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operation and maintenance facilities, storage. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution Functional Diagram.
- Controls: develop process and instrumentation diagrams (P&IDs), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)
- Valve vaults: Type of valve(s), instrumentation, controls, electrical requirements, lighting, access. Develop Plans and Sections.
- Flow Metering: Determine flow ranges, type of meter(s), control equipment, vault or building needs, structural, electrical, mechanical.
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)
- Disinfection requirements as to footprint required for building space allocations.
- Land Acquisition (if any)
- Specification - Table of Contents
- Opinion of Probable Construction Cost
- Other

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Reservoir Draft TM
- Reservoir Final TM

14.5 Rate of Flow Control Stations.

The CONSULTANT will provide predesign (30%) evaluation for the following rate of flow control stations.

- City of Henderson Connection No. 33 – 65 mgd (EL 2720 HGL)
- City of Henderson Connection No. 36 – 90 mgd (south alternative) (EL 2760 HGL)
- City of Henderson Connection No. 36 – 30 mgd (north alternative) (EL 2760 HGL)
- City of Henderson Connection No. 43 – 30 mgd (EL 2760 HGL)
- City of Henderson Connection No. 18 – 60 mgd (north) (EL 2760 HGL)
- LVVWD Sloan – 130 mgd (EL 2745 HGL)
- LVVWD Cactus – 60 mgd (EL 2538 HGL)

The predesign evaluations for each ROFCS will include

- Development of Basis of Design Criteria
- Civil: Preliminary layout of applicable civil site features including footprints of ROFCS, access roads, walkways, access points, gates, security, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Architectural: Architectural features, structure type, conceptual exterior renderings, surface treatments, colors/coatings, roofing, doors and fixtures. Interior space and room layout (chemical room, maintenance, janitorial, etc). Code review and identification (see permitting requirements below).
- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans. Code review and identification (see permitting requirements below).
- Mechanical-Hydraulics: Sizing and amount of flow control trains (piping) to determine basic layout of ROFCS. Determine low, average, high flow design criteria.
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operation and maintenance facilities, storage. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution

Functional Diagram.

- Controls: develop process and instrumentation diagrams (P&IDs), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)
- Land Acquisition (if any)
- Specification - Table of Contents
- Opinion of Probable Construction Cost

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Rate of Flow Control Station Draft TM
- Rate of Flow Control Station Final TM

14.6 South Valley Lateral to Horizon Lateral Interconnection.

The CONSULTANT will provide predesign (30%) evaluation for the following South Valley Lateral to Horizon Lateral interconnections.

- RMWTF
- Cactus
- St. Rose Parkway

The predesign evaluations for each Interconnection will include:

- Development of Basis of Design Criteria
- Civil: Preliminary layout of applicable civil site features including footprints of Interconnects, access roads, walkways, access points, gates, security, facility screening, rough grading, stormwater runoff, slope protection, surface treatments.
- Structural: building layout, loading assumptions, preliminary sizing of floors, walls, suspended slabs, partitions, columns, beams. Develop floor plans. Code review and identification (see

permitting requirements below).

- Mechanical-Hydraulics: Sizing, determine low, average, high flow design criteria.
- Mechanical-Building: HVAC, potable water, process water, wastewater, fire protection, operation and maintenance facilities, storage. Develop floor plans and sections. Code review and identification (see permitting requirements below).
- Electrical: Coordination with utility provider (supply voltage, anticipated loads, reliability/redundancy, substations, transformers, power factor). Develop Power Distribution Functional Diagram.
- Controls: develop process and instrumentation diagrams (P&IDs), develop control strategies, coordinate instruments and PLC's, coordinate equipment monitoring and alarm needs. Coordinate and develop security strategies (cameras, door switches, alarms).
- Yard piping and appurtenances (plan view)
- Cathodic Protection, protective coatings, materials selection
- Identify permitting requirements (both site requirements and building requirements, applicable codes)
- Land Acquisition (if any)
- Specification - Table of Contents
- Opinion of Probable Construction Cost

The CONSULTANT will document their findings and recommendations in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- SVL to HL Interconnection Draft TM
- SVL to HL Interconnection Final TM

Task 15 – SCADA and Telemetry (Work Activity 2.15).

15.1 SCADA Design

CONSULTANT will facilitate a SCADA Design Standards and Communication Concepts workshop to review and confirm understanding of SNWA instrumentation, control and SCADA standards. In addition, the workshop will present and discuss communication alternatives to be considered for monitoring and control for the facilities along the North and South alignments.

15.2 Telemetry Design

CONSULTANT will consider fiber optic, radio, and cellular technology options and will develop a plan to implement communications to maintain control and monitoring of the system. Evaluation of options will include desktop feasibility analysis of up to 12 potential radio propagation paths.

Evaluation will consider utilizing existing SNWA assets and coordination with other agencies. CONSULTANT will prepare control system network diagrams, process and instrumentation diagrams (P&IDs) and preliminary control narratives for the Project

Task 16 – Cathodic Protection (Work Activity 2.16)

CONSULTANT will look at factors in the proposed alignments which may impact corrosivity, constructability, or safety. The scope is broken in to three parts, planning, evaluation, and reporting. Planning addresses data collection and review which is possible remotely. Evaluation collects data in the field and interprets as needed to fill the most pressing data gaps. Reporting will bring all the information together, analyze the results, and present the preliminary design. The following summary provides for corrosion control efforts on the preliminary design along these alignments.

- 16.1 Planning and Approach - Develop the overall approach for developing a preliminary design for corrosion control systems. Coordinate internal and external meetings with stakeholders. Determine the pin spacing and preferred location for field soil resistivity testing by the geotechnical team.

Organize available reference documents and compile relevant data. Evaluate existing data gaps. Submit requests for additional documentation.

Evaluate the risk of DC stray current on the proposed pipeline.

Prepare a field inspection plan.

- 16.2 Evaluation - Evaluate the potential for induced alternating current on the pipeline where it parallels existing power lines. Utilize coordination with the power company to evaluate the potential interference based on conditions observed compared with max load.

Assess key sites particularly with regards to AC mitigation, stray current, or cathodic protection and monitoring feasibility. Review potential DC stray current sources with a focus on their impact to alignment selection.

- 16.3 Reporting - Provide a technical memorandum of the planning and evaluation efforts. Report the most relevant test results and references.

Based on information available, with consideration to future developments and remaining data gaps, determine a least and most conservative corrosion control approach for each alignment. Provide proposed rectifier locations and current outputs. Provide considerations for conductive faults and safety precautions

where applicable. Develop an approach to mitigate induced alternating current which addresses long tunneled lines.

Develop details to illustrate concepts not covered in SNWA standards.

Outline the main risks that could impact the corrosion control approach, the potential impacts of these risks, and what may be done to address them.

Deliverable

- Cathodic Protection Draft TM
- Cathodic Protection Final TM

Task 17 – Start-up and Commissioning Concepts (Work Activity 2.17)

17.1 Develop Plan

CONSULTANT will prepare a preliminary plan, roadmap on how start-up would work for facilities with and without a pipeline ready to receive flow. The plan will cover testing of clearwells and the system reservoir; pumping stations, pump testing and how to transfer flow with or without a pipeline ready to receive flow; pipeline joint testing, hydrostatic or other means; ROFCS testing, Booster Pumping Station System Testing and Forebay testing; how to address pipelines completed in the early phases and what to do with the water. The basis of these tests will be prepared and carried into final design. This task will include discussions with operations and document strategies to carry forward into design and construction of the overall system.

Task 18 – Opinions of Probable Construction Cost (Monte Carlo Analysis) (Work Activity 2.18)

CONSULTANT will prepare a predesign level Opinion of Probable Construction Cost (OPCC) for each alternative. The OPCC will be prepared following AACE International and the AUTHORITY'S estimating guidelines. Cost ranges will be developed using Monte Carlo Analysis at each alternatives' OPCC deliverable.

OPCCs will also be provided for alternatives evaluation, as needed, and updated quarterly for the purpose of keeping the AUTHORITY informed on changes. The OPCC will include the following elements for each alternative:

- Cost opinion for all pipelines,
- Cost opinion for all interconnections to the SVL,
- Cost opinion for pump stations,
- Cost opinion for reservoirs,
- Cost opinions for rate of flow control stations, and

- Cost opinions for stakeholder improvements.

18.1 The CONSULTANT will document their findings and recommendations in a Basis of Estimate (BOE) Technical Memorandum (TM) to be included within the Predesign Report. The BOE TM will contain the following elements:

- Project Description
- Summary of Costs
- Estimate Certainty Level (Monte Carlo Analysis)
- Unit Price Resources
- Estimate Scope Overview
- Estimate Exclusions
- Estimate Assumptions
- Estimate Allowances
- Construction Labor and Equipment
- Materials
- Construction General Conditions
- Sales Tax
- Bonds and Insurance
- Escalation
- Engineering and Construction Contingency
- Summary Presentation of OPCC
- Detailed Presentation of OPCC

Deliverable

- OPCC – North Corridor Alternative and Facilities Draft
- OPCC - South Corridor Preferred Alternative and Facilities Draft
- OPCC Basis of Estimate Technical Memorandum Draft (with Monte Carlo Analysis)
- OPCC – North Corridor Alternative and Facilities Final
- OPCC - South Corridor Preferred Alternative and Facilities Final
- OPCC Basis of Estimate Technical Memorandum Final (with Monte Carlo Analysis)

Task 19 – Construction Packaging, Phasing and Schedule (Work Activity 2.19)

19.1 Construction Packaging, Phasing and Schedule.

The CONSULTANT will update the construction packaging, phasing and schedule TM from the Feasibility Study based on developments during the predesign.

The CONSULTANT will assist the AUTHORITY in naming specific construction packages with unique contract numbers for future bidding; identify phasing on contracts and update overall construction schedule.

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Construction Packaging, Phasing and Schedule Draft TM
- Construction Packaging, Phasing and Schedule Final TM

Task 20 – Land Acquisition Support (Work Activity 2.20)

20.1 Right-of-Way and Land Acquisition Coordination Support.

The CONSULTANT will support the AUTHORITY’S Right-of-Way (ROW) and Land Acquisition Group on an as needed basis. Services may include land research, land research document analysis, review of preliminary title reports, review of real estate appraisal reports, preparation of agency applications for easements or ROW, preparation of AUTHORITY easement forms, the acquisition of ROW, easements, land rights and other associated work as requested. For the purposes of task budgeting the CONSULTANT makes the following assumptions:

- Support Predesign with available road right-of-way and easement data for evaluation
CONSULTANT will review and evaluate public road ROW data and aerial imagery along the designed alignment. Public information resources (County, State and Federal websites and/or offices) will be utilized to obtain the data. Where public roads do not exist, property ownership will be researched and analyzed to determine easement requirements based on design. Identify potential areas of conflict with utility land rights and property ownership based on research.
- Prepare figures of the route alternatives showing required easements – Utilize the ROW, easement and aerial image to prepare figures for up to 20 parcels.
- Document where easements are needed based on predesign alignment – Determine easement and other land rights (i.e., permanent easements and staging areas) through analysis of available deeds and other available public records. Easement locations will be cross referenced in spreadsheet

form and mapping will include potential areas where easement acquisition will be time consuming or the likelihood of obtaining an easement is low.

- Prepare easement documents for the designed alignment and support the AUTHORITY in obtaining applicable land rights. The feasibility study identified potential coordination for approximately 154 total parcels associated with the southern and approximately 127 total parcels associated with the northern alignment, with 34 of these parcels common between the two alignments resulting in a total project estimate of 247 parcels. Based on a preliminary review of unique property owners associated with these parcels, there are 60 property owners associated with the southern alignment, 30 associated with the northern alignment, and 25 owners common to both for a total project estimate of 115 unique owners. These numbers may increase or decrease with alignment adjustments or other project changes that may occur through preliminary design efforts. Consultant assumes the AUTHORITY will not require support with every potential parcel along the selected alignment, and therefore assumes assisting with R/W for up to 100 total individual parcel owners. Easements are assumed to consist of AUTHORITY-provided agreement(s) such as permanent, temporary, exclusive, or non-exclusive agreements with applicable information fields to be drafted by CONSULTANT and reviewed and accepted by the AUTHORITY. CONSULTANT will prepare easement supporting documents to include legal description and exhibit file(s) and applicable research and backup documentation. If necessary, and with the approval of the AUTHORITY, CONSULTANT will order preliminary title reports in cases where property ownership cannot be determined through analysis of available public records.
- Provide cost estimates for land rights or purchase that are required for Connection and Reservoir sites. Cost estimates will be based on available market data for properties listed for sale and recent real property transactions. CONSULTANT will assist, if requested, to request proposals for real estate appraisals which may include the cost of the preliminary title reports for the appraisal report preparation.
- Provide support to give rough estimates of property value through acceptable AUTHORITY valuation methods. Easement compensation offered to a property owner is customarily estimated from real estate appraisal property valuations prepared by a licensed real estate appraiser. CONSULTANT assumes that due to the sensitive nature of these activities AUTHORITY staff will take the lead, but CONSULTANT is able to provide coordination and assistance to the AUTHORITY with respect to land acquisitions for up to forty (40) individual parcels along the selected alignment(s). CONSULTANT will assist, if requested, to request proposals for real estate appraisals which may include the cost of the preliminary title reports for the appraisal report preparation.
- Support the process and requirements for obtaining an easement through the Sloan Canyon National Conservation Area – Review records available from BLM to determine existing easements within

the Sloan Canyon National Conservation Area and document the process required to obtain an easement through the Sloan Canyon National Conservation Area.

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM) to be included within the Predesign Report.

Deliverable

- Land Acquisition Draft TM
- Land Acquisition Final TM

Task 21 – Permitting Support (Work Activity 2.21)

21.1 Permit Matrix.

CONSULTANT will update the permit matrix prepared for the Feasibility Study, to be based on the selected predesign alignment. Permit activities will include research and identification of necessary jurisdictional review and permit requirements and will be expanded to include both permitting applicable to construction of the improvements within the overall selected alignment corridor, as well as permitting applicable to construction of the individual project elements (pumping stations, ROFCs, reservoir ,etc.) identified for the selected predesign alignment. For purposes of budgeting CONSULTANT makes the following assumptions:

- Overall Permit Matrix -- Prepare and deliver an overall project permit matrix to be based on the predesign alignment selected by the AUTHORITY. The permit matrix will provide the name of permit or required jurisdictional review; a short description of permit and application process required; description will include estimate of review/processing time by issuing agency. CONSULTANT will verify current information regarding the description, application process, and review schedule for federal, state, local, and Union Pacific Railroad (UPRR) permits. Research will be conducted primarily on-line and with phone calls as needed. Up to 40 separate permits are anticipated to be researched and included in the overall project permit matrix.
- Component Facilities -- CONSULTANT will prepare and deliver multiple individual component permit matrices to be based on the predesign alignment selected by the AUTHORITY, and the associated ancillary facilities required based on the selected alignment. Each individual component permit matrix is anticipated to consist of a subset of the overall project permit matrix, to be truncated to only include those authorities identified as having jurisdiction (AHJs) over each individual component. The permit matrix will provide the name of permit or required jurisdictional review; a short description of permit and application process required; description will include estimate of review/processing time by issuing agency. Each individual component's permit matrix is anticipated to include approximately 20-30 separate permits depending on specific criteria.

The CONSULTANT will document their finding and recommendation in a Technical Memorandum (TM)

to be included within the Predesign Report.

Deliverable

- Permit Matrix Draft TM
- Permit Matrix Final TM

Task 22 – Public Outreach Support (Work Activity 2.22)

22.1 Public Outreach.

On an as-needed basis, CONSULTANT will coordinate with and support the AUTHORITY's outreach effort to present the project to the public. CONSULTANT shall not initiate any contact in regard to Work under this task with any organization, agency or individuals, whether private or public, without prior approval of the AUTHORITY. CONSULTANT will support the development of a comprehensive public engagement program to educate, involve, solicit feedback and garner community support of the PROJECT and its subsequent phases. The provided support is generally anticipated to include attending up to three (3) public meetings to including a summary report for each meeting, preparing exhibits, handouts and presentation materials in support of both in-person and virtual outreach efforts, and developing a public involvement plan and public stakeholder engagement plan. For purposes of budgeting CONSULTANT makes the following assumptions:

- Public Meeting Support and Involvement Plan -- CONSULTANT will do the following for each public meeting: Reserve location; Manage on site logistics at meeting location; Manage logistics of concurrent virtual meeting including Facebook Live with live Q&A for a specified duration, receive online comments, facilitate responses to online comments; Prepare exhibits, handouts, and presentation materials (in person and virtual); Provide staff for meeting; Provide summary report.
- Public Meeting No. 1 – Alignment Alternatives: Provide an overview of the identified alternate alignments for the PROJECT including schedule, goals, purpose, and need. Solicit comments and direct public to AUTHORITY Community Outreach team.
- Public Meeting No. 2 – Selected Alignment: Present selected alignment for discussion and comment to AUTHORITY Community Outreach team.
- Public Meeting No. 3 – Construction: Present proposed construction implementation and scheduling for public comment to AUTHORITY Community Outreach team.

22.2 Public Involvement Plan.

On an as-needed basis, CONSULTANT will deliver a strategic and detailed Public Involvement Plan to outline all activities, deliverables and tactics to be implemented in subsequent phases of the PROJECT. This Plan will outline all tasks and tactics planned to educate the community and maximize community engagement and support, and a specific timeline for each activity.

22.2 Public Stakeholder Engagement Plan.

On an as-needed basis, CONSULTANT will develop a detailed, systematic engagement plan to connect with potentially impacted stakeholders along the selected HL alignment corridor during future PROJECT phases. Goals of this plan include education, developing and building relationships, promoting trust in the AUTHORITY, and increasing community support of the PROJECT. CONSULTANT's Public Involvement team will work with the PROJECT team to assist as needed in identifying potentially impacted current and future residential, commercial, business, industrial, environmental areas, schools, first responder organizations, HOAs, etc. The Public Involvement team will then develop a stakeholder engagement program to connect, educate and build relationships with these stakeholders to perform outreach to engage community subsets, collect contact information, and organize popup meetings, briefings and presentations.

The CONSULTANT will document their findings and recommendations from Public Meetings in a Technical Memorandum (TM) to be included within the Predesign Report. The Public Involvement Plan and Public Stakeholder Engagement Plan will be individual guidance documents that serve to inform subsequent stages of the PROJECT and may be incorporated into the Predesign Report at the direction of the AUTHORITY.

Deliverable

- Public Outreach Draft TM
- Public Outreach Final TM
- Public Involvement Plan Draft
- Public Involvement Plan Final
- Public Stakeholder Engagement Plan Draft
- Public Stakeholder Engagement Plan Final

Task 23 – Predesign Report (Work Activity 2.23)

23.1 Predesign Report.

The CONSULTANT will have performed studies and developed TMs as a result of the exploration and design tasks performed during the Predesign Phase. To document the status of the Predesign, prior to embarking to the final design phase a Predesign Report will be prepared by the CONSULTANT. The CONSULTANT will submit a Predesign Report in a binder, which summarizes the relevant data, contains basic information and any special data and information, and raises critical issues related to the project design. Appended to the Predesign Report will be the Project Risk Registry as well as all of the Preliminary Design Phase TMs. This document will enable reviewers to have a complete understanding of the process leading to the recommended design and allow for a thorough review of the Predesign Design. The TMs and other deliverables to be included with the Predesign Report include:

- Basis of Design and Standards TM
- Data Information and Control TM
- Hydraulic TM
- Draft Transient TM
- Survey Documentation and Field Notes TM
- Geotechnical TM
- Subsurface Utility Exploration TM
- Environmental TM
- Pipeline Alignment TM
- Tunnel Alignment TM
- Facilities TM or series of TM's (Main Pumping Station, Inline Pumping Stations, Booster Pumping Stations, Reservoir, ROFCS, and Interconnections
- SCADA and Telemetry TM
- Cathodic Protection TM
- Start-up and Commissioning TM
- OPCC TM
- Construction Packaging, Phasing and Schedule TM
- Land Acquisition TM
- Permitting TM
- Public Outreach TM

Deliverable

- Predesign Report – Draft
- Predesign Report - Final

Task 24 – Deliverables (Work Activity 2.24)

24.1 Deliverables.

The AUTHORITY will provide review comments to the CONSULTANT within 15 working days from the

date of receiving the submittal. CONSULTANT will resubmit revised deliverables no later than 15 calendar days after receipt of review comments from the AUTHORITY.

Deliverable Schedule

CONSULTANT will submit one electronic copy of each submittal in Portable Document Format (PDF) format and one copy in Microsoft Word format. If the electronic submittal or their part of requires, for the nature of the info or data contained, a different format, such format shall be approved by the AUTHORITY prior to submittal. In addition, a hard copy of such submittal shall be delivered with the electronic file. All documents, notes, drafts, and calculations, modeling created by the CONSULTANT for this Project shall become the property of the AUTHORITY and are to be retained by the CONSULTANT until placed in final form and entered into the AUTHORITY's Records Management System (RMS). The AUTHORITY will assign the applicable RMS Number to each document after receipt of the final documents.

Task 25 – Unallocated (Work Activity 2.25)

This Work Activity is unallocated budget that is not available to the CONSULTANT to expend. A budget is provided to address potential additional tasks that were not included in the original Scope of Work because of uncertainty about the quantity of work or cost.

Upon written direction by the AUTHORITY, budgets may be transferred between this Activity and other Work Activities to account for additional work activities or adjustments to other Work Activities.

- Additional existing Utilities services
- Additional Public Outreach services
- Additional Geotechnical services including borings
- Additional Environmental services
- Additional meetings and coordination with outside agencies
- Traffic studies/traffic control plans

EXHIBIT B TRAVEL POLICY

Individuals on business travel and temporary assignment on the Southern Nevada Water Authority (AUTHORITY) Horizon Lateral Project shall adhere to the following requirements. All travel must be pre-approved by the AUTHORITY using the AUTHORITY's standard travel authorization (TA) request form attached hereto. Reimbursement will be made only in accordance with these requirements. As economic conditions may warrant, the allowances set forth below may be modified with the approval of the CONSULTANT and the AUTHORITY's Agreement Administrator.

On an annual basis starting in January of each calendar year, the CONSULTANT shall propose a per-diem reimbursement rate for travel covered by this Travel Policy for the AUTHORITY'S review and approval. When approved by the AUTHORITY, the per-diem rate will serve as the basis of billing for travel covered by this Travel Policy. The per-diem rate will cover hotel, car rental, fuel, taxi, ride sharing services, parking, mileage, meals and other ancillary travel costs with the exception of airfare which is not included in the per-diem rate.

1. Reimbursement

A. Trips to Las Vegas

Personnel who are based in locations other than Las Vegas periodically are required to travel to Las Vegas to support the dynamic needs of the AUTHORITY's projects.

Trips to Las Vegas include: business trips for up to 30 calendar days and extended assignments for periods of more than 30 calendar days. Designation of the travel category to be applied must be identified on the TA request. Clarifications pertaining to each category are provided as follows.

1. Business Trips

- a. One-Day Trips: One-day trips are those not involving overnight stays. A copy of the approved TA request must be included with the reimbursement request. Reimbursement of expenses will be for actual transportation expenses as verified by receipts subject to the following:

- Airfare must be for coach class with the carrier having the lowest available rate fare. A receipt, or receipts, is required.
- Use of a personal vehicle in lieu of flying must be shown to have less cost (including labor) than flying and the comparative calculation shall accompany the TA request. Reimbursement for personal vehicle use shall be at the applicable IRS rate.
- Per-diem rate of \$87.50

- b. Multi-Day Trips: Multi-day trips are those involving overnight stays away from the traveler's home office area and that are not covered by an extended assignment approval. A copy of the approved TA request must be included with reimbursement request. Expenses will be reimbursed as follows:

- Airfares must be for coach class with the carrier having the lowest available fare. A receipt, or receipts, is required.
- Use of a personal vehicle in lieu of flying must be shown to have less cost (including labor) than flying and the comparative calculation shall accompany the TA request. Reimbursement for personal vehicle use shall be at the applicable IRS rate.
- Per-diem rate of \$175.00 per day
- For multi-day trips to other than the Las Vegas area, reimbursement will be as stated in paragraph B, below.

2. Extended Assignments

Extended assignments are for travel to and work in Las Vegas for periods of more than 30 days.

Extended assignments require an AUTHORITY pre-approved TA request using the AUTHORITY's standard form.

A fixed rate of \$2,500.00 per month will be paid while the traveler is in the Las Vegas area to cover all expenses, except travel to and from Las Vegas. The fixed rate will be paid for each and every full month that the traveler is in the Las Vegas area working full-time for the AUTHORITY. If the traveler works less than full time on AUTHORITY projects during the month, except for an AUTHORITY-approved absence, the allowance will be prorated. In addition, the traveler will be authorized reimbursement of reasonable travel costs of not more than \$700.00 a month (i.e. airfare or costs of fuel for privately-owned vehicles) to help defray costs of periodic trips to the traveler's home. Receipts must be presented for reimbursement of expenses.

B. Trips to Locations Outside of Nevada

A copy of the approved TA request must be included with the reimbursement request. Allowable costs for AUTHORITY-approved travel outside of Nevada will be reimbursed as follows:

1. Allowable Costs

- a. Only costs related to the traveler's business activities are reimbursed.
- b. Costs will be paid for lodging at the actual rate paid not to exceed the Federal GSA rate.
- c. Costs for meals and incidentals will be paid at the rate provided by the Federal GSA (<http://www.gsa.gov/perdiem>) for the traveler's location. The per diem reimbursement includes all tips, telephone calls and miscellaneous expenses, except those specifically described as allowable. Per diem rates are determined by the city/county in which the approved activity takes place and is not based on hotel location or which airport is utilized.
- d. Costs for parking charges at the commercial transportation terminal for the travel period. Public transportation to and from the terminal may be used. Receipts for parking must be attached to the request for reimbursement. Reimbursement will not exceed the standard daily rate for long-term airport parking.
- e. Costs for business-related calls will be reimbursed, if an explanation of the purpose and need for the business call is included with the request for reimbursement.
- f. All nonspecific receipts must have an explanation attached.

C. Travel Outside of Las Vegas But Within Nevada

A copy of the approved TA request must be included with the reimbursement request. Costs for AUTHORITY-approved travel outside of Las Vegas but within Nevada will be reimbursed as for B. above. Reservations for lodging will be made at the approved activity host hotel during travel whenever available and financially reasonable. If the approved activity is not held at a hotel, accommodations should be made considering reasonableness of cost and other travel-related expenses. Reimbursement for lodging is limited to the actual rate paid by the traveler subject to limitations specified in the Travel Authorization and the GSA Schedule prescribed for the local area.

D. Travel Guidelines

The following guidelines apply in arranging for travel and in reviewing and approving requests for reimbursement.

1. Air Travel

- a. Air travel reservations must be made through available discount airlines immediately after travel approval is received to receive the most economical airfares.
- b. Coach or economy airline accommodations should be booked unless:
 - It would require circuitous routing;
 - It would require travel during unreasonable hours;
 - It would greatly increase the duration of the flight
 - It would result in additional costs
- c. Exceptions to discount airline fares MUST be supported by written justification and accompany the TA when it is submitted for approval.
- d. If air travel is ticketed, the passenger receipt must be submitted with the request for reimbursement. If air travel is "ticketless," a travel itinerary must be submitted with the request for reimbursement.

2. Ground Transportation

- a. Private Automobile: When commercial transportation is not available or feasible, the use of a private automobile is reimbursable at the maximum rate per mile established by Internal Revenue Service, plus toll charges and parking. This mileage allowance covers all reimbursements incurred in operating the automobile, including but not limited to fuel, insurance, towing charges, repairs and damages. The traveler will be responsible for any deductibles they have on their automobile insurance policy. Mileage will be calculated based on the round trip from the employee's normal workplace.
 - When private automobile use is approved and used for travel, reimbursement will be made based on the lesser of the following:
 1. The maximum rate per mile, as explained in the previous paragraph; or
 2. The equivalent 14-day advance economy class round-trip airfare to the same destination.
 - When a private automobile is used, the traveler is not entitled to any additional per diem or other expenses (such as hotel) than if air travel had been used.
 - Approved travel within Clark County should be made using either a rental car or a personal vehicle. The Project Coordinator will determine, on a case-by-case basis, when it is appropriate to utilize a rental car and whether personal vehicle mileage will be reimbursed.
- b. Rental Automobile: Subject to the TA provisions, a rental automobile may be used when other means of transportation are not available OR are more costly to the AUTHORITY. Taxis, buses, shuttles and other forms of transportation should be considered before requesting a rental vehicle.
 - A compact or economy vehicle must be requested, except in special pre-approved circumstances.
 - If more than one employee travels to the same destination and a rental vehicle is required, the vehicle should be shared. All employees who will drive the rental vehicle should advise the rental company at the time they complete the paperwork to rent the vehicle.
 - Consultant insurance policy covers rental car use: therefore, additional

vehicle insurance coverage I not necessary and will not be considered a reimbursable expense.

- Vehicle rental receipts must be submitted with the request for reimbursement.
- The rental vehicle should be returned to the rental agency with a full tank of gas. Gas receipts must be submitted with the request for reimbursement.
- When a rental vehicle was not initially approved on the travel request, a memo justifying this expense must be included with the Expense Report.

3. Lodging Outside of Nevada

Reimbursement for lodging outside of Nevada will be made based on the actual cost, but not exceeding the Federal GSA rate.

- a. Reservations for lodging will be made at the approved activity host hotel during travel whenever available and financially reasonable. If the approved activity is not held at a hotel, accommodations should be made considering reasonableness of cost and other travel-related expenses.
- b. Reservations should be made immediately after approval of the TA to allow the AUTHORITY to receive the most economical rate and to allow prepayment of lodging.
- c. Employees traveling to the same destination at the same time should stay at the same hotel/motel whenever possible.
- d. If a traveler stays overnight after the approved activity has ended, an explanation of the necessity of the stay must be included with the request for reimbursement detailing the hotel/per diem issues involved for consideration. Additional costs incurred from non-business-related activities will be the sole responsibility of the traveler and will not be eligible for reimbursement by the AUTHORITY.

4. Disallowed Costs

Travelers are expected to exercise prudence while on SNWA-authorized travel by refraining from acquiring travel-related items and services that would commonly be considered luxurious or extravagant. The following list of disallowed costs applies to all SNWA-authorized business travel for which no reimbursement will be paid:

- Alcoholic beverages
- Personal entertainment (including in-room movies) not included in prepaid registrations
- Personal hygiene items
- Personal reading material
- Personal long-distance calls
- Cigarettes or other smoking related items
- Gasoline, oil, or other car-related items (except for rental or project cars approved on the TA)
- Costs not substantiated by a bona fide, dated receipt.
- Costs incurred before or after approved AUTHORITY approved travel periods

- Additional vehicle rental insurance, flight insurance, or other travel-related insurance
- Shipping/mailing charges (including charges to ship books purchased during travel) without prior approval
- Room Service
- Tips more than 20 percent of allowable expense category
- Costs of internet connections for personal use
- Costs of change in travel itinerary for personal reasons other than personal or family emergencies.

**EXHIBIT C
TRAVEL POLICY**

SOUTHERN NEVADA WATER AUTHORITY TRAVEL AUTHORIZATION
(PLEASE PRINT OR TYPE)

SNWA Job Order Account Number:

LAST NAME	FIRST	MIDDLE INITIAL	SNWA WBS No.	SNWA WBS Title

Travel Category (Check appropriate box)

Business Trip	Extended Assignment
<input type="checkbox"/> One Day (No Overnight Stay)	<input type="checkbox"/> More than 30 days (\$2,500 per month plus \$700.00 allowance per month for travel to and from Las Vegas)
<input type="checkbox"/> More than one day but not exceeding 30 consecutive business days.	

Note: Reimbursement for allowable costs will be paid in accordance with the contract. All special reimbursement requests must be identified on this form prior to approval.

DEPARTURE POINT: _____

DESTINATION: _____

RETURN: _____

LIST IN ORDER ALL POINTS OF AUTHORIZED BUSINESS STOPOVERS: _____

DATES OF TRAVEL	BEGINNING DATE	ENDING DATE	AN ENDING DATE MUST BE INDICATED. AN "OPEN" ENDING DATE WILL NOT BE ACCEPTED.
	FROM	TO	

Mode of Travel to and from destination

<input type="checkbox"/> YES	<input type="checkbox"/> NO	Air Travel, Coach, Lowest Cost
<input type="checkbox"/> YES	<input type="checkbox"/> NO	Privately Owned Vehicle @ .50¢ per mile
<input type="checkbox"/> YES	<input type="checkbox"/> NO	Use of rental car at destination

Special Reimbursement Requests:
--

TRAVELER'S HOME OFFICE LOCATION _____

JUSTIFICATION FOR TRAVEL:

Hotel: \$ _____ Per Day Per Diem: \$ _____ Per Day

APPROVED BY:

SNWA PROJECT COORDINATOR	PRINT OR TYPE FULL NAME	SIGNATURE	DATE
PROJECT MANAGER	PRINT OR TYPE FULL NAME	SIGNATURE	DATE
TRAVELER	PRINT OR TYPE FULL NAME	SIGNATURE	DATE

NOTE: Travel Authorization must be processed and approved in accordance with the provisions delineated in the SNWA Travel Policy.

EXHIBIT D
BASIS OF COMPENSATION AND SCHEDULE
Payment Schedule

1. Payment.
 - a. Payment for Consultant Services.
 - i. Payment for reimbursable services rendered in accordance with the Agreement shall be made at the sole discretion of the AUTHORITY.
 - ii. CONSULTANT shall be entitled to payment for the actual hours worked times direct salary cost times a multiplier of 3.15 for Cost Reimbursable Activities (“Consultant Services Payment”).
 - iii. CONSULTANT shall be entitled to SUBCONSULTANT markup of 5%.
 - iv. Consultant Services Payment includes all costs to accomplish the work including administration and overhead, fringes, quality control, direct costs and profit.
 - b. Travel Costs. Travel costs shall be reimbursed in accordance with the AUTHORITY’s Travel Policy, attached as exhibit B to the Agreement.
 - c. The final amount paid for work completed by the CONSULTANT, whether performed by CONSULTANT or a Subconsultant, shall not include unspent budget remaining under these Cost Reimbursable Activities.
2. Hourly Rates:

BV and Jacobs - Positions	Pay-Grade Hourly Rate
Project Director	\$350 - \$450
Project Management	\$325 - \$375
Discipline Experts	\$350 - \$450
Quality Control	\$300 - \$350
Engineering Management	\$225 - \$295
Sr. Project Engineers	\$210 - \$280
Project Engineers	\$180 - \$230
Staff Engineers	\$120 - \$185
Sr. CADD	\$120 - \$185
Staff CADD & Graphics	\$185 - \$260
Writers & Editors	\$165 - \$195
Project Controls	\$165 - \$195
Sr. Administration	\$95 - \$110
Project Assistant	\$75 - \$95

Atkins - Positions	Pay-Grade Hourly Rate
PIC	\$250 - \$380
Project Director	\$210 - \$350
Technical Manager	\$210 - \$350
Sr. Project Management	\$180 - \$290
Sr. Engineer / PM	\$110 - \$270
Sr. GIS Tech / Sr. ROW Agent / Sr. Geomaticist	\$100 - \$250
ROW Agent	\$80 - \$150
Engineer	\$80 - \$150
GIS Tech / ROW Tech / Public Inf Tech / CAD Tech	\$80 - \$175
2 Person Survey Crew	\$150 - \$270
Project Assistant	\$60 - \$95

NewFields - Positions	Pay-Grade Hourly Rate
Principal Manger	\$200 - \$300
Project Manager/Senior Scientist II	\$200 - \$300
Staff Engineer/Scientist/Planner	\$150 - \$200
Engineer/Scientist/Planner	\$120 - \$175
Environmental Scientist	\$100 - \$160
Project Assistant	\$65 - \$100

GES - Positions	Pay-Grade Hourly Rate
Principal Engineer	\$260 - \$300
Sr. Project Engineer	\$210 - \$260
Project Engineer	\$165 - \$210
Project Geologist	\$140 - \$165
Staff Engineer/ Geologist	\$120 - \$150
Lab/Field Technician	\$85 - \$120
Project Assistant	\$70 - \$85

N&M - Positions	Pay-Grade Hourly Rate
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Principal Engineer	\$210 - \$250
Project Manager	\$190 - \$205
Sr. Project Engineer/Geologist	\$175 - #190
Project Engineer/Geologist	\$145 - \$170
Senior Staff Engineer	\$110 - \$140
Staff Engineer	\$100 - \$120
Technician	\$85 - \$105
Drafter/CADD	\$110 - \$135
Project Assistant	\$75 - \$90

3. Activity Funding Summary:

Authorized Work Activities- Cost Reimbursable		
Activity	Description	TOTAL NTE
Activity 2.1	Project Management, Administration and Controls	\$6,910,417
Activity 2.2	Risk Management	\$997,015
Activity 2.3	Basis of Design and Standards	\$602,723
Activity 2.4	Information and Data Management	\$4,791,548
Activity 2.5	Modeling: Hydraulic, Transient, CFD, and Physical	\$1,488,469
Activity 2.6	Aerial Mapping, Survey, and Right of Way	\$2,726,272
Activity 2.7	Geotechnical Services: Pipeline and Trenchless Crossings	\$2,800,573
Activity 2.8	Geotechnical Services for Tunnel Analysis	\$6,102,215
Activity 2.9	Subsurface Utility Explorations	\$554,507
Activity 2.10	NEPA Permitting and Environmental Support	\$1,794,938
Activity 2.11	Sustainability	\$474,751
Activity 2.12	Pipelines: North and South Corridor Alternatives	\$10,470,643

Activity 2.13	Tunnels: North and South Corridor Alternatives	\$665,932
Activity 2.14	Facilities: RMPS; IPS; BPS RES; ROFCS; Interconnections.	\$11,013,036
Activity 2.15	SCADA and Telemetry	\$152,152
Activity 2.16	Cathodic Protection	\$149,641
Activity 2.17	Start-up and Commissioning Concepts	\$246,829
Activity 2.18	Opinions of Probable Construction Cost (Monte Carlo Analyses)	\$1,061,147
Activity 2.19	Construction Packaging, Phasing and Schedule	\$193,376
Activity 2.20	Land Acquisition Support	\$1,406,282
Activity 2.21	Permitting Support	\$178,975
Activity 2.22	Public Outreach Support	\$289,070
Activity 2.23	Predesign Report	\$829,489
Activity 2.24	Deliverables	\$0
	SUBTOTAL Cost Reimbursable Price	
Activity 2.25	Unallocated	\$0
	TOTAL AGREEMENT PRICE	\$55,900,000

SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
AGENDA ITEM

April 15, 2021

Subject:

Agreement

Petitioner:

Doa J. Ross, Deputy General Manager, Engineering

Recommendations:

That the Board of Directors approve and authorize the General Manager to sign, in substantially the same form as attached hereto, an agreement between JVC Associates, Inc., dba JVC Architects, and the Authority to provide professional services for the design of the Horizon Lateral management office building for an amount not to exceed \$477,840.

Fiscal Impact:

Funds requested for current year expenditures are available in the Authority's Capital Budget. Funds for future year expenditures will be budgeted accordingly.

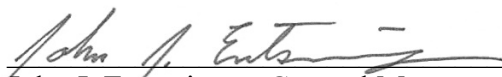
Background:

On November 19, 2020, the Board of Directors approved the Amended Major Construction and Capital Plan, which includes the Horizon Lateral Project (Project). After a life cycle cost analysis and evaluation of the Project's timeline, workspace requirements, and long-term space requirements at the River Mountains Water Treatment Facility (RMWTF), the construction of a permanent management office building (Building) for the Project is recommended. This structure, located as generally shown on Attachment A, would accommodate Project personnel for the duration of the Project. Upon completion of the Project, currently projected for 2032, the Building will be transitioned for use by RMWTF staff.

If approved, the attached Agreement to Provide Professional Services would provide the terms and conditions necessary for JVC Architects to provide design and additional support services during construction of the Building. The requested \$477,840 includes a 10 percent contingency.

This agreement is being entered into pursuant to NRS 332.115.1(b) and Section 6(j) of the SNWA 1995 Amended Cooperative Agreement. The office of the General Counsel has reviewed and approved the agreement.

Respectfully submitted:

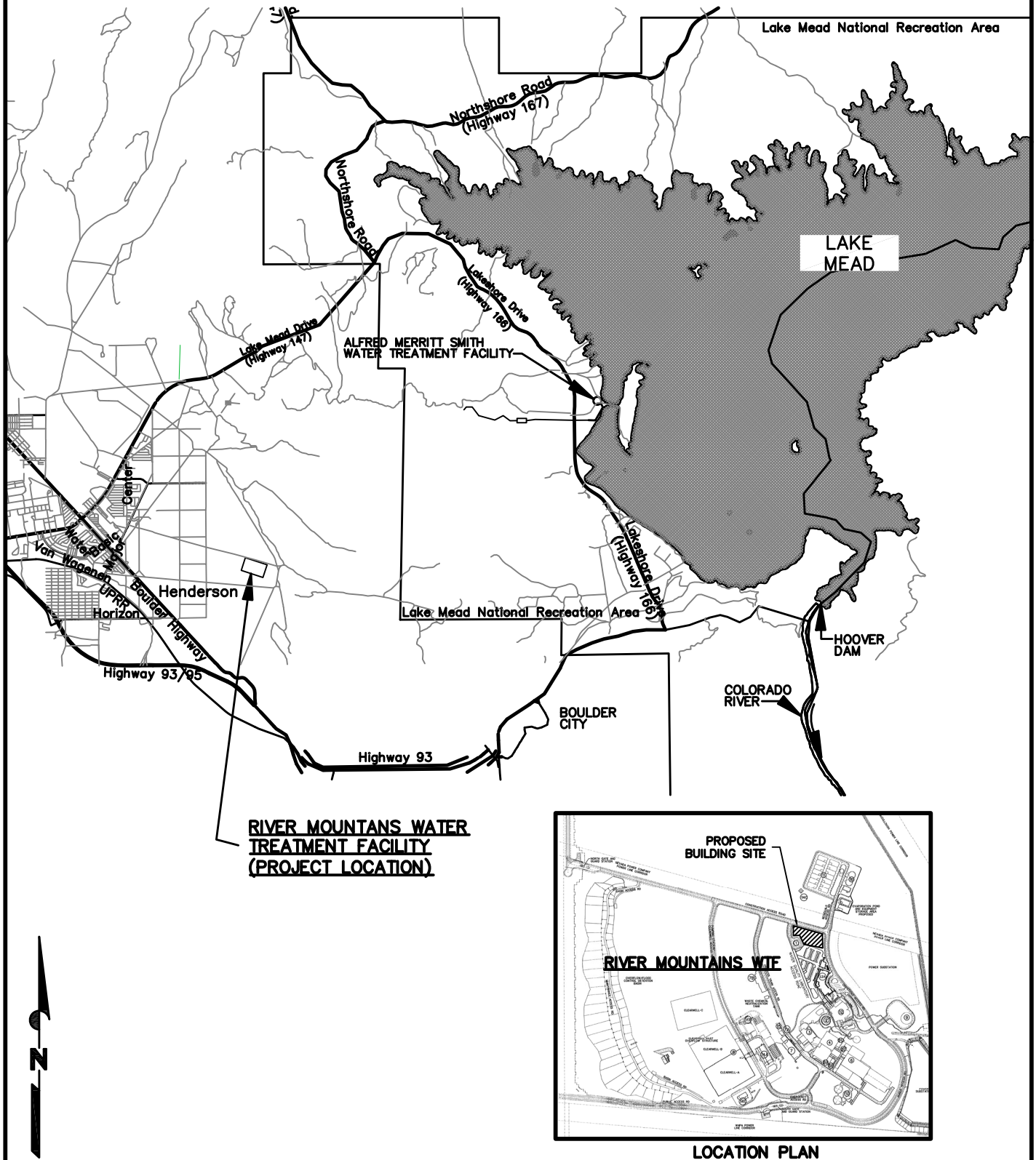


John J. Entsminger, General Manager

JJE:DRJ:PJJ:AV:an

Attachments

ATTACHMENT A



SOUTHERN NEVADA WATER AUTHORITY VICINITY MAP

NOT
TO
SCALE

DRAWN BY:
T. ACEVEDO
CHECK BY:
K. ULREY
ENGINEER:
A. VENTIMIGLIA

RIVER MOUNTAINS WTE
PROPOSED OFFICE BUILDING

DISCLOSURE OF OWNERSHIP/PRINCIPALS

Business Entity Type (Please select one)						
<input type="checkbox"/> Sole Proprietorship	<input type="checkbox"/> Partnership	<input type="checkbox"/> Limited Liability Company	<input checked="" type="checkbox"/> Privately Held Corporation	<input type="checkbox"/> Publicly Held Corporation	<input type="checkbox"/> Trust	<input type="checkbox"/> Non-Profit Organization
<input type="checkbox"/> Other						
Business Designation Group (Please select all that apply)						
<input type="checkbox"/> MBE	<input type="checkbox"/> WBE	<input checked="" type="checkbox"/> SBE	<input type="checkbox"/> PBE	<input type="checkbox"/> VET	<input type="checkbox"/> DVET	<input type="checkbox"/> ESB
Minority Business Enterprise	Women-Owned Business Enterprise	Small Business Enterprise	Physically Challenged Business Enterprise	Veteran Owned Business	Disabled Veteran Owned Business	Emerging Small Business
Number of Clark County Nevada Residents Employed: 6						
Corporate/Business Entity Name: JVC Associates, Inc.						
(Include d.b.a., if applicable) JVC Architects						
Street Address:		5385 Cameron St, Suite 15		Website: www.jvcarchitects.net		
City, State and Zip Code:		Las Vegas, NV 89118		POC Name: Jim Van Compernelle		
				Email: jvc@jvcarchitects.net		
Telephone No:		702-871-3416		Fax No: NA		
Nevada Local Street Address: (If different from above)		ALL SAME AS ABOVE		Website:		
City, State and Zip Code:				Local Fax No:		
Local Telephone No:				Local POC Name:		
				Email:		

All entities, with the exception of publicly-traded corporations and non-profit organizations, must list the names of individuals, either directly or indirectly, holding more than five percent (5%) ownership or financial interest in the business entity appearing before the Board of Directors.

Publicly-traded corporations and non-profit organizations shall list all Corporate Officers and Directors in lieu of disclosing the names of individuals with ownership or financial interest.

Entities include all business associations organized under or governed by Title 7 of the Nevada Revised Statutes, including but not limited to private corporations, close corporations, foreign corporations, limited liability companies, partnerships, limited partnerships, and professional corporations.

Full Name	Title	% Owned (Not required for Publicly Traded Corporations/Non-profit organizations)
James Van Compernelle	President	100

This section is not required for publicly-traded corporations.

- Are any individual members, partners, owners or principals, involved in the business entity, an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please note that the employee(s), or appointed/elected official(s) may not perform any work on professional service contracts, or other contracts, which are not subject to competitive bid.)
- Do any individual members, partners, owners or principals have a spouse, registered domestic partner, child, parent, in-law or brother/sister, half-brother/half-sister, grandchild, grandparent, related to an Entity full-time employee(s), or appointed/elected official(s)?
☐ Yes ☒ No (If yes, please complete the Disclosure of Relationship form on Page 2. If no, please print N/A on Page 2.)

I certify under penalty of perjury, that all of the information provided herein is current, complete, and accurate. I also understand that the Board will not take action on any item without the completed disclosure form.

Jim Van Compernelle Digitally signed by Jim Van Compernelle
Date: 2021.03.08 13:45:44 -08'00'

 Signature

 President

 Title

Jim Van Compernelle

 Print Name

 3/8/2021

 Date

DISCLOSURE OF RELATIONSHIP

List any disclosures below:
(Mark N/A, if not applicable.)

NAME OF BUSINESS OWNER/PRINCIPAL	NAME OF ENTITY* EMPLOYEE/OFFICIAL AND JOB TITLE	RELATIONSHIP TO ENTITY* EMPLOYEE/ OFFICIAL	ENTITY* EMPLOYEE'S/ OFFICIAL'S DEPARTMENT
N/A			

* Entity employee means an employee of Las Vegas Valley Water District, Southern Nevada Water Authority, or Silver State Energy Association .

“Consanguinity” is a relationship by blood. “Affinity” is a relationship by marriage.

“To the second degree of consanguinity” applies to the candidate’s first and second degree of blood relatives as follows:

- Spouse – Registered Domestic Partners – Children – Parents – In-laws (first degree)
- Brothers/Sisters – Half-Brothers/Half-Sisters – Grandchildren – Grandparents – In-laws (second degree)

For Entity Use Only:

If no Disclosure or Relationship is noted above or the section is marked N/A, please check this box.

☒ No Disclosure

If any Disclosure of Relationship is noted above, please complete the following:

☐ Yes ☐ No Is the Entity employee(s) noted above involved in the contracting/selection process for this particular agenda item?

☐ Yes ☐ No Is the Entity employee(s) noted above involved in any way with the business in performance of the contract?

Notes/Comments:

Signature

Adriana Ventimiglia, Sr. Program Engineer
Print Name
Authorized Department Representative

AGREEMENT TO PROVIDE PROFESSIONAL SERVICES

This Agreement is made and entered into by and between JVC Associates, Inc. (dba JVC Architects), hereinafter called "THE ARCHITECT," and the Southern Nevada Water Authority, a political subdivision of the State of Nevada, hereinafter called the "AUTHORITY." THE ARCHITECT and AUTHORITY are sometimes hereinafter referred to individually as "Party" and collectively as the "Parties." The term "AUTHORITY" also refers to staff of AUTHORITY acting within their designated authority and duties. The "Effective Date" is the date of last signature on this Agreement.

WITNESSETH:

WHEREAS, AUTHORITY desires to obtain professional services as more specifically described herein, and

WHEREAS, THE ARCHITECT is properly qualified and desires to provide the professional services required by AUTHORITY, and

WHEREAS, AUTHORITY, in reliance on THE ARCHITECT's representations and proposals, agrees to retain THE ARCHITECT, and THE ARCHITECT agrees to furnish professional services to AUTHORITY, on the terms and conditions hereinafter set forth.

NOW, THEREFORE, in consideration of the promises and mutual covenants contained herein, the Parties hereto agree as follows:

1. SCOPE OF SERVICES:

- 1.1. THE ARCHITECT shall provide any requested services, hereinafter referred to as "Services" or "Work," as described and within the time indicated in **Exhibit A**, which is attached herewith and made a part of this Agreement. Except as otherwise provided in this Agreement, if any provision contained in this Agreement conflicts with any provision in any of the attached Exhibits, the provision contained in this Agreement shall govern and control.
- 1.2. All Services performed shall be subject to the cost ceiling contained in Paragraph 4 hereof and subject to AUTHORITY's directions respecting priorities. THE ARCHITECT will furnish professional Services in the amount necessary to complete, promptly and effectively, the Work assigned under this Agreement. All of the Services shall be performed by THE ARCHITECT or an approved subcontractor.
- 1.3. In performing Services under this Agreement, THE ARCHITECT shall observe and abide by the terms and conditions of all applicable laws, regulations, ordinances, or rules of the United States, of the State of Nevada, of any political subdivision thereof, and of any other duly constituted public authority or agency. THE ARCHITECT shall be responsible for obtaining any license, permit or other approval as required by law or otherwise, arising out of the Services to be performed hereunder.
- 1.4. THE ARCHITECT has, or will secure at its own expense, the qualified personnel required to perform the Services assigned under this Agreement. Such personnel shall not be employed by the United States; the State of Nevada; Clark County, Nevada; Las Vegas Valley Water District, Southern Nevada Water Authority, or any other political subdivision of the State of Nevada.

2. PERIOD OF PERFORMANCE:

This Agreement shall become effective as of the Effective Date and shall remain in effect until all Services authorized by AUTHORITY to be performed are completed by THE ARCHITECT, unless terminated in accordance with the terms of this Agreement. This Agreement may not extend more than seven years from Effective Date. During this period, THE ARCHITECT agrees to provide Services as required by AUTHORITY within the scope of this Agreement.

3. COMPENSATION:

- 3.1. In consideration for completion of all duties and responsibilities under this Agreement, AUTHORITY agrees to pay THE ARCHITECT, in accordance with Exhibit A, for Work completed to AUTHORITY's satisfaction.
- 3.2. THE ARCHITECT shall provide itemized monthly invoices for Services performed during the previous month. Invoices are to be submitted to AUTHORITY in accordance with the Notice provisions of this

Agreement and must reference the name and Effective Date of the Agreement. A copy of any invoice received from subcontractors used by THE ARCHITECT shall be included.

3.3. AUTHORITY shall pay invoiced amounts from THE ARCHITECT based on tasks completed as set forth in **Exhibit A** within 30 calendar days after the date the invoice is received and approved by AUTHORITY.

3.4. AUTHORITY may dispute a payment or portion thereof that is due before or after AUTHORITY pays the invoice.

4. LIMITATION ON COSTS:

The total cost of Services provided under this Agreement shall not exceed \$477,840.

5. RESPONSIBILITIES OF THE ARCHITECT:

5.1. THE ARCHITECT shall appoint a Manager who will manage the performance of Services. All of the Services specified by this Agreement shall be performed by the Manager, or by THE ARCHITECT's associates and employees under the personal supervision of the Manager. Should the Manager, or any employee of THE ARCHITECT be unable to complete his or her responsibility for any reason, THE ARCHITECT must obtain written approval by AUTHORITY prior to replacing him or her with another equally qualified person. If THE ARCHITECT fails to make a required replacement within 30 calendar days, AUTHORITY may terminate this Agreement.

5.2. THE ARCHITECT agrees that its officers and employees will cooperate with AUTHORITY in the performance of Services under this Agreement and will be available for consultation with AUTHORITY at such reasonable times with advance notice as to not conflict with their other responsibilities.

5.3. THE ARCHITECT shall be responsible for the professional quality, technical accuracy, timely completion, and coordination of all Services furnished by THE ARCHITECT, its subcontractors and their principals, officers, employees and agents under this Agreement. In performing the Services, THE ARCHITECT shall follow practices consistent with generally accepted professional and technical standards.

5.4. It shall be the duty of THE ARCHITECT to assure that all products of its effort are technically sound and in conformance with all pertinent Federal, State and Local statutes, codes, ordinances, resolutions and other regulations. THE ARCHITECT will not produce a work product which violates or infringes on any copyright or patent rights. THE ARCHITECT shall, without additional compensation, correct or revise any errors or omissions in its work products.

5.4.1. Permitted or required approval by AUTHORITY of any products or services furnished by THE ARCHITECT shall not in any way relieve THE ARCHITECT of responsibility for the professional and technical accuracy and adequacy of its work.

5.4.2. AUTHORITY's review, approval, acceptance, or payment for any of THE ARCHITECT's Services herein shall not be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement, and THE ARCHITECT shall be and remain liable in accordance with the terms of this Agreement and applicable law for all damages to AUTHORITY caused by THE ARCHITECT's performance or failures to perform under this Agreement.

5.5. All materials, information, and documents, whether finished, unfinished, drafted, developed, prepared, completed, or acquired by THE ARCHITECT for AUTHORITY relating to the Service and not otherwise used or useful in connection with services previously rendered, or services to be rendered, by THE ARCHITECT to parties other than AUTHORITY shall become the property of AUTHORITY and shall be delivered to AUTHORITY's representative upon completion or termination of this Agreement, whichever comes first. THE ARCHITECT shall not be liable for damages, claims, and losses arising out of any reuse of any work products on any other project conducted by AUTHORITY. AUTHORITY shall have the right to reproduce all documentation supplied pursuant to this Agreement.

5.6. The rights and remedies of AUTHORITY provided for under this section are in addition to any other rights and remedies provided by law or under other sections of this Agreement.

6. RESPONSIBILITIES OF AUTHORITY:

- 6.1. AUTHORITY agrees that its officers and employees will cooperate with THE ARCHITECT in the performance of the Services and will be available for consultation with THE ARCHITECT at such reasonable times with advance notice as to not conflict with other responsibilities.
- 6.2. The Services performed by THE ARCHITECT under this Agreement shall be subject to review for compliance with the terms of this Agreement by AUTHORITY's representative, Adriana Ventimiglia, Engineering, telephone number (702) 822-3301 or their designee. AUTHORITY's representative may delegate any or all of his/her responsibilities under this Agreement to appropriate staff members.
- 6.3. AUTHORITY shall assist THE ARCHITECT in obtaining data on documents from public officers or agencies, and from private citizens and/or business firms, whenever such material is necessary for the completion of the Services.
- 6.4. THE ARCHITECT will not be responsible for accuracy of information or data supplied by AUTHORITY or other sources to the extent such information or data would be relied upon by a reasonably prudent THE ARCHITECT.

7. TRUTH-IN-NEGOTIATION CERTIFICATION:

Signing of this Agreement by THE ARCHITECT shall constitute a truth-in-negotiation certification by THE ARCHITECT that wage rates and other factual unit costs supporting the compensation of this Agreement are accurate, complete, and current at the time of execution of this Agreement. The original Agreement price and any additions thereto shall be adjusted to exclude any significant sums by which AUTHORITY determines the Agreement price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such Agreement adjustments shall be made within one year following the end of the term of this Agreement.

8. INDEPENDENT CONTRACTOR – NO JOINT VENTURE:

The relationship of THE ARCHITECT to AUTHORITY hereunder shall be that of an Independent Contractor as defined by NRS 616A.255 or Nevada state law. Nothing herein shall be construed to imply an employer and employee relationship, a joint venture, or principal and agent relationship.

9. INTELLECTUAL PROPERTY ACKNOWLEDGMENT:

In consideration of the covenants, representations and warranties set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, THE ARCHITECT hereby covenants, represents and warrants the following:

- 9.1. All content developed on behalf of AUTHORITY, in whole or in part, solely or jointly by THE ARCHITECT and all of THE ARCHITECT's employees, associates or subcontractors assisting in creating developments and/or other work product, whether or not copyrightable or otherwise protected, including, without limitation, advertisements and marketing material ("Work Product") arising from Services performed pursuant to, or arising out of the AUTHORITY's engagement of THE ARCHITECT, or previously conceived in anticipation of work to be performed in regard to AUTHORITY's engagement of THE ARCHITECT, shall be deemed "work made for hire" as defined in the copyright laws of the United States of America (17 U.S.C. §101 et seq.) and AUTHORITY shall own all right, title, and interest, including, without limitation, all copyrights and other intellectual property right, title, and interest ("Right") in and to the Work Product.
- 9.2. To the extent that THE ARCHITECT is deemed to have or retain any Right or otherwise possess any Right in and to any Work Product, THE ARCHITECT hereby assigns, transfers, and conveys, all such Right to AUTHORITY.
 - 9.2.1. THE ARCHITECT shall execute all documents and undertake all actions necessary to clarify that the AUTHORITY maintains the ownership of all of the Work Product and to allow AUTHORITY to apply for registrations of the Work Product, as well as maintain any registrations gained, including, without limitation, the Intellectual Property Assignment set forth in Paragraph 10.

- 9.3. THE ARCHITECT hereby waives and releases any claim of infringement of any Right of THE ARCHITECT (whether based in any intellectual property Right, other proprietary interest whatsoever, or fiduciary theory) in, to or respecting any Work Product (including, without limitation, any claim based on any THE ARCHITECT's rights in any Work Product which may be construed as "works of visual art" as defined in the Visual Arts Rights Act of 1990, 17 U.S.C. 106A) and shall never challenge nor dispute AUTHORITY's Right in and to the Work Product.

10. INTELLECTUAL PROPERTY ASSIGNMENT:

In consideration of the covenants, representations and warranties set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, THE ARCHITECT hereby sells, conveys, transfers and assigns to AUTHORITY all of THE ARCHITECT's right, title, license and interest (including, without limitation, all intellectual property right, title, license and interest) in and to any and all Work Product designed, developed, or created by THE ARCHITECT or otherwise arising out of the THE ARCHITECT's Services or Work and related content by and for the benefit of AUTHORITY (including, without limitation, patent applications, issued patents, prototypes for the purpose of same, and other associated derivatives) including, without limitation, all marks, all goodwill associated with such patents, trade secrets, and copyrights in and to, relating to, associated with and/or arising from the Work, the right to applications, issuance, continuations, and divisionals of such patents and the right to applications, registrations, renewals, reissues, and extensions of such marks and copyrights, and the right to sue and recover for any past and/or continuing infringements or contract breaches, said rights, titles, licenses and interests to be held and enjoyed by AUTHORITY, for AUTHORITY's own use and benefit and for the use and benefit of AUTHORITY's successors, assigns or other legal representatives, as fully and entirely as the same would have been held and enjoyed by THE ARCHITECT if this sale, conveyance, transfer and assignment had not been made.

11. INTERPRETATION:

The Parties agree that neither Party shall be deemed the drafter of this Agreement and, in the event this Agreement is ever construed by a court of law or equity, such court shall not construe this Agreement or any provision hereof against either Party as drafter of this Agreement.

12. CONFLICT OF INTEREST:

During the course of performance of this Agreement, THE ARCHITECT will not contract with any client whose interest is adverse to or would require THE ARCHITECT to take a position contrary to that of the Las Vegas Valley Water District and/or the Southern Nevada Water Authority.

13. PROHIBITION AGAINST COMMISSION FOR OBTAINING AGREEMENT:

THE ARCHITECT warrants that no person or company has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees; nor has THE ARCHITECT paid or agreed to pay any person, company, corporation, individual or firm other than a partner or bona fide employee, any fee, commission, contribution, donation, percentage, gift, or any other consideration, contingent upon or resulting from award of this Agreement. For any breach or violation of this warranty, AUTHORITY shall have the right to terminate this Agreement without liability, or at its discretion, to deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift or consideration and any other damages.

14. PROHIBITION AGAINST INTEREST BY GOVERNMENT EMPLOYEES:

- 14.1. No officer, employee, or member of the governing body of AUTHORITY shall (1) participate in any decision relating to this Agreement which affects his or her personal interest or the interest of any corporation, partnership, or association in which he or she is, directly or indirectly, interested or (2) have any interest, direct or indirect, in this Agreement or the proceeds thereof.
- 14.2. THE ARCHITECT represents that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of Services required to be performed under this Agreement. THE ARCHITECT further covenants that in the performance of said Services, no person having any such interest shall be employed.

- 14.3. No member of, delegate to, or officer or employee of the legislative, executive or judicial branches of the government of the United States, of the State of Nevada or any of its political subdivisions shall be entitled to any share or part hereof or to any benefit to arise therefrom.

15. COMPLETENESS AND ACCURACY OF THE ARCHITECT'S WORK:

- 15.1. THE ARCHITECT shall be responsible for the completeness and accuracy of its research, supporting data, and any final reports or other deliverables prepared or compiled pursuant to this Agreement and shall correct, at its expense, all errors or omissions therein.
- 15.2. The cost necessary to correct those errors attributable to THE ARCHITECT and any damage incurred by AUTHORITY as a result of additional costs caused by such errors shall be chargeable to THE ARCHITECT. The fact that AUTHORITY has accepted or approved THE ARCHITECT's Work shall in no way relieve THE ARCHITECT of any of its responsibilities.

16. INDEMNIFICATION:

- 16.1. For all claims based upon or arising out of the Services or Work of THE ARCHITECT, THE ARCHITECT shall indemnify and hold harmless, without cost to AUTHORITY, its Board of Directors and its officers, agents, and employees (the "AUTHORITY Parties"), against any and all losses, claims, costs, damages, actions, proceedings, and liability to the extent that such losses, claims, costs, damages, actions, proceedings, and liability are caused by the negligence, errors, omissions, recklessness or intentional misconduct of THE ARCHITECT or the employees of THE ARCHITECT. This indemnification includes, but is not limited to, reasonable attorneys' fees and costs and claims for or by reason of any death or deaths of, or any physical injury or injuries to, any person or persons or damage to real or personal property of any kind whatsoever, whether the person(s) or property of THE ARCHITECT, its agents, or of third parties; harassment or discrimination or any theory of joint or dual employment by THE ARCHITECT's employees, agents, subcontractors, arising out of the Services or Work under this Agreement; or infringement on any U.S. patent (issued as of the Effective Date) or any copyright or trademark.

If such claim(s) results in a trier of fact's adjudication of THE ARCHITECT as liable, THE ARCHITECT shall pay to AUTHORITY the reasonable attorneys' fees and costs which are determined to equate to the proportionate liability of THE ARCHITECT, as reimbursement for the attorneys' fees and costs incurred by the AUTHORITY in defending the claim.

- 16.2. For all claims not based upon or arising out of the Services or Work of THE ARCHITECT, THE ARCHITECT shall indemnify, hold harmless, and defend, without cost to the AUTHORITY Parties, against any and all losses, claims, costs, damages, actions, proceedings, and liability to the extent that such losses, claims, costs, damages, actions, proceedings, and liability are caused by the negligence, errors, omissions, recklessness or intentional misconduct of THE ARCHITECT or the employees of the THE ARCHITECT. This indemnification includes, but is not limited to, reasonable attorneys' fees and costs and claims for or by reason of any death or deaths of, or any physical injury or injuries to, any person or persons or damage to real or personal property of any kind whatsoever, whether the person(s) or property of THE ARCHITECT, its agents, or of third parties; harassment or discrimination or any theory of joint or dual employment by THE ARCHITECT's employees, agents, subcontractors, arising out of the Services or Work under this Agreement; or infringement on any U.S. patent (issued as of the Effective Date) or any copyright or trademark. The AUTHORITY Parties may assume, at their sole option, control of the defense, appeal or settlement of any third-party claim for which THE ARCHITECT has indemnified the AUTHORITY Parties by giving written notice of the assumption to THE ARCHITECT. The AUTHORITY Parties may not settle or compromise any claim or consent to the entry of any judgment regarding claims for which THE ARCHITECT has indemnified the AUTHORITY Parties without the prior written consent of THE ARCHITECT, which consent shall not be unreasonably withheld, conditioned or delayed. The indemnification provided by THE ARCHITECT to the AUTHORITY Parties applies to all insurance policies of THE ARCHITECT, whether primary, excess or umbrella coverage is provided to THE ARCHITECT.

17. SCHEDULE FOR PERFORMANCE OF SERVICES:

17.1. Time is of the essence in this Agreement.

17.2. If THE ARCHITECT's performance of Services is delayed or if THE ARCHITECT's sequence of tasks is changed, THE ARCHITECT shall notify AUTHORITY's representative in writing of the reasons for the delay and prepare a revised schedule for performance of Services. The revised schedule is subject to AUTHORITY's written approval.

18. INSURANCE:

18.1. General:

18.1.1. THE ARCHITECT shall not commence Work under this Agreement until it has obtained all insurance required under this Agreement with insurance companies reasonably acceptable to AUTHORITY, nor shall THE ARCHITECT allow any subcontractor to commence Work until all similar insurance required of the subcontractor has been so obtained. THE ARCHITECT shall continue to pay all premiums due for the insurance required under this Agreement during the applicable policy periods and shall notify AUTHORITY of any changes to their insurance coverage.

18.1.2. AUTHORITY shall be named as an additional insured, under THE ARCHITECT's commercial general liability, automobile liability, excess and/or umbrella liability policies. In the event of a loss arising out of or related to the performance of the Work by THE ARCHITECT or its subcontractor(s) hereunder, all insurance required under this Agreement shall be primary (pay first) with respect to any other insurance which may be available to AUTHORITY, regardless of how the "other insurance" provisions may read. THE ARCHITECT agrees to waive its rights of subrogation against AUTHORITY, and THE ARCHITECT's insurers shall also waive their rights to recover, as evidenced by an endorsement. The additional insured and waiver of subrogation language shall read as follows:

The Southern Nevada Water Authority, its members and affiliated companies, successors or assigns, including their directors, officers and employees individually and collectively when acting in the scope of the employment. Also, all owners of the property where the Work will be performed.

18.1.3. AUTHORITY shall also be named as an additional insured under the subcontractor's insurance policies. Any deviation from the required insurance requirements will need to be approved by AUTHORITY in writing. Nothing contained in this Paragraph is to be construed as limiting the extent of THE ARCHITECT's or subcontractor's liability for claims arising out of this Agreement. THE ARCHITECT and subcontractor shall be responsible for insuring all of its own personal property, tools and equipment.

18.1.4. If THE ARCHITECT fails to procure and maintain the insurance as required herein, in addition to other rights or remedies, AUTHORITY shall have the right, if AUTHORITY so chooses, to procure and maintain the required insurance in the name of THE ARCHITECT with AUTHORITY as an additional named insured. THE ARCHITECT shall pay the cost thereof and shall furnish all necessary information to maintain the procured insurance. In the event THE ARCHITECT fails to pay the cost, AUTHORITY has the right to set off any sums from the compensation due to THE ARCHITECT set forth in this Agreement and directly pay for such coverage.

18.1.5. With respect to all insurance required under this Agreement, the deductible shall not exceed \$50,000 without the prior written approval of the Risk Manager of AUTHORITY.

18.2. Evidence of Insurance:

18.2.1. THE ARCHITECT's insurance shall be written with a property and casualty insurance company with an AM Best Financial Strength Rating of A- or higher and an AM Best Financial Size Category of Class VIII or higher.

18.2.2. Within 10 working days after the Effective Date, THE ARCHITECT shall deliver to the AUTHORITY a certificate of insurance documenting the required insurance coverage. Upon

request of AUTHORITY, THE ARCHITECT agrees to provide a copy of all insurance policies required under this Agreement.

18.2.3. Renewal certificates shall be provided to AUTHORITY not later than 15 days prior to the expiration of policy coverage.

18.2.4. All insurance policies shall require the insurer to provide a minimum of 60 calendar days' prior notice to AUTHORITY for any material change in coverage, cancellation, or non-renewal, except for non-payment of premium, for which the insurer shall provide 30 days' prior notice.

18.3. Insurance Coverages:

18.3.1. Commercial General Liability Insurance: THE ARCHITECT shall maintain commercial general liability insurance, contractual liability, protective liability from independent contractors, property damage liability, bodily injury liability, and personal injury liability with limits of \$1,000,000 per occurrence, and \$2,000,000 annual aggregate. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

18.3.2. Business Automobile Insurance: THE ARCHITECT shall maintain business auto insurance for any owned, non-owned, hired, or rented vehicle with a limit of \$1,000,000 combined single limit for bodily injury and property damage liability. The limit may be satisfied by a combination of primary and excess/umbrella insurance.

18.3.3. Workers Compensation & Employers Liability Insurance: THE ARCHITECT shall maintain statutory workers compensation insurance in accordance with the laws of the state where such compensation is payable. In addition, the insurance THE ARCHITECT maintains shall comply with Nevada Industrial Insurance Act, NRS Chapters 616 and 617, for all of its employees performing Services or Work pursuant to this Agreement.

THE ARCHITECT shall maintain employers' liability insurance with limits of \$1,000,000 per accident and \$1,000,000 for each employee for injury by disease. THE ARCHITECT shall maintain insurance for benefits payable under the U.S. Longshore and Harbor Workers Act and the Jones Act, for exposures that may exist.

In the event THE ARCHITECT is permissibly self-insured for workers' compensation insurance in the State of Nevada, THE ARCHITECT shall deliver to the AUTHORITY a copy of the Certificate of Consent to self-insure issued by the State of Nevada.

18.3.4. Professional Liability Insurance: THE ARCHITECT shall maintain professional liability insurance applicable to THE ARCHITECT's Services or Work as set forth in this Agreement, with limits of not less than \$1,000,000 for each occurrence and \$1,000,000 policy aggregate. This coverage should be maintained for a period of not less than two years after completion of THE ARCHITECT's Work as set forth in this Agreement.

18.3.5. Cyber and Technology Liability Insurance: THE ARCHITECT shall maintain Cyber and Technology liability insurance providing coverage for technology and professional services; privacy and cyber security; and privacy regulatory defense, awards and fines with limits of \$1,000,000 per occurrence and \$1,000,000 annual aggregate.

19. TERMINATION:

AUTHORITY'S General Manager or his/her designee may terminate this Agreement on 30 days prior written notice. In the case of termination by the AUTHORITY, the AUTHORITY shall pay THE ARCHITECT for all Work performed to the effective date of termination and the reasonable costs of transferring all documentation of all Work to AUTHORITY.

20. REVIEWS:

20.1. THE ARCHITECT shall submit draft reports and other materials for review by AUTHORITY prior to the submission of a final report on materials. Due dates will be negotiated, but in every instance, earlier submittal is encouraged.

20.2. AUTHORITY will review the submittals and any pertinent attachments and mark all required changes. All reviews will be completed within 10 working days after receipt of the submission package, and the package will be returned to THE ARCHITECT. Corrections and changes to the submission will be made by THE ARCHITECT and resubmitted to AUTHORITY for approval within 10 working days after receipt. The final approval will be submitted to THE ARCHITECT within 5 working days after receipt of the corrected document and any attachments. Alternate review schedules may be negotiated by mutual agreement of the Parties.

21. CONFIDENTIALITY AND RELEASE OF INFORMATION:

Through the terms of this Agreement, THE ARCHITECT may furnish AUTHORITY with information that THE ARCHITECT has independently determined to be confidential under Nevada law and that THE ARCHITECT will label "Confidential Information". "Confidential Information" means confidential and proprietary information of THE ARCHITECT that is disclosed to AUTHORITY which, in the case of written information, is marked "confidential" and which, in the case of information disclosed orally, is identified at the time of the disclosure as confidential and will be summarized and confirmed in writing as such by THE ARCHITECT to AUTHORITY within 30 calendar days of the disclosure. Confidential Information shall not include information that: (1) is now or subsequently becomes generally available to the public through no fault or breach of AUTHORITY; (2) AUTHORITY can demonstrate to have had rightfully in its possession prior to disclosure by THE ARCHITECT; (3) is independently developed by AUTHORITY without the use of any Confidential Information; or (4) AUTHORITY rightfully obtains from a third party who has the right to transfer or disclose it.

AUTHORITY and THE ARCHITECT recognize AUTHORITY's duties under the Nevada Public Records Act and do not, by this Agreement, intend to alter AUTHORITY's duties thereunder or to require AUTHORITY to do, or refrain from doing, anything contrary to the Nevada Public Records Act. AUTHORITY's Office of General Counsel shall be permitted to make an independent determination as to whether any document or record marked "confidential" is confidential or is a public record, pursuant to the Nevada Public Records Act. If AUTHORITY's Office of General Counsel determines that any document or record supplied by THE ARCHITECT and marked "confidential" is determined to be a public record AUTHORITY may disclose that document or record to the extent required by the Nevada Public Records Act with prior notice to THE ARCHITECT. Upon receipt of any request for Confidential Information, this Agreement, or any part thereof, the AUTHORITY will promptly forward the request to THE ARCHITECT and work with THE ARCHITECT in good faith to minimize the extent of the disclosure to the extent requested by THE ARCHITECT and permitted by the Nevada Public Records Act.

Further, THE ARCHITECT shall make public information releases only as provided for and in accordance with this Agreement. Any and all other public releases of information gathered, obtained, or produced during the performance of this Agreement must be specifically approved in writing by AUTHORITY prior to release. Such information shall include, but is not limited to, all products, intellectual property, Work Product, ideas, data, reports, background materials, and any and all other materials belonging to AUTHORITY. Such public releases of information shall include, but are not limited to, publication in any book, newspaper, magazine, professional or academic journal, the Internet, radio, television, and presentations to professional, academic, and/or other groups or conferences.

22. USE OF MATERIALS:

22.1. AUTHORITY shall make available to THE ARCHITECT such materials from its files as may be required by THE ARCHITECT in connection with its performance of Services under this Agreement. Such materials shall remain the property of the AUTHORITY while in THE ARCHITECT's possession.

22.2. Upon termination of this Agreement, THE ARCHITECT shall turn over to AUTHORITY any property of AUTHORITY in its possession and any calculations, notes, reports, or other materials prepared by THE ARCHITECT in the course of performing this Agreement. Any proprietary software or other tools of THE ARCHITECT used to execute the Work shall remain the property of THE ARCHITECT.

23. PROJECT MANAGEMENT INFORMATION SYSTEM TERMS OF USE:

23.1. Due to the sensitive nature of information contained within the project management information system (PMIS), AUTHORITY requires that THE ARCHITECT agree to the PMIS terms of use. By entering into this Agreement, THE ARCHITECT agrees to be bound by and to bind its employees to the following terms of use ("Terms of Use").

- 23.1.1. Access to PMIS provided by AUTHORITY is for authorized users and organizations only. To protect this software from unauthorized use and to ensure that the software functions properly, activities on PMIS and use of this application, related data, and/or related services (collectively “PMIS Services”) are monitored and recorded and subject to audit.
- 23.1.2. THE ARCHITECT and its employees will abide by the typical use of protected applications/software, including but not limited to:
 - 23.1.2.1. Authorized users cannot give out their login information to another party.
 - 23.1.2.2. Authorized users shall notify AUTHORITY within 2 business days of any changes in their employment to allow for an appropriate adjustment in their access privileges.
 - 23.1.2.3. Access to PMIS will be revoked upon completion of the work, termination of the agreement, or the individual user’s separation from performing duties associated with the work, whichever comes first.
 - 23.1.2.4. These PMIS Services are provided for the convenience of contractors and engineering firms. AUTHORITY is not responsible for any issues created by a malfunction of these PMIS Services.
 - 23.1.2.5. THE ARCHITECT agrees to use PMIS for work related content. The use of PMIS as a document management system to store unrelated documents or files is expressly prohibited.
 - 23.1.2.6. THE ARCHITECT agrees not to remove or modify any copyright or other intellectual property notices that appear in PMIS or associated PMIS Services.
- 23.1.3. THE ARCHITECT agrees not to use the PMIS Services in any way that is unlawful, or harms AUTHORITY, its’ service providers, suppliers or any other user. THE ARCHITECT agrees not to use the PMIS Services in any way that breaches any other policy or notice on the PMIS Services. AUTHORITY’s failure to act with respect to a breach by THE ARCHITECT or others does not waive its right to act with respect to subsequent or similar breaches.
- 23.1.4. NO WARRANTY. AUTHORITY provides the PMIS Services “As Is,” “With All Faults” and “As Available,” and the entire risk as to satisfactory quality, performance, accuracy, and effort is with THE ARCHITECT, to the maximum extent permitted by applicable law. AUTHORITY and its suppliers make no representations, warranties or conditions, express or implied. AUTHORITY and its suppliers expressly disclaim any and all warranties or conditions, express, statutory and implied, including without limitation (a) warranties or conditions of merchantability, fitness for a particular purpose, workmanlike effort, accuracy, title, no encumbrances, no liens and non-infringement, (b) warranties or conditions arising through course dealing or usage of trade, and (c) warranties or conditions of uninterrupted or error-free access or use.
- 23.1.5. LIABILITY LIMITATION; EXCLUSIVE REMEDY. In addition to applicable Nevada laws regarding sovereign immunity, in no event will AUTHORITY or any supplier be liable for any damages including, without limitation, any indirect, consequential, special, incidental, or punitive damages arising out of, based on, or resulting from these Terms of Use or THE ARCHITECT’s use of the PMIS Services, even if such party has been advised of the possibility of such damages. The exclusion of damages under this paragraph is independent of the user’s exclusive remedy and survives in the event such remedy fails of its essential purpose or is otherwise deemed unenforceable. These limitations and exclusions apply without regard to whether the damages arise from (a) breach of contract, (b) breach of warranty, (c) negligence, or (d) any other cause of action, to the extent such exclusion and limitations are not prohibited by applicable law. If THE ARCHITECT has any dispute or claim against AUTHORITY or its suppliers with respect to these Terms of Use or the PMIS Services, then THE ARCHITECT’s sole and exclusive remedy is to discontinue using the PMIS Services.
- 23.1.6. AUTHORITY reserves the right to change the Terms of Use and will provide notice of any change to THE ARCHITECT. Continued use of the PMIS Services after the effective date of such changes will constitute acceptance of and agreement to any such changes. AUTHORITY may change,

suspend or discontinue the PMIS Services associated with PMIS at any time without notice to all or selected users. AUTHORITY may assign these Terms of Use, in whole or in part, at any time with or without notice to THE ARCHITECT. THE ARCHITECT may not assign these Terms of Use, or assign, transfer or sublicense its rights, if any, in the PMIS Services.

- 23.1.7. These Terms of Use are governed by the laws of the State of Nevada, without giving effect to its conflict of laws provisions. THE ARCHITECT agrees to submit to exclusive jurisdiction and venue in the state and federal courts sitting in Clark County, Nevada, for any and all disputes, claims and actions arising from or in connection with the Services and/or these Terms of Use.
- 23.1.8. If any part of these Terms of Use is determined to be invalid or unenforceable, then the invalid or unenforceable provision will be replaced with a valid, enforceable provision that most closely matches the intent of the original provision and the remainder of these Terms of Use will continue in effect.
- 23.1.9. Except as expressly stated herein, these Terms of Use constitute the entire agreement between AUTHORITY and THE ARCHITECT with respect to the PMIS Services and supersede all prior or contemporaneous communications of any kind between AUTHORITY and THE ARCHITECT with respect to the PMIS Services.
- 23.1.10. The PMIS Services are subject to the intellectual property rights of AUTHORITY and to the Nevada public records law.

24. DATA PRIVACY AND SECURITY:

- 24.1. During the course of this Agreement, THE ARCHITECT will create, receive or have access to the AUTHORITY's Facility Information. Facility Information means drawings, maps, plans or records that reveal the AUTHORITY's critical infrastructure of primary buildings, facilities and other structures used for storing, transporting or transmitting water or electricity, other forms of energy, fiber optic cables, or vertical assets used for the transmission or receipt of data or communications used by the AUTHORITY. Facility Information is deemed to be Confidential Information of the AUTHORITY.
- 24.2. THE ARCHITECT shall:
 - 24.2.1. Keep and maintain all Facility Information in strict confidence, using such degree of care as is appropriate to avoid unauthorized access, use, or disclosure;
 - 24.2.2. Ensure that all Facility Information is stored only in data center(s) that are subject to United States federal jurisdiction;
 - 24.2.3. Not create, collect, receive, access, or use Facility Information in violation of law;
 - 24.2.4. Use and disclose Facility Information solely and exclusively for the purposes for which the Facility Information, or access to it, is provided pursuant to the terms and conditions of this Agreement;
 - 24.2.5. Not use, sell, rent, transfer, distribute, or otherwise disclose or make available Facility Information for their own purposes or for the benefit of anyone other than the AUTHORITY without the AUTHORITY's prior written consent; and
 - 24.2.6. Not, directly or indirectly, disclose Facility Information to any person other than its Authorized Persons, without the AUTHORITY's prior written consent. Authorized Persons means THE ARCHITECT's employees, contractors, subcontractors, consultants, subconsultants, agents, or auditors who have a need to know or otherwise access Facility Information to enable THE ARCHITECT to perform its obligations under this Agreement, and who are bound in writing by confidentiality and other obligations sufficient to protect Facility Information in accordance with the terms and conditions of this Agreement.
- 24.3. Security Breach means any act or omission that compromises either the security, confidentiality, or integrity of Facility Information or the physical, technical, administrative, or organizational safeguards put in place by THE ARCHITECT or by the AUTHORITY to the extent that THE ARCHITECT has access to the AUTHORITY's systems, that relate to the protection of the security, confidentiality, or integrity of Facility

Information. Without limiting the foregoing, a compromise shall include any unauthorized access to or disclosure or acquisition of Facility Information.

24.4. THE ARCHITECT shall:

24.4.1. Notify the AUTHORITY of any Security Breach as soon as practicable, but no later than twenty-four (24) hours after the engineer and contractor Type becomes aware of it, by telephone at the following number: 702-822-8390 and by email to james.curbeam@lvvwd.com and brent.gunson@lvvwd.com, with a copy by email to the AUTHORITY's contacts listed in the Notices Section below;

24.4.2. At its own expense, coordinate and fully cooperate with the AUTHORITY in the AUTHORITY's handling of the matter;

24.4.3. Use its best efforts to immediately contain and remedy any Security Breach and prevent any further Security Breach;

24.4.4. Maintain and preserve all documents, records, and other data related to any Security Breach; and

24.4.5. Reimburse the AUTHORITY for all actual costs incurred by the AUTHORITY in responding to and mitigating damages caused by any Security Breach.

24.5. THE ARCHITECT acknowledges that any breach of its covenants or obligations set forth in this Data Privacy and Security Section may cause the AUTHORITY irreparable harm for which monetary damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the AUTHORITY is entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance, and any other relief that may be available from any court, in addition to any other remedy to which the AUTHORITY may be entitled at law or in equity. Such remedies shall not be deemed to be exclusive but shall be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Agreement to the contrary.

24.6. THE ARCHITECT has completed and provided to AUTHORITY the Business Partner Security Checklist providing accurate information on its security program including appropriate policies and procedures. THE ARCHITECT agrees to maintain a comparable or better information security program throughout the course of this Agreement that is reviewed for new risk assessments at least annually.

24.7. THE ARCHITECT shall maintain a written information security program, including appropriate policies and procedures that are reviewed for new risk assessments at least annually.

24.8. THE ARCHITECT shall implement administrative, physical and technical safeguards to protect Facility Information from unauthorized access, acquisition or disclosure, destruction, alteration, accidental loss, misuse or damage that are no less rigorous than accepted industry practices, and shall ensure that all such safeguards, including the manner in which Facility Information is collected, accessed, used, stored, processed, disposed of and disclosed, comply with applicable data protection and privacy laws, as well as the terms and conditions of this Agreement.

25. RECORDS:

THE ARCHITECT shall retain financial and other records related to this Agreement for six years after the completion or termination of this Agreement, and shall make available to AUTHORITY for inspection, all books, records, documents, and other evidence directly pertinent to performance under this Agreement upon reasonable notice.

26. ASSIGNMENT:

THE ARCHITECT shall not assign or transfer its interest in this Agreement without the prior written consent of AUTHORITY. If THE ARCHITECT assigns or transfers without prior written approval, the assignment or transfer shall be void, and not merely voidable.

27. SEVERABILITY:

If any term of this Agreement is to any extent illegal, invalid, or unenforceable, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms of this Agreement shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or

unenforceable term. If application of this Paragraph should materially and adversely affect the economic substance of the transactions contemplated in this Agreement, the Party adversely impacted shall be entitled to compensation for such adverse impact.

28. NON-DISCRIMINATORY EMPLOYEE PRACTICES:

28.1. THE ARCHITECT and any subcontractor working under the authority of THE ARCHITECT, who is responsible for the selection, referral, hiring, or assignment of workers for the Services provided pursuant to this Agreement, is required to comply with all applicable provisions of Title VII of the Civil Rights Act of 1964, Age Discrimination in Employment Act, the Civil Rights Act of 1991, the Equal Pay Act, Title I of the Americans with Disabilities Act and all associated rules and regulations.

28.2. THE ARCHITECT recognizes that if they or their subcontractors are found guilty by an appropriate authority of refusing to hire or do business with an individual or company due to reasons of race, color, religion, sex, sexual orientation, gender identity or expression, age, disability, national origin, or any other protected status, the AUTHORITY may declare THE ARCHITECT in breach of the Agreement, terminate the Agreement, and designate THE ARCHITECT as non-responsible.

29. EQUAL EMPLOYMENT OPPORTUNITY:

29.1. THE ARCHITECT and any subcontractor working under the authority of THE ARCHITECT, who is responsible for the selection, referral, hiring, or assignment of workers for the Services provided pursuant to this Agreement, is required to comply with all applicable provisions of Title VII of the Civil Rights Act of 1964. This requirement includes compliance with Equal Employment Opportunity Commission regulations that prohibit discrimination based upon race, color, religion, sex, or national origin. Furthermore, THE ARCHITECT shall in all relevant manners comply with the Age Discrimination in Employment Act, the Civil Rights Act of 1991, the Equal Pay Act, and Title I of the Americans with Disabilities Act.

29.2. THE ARCHITECT shall make all necessary documentation as required to comply with the Acts referred to above and shall make such documentation immediately available to AUTHORITY upon AUTHORITY's request. THE ARCHITECT is solely liable for failure to comply with this provision.

30. APPLICABLE LAW:

Nevada law shall govern the interpretation of this Agreement, without reference to its choice of law provisions.

31. VENUE:

The Parties agree that venue for any dispute arising from the terms of this Agreement shall be Clark County, Nevada.

32. ATTORNEY'S FEES:

In the event that any Party commences an action to enforce or interpret this Agreement, or for any other remedy based on or arising from this Agreement, the prevailing party therein shall be entitled to recover its reasonable and necessary attorneys' fees and costs incurred.

33. NO THIRD-PARTY RIGHTS:

This Agreement is not intended by the Parties to create any right in or benefit to parties other than AUTHORITY and THE ARCHITECT. This Agreement does not create any third-party beneficiary rights or causes of action.

34. WAIVER:

The failure of either Party to enforce at any time, or for any period of time, the provisions hereof shall not be construed as a waiver of such provisions or of the rights of such Party to enforce each and every such provision.

35. CAPTIONS:

The captions contained in this Agreement are for reference only and in no way to be construed as part of this Agreement.

36. COUNTERPARTS:

This Agreement may be executed in any number of counterparts and by the different Parties on separate counterparts, each of which, when so executed, shall be deemed an original, and all counterparts together shall constitute one and the same instrument.

37. INTEGRATION:

This Agreement contains the entire understanding between the Parties relating to the transactions contemplated by this Agreement, notwithstanding any previous negotiations or agreements, oral or written, between the Parties with respect to all or any part of the subject matter hereof. All prior or contemporaneous agreements, understandings, representations and statements, oral or written, regarding the subject matter of this Agreement are merged in this Agreement and shall be of no further force or effect.

38. NOTICES:

Any and all notices, demands or requests required or appropriate under this Agreement (including invoices) shall be given in writing and signed by a person with authorization to bind THE ARCHITECT or AUTHORITY, either by personal delivery, via a scanned document sent via email, or by registered or certified mail, return receipt requested, addressed to the following addresses:

To THE ARCHITECT: JVC Architects
Attention: Jim Van Compernelle
5385 Cameron Street
Suite 15
Las Vegas, NV 89118
jvc@jvcarchitects.net

To AUTHORITY: Southern Nevada Water Authority
Attention: Adriana Ventimiglia
1001 S. Valley View Blvd.
Las Vegas, Nevada
Adriana.ventimiglia@lvvwd.com

With copy to: Southern Nevada Water Authority
(excluding invoices) Attention: General Counsel
1001 S. Valley View Blvd.
Las Vegas, Nevada 89153
generalcounsel@lvvwd.com

When notice is given by mail, it shall be deemed served three business days following deposit, postage prepaid in the United States mail. When notice is given by email transmission, it shall be deemed served upon receipt of confirmation of transmission if transmitted during normal business hours or, if not transmitted during normal business hours, on the next business day following the email transmission.

The Parties may designate a new contact person under this provision for notices or invoices or change the addresses or email addresses identified above by notifying the other Party in writing.

39. AMENDMENT:

This Agreement may only be amended or modified in a writing stating specifically that it amends this Agreement and is signed by an authorized representative of each party.

40. AUDITS:

The performance of this Agreement by THE ARCHITECT is subject to review by AUTHORITY to ensure contract compliance at the discretion of AUTHORITY. THE ARCHITECT agrees to provide AUTHORITY any and all information requested that relates to the performance of this Agreement. All requests for information will be in writing to THE ARCHITECT. Time is of the essence during the audit process. Failure to provide the information requested within the timeline provided in the written information request may be considered a material breach of contract and be cause for suspension and/or termination of the Agreement.

41. SURVIVAL:

Subject to the limitations and other provisions of this Agreement, the obligations contained in: (a) Paragraph 40 (Audits) of this Agreement will survive the expiration or earlier termination of this Agreement for a period of 12 months after such expiration or termination; and, (b) Paragraphs 9 (Intellectual Property Acknowledgment), 10 (Intellectual Property Assignment), 16 (Indemnification), 21 (Confidentiality and Release of Information), 23

(Data Privacy and Security), 30 (Applicable Law), 31 (Venue), and 32 (Attorney's Fees) of this Agreement, as well as any other provision that, in order to give proper effect to its intent, should survive such expiration or termination, will survive the expiration or earlier termination of this Agreement indefinitely.

42. FORCE MAJEURE:

- 42.1. A Force Majeure Event is defined as an act beyond the affected party's reasonable control, including: (a) acts of God; (b) flood, fire, earthquake, or explosion; (c) war (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest, with a direct impact on this Agreement; (d) if site access is necessary to perform the Work under this Agreement, site restrictions for elevated security risks; and (e) industry-wide strikes with a direct impact on this Agreement. THE ARCHITECT's economic hardship and changes in market conditions are not considered Force Majeure Events.
- 42.2. Both the AUTHORITY and THE ARCHITECT have evaluated the effects of COVID-19 on this Agreement. The AUTHORITY and THE ARCHITECT expressly agree that COVID-19 and what is known about COVID-19 as of the execution of this Agreement are not considered Force Majeure Events.
- 42.3. Where THE ARCHITECT is prevented from completing any part of the Work under the Agreement due to a Force Majeure Event, the AUTHORITY and THE ARCHITECT shall agree to an extension of time in an amount equal to the time lost due to such delay, the agreed extension shall be THE ARCHITECT's sole and exclusive remedy for such delay, and THE ARCHITECT shall not be entitled to an increase in the sums due under Agreement. THE ARCHITECT shall provide a revised schedule for performance in accordance with Paragraph 17.2.
- 42.4. The Party suffering a Force Majeure Event shall give notice within 5 days of the Force Majeure Event to the other Party, stating the period of time the occurrence is expected to continue and shall use diligent efforts to end the failure or delay and ensure the effects of such Force Majeure Event are minimized.

43. COMPANIES THAT BOYCOTT ISRAEL:

THE ARCHITECT certifies that it is not engaged in, and agrees for the duration of the Agreement and any renewal terms, not to engage in, a boycott of Israel. Boycott of Israel means, refusing to deal or conduct business with, abstaining from dealing or conducting business with, terminating business or business activities with or performing any other action that is intended to limit commercial relations with Israel; or a person or entity doing business in Israel or in territories controlled by Israel, if such an action is taken in a manner that discriminates on the basis of nationality, national origin or religion. It does not include an action which is based on a bona fide business or economic reason; is taken pursuant to a boycott against a public entity of Israel if the boycott is applied in a nondiscriminatory manner; or is taken in compliance with or adherence to calls for a boycott of Israel if that action is authorized in 50 U.S.C. § 4607 or any other federal or state law.

44. ELECTRONIC SIGNATURES:

Each Party agrees that the electronic signatures, whether digital or encrypted, of the Parties are intended to authenticate this writing and to have the same force and effect as manual signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed the day and year last entered below.

JVC ARCHITECTS

SOUTHERN NEVADA WATER AUTHORITY

Signature

Signature

Print Name

Print Name

Title

Title

Date

Date

EXHIBIT A
SCOPE OF SERVICES WITH RATES AND FEES

Proposal for Architectural and Engineering Services

Phase 1 through Phase 4

Project: LVVWD Horizon Lateral Management Office

BASIC UNDERSTANDING:

1. Basic Services of this Proposal includes Architectural Services, Interior Finishes, Structural Engineering, Mechanical Engineering, Plumbing Engineering, Electrical Engineering and Professional Cost Estimating. Fee Allowances for Additional Services, are provided for Landscape Architecture, Geotechnical report, Boundary/Topographical Survey, Civil Engineering, and Photovoltaic solar panels. These allowances will be billed at the actual cost charged to the Architect plus 15%. Any un-used amounts will not be billed.
2. Identification and/or removal of hazardous materials is specifically excluded in this proposal.
3. We will coordinate and interface utilizing the Clients project management software (e-Builder).
4. The design of the "Data Center" is not included in this proposal.
5. The Architect has provided copies of our current insurance certificate for review by the Authority. In the event that additional insurance is needed by the Authority, the Architect, prior to final approval of this agreement, will obtain a proposal for additional coverage and present the cost to the Authority as an added cost. If approved by the Authority, the added coverage and costs will be included in the agreement.
6. SNWA/Parsons will procure and manage construction of the building and provide inspection and project closeout.
7. SNWA will complete the record documents.

PROJECT DESCRIPTION

An approximately 10,000 square foot single story office building and associated site work. The building will be located at the SNWA's River Mountain Water Treatment Facility (RMWTF) in Henderson, Nevada. The key elements of the new office building will be:

1. A permanent office building constructed of CMU or pre-cast concrete, complete with:
 - a) Open office space concept (cubicles for approximately 20 persons/workstations)
 - b) Private offices for approximately 15 persons
 - c) Restrooms (family and gender specific per current code), one (1) large conference room, two (2) meeting rooms, and one (1) break room with outdoor access/seating.
 - d) (optional) solar panels on the covered parking canopies.
 - e) The building shall be compatible with existing architectural theme at RMWTF, with emphasis given to street side elevations (north and west faces)
 - f) All necessary utilities including plumbing, electrical, data/communications, and HVAC systems.
 - g) Allow for potential future expansion
 - h) Conformance to City of Henderson planning Department Guidelines and requirements.
2. Site Improvements, complete with:
 - a) Vehicular access and adequate paved parking
 - b) Site lighting
 - c) Landscaping
 - d) Stormwater management
 - e) Signage
 - f) Electrical vehicle charge points (auto, golf cart, service vehicles, etc.)

SCOPE OF PROFESSIONAL SERVICES

It is anticipated that the architectural and engineering design services for the new office building will be performed in phases.

Phase 1 -Preliminary Design:

The following represents the services and tasks for this portion of the project.

1. Meet with the Client to determine the functional needs and spaces for the project and prepare a written program identifying the sizes and relationships for Client review and approval. The program will include review of potential expansion of the building. Review information technology needs and provide an assessment of findings.

2. Based on the approved program the Architect will prepare preliminary design concepts for Client review and approval. Specific drawings will include a site plan, floor plan, sections, exterior elevations and a preliminary 3-d computer generated model of the building.
3. SNWA and JVC Architects will conduct a sustainability review early in the development of the Preliminary Design Phase.
4. Prepare exterior material/color board with colored elevations.
5. Prepare a boundary survey (if necessary) and topographical survey, preliminary grading plan, and preliminary utility plan for Client review and approval.
6. Prepare preliminary landscape plans for Owner review and approval.
7. Prepare preliminary structural analysis and design including foundation plan and framing plan for Client review and approval.
8. Prepare preliminary Mechanical, plumbing, and Electrical engineering drawings for Client review and approval.
9. Prepare building life expectancy review for Client review and approval.
10. Prepare drawings for use in submitting the project to the City of Henderson for Entitlements and Design Review. Verify the necessary permit review and process for final building permit that will be part of Phase 2 services.
11. Attend meetings as needed to complete the tasks stated in this phase of work.
12. Prepare project schedule and professional cost estimate.

Phase 2 – Final Design and implementation Plan:

- A. 60% Submittal:
 1. Based on the approved Preliminary Design drawings and entitlement approval, the Architect shall prepare design documents consisting of drawings, and other documents illustrating the scale and relationship of the project's components including architectural, civil, landscape, structural, mechanical, plumbing, and electrical systems. These plans and documents are for review and comment by the Owner.
 2. Attend meetings as needed to complete the tasks stated herein.
 3. Update schedule if needed and prepare updated professional cost estimate.
- B. 100% Submittal:
 1. Based on approved 60% documents and further adjustment in the scope or quality of the Projector in construction budget authorized by the Client, the Architect shall prepare, for approval by the Client, 100% complete Construction Documents consisting of drawings and specifications setting forth in detail the requirements for the construction of the project. Services shall include: architectural, landscape, civil engineering, structural engineering, mechanical engineering, plumbing engineering, and electrical engineering.
 2. Provide the Owner the Construction Documents, including but not limited to Drawings, Specifications and Calculations required for approval of governmental authorities having jurisdiction over the project.
 3. Assist the Client with agency submittal and permit processing.
 4. Update schedule if needed and prepare updated professional cost estimate.

Phase 3 - Bid Phase:

The Architect, following the Client's Approval of the Construction Documents, shall:

1. Provide the Owner with a set of bid documents in paper and PDF format for Owner to prepare necessary bidding information.
2. Attend pre-bid conference and job walk, if applicable.
3. Address bid questions and issue addenda.
4. Review and assess alternatives and substitution as allowed by bid documents requests submitted by bidders.

Phase 4 - Construction Phase Services:

The architect construction phase services shall commence with the award of the initial contract for construction and end at the issuance of the certificate of final payment to the contractor. The following represents the tasks or services for this portion of the project.

1. Represent, advise, and consult with the owner during the administration of the contract for construction.
2. Attend weekly job site meetings with the Owner, Contractor, and Construction manager.
3. Review shop drawings and submittals.
4. Respond to requests for information, review change order requests.
5. Provide punch lists, final inspections at the completion of construction.
6. Provide drawings in CAD (.dwg) format.

PROFESSIONAL FEES

The professional fees for this Project shall be based on a fixed fee as outlined below for the Basic Services included herein plus reimbursable expenses (printing, shipping, deliveries). The Basic Services in the lump sum fee include architectural, structural engineering, electrical engineering, mechanical engineering, plumbing engineering, and professional cost estimating. Fees shall be billed monthly based on the percentage of work completed for each phase or stated tasks.

BASIC SERVICES - SCHEDULE OF FEES

PHASE/TASK	Architect	Struct (LRN)	MPE (TJK)	Prof Cost	Total By Phase
Phase 1	\$32,000	\$ 5,000	\$15,800	\$8,400	\$ 61,200
Phase 2-60%	\$43,000	\$10,600	\$15,000	\$7,300	\$ 75,900
Phase 2-100%	\$85,000	\$ 6,400	\$15,000	\$7,300	\$113,700
Phase 3	\$11,000	\$ 1,000	\$ 1,600	\$ -0-	\$ 13,600
Phase 4	\$43,000	\$ 7,000	\$ 5,600	\$ -0-	\$ 55,600
TOTAL FEE	\$214,000	\$30,000	\$53,000	\$23,000	\$320,000

Fee Allowances for Additional services are provided as outlined below. These fees will be billed monthly at the actual cost billed the Architect plus 15%. Any unused amounts of the various items that are not billed to the architect will not be billed to the Client. The stated fees will not be increased without written approval from the Client.

ALLOWANCES FOR ADDITIONAL SERVICES

a) Landscape Design		
Phase 1 Preliminary Plans	\$ 2,600	
Phase 2 100% Plans -	\$ 8,000	
Phase 3 (if service is needed)	\$ 2,900	
Phase 4	\$ 4,500	
Total all landscape Design services		\$ 18,000
b) Solar panel Design – Electrical/Structural		\$ 22,000
c) Geotechnical Services		\$ 6,000
d) Civil Engineering/Survey		
Boundary Survey (if required)	\$ 1,000	
Topographical Survey	\$ 4,000	
Drainage Study (if required)	\$10,600	
Traffic mitigation Study (if required)	\$ 1,800	
Construction Documents	\$36,000	
Retaining/Site Walls	\$ 6,000	
Legal Description/Easements (if req'd)	\$ 3,000	
Construction Phase Services	\$ 3,600	
Post Construction	\$ 2,400	
Total Civil/Survey		\$ 68,400
Total all Additional Services		\$114,400

ARCHITECTS STANDARD HOURLY RATES

PRINCIPAL ARCHITECT:	\$220.00/HOUR
PROJECT ARCHITECT:	\$200.00/HOUR
PROJECT MANAGER:	\$160.00/HOUR
DRAFTSPERSON:	\$120.00/HOUR
SPECIFICATION/CLERICAL:	\$ 80.00/HOUR

IN HOUSE PRINTING AND PLOTTING COSTS

8-1/2" x 11" BLACK AND WHITE COPIES	15 CENTS/SHEET
8-1/2" X 11" COLOR COPIES	50 CENTS/SHEET

Services Provided by Consultants

Architectural

1. Prepare Preliminary (Phase 1) level documents, 60% and 100% (Phase 2) documents, Bid Documents (Phase 3) and provide Construction (Phase 4) services as outlined herein.
2. Specific Deliverables shall include: cover sheet, general notes, code analysis/project information, accessibility standards sheets, site plan, site details, dimension floor plans, information floor plans, floor finish plan, interior finish schedules, door schedule, window schedule, signage schedules, sections, exterior elevations, roof plan, exterior material finish schedule, ceiling plans, interior elevations, and details.
3. Specifications shall be provided in book and/or sheet format.
4. Attend meetings with the Client during all phases of the project.
5. Assist with permit Application. Permit and utility fees are specifically excluded.
6. Assist with Bidding.
7. Assist with construction administration
8. Provide cad drawings in CAD (.dwg) format.
9. Attend OAC Meetings.

Geotechnical Report

1. Visit site to observe existing conditions.
2. Review existing building code requirements and local standards.
3. Excavate a minimum of two borings 25' deep and prepare logs to document findings.
4. Obtain a minimum of 2 samples of soil for laboratory testing and prepare a summary of findings.
5. Prepare geotechnical report to include (in addition to findings above) grading recommendations, special fill or grading techniques where needed, basic slope stability considerations, locations offaults and fissures, anticipated material shrinkage near subsurface, preliminary pavement sections, retaining wall recommendations, and building foundation recommendations.
6. Review plans (if required) as part of plan review process.

Cost Estimating

1. Visit the site and become familiar with the conditions relevant to the project.
2. Prepare Preliminary (Phase 1) statement of probable cost estimate for on-site work including the building and site. Attend one coordination meeting with the owner, if needed. This estimate will include the cost of the optional Data Center for the owner to use in determining if that portion of the work will be part of the project moving forward.
3. Prepare 60% cost estimate for the building and the on-site work using material and quantity take-off methods.
4. Prepare 100% cost estimate for the building and the on-site work using material and quantity take-off methods.

Survey and Civil Engineering

1. Survey: Prepare boundary survey to resolve the boundaries of project parcel if needed for design and approval of the project, and prepare a topographical survey including, set aerial horizontal and vertical panels around the site, extend survey 100' beyond the specific site perimeter, provide 1' contour intervals, width of surrounding streets including wet utilities, inverts, rim elevations, edge of pavement, visual dry utility locations, plot existing rights and easements (from Owner supplied title report).
2. Drainage Study: Prepare a Technical Drainage Study per Henderson and Clark County regional Flood Control District requirements. Includes hydrologic and hydraulic analysis. Excludes submittal fees. Establish finish floor elevations and

- drainage impacts. This work is integral with the grading plans.
3. Traffic Mitigation Study: prepare traffic mitigation study or letter only if required by agencies having jurisdiction over the project.
 4. Construction Documents: Prepare cover sheet, note sheets, grading plan, drainage and paving plan, utility plans (water, sewer, storm drain), water network analysis, civil review including bond estimate. Submittal fees are excluded. Coordinate submittal for utility approvals for water and sanitary sewer.
 5. Site Wall Design: Prepare design for site and retaining walls.
 6. Legal Descriptions and Easements: prepare legal descriptions and easements for utilities and pedestrian easements only as they may be required for the project.
 7. Construction phase Services: Provide assistance during construction including civil shopdrawings/submittal review, RFI responses, clarification, and periodic field review.
 8. Post Construction Services: provide for owners use in preparing record drawings. Provide final site observation and written punch list.

Utility Coordination Consultant

Not included. Each discipline (civil, electrical, mechanical) will coordinate utility permit applications directly.

Landscape Architect

1. Visit the site and become familiar with the conditions relevant to the project.
2. Prepare plans in conformance to SNWA standard details and applicable governmental requirements, zoning ordinances, permit requirements and known special restrictions.
3. Prepare preliminary plant and material layout plan and booklet in PDF format.
4. Provide landscape plan for submittal to the City of Henderson for entitlements if required.
5. Prepare 60% planting plan, irrigation plan, details, and specifications.
6. Prepare 60% planting plan, irrigation plan, details, and specifications.
7. Prepare conformed bid set, participate in pre-bid conference, address bid RFI's, review substitution requests, provide PDF's and up to 5 sets of hard copy documents.
8. Construction Phase: attend pre-construction meetings, reviews submittals, reply to RFI's, make periodic visits to the site to review the work in progress (3 visits included), review completed work and provide punch list.
9. Provide drawings in CAD (.dwg) format.

Technology-Voice/Data, Audio/Video, CCTV, and Intrusion Alarm (part of electrical fees)

1. Voice/Data: provide infrastructure design based on owner's requirements, design outlet requirements, provide specifications, recommended manufacturers based on budget. Specific design Includes cabling infrastructure, device locations, space planning locations, coordination with mechanical, power budget calculations.
2. Audio/Video: provide infrastructure design based on owner's requirements, design outlet requirements, provide specifications, recommended manufacturers based on budget. Specific design Includes cabling infrastructure, device locations, space planning locations, coordination with mechanical, power budget calculations.
3. CCTV Design: Device locations, infrastructure locations, space allocation in TR closets, power budget calculations for electrical coordination.
4. Intrusion Alarm/Access Control Design: Design includes, device locations, infrastructure conduit, space allocation in TR closet, power budget calculations for electrical coordination.

Structural Engineering

1. Provide necessary structural services and attend coordination meetings to help establish design requirements to achieve an economical and efficient building design.
2. Development of Design Development Drawings and Construction Documents within the proposed schedule and timeline for the project.
3. Provide necessary structural engineering services and calculations to obtain plan check approval from the governing agency in accordance with the governing building code.
4. Construction Phase Services during the project to include review of submitted shop drawings and deferred submittals, periodic site visits, and timely responses to RFI's, and jobsite questions.

Mechanical Engineering

1. Design of HVAC system shall include system sizing, air distribution, and ductwork design as applicable to the building and zoning within the building. It is anticipated that the HVAC system will consist of packaged roof top units and split systems.
2. Design of restroom exhaust systems.
3. Prepare mechanical load calculations for 2018 IECC Compliance.
4. Prepare Mechanical Compliance forms for 2018 IECC as required.
5. Construction Phase Services during the project to include review of submitted shop drawings and deferred submittals, periodic site visits, and timely responses to RFI's, and jobsite questions.

Plumbing Engineering

1. Design of sanitary and domestic water and natural gas piping systems as required. Utilities shall be routed to 5'-0" outside the building for connection to utilities by civil engineer.
2. Design of roof drain piping system based on architectural roof plan.
3. Provide domestic hot water system sizing.
4. Provide fire sprinkler performance specifications if needed.
5. Construction Phase Services during the project to include review of submitted shop drawings and deferred submittals, periodic site visits, and timely responses to RFI's, and jobsite questions.

Electrical Engineering

1. Design of building main electrical service with provisions for connections to utility power supply.
2. Design of main electrical distribution system.
3. Design of electrical distribution system for HVAC units, connections to equipment and general-purpose receptacles as required.
4. Design of electrical distribution and electrical connections to audio/visual (A/V) equipment. This proposal assumes that the electrical connection requirements (including voltage, phase, electrical loads and electrical rough-in locations for the A/V equipment) will be supplied by the owner's A/V consultant.
5. Design of electrical distribution and electrical connections to shop equipment. This proposal assumes that the electrical connection requirements (including voltage, phase, electrical loads and electrical rough-in locations for the shop equipment) will be supplied by the owner's equipment consultant.
6. Design of building main telephone and cable television service, as required. Service will include empty conduit system to utility service locations. It is anticipated that the telephone service cabling will be copper wires and cable television service cabling will be coaxial cable.
7. Design of empty conduit system for telecommunication and auxiliary system.

8. Design parking lot and building perimeter lighting systems and connections to building mounted signage as required.
9. Design interior lighting system with associated controls.
10. Prepare Lighting Compliance forms for 2018 IECC as required.
11. Design of fire sprinkler monitoring systems is excluded except for the following provisions: a 120V receptacle and a telephone outlet for connection of monitoring panel; J-boxes adjacent to fire riser room door and designated interior spaces; connection to room heater; empty conduits from the fire riser room to PIV valve at exterior of the building as required.
12. Utility Coordination:
 - a) SNWA Power Grid – Coordinate with SNWA for connection to their on-site power grid including, attending coordination meeting, filling out documents as may be needed by SNWA, provide preliminary drawings and final construction drawings.
 - b) Telephone – Prepare drawings for connection to on-site SNWA internal fiber optic systems.
 - c) Internet/Data – Prepare drawings for connection to on-site SNWA internal fiber optic systems.
13. Construction Phase Services during the project to include review of submitted shop drawings and deferred submittals, periodic site visits, and timely responses to RFI's, and jobsite questions.

EXHIBIT B
TRAVEL EXPENSE REIMBURSEMENT POLICY

Counterparty Type will bill all such expenses to District/Authority at cost without markup. Counterparty Type will provide receipts, bills, or other documentation to support expenses billed to the District/Authority that are not covered under a per diem. At no time will District/Authority reimburse Counterparty Type for any travel time charges. District/Authority reserves the right to approve all travel plans and expected costs prior to trips.

District/Authority shall reimburse Counterparty Type according to the following expense reimbursement policy utilizing the U. S. General Services Administration travel rates (<http://www.gsa.gov/portal/content/104877>) for the time of travel "GSA Travel Rates".

1. Air Travel

- Lowest Fare Routing: Air travel should be in economy (coach) class and booked and expensed at the lowest available airfare.
- Flight Changes: Any changes to flight reservations which result in an additional cost must be pre-approved by District/Authority.
- Additional Fees: The District/Authority will not reimburse for convenience charges to include, but not limited to, charges for early boarding, assigned seating, or seat upgrades.

2. Lodging

- Hotel Selection: Counterparty Type shall invoice District/Authority using the GSA Lodging Rate. Higher rates must be pre-approved by District/Authority. If Counterparty Type submitted rate is above GSA Lodging Rate without pre-approval, the District/Authority reserves the right to reimbursement at GSA rate, plus associated taxes calculated at GSA rate only.
- Additional Fees: If additional fees are charged in association with lodging (e.g. Resort Fees) the District/Authority reserves the right to limit reimbursement up to \$30 plus tax.

3. Ground Transportation

- Car Rentals: Cars are to be rented when other means of transportation are unavailable, more costly, or impractical. The use of a rented car should be justifiable as a business need and not as a matter of personal convenience. Mileage will not be reimbursed for rentals. Insurance, GPS units, and other accessories offered by rental agencies will not be reimbursed.
- Taxi, Ride Sharing Services, and Other Local Transportation: The cost of ground transportation to and from places of business, hotels, or airports in direct connection with District/Authority business is reimbursable.
- Mileage: Counterparty Type shall invoice District/Authority for mileage using the IRS Standard Mileage Rate when personal vehicles are used in connection with business activities and must be preapproved by District/Authority.

4. Meals and Incidentals

Per Diem: A per diem allowance will be paid for each day of travel. Per diem is to cover all meals and other incidental charges and does not require submission of receipts. Counterparty Type shall invoice District/Authority using the GSA Travel Rate per diem.

Incidental Expense: The following incidental expenses, when directly related to company business, are reimbursable and are not part of per diem expense:

- Parking/tolls in connection with operation of personal or rented vehicle. Self-parking charges are preferred; valet parking charges will be reimbursed only if there are no other parking options.
- Long-distance telephone calls from hotel related to District/Authority business are reimbursable.
- Internet connection fees if required for District/Authority business are reimbursable.

5. Tips

- Tips of any nature are not reimbursable

SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
AGENDA ITEM

April 15, 2021

Subject:

Budget Workshop

Petitioner:

E. Kevin Bethel, Chief Financial Officer

Recommendations:

That the Board of Directors receive an overview and discuss the Fiscal Year 2021/22 Tentative Budget.

Fiscal Impact:

None by approval of the above recommendation.

Background:

The Authority conducts annual budget workshops to provide the Board of Directors the opportunity to receive an overview of the upcoming fiscal year budget. The workshop is intended to facilitate discussion regarding the Authority's budget prior to the Authority's Budget Hearing held in May.

At this time, the Board is being asked to receive an overview of the Authority's Fiscal Year 2021/22 Tentative Budget.

The office of the General Counsel has reviewed and approved this agenda item.

Respectfully submitted:



John J. Entsminger, General Manager
JJE:EKB:CNP:AMB:KH:mdb



FY 2021-22 BUDGET WORKSHOP



1

2020-21 HIGHLIGHTS

- SNWA Board approved IRPAC's 22 recommendations regarding water resources, conservation, new facilities and water rates
- Amended the SNWA's Major Construction and Capital Plan and its approval will guide future capital efforts
- New conservation initiatives approved: septic conversion program, artificial turf incentive, etc.
- Implemented member agency interlocal agreements to ensure new facilities do not come at the expense of water resources
- Recognized as a global leader in innovation: Leading Utilities of the World and the L3PS project was awarded the Engineering News-Record (ENR) Southwest Best Project Award in the Water/Environment
- 2021 refunding activities will save \$53.0 million for a total cumulative savings of \$387.6 million since 2015



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WATER USE

- Water use is trending up
- Across the community, single-family residential customers are using more water than previously as compared to other sectors
- SNWA is developing and implementing new programs aimed to reduce water use throughout the community
- Ongoing investment in conservation programs and outreach is critical to reversing the upward water use trend



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CAPITAL PROJECT UPDATE

4

HORIZON LATERAL

- Will improve existing water deliver system in southern portion of Las Vegas Valley.
- Projects includes new transmission lateral (31-37 miles in length) and supporting facilities.
- Feasibility study completed in January. Right of way applications were submitted to BLM in April.
- Pre-design phase will begin upon contract award (today's meeting).
- Design work estimated to be complete in 2023; construction scheduled to be completed in 2030.

FY 21/22 Budget: \$62,900,000
Total Project: \$ 1.6 billion

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GARNET VALLEY WATER AND WASTEWATER SYSTEM

Three main projects:

- Water Distribution System
- Water Transmission System
- Wastewater Transmission System

Water Distribution System: ~14,000 feet of 16-inch iron pipeline

- Construction scheduled to begin in early 2022; completion scheduled by end of 2022.

Water Transmission System: ~16 miles of pipeline, two pumping stations, forebays, a reservoir and other facilities

- An RFQ has been advertised for design phase services; with Board approval slated for summer 2021.

Wastewater System: Sewer lift stations, 8 miles of force mains, 43 miles of gravity sewers

- RFQ advertised; Board approval slated for summer 2021

FY 21/22 Budget: \$6,800,000
Total Project: \$250 million

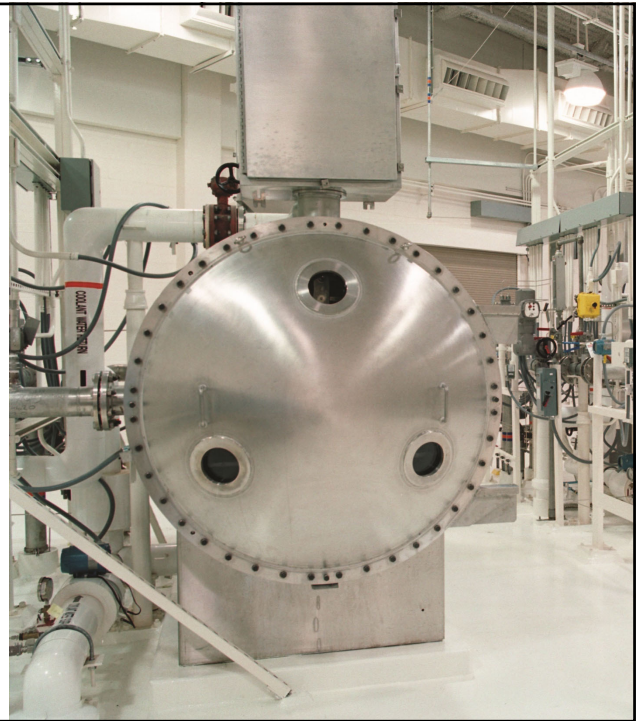
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OZONE EQUIPMENT UPGRADE

- The ozone systems at River Mountains and Alfred Merritt Smith treatment facilities are under evaluation as they are both nearing the end of their 20-year life cycle
- A full assessment will be completed by a consultant who has completed similar assessments for other large utilities
- Evaluation expected to be complete by December 2021

FY 21/22 Budget: \$1,600,000
Total Project: \$38,500,000

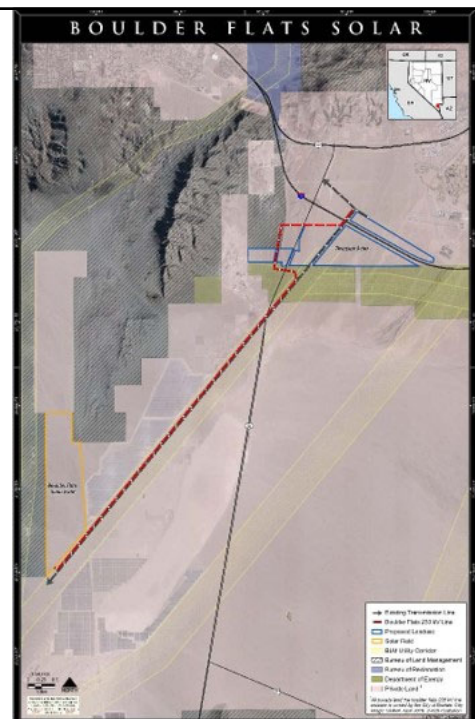


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SOLAR PHOTOVOLTAIC PROJECT

- 10-mile expansion to SNWA's existing transmission system, interconnecting a new solar PV system that can convey up to 130 megawatts
- Project will help SNWA meet Nevada's Renewable Portfolio Standard
- Power Purchase Agreement is finalized (today's Board agenda)
- Scheduled to be online in 2023

FY 21/22 Budget: \$10,000,000
Total Project: \$20,800,000



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LOWER LAS VEGAS WASH

Planning and permitting activities are underway

Cooperative Management Agreement between SNWA and Park Service approved in October 2020

Engineering and construction agreements expected to be considered by SNWA Board in May 2021

Construction estimated to be completed in 2029

FY 21/22 Budget: \$6,000,000
Total Project: \$122,515,000



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2021-22 BUDGET OVERVIEW

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2021-22 BUDGET OVERVIEW

- An increase in funding sources is largely driven by debt issuance proceeds
- Sales tax projections reflect post-pandemic recovery
- Water resource investments are up 84 percent, reflecting IRPAC recommendations
- Payroll and operating expenses remain flat
- Capital expenses up 40 percent, reflecting increasing work efforts on major construction activities
- SNWA Reserves remain healthy and stable

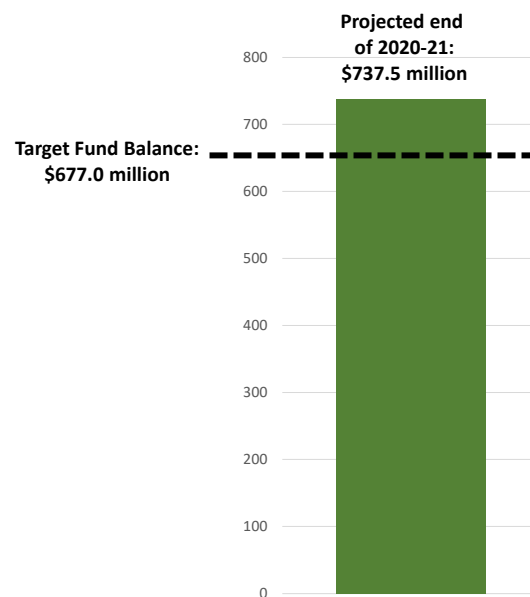
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RESERVES TARGET

Reserve Policy Elements:

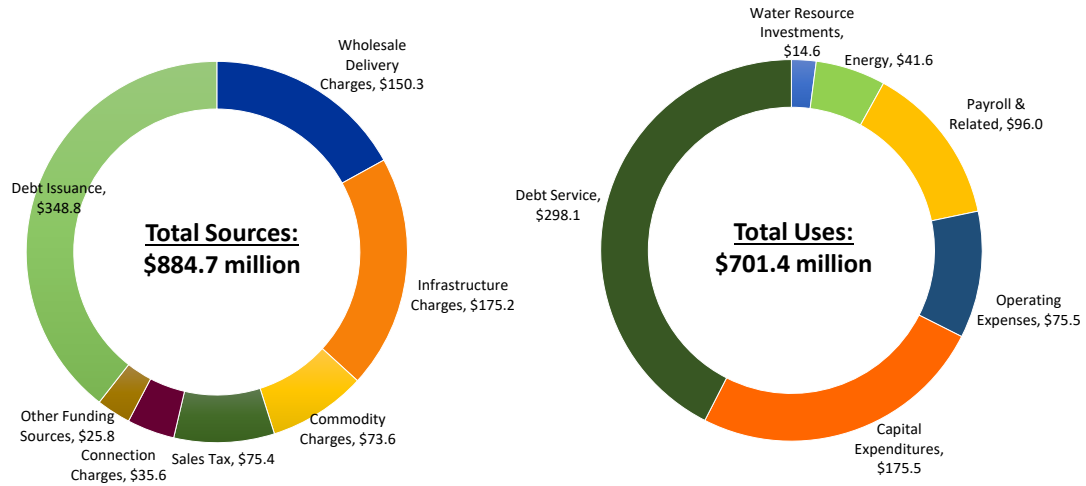
- Maintain 180 days of operating and maintenance expenses
- Fund one year of maximum annual debt service
- Fund one year of average annual capital expenditures
- Fund 1 percent of depreciable assets



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2021-22 SOURCES AND USES SUMMARY



Amounts in million dollars. Totals are rounded.

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2021-22 SOURCES OF FUNDS

	Actual 2019-20	Budget 2020-21	Budget 2021-22	Variance \$
Sources				
Wholesale Delivery Charge	\$ 146.0	\$ 142.0	\$ 150.3	\$ 8.3
Infrastructure Charge	167.5	166.9	175.2	8.3
Commodity Charge	67.4	66.8	73.6	6.8
Connection Charge	79.3	19.1	35.6	16.5
Reliability Surcharge	5.5	5.4	6.0	0.6
Sales Tax	65.5	44.7	75.4	30.7
Investment Income	31.4	7.2	9.8	2.6
Other Sources	28.4	10.1	10.0	(0.2)
Subtotal	590.9	462.3	535.9	73.7
Debt Issuance Proceeds	-	-	348.8	348.8
Total Sources	590.9	462.3	884.7	422.5

Amounts in million dollars. Totals are rounded.

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2021-22 USES OF FUNDS

	Actual 2019-20	Budget 2020-21	Budget 2021-22	Variance \$
Uses				
Water Resource Investments	\$ 4.2	\$ 7.9	\$ 14.6	\$ 6.7
Energy	37.8	38.2	41.6	3.4
Payroll & Related	85.2	97.5	96.0	(1.5)
Operating Expenses	54.5	75.8	75.5	(0.3)
Capital Expenditures	81.4	124.2	175.5	51.4
Debt Service	293.8	289.1	298.1	9.0
Total Uses	\$ 557.0	\$ 632.8	\$ 701.4	\$ 68.6

Amounts in million dollars. Totals are rounded.

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2021-22 BUDGET

	Actual 2019-20	Budget 2020-21	Budget 2021-22	Variance \$
Sources				
Wholesale Delivery Charge	\$ 146.0	\$ 142.0	\$ 150.3	\$ 8.3
Infrastructure Charge	167.5	166.9	175.2	8.3
Commodity Charge	67.4	66.8	73.6	6.8
Connection Charge	79.3	19.1	35.6	16.5
Reliability Surcharge	5.5	5.4	6.0	0.6
Sales Tax	65.5	44.7	75.4	30.7
Investment Income	31.4	7.2	9.8	2.6
Other Sources	28.4	10.1	10.0	(0.2)
Subtotal	590.9	462.3	535.9	73.7
Debt Issuance Proceeds	-	-	348.8	348.8
Total Sources	590.9	462.3	884.7	422.5
Uses				
Water Resource Investments	4.2	7.9	14.6	6.7
Energy	37.8	38.2	41.6	3.4
Payroll & Related	85.2	97.5	96.0	(1.5)
Operating Expenses	54.5	75.8	75.5	(0.3)
Capital Expenditures	81.4	124.2	175.5	51.4
Debt Service	293.8	289.1	298.1	9.0
Total Uses	557.0	632.8	701.4	68.6
Total Net Surplus/(Deficit)¹	\$ 33.9	\$ (170.5)	\$ 183.3	\$ 353.8

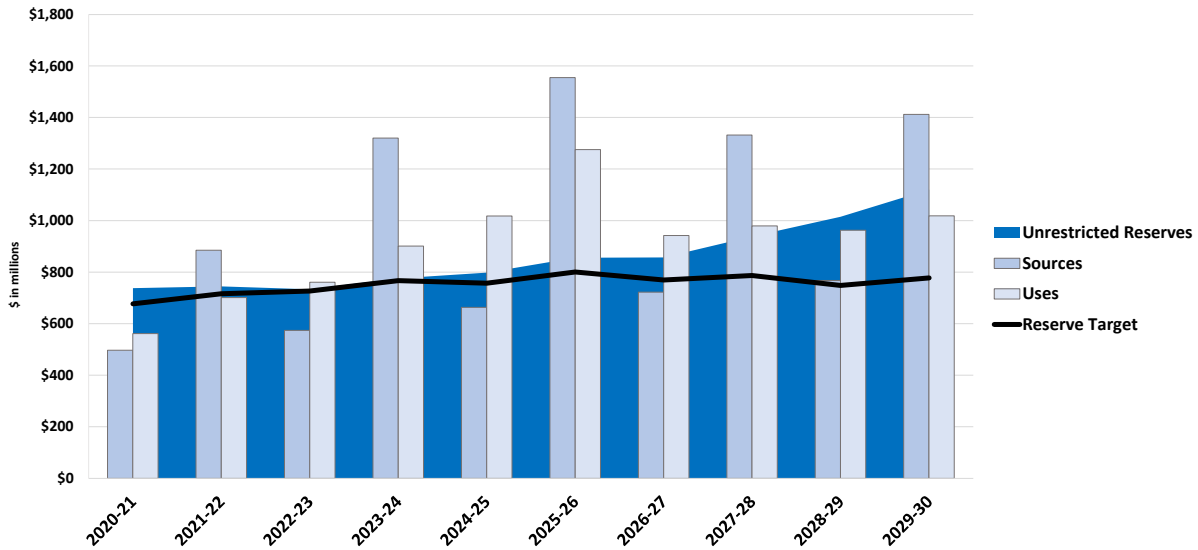
¹ Any amount of Net Surplus is used to fund reserves while Net Deficit amounts are funded through the use of reserve balances.

Amounts in million dollars. Totals are rounded.

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SNWA RESERVES FORECAST



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2021-22 BUDGET SUMMARY

- The budget reflects IRPAC recommended initiatives and programs
- SNWA sources are projected to return to more typical “post pandemic” levels
- SNWA Reserves remain healthy and stable
- Conservation remains a top priority
- The organization is positioned to withstand ongoing impacts from COVID-19

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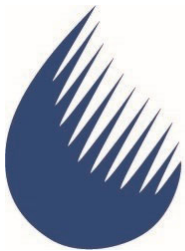
2021-22 SNWA INITIATIVES

Continue progress on IRPAC-recommended initiatives:

- Construction activities on SNWA's major facilities
- Implement conservation-related initiatives and programs to reduce water use
- Partner with Basin States on new Colorado River resources



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**SOUTHERN NEVADA
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