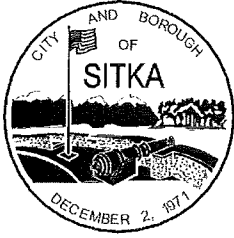


POSSIBLE MOTION

I MOVE to approve the Water Delivery Agreement between the City and Borough of Sitka and Northern Southeast Regional Aquaculture Association and authorize the Interim Administrator to execute the document.



City and Borough of Sitka

100 Lincoln Street • Sitka, Alaska 99835

MEMORANDUM

To: Mayor Gary Paxton and Assembly Members
From: Hugh Bevan, Interim Municipal Administrator *HB*
Date: January 15, 2020
Subject: NSRAA Agreement for Water Withdrawal at Sawmill Cove

Background

Northern Southeast Regional Aquaculture Association (NSRAA) operates a salmon hatchery at the Gary Paxton Industrial Park. The facility annually produces about 1.8 million coho and 45 million chum salmon. These fish are raised and released for the benefit of commercial, sport and subsistence fishermen.

The ex-vessel value to commercial fisheries in 2019 from the GPIF facility was over \$7 million dollars. This was comprised of \$7.5 million in chum value from Crawfish Inlet and approximately \$300 thousand dollars in coho value from the Deep Inlet coho program. Over 200 thousand coho have been harvested in the Sitka area to the benefit of commercial and sport fishermen since the GPIF facility began production in 2013.

Since 2006 NSRAA has leased land from the Industrial Park for the hatchery. They have also operated under an agreement with CBS to withdraw up to 10 cfs of untreated Blue Lake water as the supply for the hatchery.

Recently NSRAA began planning for an expansion of the GPIF hatchery that will add the production of 2 million Chinook salmon to the facility. They have leased the GPIF lot that is adjacent to the hatchery and they have requested an increase to their allotted Blue Lake water from 10 cfs to an annual average of 14cfs with a maximum flow rate of 20 cfs. (1 cfs = 449 gallons per minute)

20 cfs is about 4.5% of the average inflow rate into Blue Lake.

For the past few years CBS and NSRAA have been trying to reach a new agreement for Blue Lake water use. This fall our Electric Department Working Group worked with NSRAA to reach an agreement satisfactory to both parties.

Analysis

The attached schematic of the Blue Lake water supply arrangement is also an attachment to the proposed Water Delivery Agreement.

It depicts the three specific locations for withdrawal of water under the new agreement.

The existing, primary source for NSRAA will continue and is labeled Withdrawal Point 1. This access is taken directly from the penstock, the same access point as the Bulk Water pipeline. Water taken from Withdrawal Point 1 is removed above the Blue Lake powerhouse, thus it not available to generate electric power.

Withdrawal Point 1 is important to NSRAA because it feeds the hatchery with gravity water pressure, thus eliminating the need for expensive pumping systems.

Withdrawal Point 2 will be used in the future by NSRAA when Sitka needs all of the water in the penstock to produce power. Water taken from Point 2 has passed through the power house turbines and has produced electric energy. Point 2 requires NSRAA to maintain and operate a pumping system.

Withdrawal Point 3 is directly from Sawmill Creek. Point 3 will be used whenever the Blue Lake power plant and/or the penstock are taken out of service for emergencies, for maintenance or for mandatory FERC inspections.

CBS is also installing a withdrawal system at Point 3 to feed the new water filter plant.

The recent analysis of Sitka's remaining hydroelectric capacity assumed 20 cfs of water will continue to be taken from the penstock above the Blue Lake power plant, so the NSRAA agreement does not reduce our projections for the remaining generation capacity.

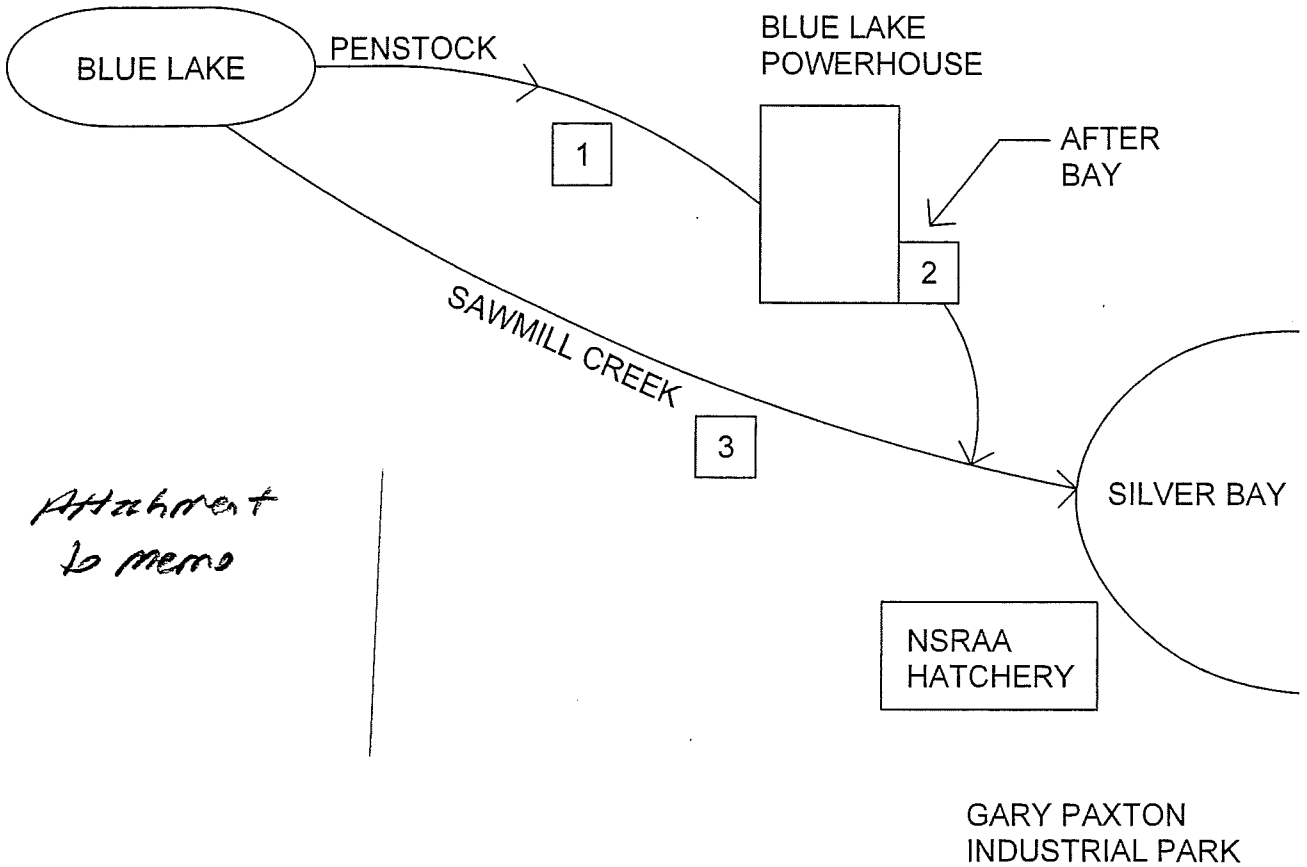
The agreement is subject to review and renegotiation in ten years.

Fiscal Note

There are no increased costs to CBS as a result of this agreement.

Recommendation


Approve the Water Delivery Agreement between the City and Borough of Sitka and Northern Regional Aquaculture Association.



Attachment to memo

LEGEND

- 1** PENSTOCK WITHDRAWAL POINT, GRAVITY FED WATER
- 2** AFTER BAY WITHDRAWAL POINT
- 3** SAWMILL CREEK WITHDRAWAL POINT


City and Borough of Sitka
 DEPARTMENT OF PUBLIC WORKS
 100 LINCOLN STREET • SITKA, ALASKA 99835
 TEL (907) 747-1804 FAX (907) 747-3158

**APPENDIX A TO
CBS/NSRAA WATER
DELIVERY AGREEMENT**

DRAWN: JJH	SCALE: N.T.S.
CHECKED: H.BEVAN	DATE: Dec 2019
DRAWING NAME: AppendixA.dwg	
SHEET NO. 1	1 / 1

Water Delivery Agreement
Between the City and Borough of
Sitka, Alaska (CBS)
and
Northern Southeast Regional Aquaculture Association (NSRAA)

Definitions

cfs – means cubic feet per second, a measure of the volume of water.
1 cfs is equal to approximately 448 gallons per minute

Penstock – The large diameter pipe and rock tunnel system that transports water from Blue Lake reservoir to the Blue Lake powerhouse for the purpose of generating electricity.

Afterbay – the concrete plunge basin located at the Blue Lake powerhouse where water emerges from the powerhouse after generating electricity. From the afterbay the water flows into Sawmill Creek and eventually into Silver Bay.

Purpose of Agreement

NSRAA operates a fish hatchery within the Gary Paxton Industrial Park which is owned by CBS. NSRAA has a land lease with CBS for the purpose of operating the hatchery. A reliable source of fresh water is essential to the success of the hatchery venture. It is the desire of NSRAA to acquire their water supply from the CBS industrial water certificate No. ADL 43826, as issued by the State of Alaska to CBS.

CBS is sympathetic to the water supply needs of NSRAA an organization CBS believes to be an important element of the overall Sitka economy. CBS currently has a surplus volume of industrial water available on an annual basis and wishes to make this available for economic development in the GPIP. CBS currently lacks the ability or controls to reliably supply Industrial Water to the GPIP through the penstock or via the powerhouse afterbay pumps. This agreement allows NSRAA to manage the Bulk Water Line supply until a point in time when the city may be able to reliably supply water via these methods.

This agreement establishes the technical and economic relationship between CBS and NSRAA for the purpose of providing a long term, reliable source of water for the hatchery.

A schematic diagram of the physical layout of the physical features described in this Agreement is attached as Appendix A.

This Agreement shall be subject to review and re-negotiation 10 years from the date of execution by both parties.

CBS shall:

1. Allow NSRAA to withdraw water from the penstock at Withdrawal Point 1 based upon an expected, calendar year average of 14 cfs with a not-to-exceed, maximum flow of 20 cfs. CBS will allow this withdrawal of water at no charge to NSRAA for the water.
2. Retain the right to determine when NSRAA may withdraw water from the penstock at Withdrawal Point 1 and which piping system is used to deliver the water to NSRAA.
3. Allow NSRAA to withdraw water at Withdrawal Point 2 at no charge to NSRAA for the water.
4. Allow NSRAA, at NSRAA expense, to upgrade existing afterbay water delivery infrastructure at Withdrawal Point 2 subject to CBS prior review and approval.
5. Allow NSRAA to upgrade, at NSRAA expense, certain water control valves, piping and control systems as described in Appendix B of this Agreement subject to CBS prior review and approval. These features are shown on the Water Delivery Agreement Flow Diagram which is attached to this Agreement as Appendix C.
6. Notify NSRAA as soon as possible when penstock water will not be available from Withdrawal Point 1 and/or when afterbay water will not be available from Withdrawal Point 2. CBS will give NSRAA at least 30 days notice of planned changes to water availability from either of these two Withdrawal Points.
7. Coordinate with NSRAA if and when the bulk water pipeline is used to transport bulk water while also supplying water the NSRAA.

It is understood and agreed that there will be unanticipated system failures or emergencies determined by CBS or NSRAA when water will not be available from Withdrawal Point 1. In that situation NSRAA must obtain its water from Withdrawal Point 2 or, if it is not available directly from Withdrawal Point 2, then from Withdrawal Point 3, i.e. directly from Sawmill Creek. There may also be times when the water quality of Withdrawal Point 2 (saltwater intrusions into afterbay) will not be suitable for the hatchery utilization due to elevation of afterbay weir. It is further understood that the surplus volume of raw water available from Withdrawal Point 1 may cease to be available in the future when additional water is needed for electric power generation.

NSRAA shall

1. Provide at its expense capital equipment, maintenance and operations of pumping equipment, valves, pipes and meters at all Withdrawal Points that are necessary to support NSRAA operations.

2. Pay CBS published rates for electric energy necessary to operate NSRAA equipment at all Withdrawal Points.
3. Provide and maintain industrial water flow meters at each Withdrawal Point with a SCADA output to CBS that will allow CBS to remotely monitor NSRAA water usage.
4. Acquire CBS and third-party approvals and permits necessary to construct facilities within Sawmill Creek at Withdrawal Point 3 or to alter Sawmill Creek stream flow to raise water levels in the afterbay at Withdrawal Point 2.
5. For any NSRAA facilities and infrastructure, and for any NSRAA activities, on CBS property, NSRAA shall, during the term of this Agreement, provide and maintain: worker's compensation insurance meeting the requirements of the State of Alaska; comprehensive general liability insurance with limits per occurrence and in the aggregate in the amount of \$2,000,000; and, automobile liability insurance with minimum limits of \$2,000,000. NSRAA shall provide proof of insurance upon written demand by CBS in the form of a Certificate of Insurance, and NSRAA's insurer shall give thirty (30) days written notice to the CBS of any material change, cancellation, or non-renewal of the insurance policies. All insurance policies required shall name the CBS as an additional insured for the purposes of the Agreement and shall contain a waiver of subrogation against the CBS.
6. Coordinate with CBS to service low-volume, third party water contracts that may need access to NSRAA water systems at Gary Paxton Industrial Park from time to time.
7. Indemnify, defend, save, and hold CBS harmless from any claims, lawsuits, or liability, including attorney's fees and costs, arising from any intentional misconduct or negligent act, error, or omission, occurring during the course of or as a result of NSRAA's performance or operations under this Agreement, except those arising from the intentional misconduct or negligent acts, errors, or omissions of CBS.
8. Not assign any rights or interests in this Agreement without the prior written consent of CBS.

[SIGNATURES ON NEXT PAGE]

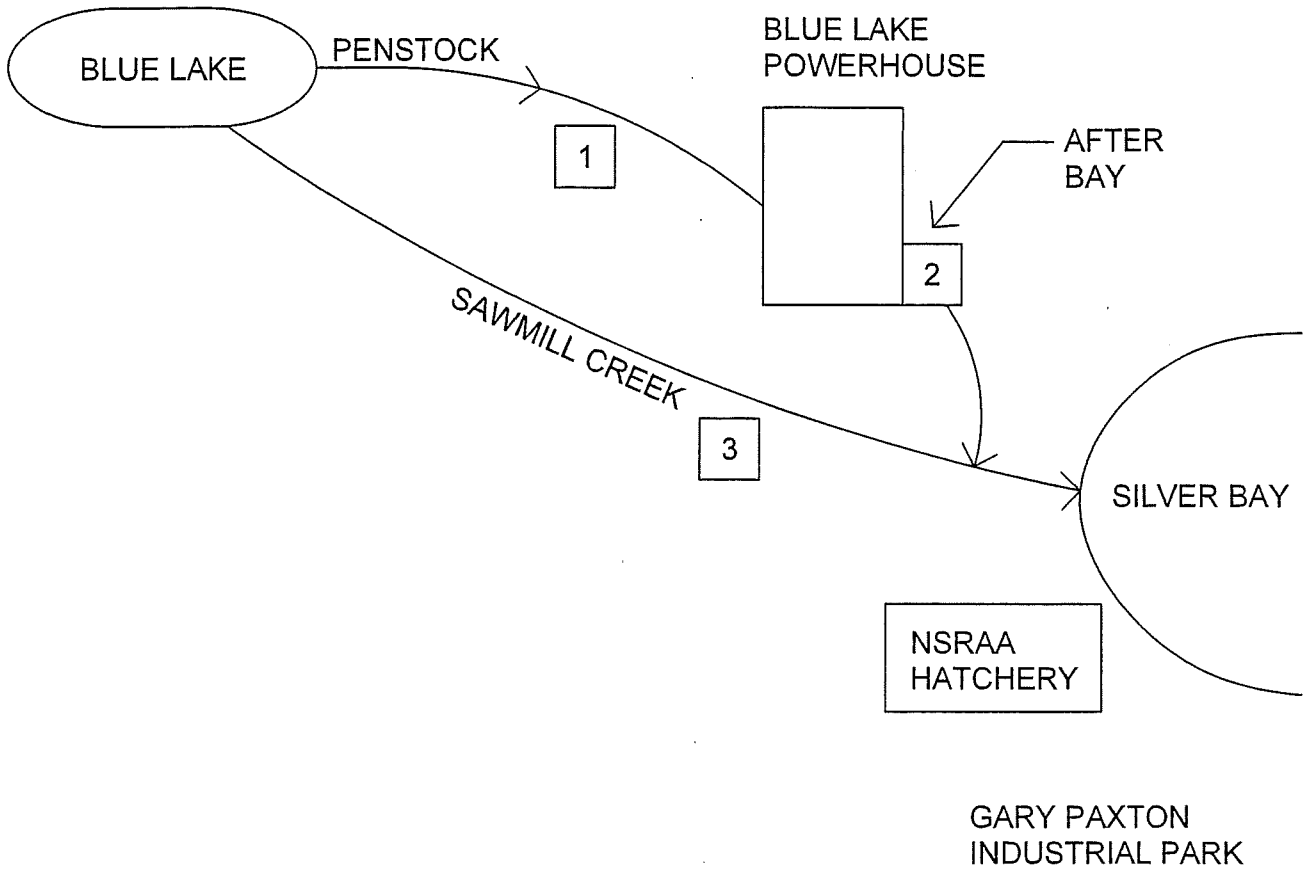
In recognition of the terms described above the parties approve this Agreement.

Steve Reifentuhl
General Manager
Northern Southeast Regional Aquaculture Association
1308 Sawmill Creek Road
Sitka, Alaska 99835

Date

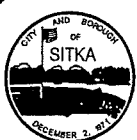
Hugh R. Bevan
Interim Administrator
City and Borough of Sitka
100 Lincoln Street
Sitka, Alaska 99835

Date



LEGEND

- 1** PENSTOCK WITHDRAWAL POINT, GRAVITY FED WATER
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APPENDIX A TO CBS/NSRAA WATER DELIVERY AGREEMENT

DRAWN:	JJH	SCALE:	N.T.S.
CHECKED:	H.BEVAN	DATE:	Dec 2019
DRAWING NAME:	AppendixA.dwg		
SHEET NO.	1 / 1		

Appendix B

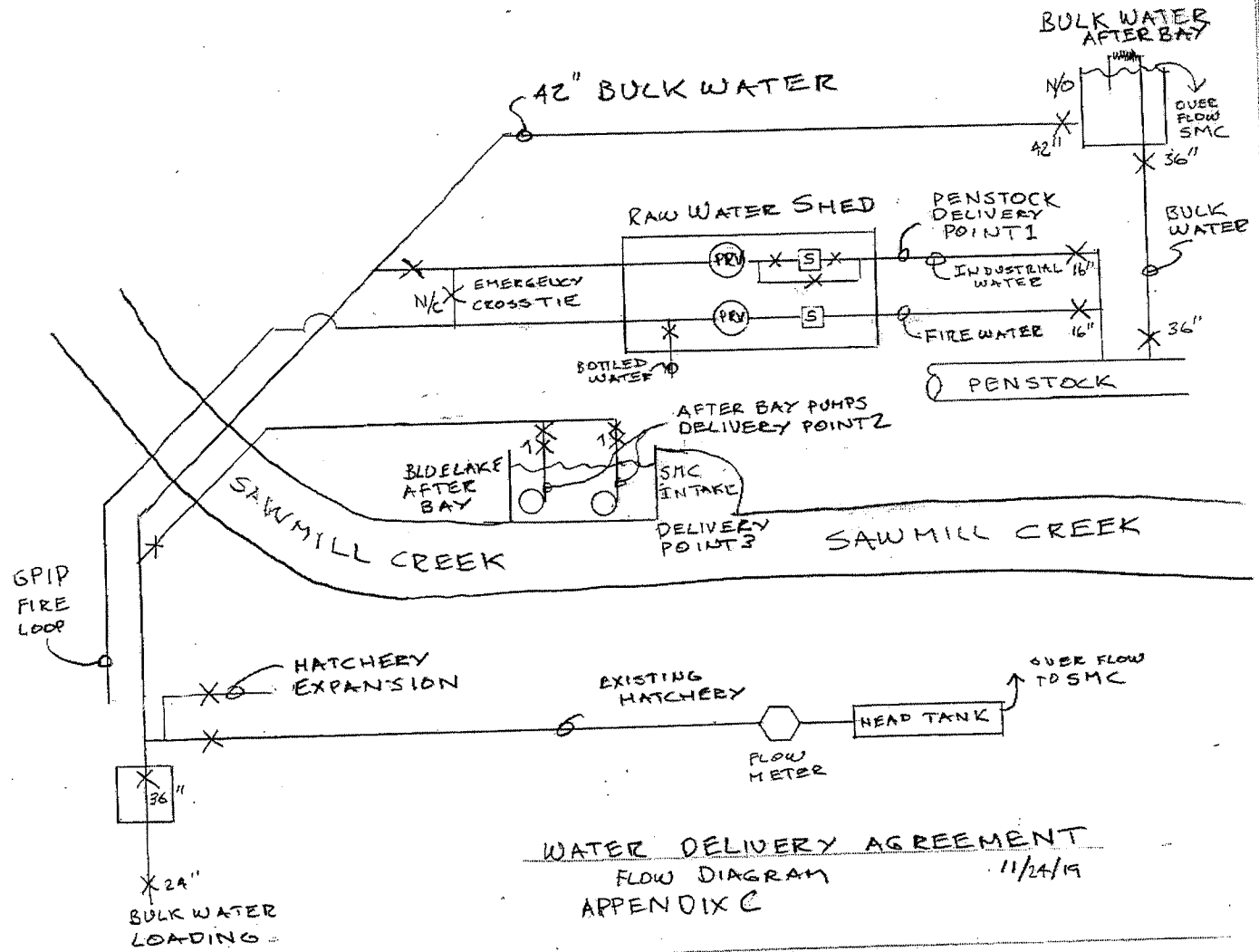
Water Delivery Agreement Between the City and Borough of Sitka, Alaska (CBS) and

Northern Southeast Regional Aquaculture Association (NSRAA)

Allow NSRAA to upgrade, at NSRAA expense, certain water control valves, piping and control systems as described below subject to CBS review and approval.

1. CBS shall allow NSRAA to upgrade the 10-inch PRV supply to a 14- inch supply.
2. NSRAA shall insure the 42-inch bulk water valve at the intake end of the bulk water line remains in the open position.
3. CBS shall insure the 24-inch bulk water loading valves at the discharge end of the bulk water line remain in the closed position under normal operation and will coordinate with NSRAA before these valves are opened for line flushing or for any other purpose.
4. CBS shall maintain 39PSI in 36-inch bulk water line during line flushing or any other GPIIP park water delivery purpose. CBS shall notify and coordinate with NSRAA prior to any planned line pressure changes.
5. CBS shall allow NSRAA to install controls on the bulk water line, the afterbay pumps and NSRAA's 16-inch PRV penstock supply subject to CBS review and approval.
6. CBS shall allow NSRAA access to the existing afterbay pumps for testing and operational purposes.
7. CBS shall maintain after bay elevation of 10.7'
8. CBS shall maintain the connection of the two existing after-bay pumps to the Blue Lake Powerhouse standby generator.
9. Situations when CBS will notify NSRAA that water is unavailable at Withdrawal Point 1 and/or Withdrawal Point 2. These situations are generally rare occasions and may include, but not limited to:
 - a. Power Conduit shutdown
 - b. Repair or replacement of any penstock root valve or piping
 - c. Drought- when Blue and Green Lake water levels are 5ft. below the average water rule curve for both lakes for more than 30 consecutive days.
 - d. Reservoir balancing.

- e. Water mismanagement by either CBS or NSRAA, i.e. NSRAA wasting water at Withdrawal Point 1 through the Filter Plant after bay, CBS releasing water unnecessarily at the Fish Valve by-pass valve or penstock drain valve.
- f. Blue Lake Power Plant shutdown.
- g. Dewatering of the Blue Lake after bay for repairs or access to turbine draft tubes.
- h. Many of these situations will also result in CBS turning off interruptible customers which would impact ratepayers also.



WATER DELIVERY AGREEMENT
 FLOW DIAGRAM
 APPENDIX C
 11/24/19