

This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

8.01 *Basis of Payment—Hourly Rates Plus Reimbursable Expenses*

A. Using the procedures set forth in Paragraph 2.01, Owner shall pay Engineer as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times standard hourly rates for each applicable billing class for all services performed on the Project, plus reimbursable expenses and Engineer's consultants' charges, if any. Engineer's standard hourly rates and reimbursable expenses will be adjusted on January 1<sup>st</sup> of each year that this Agreement is in effect to reflect equitable changes in the compensation payable to Engineer. Adjusted standard hourly rates and reimbursable expenses will become effective immediately.
2. Engineer's Rate Schedule are attached as Exhibit B.
3. The total compensation for services and reimbursable expenses is not to exceed the amount of \$ 50,000 .

Attachments:

- Exhibit A – Project Schedule
- Exhibit B – Engineer's Rate Schedule

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

OWNER: CITY OF YERINGTON

ENGINEER: FARR WEST ENGINEERING

By: Robert Switzer

By: Greg Lyman, P.E.

Title: City Manager

Title: Vice President

Date Signed: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

14 East Goldfield Avenue

5510 Longley Lane

Yerington, NV 89447

Reno, NV 89511

## **EXHIBIT A – PROJECT SCHEDULE**

Begin Project	1/1/22	2/1/22
Design	2/2/22	3/2/22
Construction	3/3/22	5/3/22
Close-Out	By end of year 2022	

Schedule will be dependent on approvals.

**EXHIBIT B - 2022 RATE SCHEDULE**

<b>Title</b>	<b>Hourly Rate</b>	<b>Title</b>	<b>Hourly Rate</b>
Principal Engineer	\$189	Project Coordinator	\$105
Senior Engineer II	\$182	Project Assistant I	\$80
Senior Engineer	\$170	Admin IV	\$110
Engineer IV	\$150	Admin III	\$95
Engineer III	\$140	Admin II	\$85
Engineer II	\$130	Admin I	\$75
Engineer I	\$120	Intern	\$50
Engineer in Training II	\$108	GIS Analyst II	\$150
Engineer in Training I	\$100	GIS Analyst I	\$125
Senior Electrical Engineer	\$170	GIS Specialist	\$110
Electrical Engineer III	\$150	GIS Technician II	\$100
Electrical Engineer II	\$140	GIS Technician I	\$90
Electrical Engineer I	\$130	Water Resource Specialist	\$150
Electrical and Controls Engineer in Training	\$125	Water Rights Specialist II	\$140
Electrical Engineer in Training II	\$120	Water Rights Specialist I	\$115
Electrical Engineer in Training I	\$110	Water Rights Technician III	\$100
Senior Hydrogeologist	\$176	Water Rights Technician II	\$90
Hydrogeologist II	\$125	Water Rights Technician I	\$80
Hydrogeologist I	\$110	Regulatory & Env. Specialist	\$110
Construction Inspector III	\$125	Professional Surveyor	\$155
Construction Inspector II	\$120	Senior Survey Technician	\$135
Construction Inspector I	\$110	Survey Technician III	\$125
Designer III	\$130	Survey Technician II	\$115
Designer II	\$125	Survey Technician I	\$100
Designer I	\$115	1 Man Survey Crew	\$160
Proposal Specialist	\$85	2 Man Survey Crew	\$270

Other Fees and Charges:

1. All direct project expenses, including subconsultants, will be billed at actual cost plus 15%.
2. An overtime surcharge of 25% will be applied to the hourly rates of non-salaried employees for authorized overtime work.
3. Different survey and construction inspection labor rates will apply on prevailing wage projects. Rates for prevailing wage projects will be provided on a case-by-case basis.

**ITEM**

**#11**





14 East Goldfield Avenue, Yerington, Nevada 89447  
PHONE: (775) 463-3511 WEBSITE: www.yerington.net FAX: (775) 463-2284  
The City of Yerington is an Equal Opportunity Provider

January 10, 2022

TO: Yerington City Council

RE: Purchase of four (4) aerators for WWTP

Summary:

For the past several years, the City's waste water treatment plant has been a source of many complaints about odors emanating from the plant. Primarily, residents east of the plant and business customers to the south have been subjected to the noxious problem. The City has employed various measures in an effort to combat the problem. For a time, it was theorized that chemical agents not friendly to the aerobic action necessary to keep smells down could have been the cause. Yet, when tests of downstream effluent resulted in low or no contamination, public works had to look elsewhere.

Discussion:

Beginning earlier this year, we introduced beneficial chemicals such as lime into the treatment system which can help adjust p/H levels and encourage good aerobic activity, and magnesium hydroxide, basically "milk of magnesia." Those are helping and they did reduce somewhat the odor issues this past summer. However, we are still receiving complaints and the current situation is not sustainable, especially as the first of Spring is right around the corner and a time when odors come back in earnest.

Discussion in the past with this issue between public works staff and our engineer resulted in a conclusion that more oxygen needed to be introduced into the treatment pond(s) along with the proper mix of chemicals as needed. Along with those recommendations, staff is proposing to purchase and install four new 20 hp. aerators in the main treatment pond.

Recommendation:

Purchase four Arrowmix Aerators for the primary treatment pond in an amount not to exceed \$60,000

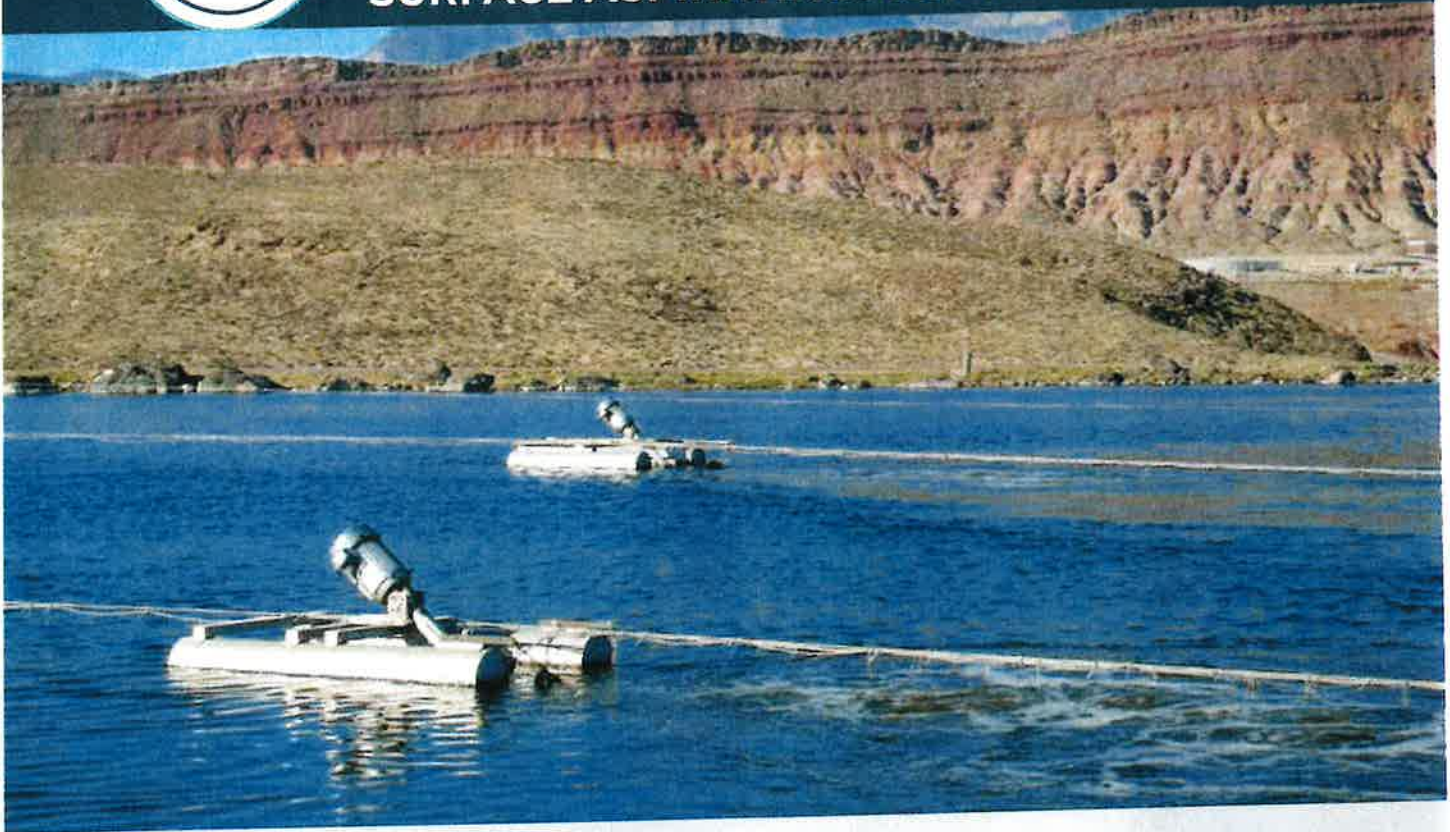
Robert Switzer  
City Manager





# Tornado<sup>®</sup>

## SURFACE ASPIRATING AERATOR



**Powerful and reliable, self-aspirating surface Tornado aerators are used to upgrade lagoon systems and expand the treatment capacity of mechanical wastewater treatment plants.**

### **Tornado surface aspirating aerators improve aeration and mixing in a wide range of applications.**

Tornado provides high oxygen transfer and intensive mixing capabilities in a wide range of applications. The Tornado aerator's turbulent directional mixing and jet propulsion discharge assures that oxygen is quickly blended with

the wastewater for unmatched oxygen transfer. The intense action of the jet propulsion shears wastewater solids to increase treatment performance and provide better contact for the oxygen and wastewater bacteria.





## Principle of Operation

The Tornado aerator mounts at an angle in the water with the motor and air intake above the surface and the propeller submerged below the water. The solid motor shaft spins a proprietary stainless steel propeller. Water moves at a high velocity through and near the propeller, creating a low pressure zone at the hub. The low pressure zone draws air in through the stationary intake and down the large diameter draft tube. The air exits into the water at the propeller hub. Turbulence and flow created by the propeller breaks up the air bubbles, mixes the basin, and disperses oxygen.



An aeration the Tornado through the opening in the draft tube



Aeration and mixing occur below the water surface to eliminate water splashing and subsiding

- Reduced reflux
- Energy conservation
- Long problems eliminated

## Key Technical Features

- Available horsepower range: 2-100 hp (1.5 kW-75 kW)
- Operational speed: 1800 rpm at 60 Hz (1500 rpm at 50 Hz)
- Premium efficiency (TEFC) motors
- 304 stainless steel (standard) or 316 stainless steel (optional) construction
- Grease-lubricated bearings and a solid shaft ensure a vibration-free design

**Markets and Industries**

- Municipal Wastewater Treatment
- Aquaculture
- Wineries & Breweries
- Chemical Processing
- Pulp & Paper Mills
- Textile
- Oil & Gas
- Mining
- Dairies
- Food & Beverage Processing

## Suitable Applications

- Activated sludge basins
- Sludge holding tanks/digesters
- Oxidation ditches
- Logponds
- Post Aeration
- Odor and algae control/air cap
- Ice control
- Leachate treatment

## Rugged Construction

Harsh wastewater environments require tough, rugged materials designed for longevity and reliability in extreme environmental conditions. The Tornado's sealed, grease-lubricated bearings allow the aerators to be used in applications with high amounts of solids, grit, or sand and in leachate treatment. The two tapered roller

## Stainless Steel Components

Durable stainless steel floats are unmatched in the industry and ensure the aerator remains buoyant for its full life, even in the harshest of environments. Proprietary engineering

## Reduced Energy Costs

Every Tornado aerator is equipped with a premium efficiency motor to reduce energy costs. Larger motors are designed to work with soft

## Tornado Specifications

hp	kW	60 Hz Motor rpm	Motor FLA 480V	50 Hz Motor rpm	Motor FLA 380V	Ship Weight (kg)	Pontoon System Available	Pontoon System	Length (ft/cm)	Width (ft/cm)
2	1.5	1750	3.1	1425	3.7	118 (84)	a, b	2-Float (a)	72 (183)	70 (177)
3	2	1745	4.0	1430	4.8	161 (75)	a, b	4-Float (b)	145 (368)	70 (177)
5	4	1750	6.5	1445	7.9	169 (79)	a, b	6-Float (c)	145 (368)	105 (267)
7.5	5.5	1750	9.4	1445	11.6	225 (102)	a, b	8-Float (d)	145 (368)	105 (267)
10	7.5	1750	12.4	1445	15	248 (113)	a, b			
15	11	1780	18.6	1450	22.6	407 (185)	b, c			
20	15	1760	23.5	1450	31.4	492 (223)	b, c			
25	18.5	1770	29.6	1460	35.2	539 (244)	b, c			
30	22	1770	35.5	1460	42	541 (245)	b, c			
40	30	1770	47.1	1460	55	730 (331)	b, c			
50	37	1770	59.2	1460	69	914 (415)	b, c			
60	45	1775	69.4	1465	83	1146 (520)	c, d			
75	56	1775	86.2	1465	103.5	1219 (553)	d			
100	74.5	1780	114	1480	135	1553 (1353)	d			



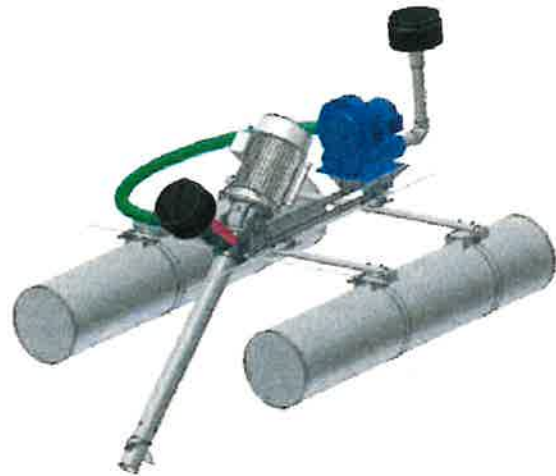
## Available Accessories

- Anti-erosion shields to prevent erosion in shallow (clay or earthen) basins
- Anti-vortex shield if vortexing occurs or if an aerator is operated below the standard 45 degree angle of operation
- Low-level legs to prevent damage to basin or equipment when waterlevels drop below three feet
- Walls and bridge mounts for mounting flexibility
- Swing arms to accommodate up to 15 feet of fluctuations in water elevation
- Maintenance decks built on pontoon platforms for easy servicing access
- Automatic grease lubrication equipment to reduce maintenance
- Blower add-on kit accessory to convert to blower-assisted operation

Rental units also available



The Blower Assisted TORNADO Aerator is used for wastewater treatment applications that require a higher level of oxygenation. A blower is added to the self-aspirating aerator to force additional air down the inlet hole. The blower uses a small motor, typically from 2 to 10 HP (1.5kW to 7.5 kW), that inputs more oxygen as compared to a standard Tornado aerator. The Tornado Blower-assist aerator mounts at an angle on floats or can be wall-mounted. The motor and air intake is above the surface and the propeller is submerged beneath the water.



## Fluence is Your EXPERT

With thousands of installed units around the world, Fluence is your expert provider for wastewater treatment solutions. We offer all major wastewater aeration technologies and the expertise to help you select and apply the equipment best suited for your application. Our technical experts are ready to assist you with the proper sizing, layout, and operation of your aeration system.



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Value from Water

