Legal Notice

The Village of Versailles is seeking a qualified firm to provide professional consulting services for a preliminary design engineering study for improvements and expansion of the existing water treatment plant. The proposed project consists of the preliminary design engineering study of the existing water treatment plant to serve the Village.

The Village of Versailles is accepting Statements of Qualifications from consulting firms to determine their interest and capabilities in performing the prescribed work. The Statement of Qualification shall be a document of no more than ten (10) double sided pages or twenty (20) single sided pages between covers. Any Statement of Qualification with excess pages will not be considered. It is the intention of the Village to review Statements submitted based on established evaluation criteria. Emphasis should be placed upon providing information concerning your level of staff availability, your experience with other projects and your approach to completing the proposed project. The firm must be familiar with the design of water treatment facilities. Firms with experience in rural areas will be given special consideration by the Village.

- A brief discussion of your understanding of the project and a scope of work outlining key issues and your approach to the project.
- A brief discussion of similar projects completed within the last ten (10) years.
- A list of key members of the project team, a brief presentation of their qualifications, related experience and the work tasks for which each of these individuals is responsible.
- The location of the office where the majority of the work will be performed.
- A schedule listing employee-billing rates by classification, overhead multiplier for your firm and expected fixed fee or profit multiplier.
- A list of anticipated sub-consultants to be used and the work they will perform, if any.
- A brief discussion of your firm's experience utilizing the above-mentioned funding sources.
- Public meetings will be required on the project. Describe your experience with public meetings.

All Statement of Qualification requirements must be met or be capable of being met by the responding firm or the submittal will be disqualified as being non-responsive. Statements of qualifications will be accepted until February 14, 2025, at 4:00 pm local time at the Village of Versailles, 177 North Center Street, Versailles, OH at which time the evaluation process will begin.

Copies of the scope of project may be obtained by visiting the Village of Versailles website at www.versaillesoh.com, or request via email to kylefrancis@versaillesoh.com.

The Village of Versailles administration reserves the right to accept or reject any or all submissions of Statements of Qualifications

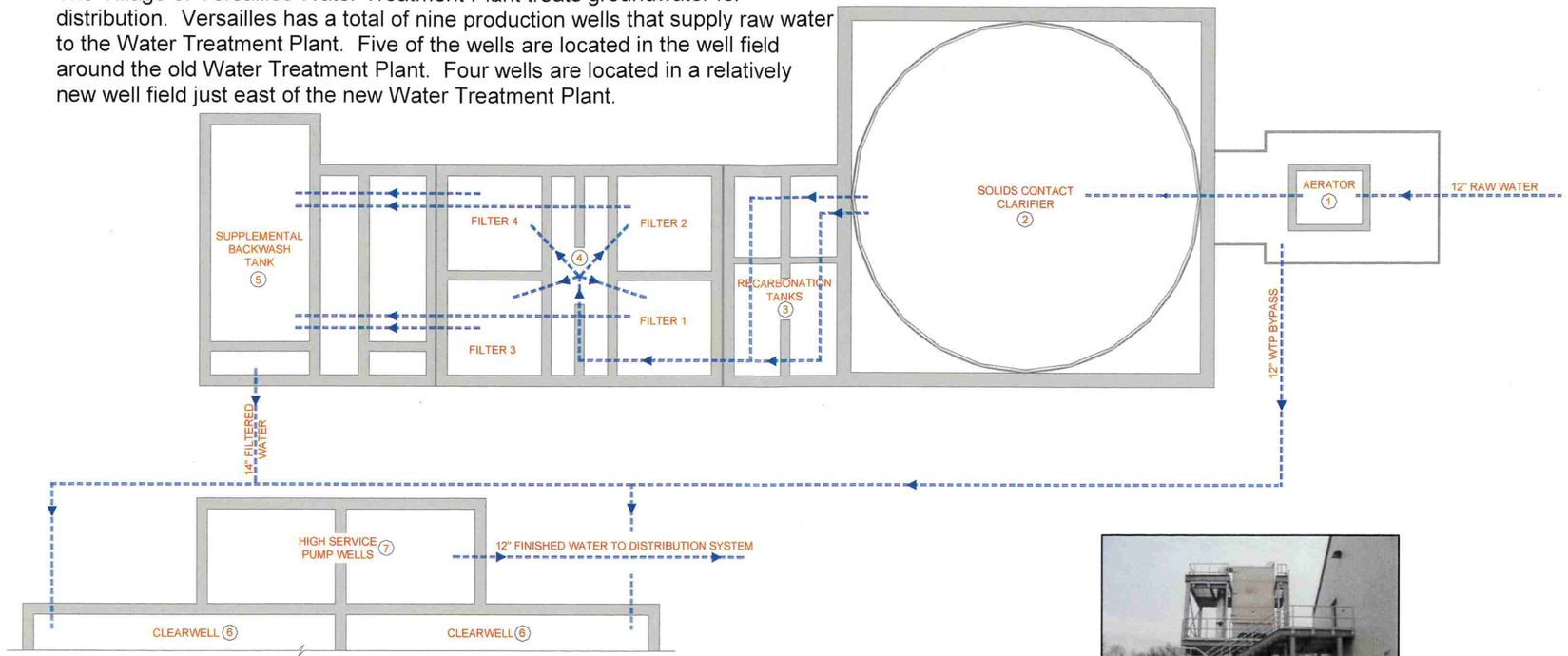
Kyle R. Francis

Village Administrator

Village of Versailles, Ohio

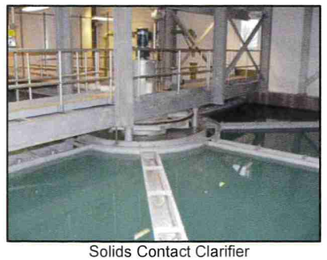
WATER TREATMENT PLANT FLOW DIAGRAM

The Village of Versailles Water Treatment Plant treats groundwater for distribution. Versailles has a total of nine production wells that supply raw water to the Water Treatment Plant. Five of the wells are located in the well field around the old Water Treatment Plant. Four wells are located in a relatively new well field just east of the new Water Treatment Plant.



Aerator

The raw water is pumped from the well field to the Aerator (1). Outside air is blown into the aerator as the water passes through. The introduction of air to the raw water provides oxidation of iron and reduction of carbon dioxide in the raw water.


Solids Contact Clarifier

From the aerator the water flows by gravity to the Solids Contact Clarifier (2). Lime and Soda Ash are added to the clarifier for water softening and coagulation of water. Solids settled for the water are collected in the bottom of the clarifier and wasted to the lime sludge storage tank located east of the water treatment plant.

The clarified water then moves into the Recarbonation Tanks (3) where carbon dioxide is added. Recarbonation is the process to adjust the alkalinity (pH) of the finished water. Chlorine is added for disinfection after Recarbonation.

The water continues through the plant to the Gravity Sand Filters (4) and moves downward by gravity through 18" of anthracite coal and 12" of sand. The filter removes any remaining suspended chemicals and bacteria present in the water.

The water leaves the rapid sand filters and flows into the Supplemental Backwash Tank (5). The Supplemental Backwash Tank is used to clean the Gravity Sand Filters by back flushing them with filtered water. The Supplemental Backwash Tank is equipped with pumps to back flush the filters for cleaning as needed. When the filters do not need cleaned the water flows from the Supplemental Backwash Tank to the Clearwell.


Supplemental Backwash Pumps


High Service Pump Building & Clearwell

The Clearwell (6) has the capacity to store 225,000 gallons of finished water. As the community requires water, the water flows into the High Service Pump Wells (7) where it is pumped to the distribution system by the High Service Pumps. Chlorine can also be added if additional disinfection is needed.

Design Data

Plant Capacity
The water treatment plant is rated to have a maximum capacity of 1.5 mgd. The following data is based on the capacity of 1.5 mgd.

Well Pumps

Total Capacity	1039 gpm/1.50 mgd
Firm Capacity	906 gpm/1.30 mgd

Aerator

Quantity	One (1)
Type	Forced Draft
Blower Capacity	3675 scfm

In-Line Rapid Mixer

Quantity	One (1)
Type	In-Line Mechanical
Size	14" Diameter

Solids Contact Clarifier

Quantity	One (1)
Size	37'x37'x16.5' SWD
Detention Time	2.5 hours
Flocculation Detention Time	30 minutes
Upflow Rate @ Slurry Separation Line	0.85 gpm/sf

Recarbonation Tank

Quantity	Two (2)
Mixing Zone:	
Size	3'x5'x14.5' SWD
Volume	417.9 cf/3,120 gal
Detention Time	3 minutes
Reaction Zone:	
Size	5'x18'x14.5' SWD
Volume	2,610 cf/19,500 gal
Detention Time	18.7 minutes

Rapid Sand Filters

Quantity	One, Four Cell Unit (Total of Four Cells)
Cell Size	10'x10'
Filtration Area	400 sf
Filtration Rate:	
Four Cells	2.6 gpm/sf
Three Cells	3.5 gpm/sf
Filter Media:	
Anthracite Cap	18"
Sand	12"
Backwash:	
Air Scour	4 scfm/sf
Air Scour	400 scfm/sf @ 5 psi
Washwater Rate	20 gpm/sf
Backwash Period	15 minutes
Backwash Vol	30,000 gal
Backwash Supply:	
Flow Required	2,000 gpm
Min from Treatment	400 gpm
Supplemental Backwash Req'd	1,600 gpm

Supplemental Backwash Tank (Supplemental Backwash Pump)

Quantity	Two (2)
Type	Vertical Turbine
Pumping Rate	1,600 gpm
Supplemental Backwash Rate	1,600 gpm
Backwash Period	15 minutes
Volume Required	24,000 gal
Volume Provided	24,000 gal
Size	10.5'x17.5' x14.25' SWD 10.5'x 6' x10.17' SWD

Backwash Storage Tank

Quantity	One (1)
Size	26' dia x 16' SWD
Volume	8,500 cf/63,500 gal
Backwash Recycle Pumps:	
Quantity	Two (2)
Capacity	104 gpm
Type	Vertical Turbine

Clearwell

Quantity	Two (2)
Size	32'x32'x15' SWD
Volume	30,000cf/225,000gal

High Service Pumps

Quantity	Four (4)
Type	Vertical Turbine
Capacity (each)	400 gpm

Lime Sludge Tank

Quantity	One (1)
Size	75' dia x 14.5' SWD
Volume	68,300 cf/511,200 gal
Sludge Generated	18,900 gal/MG
Storage	180 days
Lime Sludge Tank Mixing/Pumping:	
Quantity	Three (3)
Type	Submersible
Truck Fill Rate	300 gpm
Mixing Rate	1,860 gpm

Lime Storage and Feed

Chemical	Calcium Oxide
Storage Silo:	
Quantity	One (1)
Size	14' dia x 36' height
Capacity	2,500 cf
@ 60 lb/cf	75 tons
Truck Load Shipment	20 tons
Feeder/Slaker:	
Quantity	Two (2)
Capacity (each)	500 lbs/hr
Lime Dosage	525-575 mg/L

Soda Ash Storage and Feed

Chemical	Sodium Carbonate
Storage Silo:	
Quantity	One (1)
Size	14' dia x 30' height
Capacity	950 cf
@ 60 lb/cf	30 tons
Truck Load Shipment	20 tons
Feeder:	
Quantity	Two (2)
Capacity (each)	98 lbs/day
Soda Ash Dosage	125-145 mg/L

Carbon Dioxide

Storage Capacity	14 tons
Carbon Dioxide Dosage	35-55 mg/L
Feed Range, total	344-1032 lbs/day 14-43 lbs/hr
Feed Range, per tank	172-516 lbs/day 7-21.5 lbs/hr

Alum Storage and Feed

Storage Tank:	
Quantity	One (1)
Size	7' dia x 18' length
Capacity	4,800 gal
Truck Load Shipment	up to 4,000 gal
Alum Dosage	18 mg/L
Alum Feed Solution	25 percent
Day Tank:	
Quantity	One (1)
Size	2'-4" dia x 3'-8" high
Capacity	100 gal
Feed Pump:	
Quantity	Two (2)
Capacity, each	0.4-4.0 gph

Chlorine

Chlorine Required 2.5 mg/l to1.5mgd	31 lbs/day
Chlorinators:	
Quantity	Two (2)
Capacity	200 lbs/day
Rotameter Capacity	20 & 30 lbs/day
Operation	Automatic Switchover
Chlorine Supply:	
Service	2-150 lb cylinders
Reserve	2-150 lb cylinders
Storage	3-150 lb cylinders

100-Year Flood Elevation
The 100-year flood elevation at the Village of Versailles Water Treatment Plant is 966.50.