GEORGIA ENVIRONMENTAL PROTECTION DIVISION

DRINKING WATER PERMITTING & ENGINEERING PROGRAM

PUBLIC WATER SUPPLY
SYSTEM DESCRIPTION

PART B

DATE: _____

SYSTEM NAME: _____

WSID No.: GA _____ COUNTY:_____

NAME(s) OF OPERATOR(s)
WHO COMPLETED THIS FORM: _____

_____

GEORGIA ENVIRONMENTAL PROTECTION DIVISION
PUBLIC WATER SUPPLY SYSTEM DESCRIPTION

PART B

Date: _____/_____/_____
System Name_____ County:_____ ID No.:_____
Owner:_____ Phone: ( ) _____
Mailing Address:_____
Water Plant Phone: ( )_____

Plant Location	**Treatment Type**
1._____	_____
2._____	_____
3._____	_____

Community WS:__ NTNCWS:__ TNCWS:__ Seasonal From:___/____ to ____/_____

PERMIT STATUS

Permitted Operating Capacity: _____MGD Plant Design Capacity:_____MGD

Surface Water Withdrawal Permit No.:_____ Ground Water Use Permit No.:_____
Permitted Max. Day:_____MGD Permitted Monthly Avg.:_____MGD
Permitted Monthly Avg.:_____MGD Permitted Annual Avg.:_____MGD

PURCHASED WATER SOURCES:

Name of Water System	Purchase Meter Location	GPM Available
_____	_____	_____
_____	_____	_____
_____	_____	_____

Describe Any Special Conditions:

WATER PLANT OPERATOR

Plant Classification for operator certification level: _____
Name of Principal Treatment Plant Operator:_____ Certification Level:_____

Names of other Plant Operators:

_____ Certification Class:___ Expiration Date:_____
_____ Certification Class:___ Expiration Date:_____
_____ Certification Class:___ Expiration Date:_____
Distribution Operator:_____ Certification Expiration Date:_____
(*list additional personnel on back*)

NPDES Permit: Required: Y/N Permit No.:_____ Expiration Date:_____
Certified Laboratory: Required: Y/N Permit No.:_____ Name of Chief Lab Analyst: _____

GROUND WATER SOURCES: YES/ N/A

How Many Wells:_____ Drilled:_____

Well No.	Yield, gpm	Location	Sanitary Protection Adequate
_____	_____	_____	Yes/No
_____	_____	_____	Yes/No
_____	_____	_____	Yes/No
_____	_____	_____	Yes/No

Well Head Protection: Y/N

SPRING WATER SOURCES: YES/ N/A

How Many:_____ Infiltration Gallery: Y/N

Spring No.	Yield, gpm	Location	Subject to Flooding
_____	_____	_____	Yes/No
_____	_____	_____	Yes/No
_____	_____	_____	Yes/No

Is the Spring Area? Owned:_____ Fenced and Posted: _____

Is the Spring Source? Enclosed:_____ Box Covered: _____ Locked:____

Surface Water Diversion Channel Satisfactory: Y/N

Surface Water Run-off Satisfactory: Y/N

Contact Chamber Provided: Y/N Volume:_____gal. Contact Time:_____min.

CONSERVATION PROGRAM:

Plan Approved: Y/N Name of Responsible Official:_____ Title:_____

1990 Water Conservation Act Ordinance: Y/N

CROSS-CONNECTION CONTROL PROGRAM:

Required: Y/N Plan approved: Y/N

Name of Responsible Official:_____ Title: _____

CONSUMER & PRODUCTION DATA:

Describe Service Area: _____

Total Service Connections: Residential#:_____ Commercial#_____

Wholesale#:_____ Metered: Y/N

Total Population Served:_____

List No. of known Unmetered Connections _____

Meter Replacement Program: Y/N How Frequent: _____

Meter Calibration Program: Y/N How Frequent: _____

During Last 12 Month Period, From _____ to _____

Total Water Produced and/or Purchased:_____MG,

Total Amount of Metered Sales:_____MG Unaccounted-for-water:_____%

Leak survey conducted: Y/N Date: _____

I. RAW WATER SOURCE DATA

A. SURFACE SOURCES:

How Many:_____ Drainage Basin(s): _____
Name Lake(s):_____ River(s):_____
Stream(s):_____ Reservoir(s): _____
_____ _____
_____ _____
_____ _____

Describe characteristics of the watershed area:
Topography: _____
% Rural:_____; % Urban:_____

Describe any commercial or industrial operations, transportation corridors or other potential contaminate sources which could adversely impact the watershed area:_____
_____
Identify treated wastewater discharges into Watershed Area:_____
Individual sewer systems: Y/N Are residential units served by public sewers? Y/N
List recreational activities permited on lakes, reservoirs, & streams:_____
How is public access regulated and monitored? _____

II. RAW WATER STORAGE & PUMPING FACILITIES

A. RAW WATER SUPPLY:

No. of Reservoirs:_____ Size:_____Acres
Water Supply Storage Capacity:_____MG Average Depth:_____
Stream bed Impoundment: Y/N Off Stream: Y/N
Algacide Program: Y/N Chemical Used:_____
Aeration: Y/N Chlorination: Y/N $KMnO_4$: Y/N Other:_____

B. RAW WATER INTAKE STATION:

Subject to Flooding: Y/N Siltation/clogging Problem: Y/N
Number of Intake Withdrawal Levels:_____
Intake Screened: Y/N Screen Type:_____
Intake Capacity Adequate: Y/N Gravity Discharge: Y/N Pump Station: Y/N

PUMPS	TYPE	CAPACITY, GPM
_____	_____	_____
_____	_____	_____
_____	_____	_____

Auxillary Power Source Available: Y/N

Pump Station Area Secured: Y/N
Maximum Pumping Capacity:_____MGD Pumps Housed: Y/N Remote Control Oper.: Y/N
Raw Water Line Size(s):_____ Distance to Pond or Plant:_____ft./miles
Pipe Type(s):_____ Air Relief: Y/N Lines Cleaned (pigged): Y/N
Raw Water Meter: Y/N Type:_____ Last Calibration Date:_____

C. PLANT POND / PRE-SEDIMENTATION RESERVOIR:

Subject to Flooding: Y/N Any Run-offs/Discharges into Pond: Y/N
Surface Area: _____acres; Effective Storage Capacity:_____MG
Algae Control: Y/N; Chemical Used:_____
Aeration: Y/N; Other Treatment:_____
Any Maintenance/Vegetation Control Program: Y/N Frequency:_____
Pond By-pass: Y/N
Intake Screened: Y/N Multilevel Withdrawal: Y/N
Flow to Plant: gravity: Y/N Pumped: Y/N
Does gravity line valve provide positive flow shut off? Y/N

Pumps	Type	Capacity, gpm
_____	_____	Maximum Pumping Capacity:_____MGD
_____	_____	Discharge Line Size(s):_____inches
_____	_____	Distance to Water Plant:_____ft./miles

Is treated plant washwater returned for recycling? Y/N Rate of Return:_____GPM
Point of return? _____

D. PLANT RAW WATER METER:

Type:_____ Manufacturer:_____
Range:_____ Recorder:_____ Totalizer:_____
Last Calibration Date:_____

III. CHEMICAL STORAGE FACILITIES

STORAGE AREA	Y/N		BULK STORAGE TANKS	Volume(gal.)
Separate Storage Area			Alum	
Dry Chemicals on Pallets			Sodium Hydroxide	
Ventilation Adequate			Sodium Chlorite	
Forced Draft Ventilation			Hydrofluorosilic Acid	
Mechanical Handling Equipment			Phosphate	
Drainage Around Bulk Storage Area			Polymers	
Emergency Containment Area Provided			Lime Slurry	
Liquid Storage Tank Enclosed			Other	
Tank Contents Labeled at Refill Connections				
Tank Fill Connections Secured				

IV. CHEMICAL FEED EQUIPMENT

DISINFECTION SYSTEMS								
Type	No.	Capacity lbs/day	Operable Y/N	Flow Pacing Y/N	NSF 60 Y/N	Separate Room: Y/N	Gas Chlorination System	Y/N Need
Gas, Cl_2							Adequate Ventilation	
Ammonia							Separate Cylinder Storage Room	
NaOCl							Cylinders Secured	
ClO_2							Protected From Sun Rays	
HTH							Ton Cylinders	
Ozone							150 lbs. Cylinders	
SO_2							Scales	
Other							Evaporator	
							Leak Repair Kits	
							Chlorine Leak Dectector	
							Ammonium Hydroxide	
							Gas Mask:___ Type: ____ Serviced Date: _____	
							Automatic Change Over	

V. DRY CHEMICAL SYSTEMS

Feeders	No.	Type	Adequate Capacity: Y/N	Auto Flow Proportioning: Y/N	Operable Y/N	Other	Comment
Alum							
Lime/Soda Ash (Pre)							
Lime/Soda Ash (Post)							
Carbon							
Fluoride							
Potassium Permanganate							
Corrosion Inhibitors							
Other							

VI. LIQUID CHEMICAL SYSTEMS

Feeders	No.	Type	Adequate Capacity: Y/N	Auto Flow Proportioning: Y/N	Operable Y/N	Other	Comments
Alum							
Sodium Hydroxide							
Hydrofluorosilic Acid							
Sodium Chlorite							
Potassium Permanganate							
Corrosion Inhibitor							
Polymer							
Other							

COMMENTS:

VII. UNIT PROCESSES

Chemical Addition

Chemical Application Point(s): Inline: Y/N ; Mixing Chamber:Y/N ; Other: _____
Sequence of Chemical Addition: _____ _____ _____ _____ Flow
Mechanical Flash Mix: Y/N ; Static Mixer: Y/N ; Rapid (Hydraulic Mix): Y/N
Continuous Monitoring: Streaming Current Detector: Y/N Provides flow pacing for _____
Microprocessing Unit: Y/N Provides flow pacing for_____

Coagulation	Yes	No	Application Point
Alum			
Iron Salts			
Polymers			
Other			
Alkalinity Adjustment	Yes	No	Application Point
Lime			
Soda Ash			
Caustic Soda			
Other			
Iron/Manganese Cont.	Yes	No	Application Point
$KMnO_4$			
ClO_2			
Cl_2			
Other			
Taste/Odor Cont.	Yes	No	Application Point
Activated Carbon(PAC)			
$KMnO_4$			
ClO_2			
Cl_2			
Other			
Post-Treatment	Yes	No	Application Point
Gas, Cl			
ClO_2			
Ammonia			
Lime			
Soda Ash			
Caustic Soda			
Corrosion Inhibitor			
Sodium Silicafluoride			
Hydrofluorosilic Acid			
Sodium Fluoride			

A. FLOCCULATION

Describe Flow Division Method from rapid mix system to Flocculator Chambers:_____

Describe Flow Inlet Detail to Flocculation Systems: _____

Total Number of Flocculation Systems:_____

Fixed Baffle Systems (Hydraulic Mix): Y/N Number:_____

Mechanical Mixers: Y/N Type:_____ Number:_____

Number of Mixing Stages:_____ Variable Speed Flocculators: Y/N

Basin Dimensions: Length:___ft; Width:___ft; Diameter:___ft; Water Depth:___ft;

Detention Period (Theoretical):_____min; Actual Detention Time:_____min

Verification Method used to determine actual detention time:_____

Basin drain: Y/N Flocculators free of excessive silt/sand accumulation: Y/N

B. CONVENTIONAL SEDIMENTATION BASIN(s): Y/N

Basin No.	Length	Width	Depth	Diameter	Theoretical Detention Time (min)	Actual Detention Period (min.)	Detention Verification Method
1.							
2.							
3.							
4.							
5.							
6.							

Describe Flow Inlet Detail to Each Basin(s): _____

Basin Effluent Weir Type:_____; Total Length:___ft.; Overflow Rate:_____GPD/ft.

Weir Elevation Satisfactory: Y/N

Short-circuiting Observed: Y/N

Plate/Tube Settlers in Basin: Y/N Baffles: Y/N Type: _____

Automated Sludge Removal: Y/N; Type:_____; Operable: Y/N

Manual Cleaning: Y/N Basin cleaning frequency:_____; Adequate: Y/N

C. UPFLOW CLARIFIERS AND CONTACT CHAMBERS:

Number:____; Dimensions:_____; Capacity:_____

Automated Sludge Blow-off: Y/N Flow Division into each Chamber Satisfactory: Y/N

Mechanical Equip. Operable: Y/N Short Circuiting problems observed: Y/N

Weir(s) Satisfactory: Y/N Air Flush System Satisfactory: Y/N

D. FILTRATION

Filter Number:	thru	thru	thru	thru
Type Filter Units				
Gravity				
Pressure				
Last Inspection Date				
Other				
Total Filter Area (ft^2)				
Permitted Filter Rate (GPMSFFA)				
Filter Media Configuration				
Mono (Sand, Anthracite or synthetic)				
Dual (Sand,Anthracite)				
Mixed (Sand, Anthracite, Garnet)				
Diatomaceous Earth				
Precoat Satisfactory				
Body Feed Satisfactory				
Material Specifications				
Effective Size/ Uniformity Coefficient				
Sand				
Anthracite				
Garnet				
Media Depth Satisfactory				
Last Date Installed				
Troughs				
Restrained				
Leveled				
Free Board (inches)				
Filter Agitator Type				
Air Scrubber				
Surface/Sub Surface Sweeps				
Last Inspection Date				
Backflow Prevention Device Provided				
Underdrain Type				
Date Installed				
Flow Rate Control System				
Mechanical				
Type				
Range__ to __ MGD				
Last Calibration Date				
Inlet Flow Control				
Declining Rate				
Head Loss Gage operable				
Flow Rate Gage Operable				
Filter Level Control Device				

Filter Number:	thru	thru	thru	thru
Filters Operated Intermittently				
Filter to Waste Provided (Rewash)				
Number of Minutes Rewashed				
Turbidimeter				
Continuous Recorder				
Calibration Frequency				

E. BACKWASH OPERATIONS

Filter Operating Periods Between Backwashing:

Min.:_____Hrs. Max. Hrs.:_____Average Hrs.:

Backwash initiated after _____hrs. operation or ____ ft. head loss.

Backwash water source treated: Y/N Identify any Auxilary Backwash Source: _____

Backwash flow: (1) Gravity: Y/N Storage Capacity:_____MG

Flow Controller: Y/N Last Calibration Date:_____

(2) Pumped flow: Y/N Spare Pump: Y/N

(3) Washwater line size ____in. Air Relief Valve: Y/N

(4) Wash Water Flow Indicator: Y/N

Filter Conditions :

Rate of vertical rise measured: _____in.

Washwater distributed uniformly: Y/N; Craters: Y/N; Boils: Y/N; Mounding: Y/N;

Media Separation: Y/N; Mudballs: Y/N

Amount of water used for backwashing: monthly_____%.

VIII. PIPE GALLERY:

Type Valves:_____ Actuator Method:_____

Leakage in Gallery: None_____ Minor_____ Excessive_____

Corrosion in Gallery: Light_____ Moderate____ Excessive_____

IX. PLANT BACKWASH WATER / SLUDGE HANDLING FACILITIES

Discharge untreated: Y/N Name of Receiving Water (if any):_____

Discharged into: WPC Facility: Y/N

Settling Ponds: Y/N

Type: Single Cell:___ Dual Cell:___ Other:_____

Under Drain: Y/N Last date Cleaned:___/___/_____

Comments: _____

A. SLUDGE DEWATERING FACILITIES

Equalization Basins: No.____ Volume:_____MG

Clarifiers: Y/N Volume:_____

Sludge thickeners: Y/N Number:_____ Volume:_____

Sludge Conditioning Chemicals: Polymers: Y/N Lime: Y/N Other:_____

Sludge Conditioning Tanks Number: _____ Volume: _____

Centrifuge(s): Y/N Press Type : Filter: Y/N Belt: Y/N

Describe Filtrate Disposal: _____

B. DRYING BEDS

How many?:_____ Total area:_____ft^2

Solids Disposal Site:

Supernatant Recycled to:_____Rate:_____GPM

Sludge Recycled to:_____Rate:_____GPM

C. DISCHARGES INTO SURFACE WATERS

Stream: Y/N Name:_____; Lake: Y/N Name:_____

Discharge in compliance with NPDES Permit Conditions: Y/N

X. CORROSION CONTROL PROGRAM: Y/N

Describe: _____

Distribution System Flushing Program: Y/N Frequency: _____

Name of Person(s) responsible for flushing: _____

Distribution System Corrosion Evaluation Studies Conducted: Y/N Date:_____

Describe type and length of study: _____

Describe Corrosion Study Results : _____

Red Water & other corrosion related complaints: Y/N Corrosion Inhibitors used:_____

Finished Water pH Value Maintained _____units Application dose:_____mg/l

XI. CLEARWELL & PLANT STORAGE

No.	Clearwell(s) Storage Capacity(MG)	Pump Suction Well Capacity	Baffled Y/N	Drain Valve Y/N	Screened Overflow Satisfactory Y/N	Screened Vent Satisfactory Y/N	Access Cover Secured Y/N	Comments
1								
2								
3								
4								
5								
6								

Clearwell operated on fill & draw : Y/N Clearwell floats on system: Y/N

High Service Pumps	**Type**	**Capacity** gpm/mgd	**Auxillary Power** available Y/N
1			
2			
3			
4			
5			
6			

Maximum Pump Capacity:_____MGD
Finished Water Meter: Y/N Type:_____
Number of Finished Water Mains:_____inches
Size(s):_____inches

High Service Pumps Water Lubricated: Y/N
Last Date Calibrated:
Distance to first customer: _____feet

XII. DISTRIBUTION SYSTEM

Current Distribution System Map Available: Y/N Location:_____
Standard Material & Construction Specifications Filed With EPD: Y/N
Construction Projects Receive Prior Approval From EPD: Y/N, If NO, Explain: _____
_____
Total Miles feet of Lines in Dist. System (approx): _____
Percentage of Pipe Material:

DI:____ CI:___ PVC:___ AC:___ Galvanized:____ Concrete:_____
OTHER:_____

A. LIST PRESSURE ZONES: (give elevations)

1._____
2._____
3._____

B. BOOSTER PUMP STATIONS

Location	Number Pumps	Capacity (MGD)	Auxillary Power Avail.
			Y/N
			Y/N
			Y/N

C. STORAGE FACILITIES

Location	Type	Material	Volume	Fenced	Overflow Screened	Drain	Altitude Valve	Coating Cond.	Comments

D. BOOSTER CHLORINATION FACILITIES

Locations:

1. _____

2. _____

E. DISTRIBUTION SYSTEM MONITORING

Cl_2 Residual:_____ Flow: Y/N Pressure: Y/N

Tank levels monitored: Y/N

Other: _____

F. SAMPLING PLAN

Microbiologic al Sample siting plan reviewed and approved: Y/N

Number of sampling sites required:_____ Adequate: Y/N

Sites representative of the distribution system: Y/N

Sites regularly used: Y/N

XIII. LABORATORY CONTROL

YES/NO		NEED
	Separate space for lab	
	HVAC adequate	
	Lab protected from direct sunlight	
	Lab clean	
	Adequate storage	
	Adequate glassware	
	Balance	
	Refrigerator	
	Colorimeter / Spectrophotometer	
	Jar test equip. with lighted base	

Fresh Reagent Solutions available for all test procedures? Y/N

ALKALINITY

Buret
Sulfuric acid, N/ 50
Methyl purple

PH

Electric pH meter Type:_____ Standardization Frequency:_____
Buffer solutions:
Colorimeter comparator: Y/N
Bromomethyl Blue
Phenol Red
Thymol Blue
Sodium Thiosulfate, 0.1 N

Cl_2 RESIDUAL COMPARATOR

Type: Orthotolidine
DPD
Amperometric Titration

CHLORINE DIOXIDE

Test method: _____

TOC

Test method: _____

SUVA

Test method: _____

TURBIDITY

Standards: _____ Type:_____
Meter: Model:_____ Serviced: _____ Calibration Frequency:_____

MANGANESE

Test method: _____ Reagent:_____

IRON

Test Method: _____ Reagent: _____

FLUORIDE

Test Method: _____ Reagent:_____

HARDNESS

Test Method: _____ Reagent:_____
_____
Test Method: _____ Reagent_____
_____
Test Method: _____ Reagent: _____

COMMENTS:

XIV. CONTINUOUS MONITORING

	Raw	Treated	Filter	Finished
pH Value				
Chlorine Res. FACR				
Particle Counter				
Turbidity, NTU				
Fluoride				
Pilot Filter				

XV. RECORD KEEPING

Operational Reports Available at Plant: Y/N Number of Years:_____

Microbiological Reports Available at Plant: Y/N Number of Years:_____

Chemical Reports Available at Plant: Y/N Number of Years:_____

Inorg.___ Org.___ Rad___ THMs___ VOCs___ Turbidity_____

Corrosion Control Data:_____

Violation Records:_____

Other: _____

XVI. SAFETY

Does Plant have a Safety program: Y/N

Fire Extinguishers: Y/N First Aid Kits: Y/N Emergency eyewash Stations: Y/N

Safety rails around basin: Y/N

Appropriate Warning signs on equipment: Y/N

COMMENTS: