Form 1-1 Operational Checklist: System description (SD)

(This form is used for the initial system evaluation for the facility and the site. It should be kept on file, and a copy should accompany the service provider at each O&M service visit. Any changes to the system facility should be recorded on the form, along with the date the change was noted.)

A. Client Contact Information

Name of owner:_____ System ref. #:_____

Phone:_____ T:___R:___Sec:___No.:_____

Cell:_____ E-mail:_____

Site address/County:_____

_____

Mailing address/County (if different):_____

_____

Directions to site:_____

B. System Documentation Available (If no documentation, fill out Section D.)

Date installed:_____

Installer:_____ License #:_____

Phone:_____ Cell:_____ Fax:_____

E-mail:_____

Designer:_____ License #:_____

Phone:_____ Cell:_____ Fax:_____

E-mail:_____

Previous service provider:_____ License #:_____

Phone:_____ Cell:_____ Fax:_____

E-mail:_____

Design flow: _____Gal per day

C. Operational Checklists

Identify operational checklists for components included in system. Number the components of the treatment train in order in the spaces provided after the titles.

Form 4.1 Site Assessment on File. ☐ Yes ☐ No

Tanks and advanced treatment component operational checklists (Chapters 5, 6 and 7):

☐ Pump: Demand-Dosed system: _____
☐ Pump: Timer-Dosed system: _____
☐ Holding tank: _____
☐ Septic/trash/processing (tank): _____
☐ Pump tank(s): _____
☐ Media filter: _____
☐ Aerobic treatment unit: _____
☐ Constructed wetland: _____
☐ Lagoon: _____
☐ Disinfection unit –chlorine: _____
☐ Disinfection unit –ultraviolet light: _____
☐ Disinfection unit –ozone: _____

System ref. #:_____

Final treatment and dispersal component operational checklists (Chapter 8):

- ☐ Gravity Distribution: _____
- ☐ Drip field: _____
- ☐ Evapotranspiration bed: _____
- ☐ Spray field: _____
- ☐ Mound system: _____
- ☐ Outfalls: _____
- ☐ Bottomless sand filter:_____
- ☐ Bottomless peat filter:_____
- ☐ Low-pressure drainfield: _____

D. No System Documentation Available

Complete the remaining information if it is not available in the permit or as-built drawings.

Facility Details

1. Number of bedrooms: _____
2. Square footage of facility: _____sq ft
3. Number of current occupants: _____
4. Design flow: _____gpd
5. Design strength: _____ BOD (mg/L) _____TSS (mg/L) _____ FOG (mg/L)
6. Water supply:
   - ☐ Private water supply
   - ☐ Public water supply
7. Water source (if private supply): Lateral distance to water supply
   - ☐ Groundwater well: _____ft
   - ☐ Spring: _____ft
   - ☐ Surface water (i.e. creek, lake, etc.): _____ft
8. Garbage disposal present. Yes____No_____
9. Are any water softener or water treatment chemicals used. Yes____No_____
   - ☐ Softener backwash drains to system: Yes____No_____
   - ☐ Softener backwash does not drain to system: Yes____No_____
10. Has facility been remodeled since original construction. Yes____No_____

System Details

1. Site

a. Landscape position: _____

b. Drainage: ☐ Surface/gravity ☐ Subsurface/gravity ☐ Subsurface/pump

c. Monitoring well present. Yes____No_____

2. Pretreatment components - Tanks

a. Holding tank

1) Capacity: _____gal

2) Material: ☐ Concrete ☐ Fiberglass ☐ Plastic ☐ Other

i) Manufacturer:_____

3) Access to surface. Yes____No_____

4) Location (GIS): _____/_____

b. Septic tank /Trash tank

1) Capacity (total): _____gal

i) Compartmented. Yes____No_____

ii) Capacities for compartmented system: 1)_____gal 2)_____gal

2) Material: ☐ Concrete ☐ Fiberglass ☐ Plastic ☐ Other

i) Manufacturer:_____

System ref. #:_____

3) Access to surface. Yes____No_____
4) Location (GIS): _____/_____
5) Effluent screen. Yes____No_____
   i) Manufacturer:_____ Model: _____

c. Flow equalization tank (surge, etc.)
1) Capacity: _____gal/in
2) Material: ☐ Concrete ☐ Fiberglass ☐ Plastic
3) Access to surface. Yes____No_____
4) Location (GIS): _____/_____
5) Pump tank: _____N.A.
   i) Manufacturer:_____
6) Pump: _____N.A.
   i) Manufacturer:_____ Model:_____ HP:____
7) Pump operating condition
   i) Discharge Rate: _____gal/min
   ii) Operating Pressure: _____ft
8) Control method
   i) Sensors: ☐ Floats ☐ Pressure transducer ☐ Ultrasonic ☐ Other
   ii) Description:_____
9) Pump dose settings
   i) Frequency _____ doses/day
   ii) Interval _____ sec/dose
   iii) Volume _____ gal/dose
10) Control panel
   i) Manufacturer:_____ Model:_____
11) Electrical
   i) Separate circuits (pump, alarm). Yes____No_____
   ii) Breaker size: _____
12) Alarm
   i) Manufacturer: _____
   ii) Sensors: ☐ Floats ☐ Pressure transducer ☐ Ultrasonic ☐ Other
   iii) Description:_____

d. Dosing pump tank
1) Capacity: _____gal/in
2) Material: ☐ Concrete ☐ Fiberglass ☐ Plastic
3) Access to surface. Yes____No_____
4) Location (GIS): _____/_____
5) Dosing tank: _____N.A.
   i) Manufacturer:_____
6) Pump: _____N.A.
   i) Manufacturer:_____ Model:_____ HP:____
7) Pump operating condition
   i) Discharge Rate: _____gal/min
   ii) Head: _____ft
8) Control method
   i) Sensors: ☐ Floats ☐ Pressure transducer ☐ Ultrasonic ☐ Other
   ii) Description:_____
9) Pump dose settings
   i) Frequency: _____ doses/day

ii) Interval: _____ sec/dose
iii) Volume: _____ gal/dose

10) Panel for sensors
i) Manufacturer:_____ Model:_____

11) Electrical
i) Separate circuits (pump, alarm). Yes____No_____
ii) Breaker size: _____

12) Alarm
i) Manufacturer:_____
ii) Sensors: ☐ Floats ☐ Pressure transducer ☐ Ultrasonic ☐ Other
iii) Description:_____

3. Pretreatment components – advanced

a. Aerobic treatment unit (ATU)

1) Treatment method:
☐ Suspended growth ☐ Attached growth ☐ Rotating Biological Contactor
☐ Combination attached/suspended growth ☐ Sequencing Batch Reactor
☐ Other: _____

2) Capacity: _____gpd

3) Material: ☐ Concrete ☐ Fiberglass ☐ Plastic
i) Manufacturer:_____ Model #:_____
ii) Product serial #:_____

4) Access to surface. Yes____No_____

5) Location (GIS): _____/_____

6) Effluent screen / Tertiary filter _____N.A.
i) Manufacturer:_____

7) Air supply
i) Air supply method: ☐ Aspirator ☐ Compressor ☐ Blower ☐ Free Air
ii) Manufacturer:_____ Model #:_____

8) Sludge return method: _____

b. Single pass filter

1) Media: ☐ Sand ☐ Glass ☐ Foam ☐ Peat ☐ Other: _____
i) Media depth: _____in
ii) Liner material: _____

2) Filter size: _____sq ft
i) Dimensions: _____ft x ____ft
ii) Accessibility: ☐ Buried ☐ Free Access ☐ Covered
iii) Cover material:_____
iv) Lid insulated. Yes____No_____

3) Distribution method: ☐ Pressure ☐ Gravity
i) Pipe diameter: _____in
ii) Flow control: ☐ Orifice ☐ Spray nozzle ☐ Other: _____
Orifice orientation: _____
iii) Flow control diameter: _____in
iv) Number of flow controls (orifices, nozzles, etc.): _____
v) Squirt height/Operating Pressure: _____in
vi) Clean outs/Inspection ports: Number_____Yes____No_____
vii) Clean out access to surface. Yes____No_____

4) Filtrate collection system: _____

System ref. #:_____

c. Recirculating Filter

1) Media: ☐ Sand ☐ Gravel ☐ Polystyrene ☐ Bottom Ash ☐ Foam ☐ Textile ☐ Other:_____

i) Media depth: _____in

ii) Liner material: _____

iii) Recirculation method: _____

2) Filter size: _____sq ft

i) Dimensions: _____ft x _____ft

ii) Accessibility: ☐ Buried ☐ Free Access

iii) Cover material:_____

iv) Lid insulated. Yes____No_____

3) Distribution method

i) Pipe diameter: _____in

ii) Flow control: ☐ Orifice ☐ Spray nozzle ☐ Other: _____

Orifice position: _____

iii) Flow control diameter: _____in

iv) Number of flow controls (orifices, nozzles, etc.): _____

v) Squirt height/Operating head: _____in

vi) Clean outs/Inspection ports: Number_____Yes____No_____

vii) Clean out access to surface. Yes____No_____

4) Filtrate collection system: _____

5) Forced aeration: _____N.A.

i) Description:_____

d. Trickling filter

1) Media: ☐ Gravel ☐ Foam ☐ Textile ☐ Plastic ☐ Other:_____

i) Media depth: _____in

ii) Liner material: _____

2) Filter size: _____sq ft

i) Dimensions: _____ft x _____ft

3) Distribution method

i) Pipe diameter: _____in

ii) Flow control: ☐ Orifice ☐ Spray nozzle ☐ Other: _____

Orifice position: _____

iii) Flow control diameter: _____in

iv) Number of flow controls (orifices, nozzles, etc.): _____

v) Squirt height/Operating Pressure: _____in

vi) Clean outs/Inspection ports: Number_____Yes____No_____

vii) Clean out access to surface. Yes____No_____

4) Filtrate collection system: _____

5) Forced aeration: _____N.A.

i) Description: _____

e. Constructed wetland

1) Bed media: ☐ None ☐ Gravel ☐ Other:_____

i) Number of cells: _____

ii) Media depth: _____in

iii) Water depth: _____in

iv) Liner material: _____

v) Border material: _____

2) Size: _____sq ft

i) Dimensions: _____ft x _____ft

ii) Length to width ratio: _____:_____

3) Distribution method
   i) Pipe diameter: _____in
   ii) Flow control: ☐ Orifice ☐ Spray nozzle ☐ Other: _____
   Orifice position: _____
   iii) Flow control diameter: _____in
   iv) Number of flow controls (orifices, nozzles, etc.): _____
   v) Squirt height/Operating Pressure: _____in
   vi) Clean outs/Inspection ports: Number_____Yes____No_____
   vii) Clean out access to surface. Yes____No_____
4) Surface loading rate: _____gpd/sq ft
5) Filtrate collection system: _____
6) Monitoring location: _____
7) Vegetation: _____N.A.
   i) Description:_____
8) Water level control: _____N.A.
   i) Description:_____

f. Lagoon system
1) Type: ☐ Aerobic ☐ Facultative ☐ Partial-mixed aerated ☐ Anaerobic
   i) Water depth: _____ft
   ii) Liner material: _____
2) Lagoon size: _____sq ft
   i) Dimensions: _____ft x ____ft
   ii) Length to width ratio: _____:_____
3) Inlet to lagoon
   i) Pipe description:_____
   ii) Pipe diameter: _____in
   iii) Clean outs. Yes____No_____
4) Surface loading rate: _____gpd/sq ft
5) Monitoring location: _____
6) Vegetation: _____N.A.
   i) Description:_____
7) Water level control: _____N.A.
   i) Description:_____

g. Disinfection unit
1) Chlorine – tablet
   i) Manufacturer:_____ Model:_____
2) Chorine – liquid
   i) Manufacturer:_____ Model:_____
3) Ultraviolet light
   i) Manufacturer:_____ Model:_____
4) Ozone
   i) Manufacturer:_____ Model:_____
5) Other:_____
6) Disinfection monitoring location:_____
7) Dechlorination
   i) Type: _____
   ii) Manufacturer:_____ Model:_____
8) Dechlorination monitoring location: _____

System ref. #:_____

4. Final treatment and dispersal

a. Gravity distribution

1) Type: ☐ Trench ☐ Bed ☐ ET bed

i) If lined ET bed, describe liner material:_____

2) Distribution method: ☐ Gravity-to-gravity ☐ Pump-to-gravity ☐ Siphon-to-gravity

3) Configuration: ☐ Parallel ☐ Serial ☐ Sequential

4) Distribution approach: ☐ Distribution box ☐ Solid header pipe ☐ Drop box ☐ Stepdown

5) Distribution media

i) Material: ☐ Gravelless ☐ Multi-pipe ☐ Chamber
☐ Washed rock ☐ Polystyrene ☐ Other:_____

b. Pressure

1) Low-pressure drainfield

i) Level. Yes____No_____

ii) Number of zones: _____

a) Switching method: ☐ Hydraulic valves ☐ Separate pumps
☐ Other:_____

iii) Distribution method

a) Pipe diameter: _____in

b) Orifice diameter: _____in

c) Orifice orientation: _____

d) Number of orifices: _____

e) Squirt height/Operating head: _____in

f) Clean outs/Inspection ports: Number_____Yes____No_____

g) Clean out access to surface. Yes____No_____

iv) Number of trenches/beds: _____

v) Dimensions of trenches/beds: _____ft x ____ft

2) Pressure mound distribution

i) Distribution method: ☐ Trench ☐ Bed ☐ Other:_____

a) Pipe diameter: _____in

b) Orifice diameter: _____in

c) Number of orifices: _____

d) Squirt height/Operating head: _____in

e) Clean outs/Inspection ports: Number_____Yes____No_____

f) Clean out access to surface. Yes____No_____

ii) Number of trenches/beds: _____

iii) Dimensions of trenches/beds: _____ft x ____ft

3) Drip distribution

i) Distribution field: ☐ Surface ☐ Subsurface

ii) Drip tubing manufacturer:_____ Model:_____

iii) Filtration: ☐ Screen ☐ Disk ☐ Sand
Manufacturer:_____ Model:_____

iv) Filter cleaning: ☐ Automated ☐ Manual/Continuous flush

v) Number of zones: _____

a) If multiple, switching device: _____

b) Zone area(s): _____sq ft _____ sq ft _____sq ft

vi) Field flushing: ☐ Automated ☐ Continuous ☐ Manual

vii) Air release/Vacuum breaker: _____N.A.

a) Manufacturer:_____ Model:_____

System ref. #:_____

viii) Inspection ports. Yes____No_____
  a) Locations:_____

4) Spray field
  i) Number of zones: _____
    a) If multiple, switching device:_____
  ii) Distribution heads per zone: _____
    a) Manufacturer:_____ Model(s):_____
    b) Pattern(s):_____
  iii) In-line filtration: ☐ None ☐ Screen ☐ Disk ☐ Sand
    a) Manufacturer:_____ Model:_____
  iv) Total area of spray distribution fields: _____sq ft
  v) Gauging Device:_____

5) Surface discharge
  i) Permit number:_____
  ii) Permit requirements:_____
  iii) Location:_____
  iv) Monitoring location:_____

System ref. #:_____

E. Sketch of system

Scale 1 in = _____ ft