HI SDWB Sanitary Survey Form

Pre-Inspection

Date of Survey	Date
PWS ID No.	
Water System Name	
Water System Owner	
PWS Contact Person	
Phone	
Email Address	

PWS Type	Choose PWS Type
Source	Choose an item.
Consecutive From	Choose an item.
Population Served	
No. of Service Connections	
Average Daily Flow (MGD)	

Persons Present During Sanitary Survey (provide name and affiliation)

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

Compliance History

Violations Since Last Sanitary Survey			
Violation Type	Date	Description	Status
Violation Type	Date		
Violation Type	Date		
Violation Type	Date		

System Management and Operation

Annual Report or Similar Document Provided	Yes, No, N/A
CCR Database Storage and Compliance Status	Satisfactory/Unsatisfactory
Is an Updated Emergency Response Plan Available per HAR 11-19-5 (County Only)	Yes, No, N/A

Pumps, Pump Facilities, and Controls				
Source Name				
Location				
Source Type	Choose Source Type	Source Type	Source Type	Source Type
Source Infrastructure	Choose Infrastructure	Choose Infrastructure	Choose Infrastructure	Choose Infrastructure
USGS Number				
Well Depth (ft)				
Pump Type	Choose Pump Type	Choose Pump Type	Choose Pump Type	Choose Pump Type
Rated Flow (gpm)				
TDH (ft)				
Pump lubrication	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Condition of oil lubricating equipment	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Pump in 100-Year Floodplain	Yes or No	Yes or No	Yes or No	Yes or No
Pump site protected from runoff	Yes or No	Yes or No	Yes or No	Yes or No
Well slab/floor material condition	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Watertight seal for:				
Pump base plate/discharge head openings	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A
Airline tubing for water level measurements?	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A
Pump column vent hole/tubing?	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A
Pump-to-Waste vent elevated and screened/flappered?	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Condition of Pump-to-Waste screen/flapper	Choose an item.	Choose an item.	Choose an item.	Choose an item.
All ARVs are screened	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A
All ARVs are pointed downward	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A	Yes, No, or N/A
Emergency power exists?	Yes or No	Yes or No	Yes or No	Yes or No
Emergency power test frequency	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Emergency power protected from vandalism or the elements?	Yes or No	Yes or No	Yes or No	Yes or No
Identify cross-connections (submerged outlets, standing water, hose bib connections, etc.)				
Recent daily maintenance log entries attached (photo ok)	☐	☐	☐	☐
Questions for Booster Pumps only:				
Pumps From / To				
# of Pumps				
Configuration (# online / # backup)				
Remarks				

Groundwater Source Protection				
Source(s) Name				
Infrastructure immediately downstream	Infrastructure	Infrastructure	Infrastructure	Infrastructure
Emergency Spill Response Plan available?	Yes or No	Yes or No	Yes or No	Yes or No
Source Site:				
In a 100-Year Flood Plain?	Yes or No	Yes or No	Yes or No	Yes or No
Protected from runoff?	Yes or No	Yes or No	Yes or No	Yes or No
Enclosed?	Yes or No	Yes or No	Yes or No	Yes or No
Fenced and gated?	Yes or No	Yes or No	Yes or No	Yes or No
Warning signs posted?	Yes or No	Yes or No	Yes or No	Yes or No
Inappropriate chemicals stored?	Yes or No	Yes or No	Yes or No	Yes or No
Chemical additions?	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Safety Data Sheets (SDS) onsite	Yes or No	Yes or No	Yes or No	Yes or No
Potential Contaminating Activities	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.	1. Choose an item. 2. Choose an item. 3. Choose an item.
Remarks				

GAC Treatment				
Facility Name				
Raw Water Source & Type				
Raw Water Source Flow				
Bypass Piping	Yes/No			
Downstream Infrastructure				
Target Contaminant Removal				
No. of Contactors	# (# on standby)			
Condition of tanks, piping, valves, general site, etc. (e.g., rust, holes, insects, etc.)	Satisfactory/Unsatisfactory			
All ARVs are screened	Yes, No, or N/A			
All ARVs are pointed downward	Yes, No, or N/A			
Overflow line screen/flapper	Satisfactory/Unsatisfactory			
Washout / drain line outlet location (e.g. settling basin, percolation pond, irrigation ditch, stream, drain manhole, inlet)				
Carbon Replacement Schedule				
Method of Spent Carbon Disposal (if known)				
Configuration	Single Pass/Series/Parallel			
Sampling Schedule (List frequency and location)				
O&M Manual On-site?	Yes/No			
Maintenance Log On-site?	Yes/No			

Corrosion Control Treatment	
Facility Name	
Source being Treated	
Purpose for Corrosion Control Treatment	1) Lead Action Level Exceedance; 2) Copper Action Level Exceedance; 3) Preventive Measure
Unit Process	1) Chemical pH Adjustment; 2) Corrosion Inhibitor Addition; 3) Aeration pH Adjustment
Chemical/Manufacturer Name #1	
NSF 60 Certified?	Yes/No
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Chemical/Manufacturer Name #2	
NSF 60 Certified	Yes/No
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Proper Chemical Storage	Yes/No
Proper Chemical Labeling	Yes/No
Updated SDS On-Site	Yes/No
Aeration Towers: Vent Insect Screen	Satisfactory / Unsatisfactory / N/A
Updated O&M Manual On-Site	Yes/No
List Daily Log Entries	
List SDWB-Approved Optimal Water Quality Parameters and Testing Frequency & Location, including but not limited to pH, Alkalinity, Calcium, Conductivity, Temperature, Orthophosphate	
Complying with SDWB-Approved Optimal Water Quality Parameters?	Yes/No
Remarks	

Surface Water Treatment	
Facility Name	
Raw Water Source Name & Type	
Raw Water Source Flow (min/max/avg)	
Bypass piping? Describe the bypassed treatment process and last bypass event.	
System infrastructure immediately downstream of WTP	
WTP Capacity	

Source Water Protection for Surface Water/GWUDI Sources

Under the Long Term 2 Enhanced Surface Water Treatment Rule, a "significant change in the watershed and source water" is defined as any change, which detrimentally affects the raw water delivered to the water treatment plant.

Activities that could contribute to significant changes in the watershed and source water include:

- Changes in land use patterns.
- Changes in ownership.
- Changes in agricultural cropping, chemical application, or irrigation practices.
- Changes in other non-point discharge source activities such as commercial, industrial or residential development.
- Natural or man-made stream or reservoir modifications.
- New NPDES permits or changes in existing NPDES permits that involve increased loading of contaminants.
- NPDES permit violations at wastewater treatment plants and confined animal feedlot operations.
- Accidental or illegal waste discharges and spills.
- Dramatic natural events such as hurricanes, floods, forest fires, earthquakes, and landslides that may transport or expose contaminants.
- Prolonged drought conditions that may warrant special preparatory measures to minimize impacts from waste accumulations that are washed into source waters when precipitation returns.
- Status of the water system's emergency response plan to these significant changes.

The inspector shall answer the next three questions below using these criteria:

Identify any new significant actual or potential sources of *Cryptosporidium*	
Identify any significant hydrological changes in the watershed that could affect *Cryptosporidium* loading	
Inspect the intake structure and identify any modifications to its location or design	

Presedimentation / Raw Water Reservoir	
Capacity	
Pretreatment – Chemical Addition	
Purpose	
Chemical Name	
NSF 60 Certified?	
Dosage	
How is chemical dosage determined?	
Unit Redundancy	
Pretreatment – Prescreening	
Strainer/filter type & sieve/pore size	
Solids disposal?	
Unit Redundancy	
Pretreatment – Other	
Describe pre-treatment process (e.g. PAC, UV, microfiltration, MIEX)	
Coagulation/Flocculation	
Configuration (# online/ #backup/tank shape)	
Coagulant chemical	
How is chemical dosage determined? What is the protocol for flashy or prolonged higher turbidity events?	
Option to manually operate?	Yes/No
Sedimentation	
Configuration (# online/ #backup/tank shape)	
Sludge handing (dewatering & disposal)	

Filtration			
Configuration (# online/ #backup/filter media)			
Backwash frequency & basis?			
Frequency of filter replacement			
Recycling of supernatant or backwash water?			
Is Filter Backwash Recyling Rule requirements met? (i.e. recycled back to the head of the plant) – for conventional and direct filtration plants only			
Post-Treatment			
Purpose	Disinfection	Corrosion Control	Other
Chemical Name			
NSF 60 Certified?			
Dosage			
How is chemical dosage determined?			
Unit Redundancy			
Activated Carbon			
Configuration (# online/ #backup/series or parallel)			
Targeted contaminants			
Solids handling & disposal			
Operation & Maintenance			
Is an updated O&M Manual available on-site for operator consultation?	Yes/No		
Is an updated O&M Manual submitted to DOH every 2 years in July?	Yes/No		
Are daily operations scheduled and listed for plant operators to follow?	Yes/No		
Daily maintenance logs kept onsite?	Yes/No		
List Daily Log entries			
Are appropriate spare parts and tool kits maintained onsite?	Yes/No		

Is there a cross-connection program?	Yes/No
Is there a worker safety or training program?	Yes/No
Chemical handling & storage	
Proper chemical handling and safety equipment available?	Yes/No
Were chemicals stored in a separate room?	Yes/No
Was adequate separation of different chemicals provided?	Yes/No
Were SDS sheets available on-site?	Yes/No
Was adequate ventilation provided?	Yes/No
Describe alarm system	
Describe emergency procedures	
Emergency power	
Is emergency power available?	Yes/No
How often is it exercised?	
Is it exercised under full load?	Yes/No

Monitoring – List parameters monitored, location & recorded with frequency and instrument name

Parameter	Location	Frequency	Instrument	Calibration Frequency

Alarms – List plant alarms and location			
Alarm	**Location**	**Setpoints**	**Steps Taken After Alarm**
Reporting (CT compliance, etc.)			
Reporting violations received in the last 12 months:			
Verify disinfection points, CT monitoring points, calculated volumes, flows and unit processes			
Miscellaneous			
Are site boundaries appropriately fenced & gated?	Yes/No		
Does appropriate warning or “keep out” signage exist?	Yes/No		
Are all building doors appropriately signed (e.g. chlorine, etc.)?	Yes/No		
Does site maintenance control vegetation & vector habitats?	Yes/No		

Disinfection				
Name of Source being disinfected	Enter Source Name	Enter Source Name	Enter Source Name	Enter Source Name
Disinfection method	Disinfection method	Disinfection method	Disinfection method	Disinfection method
Labeled chemical manufacturer's information				
Meets NSF 60	Yes or No	Yes or No	Yes or No	Yes or No
Equipment in enclosed structure	Yes or No	Yes or No	Yes or No	Yes or No
Material of enclosed structure	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Warning signs present	Yes or No	Yes or No	Yes or No	Yes or No
Feed equipment type	Type	Type	Type	Type
Number of back-up units	Quantity	Quantity	Quantity	Quantity
Target residual at far ends of distribution system (ppm)				
Target residual at EPD point (ppm)				
How are feed adjustments made?	Adjustment type	Adjustment type	Adjustment type	Adjustment type
No. of days chemicals are stored (60-90 days max, 30 days preferred)				
Disinfectant feed point location				
Copy of daily log attached	☐	☐	☐	☐
Preventative maintenance program	Yes or No	Yes or No	Yes or No	Yes or No
Critical spare parts and repair kit on hand	Yes or No	Yes or No	Yes or No	Yes or No
Backup power available?	Yes or No	Yes or No	Yes or No	Yes or No
Emergency response plan procedures onsite	Yes or No	Yes or No	Yes or No	Yes or No

	Source Name	Source Name	Source Name	Source Name
For Gas Chlorination				
Chlorinators in a separate room?	Yes or No	Yes or No	Yes or No	Yes or No
Automatic switch-over equipment	Yes or No	Yes or No	Yes or No	Yes or No
Cylinders labeled and chained	Yes or No	Yes or No	Yes or No	Yes or No
Protective cap on stored cylinders	Yes or No	Yes or No	Yes or No	Yes or No
Working scale	Yes or No	Yes or No	Yes or No	Yes or No
Chlorine leak detectors/kits in room	Yes or No	Yes or No	Yes or No	Yes or No
Leak detection/low residual alarms	Yes or No	Yes or No	Yes or No	Yes or No
Positive pressure SCBA availability and training	Yes or No	Yes or No	Yes or No	Yes or No
Chemical handling clothes, safety equipment and tools	Yes or No	Yes or No	Yes or No	Yes or No
Light and exhaust fan switches outside of the room	Yes or No	Yes or No	Yes or No	Yes or No
Panic bars on outward-swinging door to outside	Yes or No	Yes or No	Yes or No	Yes or No
Adequate floor ventilation	Yes or No	Yes or No	Yes or No	Yes or No
Viewing window into room	Yes or No	Yes or No	Yes or No	Yes or No
For Chloramination				
In what order and ratio is ammonia combined with chlorine?				

Finished Water Storage				
Tank Name				
Spillway elevation (ft)				
Capacity (MG)				
Material of construction	Material	Material	Material	Material
Exposure to unauthorized persons	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Surrounding landscape	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Site fenced	Yes or No	Yes or No	Yes or No	Yes or No
Warning signs	Yes or No	Yes or No	Yes or No	Yes or No
Gates locked	Yes or No	Yes or No	Yes or No	Yes or No
Cross-connection potential with onsite irrigation	Yes or No	Yes or No	Yes or No	Yes or No
Site drainage	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Condition of tank exterior	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Condition of access ladder	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Vent insect screen	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Tank access hatch	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Visual water quality	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Overflow hatch	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Level indicator cable opening	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Overflow line screen/flapper	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
Washout drain line	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory	Satisfactory/Unsatisfactory
O & M program	Yes or No	Yes or No	Yes or No	Yes or No
Frequency of inspection of tank roof and interior and exterior surfaces	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Frequency of tank interior cleaning	Choose an item.	Choose an item.	Choose an item.	Choose an item.
Tank isolation by valving	Yes or No	Yes or No	Yes or No	Yes or No
Disinfection onsite	Yes or No	Yes or No	Yes or No	Yes or No
Remarks				

Distribution and Transmission	
System pipe materials	1. Choose pipe material and enter size 2. Choose pipe material and enter size 3. Choose pipe material and enter size
System pressure range (psi)	
Method of isolation	
Security measures	Choose an item.
Installation and repair procedures for water mains	
Flushing schedule and procedure	
Leak detection control program	Satisfactory/Unsatisfactory
Corrosion control program	
For all surface water, GWUDI, and non-county groundwater systems: Has there been any substantial modifications to the water system, as per HAR 11-20-30, since the last sanitary survey?	Choose an item.
Remarks	

Capacity Evaluation Checklist for Existing PWS

Technical Capacity	
OPERATOR CERTIFICATION Each public water system (except transient, non-community) shall be under the responsible charge of an operator(s) holding a valid certification equal to or greater than the classification of the WTP or DS. Check whether the water system operators are certified. A backup certified operator is recommended.	☐ System has a certified operator ☐ System has a backup certified operator ☐ The system does not have the required certified operators If the answer is "no" to any of the above, explain.
ADEQUATE WATER SOURCES Discuss with water system whether the present water sources are adequate for the future (next 5 years). CWRM-issued pump installation permit and the projected number of service connections in the next five years should be provided. Source(s) should meet average and maximum day demand, otherwise, water use limitations per meter must be formally documented and made known to all users.	Are the existing sources of sufficient quantity and quality to meet current and future demand based on County Water System Standards and the Department of Health, respectively? ☐ Yes ☐ No, explain: Does the system have a backup source in case of a primary source failure? ☐ Yes ☐ No Does the system have an emergency connection with other systems? ☐ Yes ☐ No

Technical Capacity	
POTENTIAL FOR CONTAMINATION OF THE WATER Inspect for pathways that could contaminate the finished water at the well site, storage tanks, or distribution system. Systems must take corrective actions as directed by the SDWB.	Are all Potential Contaminant Sources (PCS) within the system's service area identified? ☐ Yes ☐ No The PWS has uncorrected significant deficiencies: ☐ Yes ☐ No The PWS has a history of significant deficiencies on every sanitary survey: ☐ Yes ☐ No Have controls been implemented to remediate the issue that caused an significant deficiency? ☐ Yes ☐ No, explain:
MONITORING PROGRAMS Check water quality monitoring performance.	<u>Bacteriological Monitoring Program</u> ☐ Satisfactory ☐ Unsatisfactory, explain: <u>Lead and Copper Monitoring Program</u> ☐ Satisfactory ☐ Unsatisfactory, explain: <u>Chemical Monitoring</u> ☐ Satisfactory ☐ Unsatisfactory, explain:

Technical Capacity	
BACKFLOW AND CROSS-CONNECTIONS Check whether backflow prevention devices are used if the water system serves hospitals, farms, golf courses, sewage treatment plants, or other activities that could cause a backflow of contamination into the drinking water.	Does the system have a cross connection control program or policy that specifies appropriate devices, design and location standards, annual testing requirements, and maintains a device inventory and testing history? ☐ Yes ☐ No, explain:

Managerial Capacity	
ORGANIZATION AND MANAGEMENT CAPABILITY	Is there a clear plan of organization and control among the people responsible for the management and operation of the system? ☐ Yes ☐ No, explain: Have all Board members completed board training? ☐ Yes ☐ No, explain: Are Board meeting minutes kept and available to system users? ☐ Yes ☐ No, explain: Is the system receiving the technical assistance or other support that is needed? ☐ Yes ☐ No, describe any assistance or support that would be useful:
ASSET MANAGEMENT The water system should have a complete inventory of all water system assets that includes date of installation, price when installed, anticipated life span, and a maintenance schedule. Additionally, each asset should be prioritized on its critical to the water system.	Is there a complete inventory of all water system assets? ☐ Yes ☐ No, explain what is missing: Is each asset prioritized based on its likelihood and consequences of failure? ☐ Yes ☐ No, explain what is missing: If the answer to one or both of the previous questions was “No”, what barriers exist to completing and/or prioritizing the system’s asset inventory?

Managerial Capacity	
EMERGENCY PLANS Check whether the water system has an Emergency Response/Risk Assessment Plan (ERP/RA). The plan should include obtaining backup sources of water in drought situations, loss of a well pump or extended loss of electrical power.	Does the system have an ERP/RA plan that addresses infrastructure breakdown, chemical releases, water quality events, natural disasters or events, backup sources of water, communications, the use of first responders? ☐ Yes ☐ No, explain: How frequently is this document updated? Does the water system engage in exercises to practice emergency response? ☐ Yes ☐ No, explain: Does the water system participate in a mutual assistance network like HIWARN? ☐ Yes ☐ No
CORRECTION OF PROBLEMS The water system should have plans to correct obvious significant problems noted during the survey. The water system should also have corrected earlier identified significant problem(s) in a timely fashion.	List the uncorrected significant deficiencies from the last sanitary survey and check the box if corrected: ☐ 1. ☐ 2. ☐ 3. ☐ 4.
VIOLATIONS Check for violations this water system has incurred in the past five years.	List violations incurred in the last five years Violation Type Date Description Status Date

Financial Capacity	
ADEQUATE FINANCIAL BUDGETS The annual budget should have sufficient income and cash reserves to pay annual operating expenses, unexpected significant repairs, and planned major work. A dedicated source of income should be identified and its adequacy should be evaluated at least every 5 years.	Is there an adequate annual budget? ☐ Yes ☐ No, explain: Has the water system completed a rate study or raised rates in the past 5 years? ☐ Yes ☐ No, explain:
NORMAL OPERATION AND MAINTENANCE Discuss whether funding levels for operation and maintenance are sufficient.	Are there sufficient incoming revenues and dedicated funds to cover the necessary expenses for the water system to operate? ☐ Yes ☐ No, explain: Are there sufficient funds to cover an emergency expense (i.e. the most expensive component) for the system? ☐ Yes ☐ No, explain:
CAPITAL IMPROVEMENT PROJECTS (SUSTAINABILITY/RESILIENCY) A capital improvement plan should help the water system plan for future needs, maximize existing assets and adjust for climate change impacts. Sustainable facility improvements are indicative of management understanding and support of the water system's needs.	Is there a capital improvement plan (CIP)? ☐ Yes ☐ No, explain List major capital improvement projects over the last 10-15 years. If there were no capital improvements since the last sanitary survey, is the existing infrastructure adequate? ☐ Yes ☐ No, explain what upgrades are needed: Does CIP planning emphasize sustainable and resilient infrastructure, e.g. maximize existing assets, consider climate change ☐ Yes ☐ No

Significant Deficiencies and Recommendations

Significant Deficiencies

Recommendations