

PrimusGFS v3.0 Checklist

TABLE 2: IRRIGATION / WATER USE

(Including Question Applicability Table)

REVISED AUGUST 22, 2018

This irrigation / water use section should be completed for each of the farm and indoor agriculture operations

Powered by Azzule Systems

IRRIGATION / WATER USE

This irrigation / water use section should be completed for each of the farm and indoor agriculture operations

IF USING: MUNICIPAL / DISTRICT WATER

Complete Pages: 1-2

2.09.01 / 3.10.01

IF USING: WELL WATER

Complete Pages: 3-4

2.09.02 / 3.10.02

IF USING: NON-FLOWING SURFACE WATER

(pond, reservoir, watershed)

Complete Pages: 5-6

2.09.03 / 3.10.03

IF USING: OPEN FLOWING SURFACE WATER

(river, canal, ditch)

Complete Pages: 7-8

2.09.04 / 3.10.04

IF USING: RECLAIMED WATER

Complete Pages: 9-10

2.09.05 / 3.10.05

IF USING: TAIL WATER

(includes hydroponics)

Complete Pages: 11-12

2.09.06 / 3.10.06

Where laws, commodity specific guidelines and/or best practice recommendations exist and are derived from a reputable source, then these practices and parameters should be used. This includes FSMA guidelines, and where any FSMA guidelines are stricter than the audit guidelines, the FSMA guidelines prevail, including compost produced in-house. Audit users should allow a degree of risk association if laws, guidelines, best practices, etc., have not been documented.

(Questions in the same column as the Irrigation / Water source used in the growing operation should be answered. The question number is dependent on the module being completed (Farm or Indoor Agriculture). The cells in dark gray are not applicable based on the specific source type). Question applicability table must be used in conjunction with the checklist.

Points	Question	Municipal / District	Well	Non-flowing Surface Water	Open Flowing Surface Water	Reclaimed Water	Tail Water
0	Which water source(s) is/are used in the growing operation? For the water source(s) used in the operation, all informational gathering questions must be reviewed in the below sections for each source.	2.09.01/3.10.01	2.09.02/3.10.02	2.09.03/3.10.03	2.09.04/3.10.04	2.09.05/3.10.05	2.09.06/3.10.06
15	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	2.09.01a/3.10.01a	2.09.02a/3.10.02a	2.09.03a/3.10.03a	2.09.04a/3.10.04a	2.09.05a/3.10.05a	2.09.06a/3.10.06a
10	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	2.09.01b/3.10.01b	2.09.02b/3.10.02b	2.09.03b/3.10.03b	2.09.04b/3.10.04b	2.09.05b/3.10.05b	2.09.06b/3.10.06b
10	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	2.09.01c/3.10.01c	2.09.02c/3.10.02c	2.09.03c/3.10.03c	2.09.04c/3.10.04c	2.09.05c/3.10.05c	2.09.06c/3.10.06c
15	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	2.09.01d/3.10.01d	2.09.02d/3.10.02d	2.09.03d/3.10.03d	2.09.04d/3.10.04d	2.09.05d/3.10.05d	2.09.06d/3.10.06d
15	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	2.09.01e/3.10.01e	2.09.02e/3.10.02e	2.09.03e/3.10.03e	2.09.04e/3.10.04e	2.09.05e/3.10.05e	2.09.06e/3.10.06e
5	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	2.09.01f/3.10.01f	2.09.02f/3.10.02f	2.09.03f/3.10.03f	2.09.04f/3.10.04f	2.09.05f/3.10.05f	2.09.06f/3.10.06f
15	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	2.09.07/3.10.07	2.09.07/3.10.07	2.09.07/3.10.07	2.09.07/3.10.07	2.09.07/3.10.07	2.09.07/3.10.07
10	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	2.09.08/3.10.08	2.09.08/3.10.08	2.09.08/3.10.08	2.09.08/3.10.08	2.09.08/3.10.08	2.09.08/3.10.08
15	If the operation stores water (tank, cistern, container), is the storage container well maintained?	2.09.09/3.10.09	2.09.09/3.10.09	2.09.09/3.10.09	2.09.09/3.10.09	2.09.09/3.10.09	2.09.09/3.10.09

MUNICIPAL / DISTRICT			PAGE 1 OF 2
Question No.	Question	Total Points	Expectation
2.09.01/ 3.10.01	Is the water used for the growing operation sourced from municipal or district water pipeline systems?	0	
2.09.01/ 3.10.01	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	
2.09.01/ 3.10.01	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	
2.09.01/ 3.10.01	Does the water come in contact with the edible portion of the crop?	0	
2.09.01a/ 3.10.01a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15	
2.09.01b/ 3.10.01b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	
2.09.01c/ 3.10.01c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	

MUNICIPAL / DISTRICT (CONTINUED)			PAGE 2 OF 2
Question No.	Question	Total Points	Expectation
2.09.01d/ 3.10.01d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15	
2.09.01e/ 3.10.01e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	
2.09.01f/ 3.10.01f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5	
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15	
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10	
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15	

WELL			PAGE 1 OF 2
Question No.	Question	Total Points	Expectation
2.09.02/ 3.10.02	Is the water used in the growing operation sourced from wells?	0	
2.09.02/ 3.10.02	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	
2.09.02/ 3.10.02	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	
2.09.02/ 3.10.02	Does the water come in contact with the edible portion of the crop?	0	
2.09.02a/ 3.10.02a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15	
2.09.02b/ 3.10.02b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	
2.09.02c/ 3.10.02c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	

WELL (CONTINUED)			PAGE 2 OF 2
Question No.	Question	Total Points	Expectation
2.09.02d/ 3.10.02d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15	
2.09.02e/ 3.10.02e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	
2.09.02f/ 3.10.02f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5	
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15	
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10	
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15	

NON-FLOWING SURFACE WATER			
			PAGE 1 OF 2
Question No.	Question	Total Points	Expectation
2.09.03/ 3.10.03	Is the water used in the growing operation sourced from non-flowing surface water (e.g., ponds, reservoirs, watersheds, etc.)?	0	
2.09.03/ 3.10.03	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	
2.09.03/ 3.10.03	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	
2.09.03/ 3.10.03	Does the water come in contact with the edible portion of the crop?	0	
2.09.03a/ 3.10.03a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15	
2.09.03b/ 3.10.03b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	
2.09.03c/ 3.10.03c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	

NON-FLOWING SURFACE WATER (CONTINUED)			PAGE 2 OF 2
Question No.	Question	Total Points	Expectation
2.09.03d/ 3.10.03d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15	
2.09.03e/ 3.10.03e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	
2.09.03f/ 3.10.03f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5	
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15	
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10	
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15	

OPEN FLOWING SURFACE WATER			PAGE 1 OF 2
Question No.	Question	Total Points	Expectation
2.09.04/ 3.10.04	Is the water used in the growing operation sourced from open flowing surface water (e.g., rivers, canals, ditches, etc.)?	0	
2.09.04/ 3.10.04	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	
2.09.04/ 3.10.04	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	
2.09.04/ 3.10.04	Does the water come in contact with the edible portion of the crop?	0	
2.09.04a/ 3.10.04a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15	
2.09.04b/ 3.10.04b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	
2.09.04c/ 3.10.04c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	

OPEN FLOWING SURFACE WATER (CONTINUED)			PAGE 2 OF 2
Question No.	Question	Total Points	Expectation
2.09.04d/ 3.10.04d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15	
2.09.04e/ 3.10.04e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	
2.09.04f/ 3.10.04f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5	
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15	
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10	
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15	

RECLAIMED WATER			
			PAGE 1 OF 2
Question No.	Question	Total Points	Expectation
2.09.05/ 3.10.05	Is reclaimed water used in the growing operation? NOTE: This refers to wastewater that has gone through a treatment process.	0	
2.09.05/ 3.10.05	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	
2.09.05/ 3.10.05	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	
2.09.05/ 3.10.05	Does the water come in contact with the edible portion of the crop?	0	
2.09.05a/ 3.10.05a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15	
2.09.05b/ 3.10.05b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	
2.09.05c/ 3.10.05c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	

RECLAIMED WATER (CONTINUED)				PAGE 2 OF 2
Question No.	Question	Total Points	Expectation	
2.09.05d/ 3.10.05d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15		
2.09.05e/ 3.10.05e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15		
2.09.05f/ 3.10.05f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5		
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15		
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10		
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15		

TAIL WATER				PAGE 1 OF 2
Question No.	Question	Total Points	Expectation	
2.09.06/ 3.10.06	Are tail water (run off water) systems, including hydroponics, used in the growing operation?	0		
2.09.06/ 3.10.06	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0		
2.09.06/ 3.10.06	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0		
2.09.06/ 3.10.06	Does the water come in contact with the edible portion of the crop?	0		
2.09.06a/ 3.10.06a	Are generic <i>E.coli</i> tests conducted on the water (taken from the closest practical source of use) at the required and/or expected frequency?	15		
2.09.06b/ 3.10.06b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10		
2.09.06c/ 3.10.06c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10		

TAIL WATER (CONTINUED)				PAGE 2 OF 2
Question No.	Question	Total Points	Expectation	
2.09.06d/ 3.10.06d	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15		
2.09.06e/ 3.10.06e	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15		
2.09.06f/ 3.10.06f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	5		
2.09.07/ 3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15		
2.09.08/ 3.10.08	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10		
2.09.09/ 3.10.09	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15		