



## CERTIFICATION PROGRAM Landscape Irrigation Auditor

### \*\*\*FIELD AUDIT SUBMISSION PACKAGE\*\*\*

Please read carefully!

March 2015

- ① Read and follow the **candidate procedures to submit field audits**. Audit field work and calculations must be conducted and completed independently by the candidate with no outside assistance of any type. Audits must be completed within your program period.
- ② Contact an IA-certified professional in good standing to observe and verify your audit. Make sure they read and follow the **field audit verification procedures and policies** before you conduct your audit. These procedures must be followed during the audit field work and calculations.
- ③ Conduct field audit. Record all audit data on IA forms – eight worksheets for rotor area and eight worksheets for spray area. Only data submitted on IA forms will be used to grade the audit. Do not submit additional materials or photographs. Fill out the candidate and site info at the top of every audit worksheet. Do not write your name on the worksheets, only your candidate ID.
  - For the rotor area audit, complete a watering days irrigation schedule. Assume watering restrictions are in place that will limit irrigation to every third day.
  - For the spray area audit, complete a soil moisture irrigation schedule.
- ④ Complete the **audit verification form**.
- ⑤ **FIRST TIME SUBMISSIONS:** Mail original **verification form** and **16 audit worksheets** to the Irrigation Association. Make a copy for your records. You will receive email verification when your audit is received at the IA office. If you do not receive verification of receipt within two weeks of sending the audit contact the IA office.

**RESUBMISSIONS:** Mail original **resubmission form** with payment information and corrected **audit worksheets** to the Irrigation Association. Make a copy for your records. You will receive email verification when your audit is received at the IA office. If you do not receive verification of receipt within two weeks of sending the audit contact the IA office.

#### Certification

Irrigation Association

8280 Willow Oaks Corporate Drive, Suite 400

Fairfax, VA 22031



**CANDIDATE PROCEDURES TO CONDUCT AND SUBMIT FIELD AUDITS**

The process to become an Irrigation Association certified auditor involves three steps.

- 1) Application and acceptance into the program.
- 2) Successful completion of the auditor exam.
- 3) Successful completion of independent field audits:
  - Landscape - one rotor (minimum four heads) and one spray (minimum eight heads) area.
  - Golf - one fairway (minimum of 60 audited yards of fairway and a minimum of four sprinkler heads) and one green.

Candidates are required to conduct audits and complete calculations independently with no assistance. This must be verified and attested to in writing by an IA-certified professional. Audits conducted as part of a class do not meet this requirement.

**WHEN YOU ARE READY TO CONDUCT THE FIELD AUDIT**

- 1) Check the IA website for the correct version of the audit work sheets and the audit verification form. Print a hard copy of the forms. Audits must be submitted on these worksheets.
- 2) Contact an IA-certified irrigation professional in good standing who will be present to verify your fieldwork. Make sure that the person verifying your audit has access to and agrees to follow the "field audit verification procedures and policies" document. Your audit must meet these conditions or it may be rejected.
- 3) Conduct field audit. **For rotor area complete the watering days schedule assuming watering restrictions allowing watering every third day.** Fill out all information completely including date(s), time(s), pressure and flow data, etc.
- 4) Complete the remaining forms making sure to show all values and calculations. Pay careful attention to the  $DU_{LQ}$ , precipitation rate and run time calculations. These must be calculated to within the rounding margin of error in order for the audit to be approved. Provide completed original audit and verification form to the verifier to sign off. This signature only indicates that work was performed independently by the candidate; the verifier is not responsible for the accuracy of the audit. Any outside assistance could cause the audit to be rejected.

**FINDING SOMEONE TO VERIFY YOUR AUDIT**

Any IA-certified professional in good standing (regardless of the certification they hold) can verify and sign off on your audit. They do not have to be certified in auditing. Check the certification directory at the IA web site to find someone near you. Send them a copy of the verification procedures so they will know what they are being asked to do. If you cannot find anyone in your area to verify your audit, contact the certification department as [certification@irrigation.org](mailto:certification@irrigation.org) before you do your fieldwork to come up with a procedure that is agreeable to all parties.

**WHEN YOU ARE READY TO SUBMIT YOUR FIELD AUDIT**

- 1) Sign and make sure all pages are included.
- 2) Make a copy for your records.
- 3) Mail the original audit and verification form to:  
Certification  
Irrigation Association  
8280 Willow Oaks Corporate Drive, Suite 400  
Fairfax, VA 22031
- 4) You will be notified when the audit is received at the IA
- 5) Results will be mailed to the address shown on the verification form.

**RESULTS MAY TAKE UP TO SIX WEEKS TO COMPLETE.**

*The Irrigation Association reserves the right to revoke any certification if it was obtained under conditions that did not meet the posted requirements, if any portion of the code of ethics is not upheld or if renewal/CEU procedures are not adhered to.*

**REJECTING AUDITS**

Audits may be rejected if you receive assistance or if you observe someone while they conduct their audit on the same site where you will be conducting your fieldwork.

If there is reason to believe that the audit was not conducted independently or if any information was copied or falsified, the candidate will be notified in writing and given an opportunity to respond. After investigating, the certification board will make a decision about the consequences which may include a partial or full ban of the candidate's involvement in the IA certification program. The candidate will be notified in writing of the decision.

**FIELD AUDIT VERIFICATION PROCEDURES AND POLICIES**

If a candidate in the IA auditor program contacts you to verify their field audit, you must witness that the decisions and actions involved in the submitted field work were taken solely by the candidate with no assistance from yourself or anyone else. You must also be confident that all calculations were completed by the candidate.

To verify a field audit for a candidate, you must be IA-certified and in good standing. The goal for someone verifying an audit is to help provide a good “testing environment” for the candidate. The most critical part of the field audit is to verify that the candidate has the knowledge and skills to make the judgments required to conduct a field audit. The candidate must also be able to work through the calculations required to complete the scheduling worksheet.

**THE AUDITOR PROCESS**

The process to become an Irrigation Association certified auditor involves three steps.

- 1) Application and acceptance into the program.
- 2) Successful completion of the auditor exam.
- 3) Successful completion of independent field audits:
  - Landscape - one rotor (minimum of four heads) and one Spray (minimum of eight heads) area.
  - Golf - one fairway (minimum of 60 audited yards and a minimum of four sprinkler heads) and one green.

**CANDIDATES HAVE BEEN INFORMED THAT:**

- 1) Audits (field work and calculations) must be conducted independently with no outside assistance.
- 2) Audits conducted as part of a class are not acceptable.
- 3) Audits must be submitted using IA-approved procedures and forms.
- 4) The original paperwork must be submitted – copies or faxes will not be accepted.

**FREQUENTLY ASKED QUESTIONS**

What would cause an audit to be rejected?

The following will be grounds to reject an audit:

- 1) More than one candidate on the audit site.
- 2) A candidate observing another candidate while they do their audit (whether they will be performing their audit on that site or not).
- 3) A candidate accepting advice or assistance from anyone.

Can two candidates work together or in a group?

No. There is no such thing as a group audit even if one person is only helping to read the catch devices. The only people allowed at the audit site are the candidate and the verifier.

What if I see someone doing something wrong?

Either in the fieldwork or calculations, if a verifier offers advice or assistance, the audit will be invalid and should not be signed off on by the verifier and submitted for grading.

Can our organization conduct field audit classes/sessions?

Providing the following field audit assistance is acceptable:

- 1) Auditing equipment
- 2) Audit site \*

\* A wide variety of audit sites should be made available. Using the same audit site for large numbers of candidates is roughly equivalent to giving everyone the same exam. A different site should be used for the spray and rotor zones. The intent of the field audit is for the candidate to make judgments in two different audit conditions.

*The Irrigation Association reserves the right to revoke any certification if it was obtained under conditions that did not meet the posted requirements, if any portion of the code of ethics is not upheld or if renewal/CEU procedures are not adhered to.*

For questions or clarification on verifying an audit contact the certification department at [certification@irrigation.org](mailto:certification@irrigation.org) or 703.536.7080.

# Site Conditions Review

## Rotor Worksheet # 1

<b>Project Name</b>		Date	
Address		Candidate ID #	
City, State		Page	of

Controller ID/Name					
<b>Controller station(s) #</b>					
Area/location					
Irrigated area	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>
Plant material (all that apply)					
Plant condition (choose one)					
Microclimate (choose one)					
Soil category (choose one)					
Root depth	in.	in.	in.	in.	in.
Slope (choose one)					
Compaction (Y/N)					
Runtime until runoff	min	min	min	min	min
Standing water (Y/N)					
Hydrozone separation (Y/N)					

### Abbreviation Key

#### Plant Materials

CS= Cool season turf  
 WS= Warm season turf  
 T= Trees  
 S= Shrubs  
 N= Native plants  
 GC= Ground cover

#### Soil Category

C= Coarse  
 MC= Moderately coarse  
 M= Medium  
 MF= Moderately fine  
 F= Fine

#### Slope

F= Flat  
 SL= Slight  
 Mod= Moderate  
 Stp= Steep

#### Plant Condition

LM= Low maintenance, stressed  
 TRD= Traditional, some stress, but generally good condition  
 HQ= High quality, majority are vigorously growing

#### Microclimate

FS= Full sun all day  
 PS= Part shade, less than 6 hours of sun per day  
 SH= Full shade all day  
 EX= Extreme conditions (parking lots, south-facing glass or wall)

# Sprinkler System Review

## Rotor Worksheet # 2

<b>Project Name</b>		Date	
Address		Candidate ID #	
City, State		Page	of

Abbreviation Key: S = Spray, fixed nozzle R = Rotor, including MSMT nozzles I = Impact X = Needs correction ✓ = Correction

Controller ID/Name										
Controller Station #										
Sprinkler type (choose one)										
Station flow		gpm		gpm		gpm		gpm		gpm
High pressure		psi		psi		psi		psi		psi
Low pressure		psi		psi		psi		psi		psi
Action Required (Place "X" for needs correction, ✓ when completed)	X	✓	X	✓	X	✓	X	✓	X	✓
Broken pipes										
Missing/broken heads										
Missing nozzle										
psi adjustment needed										
Clogged nozzle										
Heads not turning										
Arc misalignment										
Low head drainage										
Leaking seals/fittings										
Spray deflected/blocked										
Sunken head										
Tilted heads										
Mismatched heads										
Spray/rotor separation										
Spacing uneven										
Valve malfunction										

<b>Observations on Maintenance Frequency</b>



# Controller Features

## Rotor Worksheet # 4

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

<b>Manufacturer</b>		<b>Central Control</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Model Number</b>		<b>Weather Station</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Stations Being Used</b>		<b>Smart Controller</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Station Run Time Range</b> (min)			
Minimum		Maximum	
<b>Number of Programs</b>		<b>Start Times/Program</b>	
<b>Calendar Days</b> (check one)			
<input type="checkbox"/> 7 days	<input type="checkbox"/> 14 days	<input type="checkbox"/> Other (explain)	
<b>Irrigation Interval</b> (check options available)			
<input type="checkbox"/> Daily	<input type="checkbox"/> Even/Odd	<input type="checkbox"/> Custom (explain)	
<b>Rain delay</b> (maximum days)		<b>Skip Day Period</b> (maximum days)	
<b>Percent Adjust Options</b> (check applicable)			
<input type="checkbox"/> Global	<input type="checkbox"/> By program	<input type="checkbox"/> By station	<input type="checkbox"/> By month
<input type="checkbox"/> Seasonal			
<b>Sensors Installed</b> (make & model)			
Rain			
Freeze			
Wind			
Temperature			
Flow			
Soil moisture			
Tipping bucket			
<b>Notes</b>			





## Test Area Map – Rotor Worksheet # 6

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

<b>Test Area/Station</b>								
<b>Test Run Time</b>		<b>min</b>	<b>Wind</b>		<b>mph</b>	<b>Pressure</b>		<b>psi</b>
<b>Meter Start</b>			<b>Meter Stop</b>			<b>Total</b>		

**\*\*Indicate north and ALL audit area and sprinkler dimensions**  
**O = SPRINKLER** – Record the location of each sprinkler and sprinkler spacing.  
**X = CATCH DEVICE** – Record the location of each catch device and catch amount.

# Catch Can Test - Rotor Worksheet # 7

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

<b>Test Area/Station</b>			
<b>Catch Device Area (A<sub>CD</sub>)</b>		in. <sup>2</sup>	<b>Test Run Time (t<sub>R</sub>)</b>
			min

**Catch Device Volumes:** *All values and calculations must be completed on this page; auditing software is not acceptable for use in determining these values.*

#1		#13		#25		#37		#49		#61		#73	
#2		#14		#26		#38		#50		#62		#74	
#3		#15		#27		#39		#51		#63		#75	
#4		#16		#28		#40		#52		#64		#76	
#5		#17		#29		#41		#53		#65		#77	
#6		#18		#30		#42		#54		#66		#78	
#7		#19		#31		#43		#55		#67		#79	
#8		#20		#32		#44		#56		#68		#80	
#9		#21		#33		#45		#57		#69		#81	
#10		#22		#34		#46		#58		#70		#82	
#11		#23		#35		#47		#59		#71		#83	
#12		#24		#36		#48		#60		#72		#84	
<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>	

<b>Total Catch Volume</b>		<b>Total Low Quarter</b>	
<b>Average Volume</b>		<b>Average Low Quarter</b>	

<b>Calculate Distribution Uniformity (show work)</b>	<b>Calculate Net Precipitation Rate (show work)</b>
$DU_{LQ} = \frac{\text{avg catch in low quarter}}{\text{avg catch volume}}$ $= \frac{\text{mL}}{\text{mL}}$ $= \underline{\hspace{2cm}}$	$PR_{net} = \frac{3.66 \times V_{avg}}{T_r \times A_{CD}}$ $= \frac{3.66 \times (\text{mL})}{(\text{min}) \times (\text{in.}^2)}$ $= \underline{\hspace{2cm}}$

# Watering Days Irrigation Schedule

## Rotor Worksheet # 8

<b>Project Name</b>		Date	
Address		Candidate ID #	
City, State		Station	

Watering Days or Interval (see instructions)				
Plant Water Requirement		Value	Units	Source
A.	Hydrozone type			field observation
B.	Reference period		days	
C.	Reference ET [ET <sub>o</sub> ]		in.	weather data
D.	Landscape coefficient [K <sub>L</sub> ]			K <sub>T</sub> × K <sub>d</sub> × K <sub>mc</sub>
	1) Turf or plant factor [K <sub>T</sub> or K <sub>P</sub> ]			charts & tables
	2) Vegetation density factor [K <sub>d</sub> ]			charts & tables
	3) Microclimate factor [K <sub>mc</sub> ]			charts & tables
E.	Landscape ET [ET <sub>L</sub> ]		in.	C × D
F.	Average daily ET <sub>L</sub>		in.	E ÷ B
Sprinkler Performance		Value	Units	Source
G.	Precipitation rate [PR]		in./h	audit or calculation
H.	Distribution uniformity [DU <sub>LQ</sub> ]		decimal	audit or estimate
I.	Scheduling multiplier [SM]			table or equation
Scheduling Parameters		Value	Units	Source
J.	Irrigation interval		days	watering days (see instructions)
K.	Water to apply		in.	J × F
L.	Lower boundary		min	(K ÷ G) × 60 (round down)
M.	Upper boundary		min	(L × I) (round up)
N.	<b>Selected Run Time</b>		min	management decision
O.	Determine cycle starts (CHOOSE METHOD A OR B)			
	a. Observed time to runoff		min	field observation
<b>OR</b>	b. Site conditions		cycles	based on site conditions
	1) Soil category			Coarse = 1, Medium = 2, Fine = 3
	2) Slope			Flat = 0, Slight = 1, Moderate = 2, Steep = 3
	3) Compaction			No = 0, Yes = 1
	4) Sprinkler type			Rotor = 0, Spray = 1
Scheduling Summary		Value	Units	Source
	Water to be applied		in.	Line K
	Interval		days	Line J
	Cycle starts per day			(Line N ÷ O-a or O-b (round up))
	Minutes per cycle		min	Line N ÷ Cycle starts

# Site Conditions Review

## Spray Worksheet # 1

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

Controller ID/Name					
Controller station(s) #					
Area/location					
Irrigated area	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>	ft <sup>2</sup>
Plant material (all that apply)					
Plant condition (choose one)					
Microclimate (choose one)					
Soil category (choose one)					
Root depth	in.	in.	in.	in.	in.
Slope (choose one)					
Compaction (Y/N)					
Runtime until runoff	min	min	min	min	min
Standing water (Y/N)					
Hydrozone separation (Y/N)					

### Abbreviation Key

#### Plant Materials

CS= Cool season turf  
 WS= Warm season turf  
 T= Trees  
 S= Shrubs  
 N= Native plants  
 GC= Ground cover

#### Soil Category

C= Coarse  
 MC= Moderately coarse  
 M= Medium  
 MF= Moderately fine  
 F= Fine

#### Slope

F= Flat  
 SL= Slight  
 Mod= Moderate  
 Stp= Steep

#### Plant Condition

LM= Low maintenance, stressed  
 TRD= Traditional, some stress, but generally good condition  
 HQ= High quality, majority are vigorously growing

#### Microclimate

FS= Full sun all day  
 PS= Part shade, less than 6 hours of sun per day  
 SH= Full shade all day  
 EX= Extreme conditions (parking lots, south-facing glass or wall)

# Sprinkler System Review

## Spray Worksheet # 2

<b>Project Name</b>		Date	
Address		Candidate ID #	
City, State		Page	of

Abbreviation Key: S = Spray, fixed nozzle R = Rotor, including MSMT nozzles I = Impact **X** = Needs correction ✓ = Correction

Controller ID/Name										
Controller Station #										
Sprinkler type (choose one)										
Station flow		gpm		gpm		gpm		gpm		gpm
High pressure		psi		psi		psi		psi		psi
Low pressure		psi		psi		psi		psi		psi
Action Required (Place "X" for action needed, ✓ when completed)	X	✓	X	✓	X	✓	X	✓	X	✓
Broken pipes										
Missing/broken heads										
Missing nozzle										
psi adjustment needed										
Clogged nozzle										
Heads not turning										
Arc misalignment										
Low head drainage										
Leaking seals/fittings										
Spray deflected/blocked										
Sunken head										
Tilted heads										
Mismatched heads										
Spray/rotor separation										
Spacing uneven										
Valve malfunction										

<b>Observations on Maintenance Frequency</b>



# Controller Features

## Spray Worksheet # 4

<b>Project Name</b>		Date	
Address		Candidate ID #	
City, State		Page	of

<b>Manufacturer</b>		<b>Central Control</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Model Number</b>		<b>Weather Station</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Stations Being Used</b>		<b>Smart Controller</b> (check one)	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Station Run Time Range</b> (min)			
Minimum		Maximum	
<b>Number of Programs</b>		<b>Start Times/Program</b>	
<b>Calendar Days</b> (check one)			
<input type="checkbox"/> 7 days	<input type="checkbox"/> 14 days	<input type="checkbox"/> Other (explain)	
<b>Irrigation Interval</b> (check options available)			
<input type="checkbox"/> Daily	<input type="checkbox"/> Even/Odd	<input type="checkbox"/> Custom (explain)	
<b>Rain delay</b> (maximum days)		<b>Skip Day Period</b> (maximum days)	
<b>Percent Adjust Options</b> (check applicable)			
<input type="checkbox"/> Global	<input type="checkbox"/> By program	<input type="checkbox"/> By station	<input type="checkbox"/> By month
<input type="checkbox"/> Seasonal			
<b>Sensors Installed</b> (make & model)			
Rain			
Freeze			
Wind			
Temperature			
Flow			
Soil moisture			
Tipping bucket			
<b>Notes</b>			





## Test Area Map – Spray Worksheet # 6

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

<b>Test Area/Station</b>								
<b>Test Run Time</b>		<b>min</b>	<b>Wind</b>		<b>mph</b>	<b>Pressure</b>		<b>psi</b>
<b>Meter Start</b>			<b>Meter Stop</b>			<b>Total</b>		

**\*\*Indicate north and ALL audit area and sprinkler dimensions**  
**O = SPRINKLER** – Record the location of each sprinkler and sprinkler spacing.  
**X = CATCH DEVICE** – Record the location of each catch device and catch amount.

# Catch Can Test - Spray Worksheet # 7

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Page</b>	of

<b>Test Area/Station</b>			
<b>Catch Device Area (A<sub>CD</sub>)</b>		in. <sup>2</sup>	<b>Test Run Time (t<sub>R</sub>)</b>
			min

**Catch Device Volumes:** *All values and calculations must be completed on this page; auditing software is not acceptable for use in determining these values.*

#1		#13		#25		#37		#49		#61		#73	
#2		#14		#26		#38		#50		#62		#74	
#3		#15		#27		#39		#51		#63		#75	
#4		#16		#28		#40		#52		#64		#76	
#5		#17		#29		#41		#53		#65		#77	
#6		#18		#30		#42		#54		#66		#78	
#7		#19		#31		#43		#55		#67		#79	
#8		#20		#32		#44		#56		#68		#80	
#9		#21		#33		#45		#57		#69		#81	
#10		#22		#34		#46		#58		#70		#82	
#11		#23		#35		#47		#59		#71		#83	
#12		#24		#36		#48		#60		#72		#84	
<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>		<b>Sub-total</b>	

<b>Total Catch Volume</b>		<b>Total Low Quarter</b>	
<b>Average Volume</b>		<b>Average Low Quarter</b>	

<b>Calculate Distribution Uniformity (show work)</b>	<b>Calculate Net Precipitation Rate (show work)</b>
$DU_{LQ} = \frac{\text{avg catch in low quarter}}{\text{avg catch volume}}$ $= \frac{\text{mL}}{\text{mL}}$ $= \underline{\hspace{2cm}}$	$PR_{net} = \frac{3.66 \times V_{avg}}{T_r \times A_{CD}}$ $= \frac{3.66 \times (\text{mL})}{(\text{min}) \times (\text{in.}^2)}$ $= \underline{\hspace{2cm}}$

## Soil Moisture Irrigation Schedule – Spray Worksheet # 8

<b>Project Name</b>		<b>Date</b>	
<b>Address</b>		<b>Candidate ID #</b>	
<b>City, State</b>		<b>Station</b>	

Plant Water Requirement		Value	Units	Source
A.	Hydrozone type			field observation
B.	Reference period		days	
C.	Reference ET [ET <sub>o</sub> ]		in.	weather data
D.	Landscape coefficient [K <sub>L</sub> ]			K <sub>T</sub> × K <sub>d</sub> × K <sub>mc</sub>
	1) Turf or plant factor [K <sub>T</sub> or K <sub>P</sub> ]			charts & tables
	2) Vegetation density factor [K <sub>d</sub> ]			charts & tables
	3) Microclimate factor [K <sub>mc</sub> ]			charts & tables
E.	Landscape ET [ET <sub>L</sub> ]		in.	C × D
F.	Average daily ET <sub>L</sub>		in.	E ÷ B
Sprinkler Performance		Value	Units	Source
G.	Precipitation rate [PR]		in./h	audit or calculation
H.	Distribution uniformity [DU <sub>LQ</sub> ]		decimal	audit or estimate
I.	Scheduling multiplier [SM]			table or equation
Soil Moisture “Bucket”		Value	Units	Source
J.	Soil category			field observation
K.	Available water [AW]		in./in.	charts & tables
L.	Root zone depth		in.	field measurement
M.	Plant available water [PAW]		in.	K × L
N.	Management allowable depletion [MAD]		decimal	50% for landscapes
O.	Allowable depletion [AD]		in.	M × N
Scheduling Parameters		Value	Units	Source
P.	Irrigation interval		days	O ÷ F (round down)
Q.	Water to apply		in.	F × P
R.	Lower boundary		min	(Q ÷ G) × 60 (round down)
S.	Upper boundary		min	(R × I) (round up)
T.	<b>Selected Run Time</b>		min	management decision
U.	Determine cycle starts (CHOOSE METHOD A OR B)			
	a. Observed time to runoff		min	field observation
<b>OR</b>	b. Site conditions		cycles	based on site conditions
	1) Soil category		Coarse = 1, Medium = 2, Fine = 3	
	2) Slope		Flat = 0, Slight = 1, Moderate = 2, Steep = 3	
	3) Compaction		No = 0, Yes = 1	
	4) Sprinkler type		Rotor = 0, Spray = 1	
Scheduling Summary		Value	Units	Source
Water to be applied			in.	Line Q
Interval			days	Line P
Cycle starts per day				(Line T ÷ U-a or U-b) (round up)
Minutes per cycle			min	Line T ÷ Cycle starts

