GROWER | Section 1: Getting Oriented | 2: Your Water Story

Activity 1 — Map your water sources

List every water source you currently use or could potentially access. For each source, note the quantity or rate, any legal or physical limitations, and relevant seasonal timing. If you have questions about water quality, including concerns around contamination, salinity, or pathogen load, contact your local extension office or NRCS for testing resources.

The filled out rows show an example farm. Add your own information in the blank rows below.

Source	Quantity / rate	Limitation?	Additional notes
Avg. annual rainfall	39.3 in	Drought timing	June–Sept: ~1 inch total
Stream / water rights	0	Junior water rights	Cut off June/July in drought years
Well	2 gal/min	Tends to dry out by August	
Cisterns / tanks	2,000 gal	Only enough to irrigate starts in the spring	
Municipal water			Expensive — emergency backup only

After completing the table, consider:

- Which sources are unavailable or severely limited during your driest months?
- What is your realistic total water supply during the dry season?
- Do you have any backup sources if your primary source fails or is restricted?

Activity 2 — Map how water leaves your farm

Understanding losses is as important as mapping sources. For each pathway below, estimate its significance on your farm, note what is driving it, and record any practices you already have in place to reduce it.

> Deeper reading: The site factors publication covers evapotranspiration, vapor pressure deficit, and wind in detail. If you'd like more context for estimating ET-driven losses before completing this table, read Section 1 of *Understanding and Evaluating Site Factors Related to Dry-Farmed Vegetable Productivity* first.

Loss pathway	Significance (high / med / low)	Driving factors on your site	Practices already in place to reduce this
Evaporation ('non-productive' loss from bare soil)			
Transpiration ('productive' water used by crops)			
Runoff (rain or irrigation leaving the field)			
Deep drainage / leaching below root zone			
Distribution losses (leaks, inefficient irrigation)			

After completing the table, consider:

- Which loss pathway has the greatest impact during your dry season?
- Where are the highest-leverage opportunities to reduce losses — through mulch, cover crops, irrigation system improvements, or windbreaks?
- If you could address one loss pathway this season, which would have the most impact on your overall water budget?

Activity 3 — Assess your water system's flexibility

A resilient water system has options — backup sources, ways to reduce demand, and infrastructure to store what falls. For each question below, note your current situation and any opportunities you see.

Flexibility question	Your current situation	Opportunities to improve
Do you have backup water sources if your primary source fails or is restricted?		
Can you shift crops or planting dates to reduce water demand during the driest period?		
Can you capture and store more of the water that already falls on your land?		

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From your water map to strategy

Look at your completed water sources and losses tables. Find the row or rows that most closely describe what you see. Check the box next to each one that applies — if more than one fits, they likely work together.

My water map shows…	✓	Strategy areas worth exploring first
Rainfall is the primary water source; the dry season runs 3 or more months with little or no supplemental irrigation available	☐	Dry farming as a primary strategy; deep soil building to maximize stored water; pre-season soil moisture banking; planting timing and variety selection to match crops to the available water window.
Irrigation supply is present but limited — well yield, tank capacity, or rights restrict how much I can put on in the dry season	☐	Soil moisture monitoring to irrigate only when needed; drip or subsurface irrigation to minimize losses; rainwater catchment to expand storage; cover crops and mulch to extend intervals between irrigations.
Water supply is relatively accessible, but soil dries quickly after rain or irrigation — water seems to leave faster than expected	☐	ET reduction first: mulch, windbreaks, shade structures, reduced bare soil. Irrigation timing and method improvements (early morning, drip over overhead). You may have more effective water than current losses suggest.
Flooding or waterlogging occurs in wet months, alongside water scarcity in the dry season	☐	Two-season management: drainage and infiltration work for the wet season; storage and retention for the dry season. Earthworks, bioswales, and catchment ponds can address both. Organic matter improves drainage in wet conditions and retention in dry ones.
Distribution system issues — leaks, pressure inconsistency, or uneven delivery to different parts of the farm	☐	System audit before other investments. Delivery losses may be the highest-leverage fix available. What reaches the crop matters more than what leaves the source.
No current irrigation infrastructure; rainfall-only system with uncertain storage capacity	☐	Start with the soil: AWHC assessment tells you how much winter rain your soil is already storing. From there, identify whether storage, infrastructure, or crop selection is the highest-priority investment.

PUTTING IT INTO PRACTICE

- Which row in the table most closely matches your dry-season water situation?
- What is the single highest-significance loss pathway on your farm right now?
- What is your realistic total water supply during your two driest months?

Carry forward: *Your dry-season supply and your highest-significance loss pathway carry into the soil articles and the Water–Soil–Climate Snapshot.*