Dairy Water Management
As a dairymen, your primary focus is gaining greater volume and a higher quality of milk from your cattle. That’s a big job in and of itself. But you also have other things to worry about - environmental requirements, runoff, lagoon capacity, water quality and nutrient management – not to mention accurate record keeping and satisfying “concerned neighbors.”

It’s a lot to take on and it’s precisely why you are a dairymen. Regardless of what regulators expect of you, your experience has prepared you to protect your operation and the environment by finding the best resources available to you.

From the Ground Floor to the Grand Plan

Whether you’re facing the challenges of starting up a new dairy, expanding your current operation, reevaluating your current setup or ensuring you’re in full compliance, you have the opportunity to harness the resources of the most comprehensive water management company in the business – Valley Water Management.

We can help you validate your investment, complete due diligence, manage water resources, minimize environmental impact, and provide you with the equipment to make it all happen.

When you partner with Valley Water Management, you collaborate with a three-company team working for you behind the scenes.

**Your Water Source Specialists**

Takes the lead to work directly with your dairy. Detects and develops your water sources, sustaining the viability of those sources and managing them all the way to your dairy operation and fields.

**Your Environmental System Advisors**

Guides you through complicated federal, state and local laws and regulations managing compliance risk, designs treatment systems, and creates effective nutrient-soil management strategies so you can advance productivity and reduce waste.

**Your Precision Irrigation Experts**

Provides irrigation solutions for any operation, delivering water and nutrients to your crops in the most efficient and effective way possible, closing the circle for water re-use.

**The Team On Your Side**

- Soil Scientists
- Geologists
- Hydrologists
- Agricultural, Civil and Environmental Engineers
- Compliance Specialists
- Water Rights Specialists
- Pump Specialists
- Irrigation Experts
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By tapping into our resources, you save time and effort so you can regain your operational perspective. We’ll do the heavy lifting – consulting, permitting, sourcing, compliance, design, construction and management – so you can make a positive contribution to the environment and make a lasting impact on the future and sustainability of water for agriculture.

You determine our level of involvement based on the challenges you face. It may be issues of concern in catching greater runoff, evaluating lagoon liner seepage rates to meet state compliance for holding structures, increasing lagoon storage capacity, or development of a nutrient management plan.

Our experienced team can complete in-depth analyses to help you choose a new site or evaluate an existing site to maximize its potential. From aquifer studies to well and/or reservoir design to soil characterization, we’ll make sure you’re collecting water from the right places and delivering it where it needs to go.

**Regulatory Record Keeping**

No matter your situation, maintaining the proper records is certainly crucial to your water management plan. With mounting pressure and increasing scrutiny of dairies, proper data collection, tracking, management and analysis is the best way you can demonstrate that you’re complying with every regulation.

**Re-Use Water Management**
That's why our water management experts designed Water Sentinel®, a stand-alone online service that's easy to use on any computer with Internet access. Water Sentinel is BaseStation3™ compatible and allows multiple authorized users to have access to safe and secure information and tools such as:

- Simple and accurate point-and-click regulatory reports
- Automated data inputs from SCADA systems, irrigation base stations and other telemetry
- Customized setup for your site
- Map-driven data access
- Easy interface with spreadsheet and database software

**Operational & Environmental Gains**

Water re-use management is positioned not only to comply, but also to further boost operational progress for your dairy, both economically and environmentally.

**Combines farming and feeding to lower operating costs**
- Wastewater becomes a resource
- Reduces energy consumption and emissions

**Protects the environment**
- Safeguards water resources (groundwater and surface water)
- Prevents soil erosion

**Improves crop yield**
- Enhances soil fertility
- Reduces fertilizer inputs

**Sustainable progress**
- Provides a balance between growing and feeding
- Strengthens water resource development
The Center Point of a Full-Circle Solution

At Valley Water Management, we understand that dairies of all sizes face challenges that no other agribusiness does. It requires some serious knowledge and practical know-how to overcome them all. In the best possible situation, improved management will allow you to get full use out of every drop of water, several times over.

Valley Water Management can be the center point solution to evaluating and creating a solid dairy water recycling program.

Water’s Journey

1. Dairy Stalls and Barn
   Manure, wastewater, runoff and cooling water are collected from the farm for treatment and re-use purposes.

2. Treatment System/Solids Separation
   Wastewater is initially treated to remove solids and bedding material. Collected solids can be composted, used as bedding, or land applied.

3. Treatment Lagoons/Anaerobic Digestion
   Screened wastewater is further treated using facultative lagoons and/or treated anaerobically to further reduce organic solids.

4. Post-Treatment Storage Pond
   Treated wastewater is stored for on-farm use.

5. Pumping System
   Treated wastewater can be diverted for irrigation or flush water makeup. Freshwater can be blended with wastewater to ensure crop water demands are met.

6. Land Application System
   Treated wastewater is utilized as a moisture and nutrient source for crop production.

7. Re-use Water
   Treated wastewater is used as part of makeup water for flushing and cleaning.
Re-using water right away
Some water can be used, captured, and used again almost immediately. Water that’s used strictly for cooling milk can be captured in drains and stored in tanks to clean milking center floors. Valley Water Management can design and build the drains, flush tanks and prep stalls to make this happen seamlessly.

Collecting wastewater and runoff
Any water that comes in contact with dairy waste, and even stored feedstock must be contained. We can design and create a system that will ensure that wastewater becomes re-use water, routing it to the proper place to store and treat it. Capturing runoff can involve terraces, drains, roof gutters and more. The storage lagoon should be large enough to hold required volume of runoff even in the wettest, stormiest year, while prohibiting unwanted leeching.

Developing a treatment plan
Water that is captured can be treated for re-use. Nitrogen levels can be balanced to meet federal and state requirements. Valley Water Management can provide the right nutrient management program to keep your re-use water safe for crops, cattle, nearby water sources and your soil. Our experts will develop a plan that’s tailored to your operation, leveraging your site features, including ponds, lagoons, vegetative filters, separators, tanks, pipes, streams – whatever matches your dairy requirements.

Applying re-use water through irrigation
One of the best ways to re-use all that nutrient rich water is through irrigation. Animal feeding operations produce manure and process re-use water, which can be partially treated, managed and properly applied to land through irrigation for final treatment.

In fact, a dairy farm with 500 cattle typically produces nitrogen, phosphorus and potassium to fertigate or fertilize 5,000 acres of corn growth, which can meet the silage demand for 1,000 head of cattle. Of course, Valley Irrigation is best known for irrigation expertise, and your Valley Water Management team can provide you with the most effective irrigation plan, including the equipment that is built to stand the test of time, even under the harshest conditions. With the right irrigation plan, your cattle will benefit from healthier feed, and you’ll save money by using your own closed-loop system.

Keeping up with regulations
No matter where your dairy is located, you’ve got regulations – from the EPA, the state(s) in which you operate, and sometimes even county and city ordinances. Through the support of CES, our environmental advisors understand these regulations and manage them on a daily basis, and we will continue to look out for you and make sure you’re in compliance now and for years to come. Plus, Water Sentinel will make record keeping easy for you, so you can quickly provide proof of your compliance and get instant information on system performance.
See for yourself how your Valley Water Management team can help your dairy from start to finish or at any stage in between.

Visit www.valleyirrigation.com, contact your local Valley dealer or call us today at 877.568.7878.