

USING THE WORLD-WIDE WEB TO CONSERVE WATER

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Water Conservation Goals

- Reduce irrigation to least amount necessary to achieve yield goals
- Minimize losses
 - Runoff
 - Deep percolation
 - Evaporation
- Protect water supply
- Save money
 - Water
 - Power



Value of Water Conservation?

Depends on:

- Value of the crop
 - Cost of management vs cost savings on inputs, and
 - Potential to improve yields
- Tolerance to risk
 - Yield loss from poor water management
 - Long-term availability of high quality water supply
- Value of water
 - Cost of irrigation (water, power, labor, equipment)
 - Sustainability of irrigation practices



Monitoring Needs

- Complete
 - Crop water demand estimates
 - Inputs from precipitation and irrigation
 - Soil capacity to store water
 - Soil moisture
- Accurate/reliable/consistent
 - Permanent, locally representative locations
- Timely
 - Daily for most information



Barriers to Water Conservation

- Time
 - Data collection
 - Review
 - Decision-making
 - Taking action
- Cost
 - Labor, equipment
- Expertise
 - Using the data effectively at your operation



How the Web Can Help

- Internet is a modern utility
 - Just like electricity, telephone, natural gas, etc.
- Connects grower with water management information
 - Highway has numerous “on ramps”
 - telephone, satellite, cellular
 - Can transport data directly from the field to the grower
 - Access information at any time from anywhere
 - Access by multiple users – owners, managers, workers
 - Consolidates data in one place



- Home
- Login
- Information
- Contact us
- Help

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Water Sentinel Facts:

- Real-time access, input, and reporting of your data.
- No special software required.
- Customizable content.
- Integrated with Cascade Earth Sciences reporting functions.



Introduction

The Water Sentinel allows clients direct access to information such as process water application rates, analytical chemistry, reports, site maps, and graphs. All data is linked to a master database that is updated as new information is available. Each client site is password protected, allowing access only by approved personnel. Database information can be downloaded and used in various database and spreadsheet applications.

Login

Click on the button to the left to login to your personal Water Sentinel web database.

Information

If you would like more information regarding the Water Sentinel database service, please contact danbr@cascade-earth.com, or your project manager.

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Login to your Water Sentinel

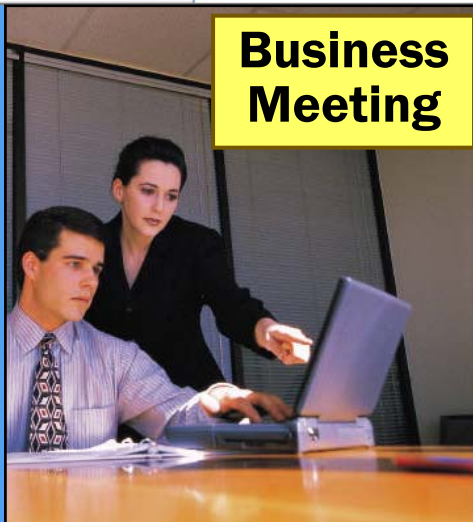
Instructions:

1. Enter your user name in the first box (required).
2. Enter your password in the second box (required).
3. Click the 'Login' button.

User Name: Password:



Business Meeting



Office



Field



Secure Client Website

Water Sentinel

- Home
- Enter Data
- Reports
- Site Map
- Monthly Graphs
- Edit Data
- Contact us
- Help
- Logout

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Features:

- Secure data access and entry.
- Instant access to reports.
- Track loadings.



Welcome to the Demonstration Water Sentinel

Click on the link buttons to the left to access information regarding your project site. If you have trouble, click the "Help" button for detailed instructions.

Please report any problems to [Sentinel Support](#).

Thank you!

-Cascade Earth Sciences

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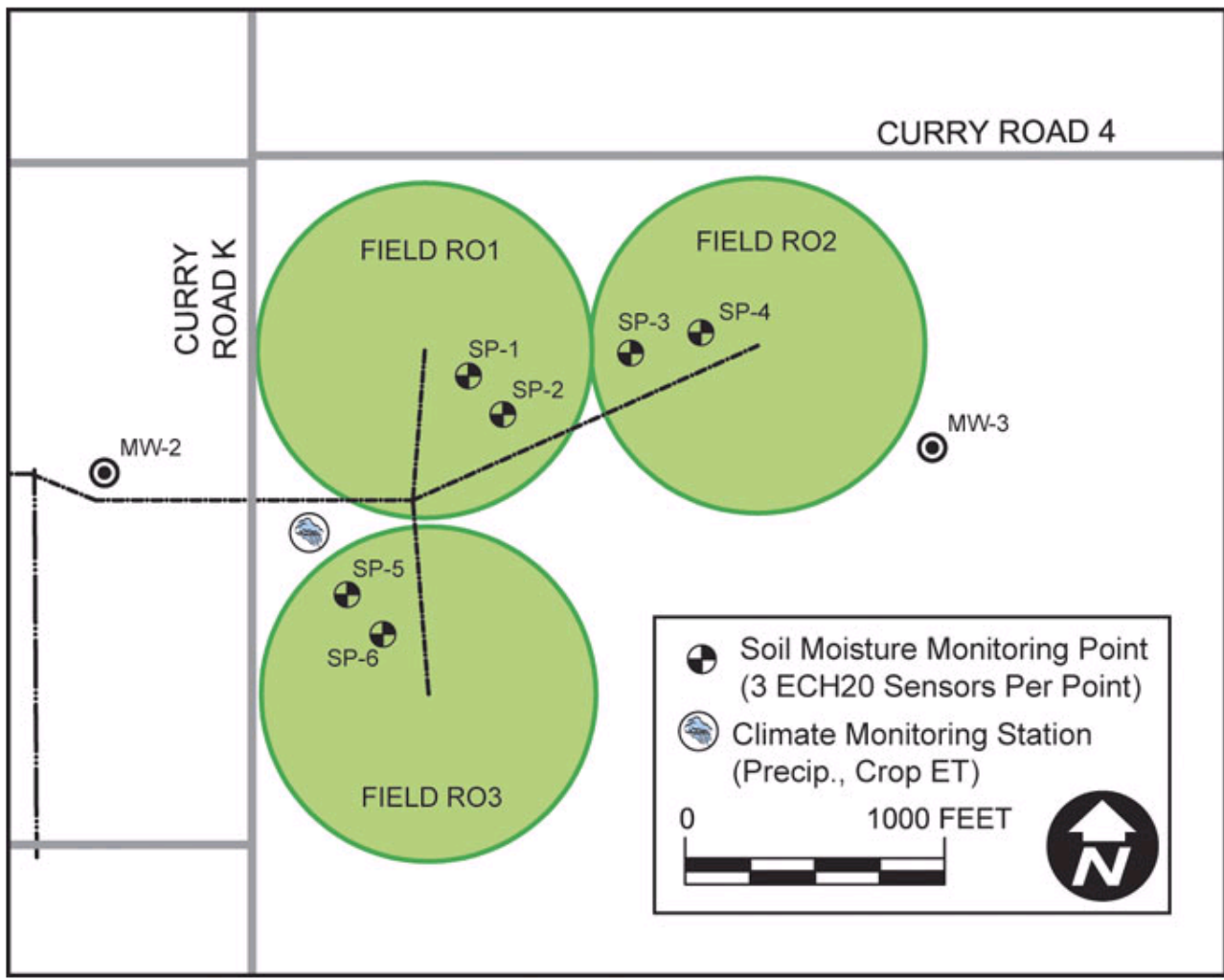
Live Map to Retrieve Data
- Static or Online Sensors

- Home
- Data Entry - RO
- Data Entry - Em
- Data Entry - Msc
- Reports
- Site Map
- Graphs
- Misc
- Logout



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Click on a field to view Summary information.



**Quickly Generated,
Consistent Reports**

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Instructions:

1. Select a reporting year.
2. Click on the 'Create Report' button.

Idaho DEQ Management Unit Summary Report

Select a Reporting Year:

1999

(Note: Report results can be copied and pasted into Excel or other programs.)

LAND APPLICATION OF WASTEWATER PROGRAM

ANNUAL REPORTING FORMS for Reporting Year: Nov. 1, 2001 - Oct. 31, 2002

Permit No. LA-000036

MANAGEMENT UNIT SUMMARY

Reporting Year	Management Unit	Common Name	WW App (MG)	WW App Non Growing (in/ac/yr)	WW App Growing (in/ac/yr)	IW (in/ac/yr)	N from WW (lb/ac/yr)	N from Fert (lb/ac/yr)	Crop Type	Crop Yield (lb/ac/yr)	Crop N Conc (mg/kg)	Crop N Removed (lb/ac/yr)	COD App Non Growing (lb/ac/dy)	COD App Growing (lb/ac/dy)	COD App Yearly Avg (lb/ac/dy)
2002	MU-003607	Cent Piv 1	36.87	12.98	12.64	23.20	695			4,511	45,093	610	48	39	43
2002	MU-003608	Cent Piv 2	21.19	11.95	9.15	24.34	658			4,254	48,040	613	50	39	44
2002	MU-003609	Cent Piv 3	29.27	12.00	10.46	22.29	653			3,149	39,998	378	50	38	43
2002	MU-003610	Cent Piv 4	48.44	11.26	9.98	24.88	664			3,774	45,549	516	49	42	45
2002	MU-003611	Cent Piv 5	50.85	6.34	14.95	19.24	583			3,809	46,276	529	27	48	39
2002	MU-003612	Cent Piv 6	5.67	10.98	9.91	24.16	645			4,160	39,935	498	48	41	44
2002	MU-003613	Cent Piv 7	7.29	9.45	12.92	21.70	693			4,305	39,339	508	41	52	47
2002	MU-003614	Cent Piv 8	7.37	8.27	12.61	21.59	652			3,351	41,413	416	34	50	44
2002	MU-003615	Cent Piv 9	4.94	10.76	9.45	25.29	623			4,449	41,780	558	45	41	42

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Instructions:

1. Select a reporting year.
2. Click on the 'Create Graph' button.

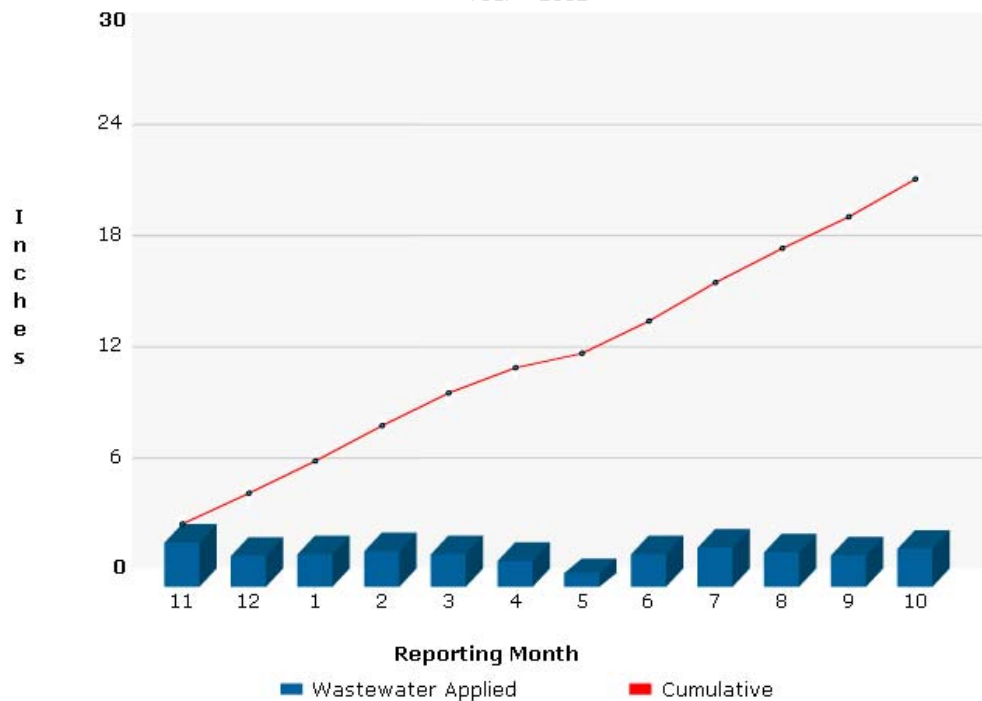
Select a Reporting Year:

1999 Reporting Year



Nonpareil: Monthly Site Wastewater Applications

Year - 2002



Benefits

- Monitoring helps growers make better water management decisions
- Growers can leverage the Internet to:
 - conserve water
 - save time
 - save \$\$

