CWQMC

Colorado Water Quality Monitoring Council

CWQMC COLORADO WATER QUALITY MONITORING COUNCIL

The *Colorado Water Quality Monitoring Council* serves as a statewide collaborative body, open to all, to help achieve effective goal identification, data collection, data analysis, data retrieval, and reporting/dissemination of water quality data, and monitoring information.

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MISSION:

Provide a collaborative forum for implementation of effective collection, analyses, formatting, and sharing of water quality data.

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Began With a Vision:

To have a sufficient quantity of scientifically sound data that is available to all to facilitate water quality protection.

History

- DRCOG Initiated Regional Data Sharing Effort
- 2000 CWQMC Organized – State/USGS Facilitated
- 2001 First Data Swap – Clear Creek/So. Platte
- 2003 Awarded EPA RGI Grant - Meta Data Map
- 2004 Awarded NPS Grant – NPS Legacy Data
- 2006 Data Sharing Network (DSN) Created
- 2007 Interactive Map Created - Limited
- 2008 Awarded Second NPS Grant
- 2009 Conversion to WQX
- 2010 Interactive Google Based Map – coming soon

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What is the Data Sharing Network, DSN

- A shared, web based water quality data management system; data input, output and data manipulation.
- A web-based map, in compliment to the data management system, that shares monitoring locations, contact and monitoring information, allows downloading of site data (Coming Soon)

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Ambient Water Quality Monitoring System, AWQMS

Core Functionality:

- Highly configurable import module
- Query List – find data of interest
- Adding, updating and deleting data
- Compatibility with WQX for data export to EPA
- Data export to Excel
- Reports and charts

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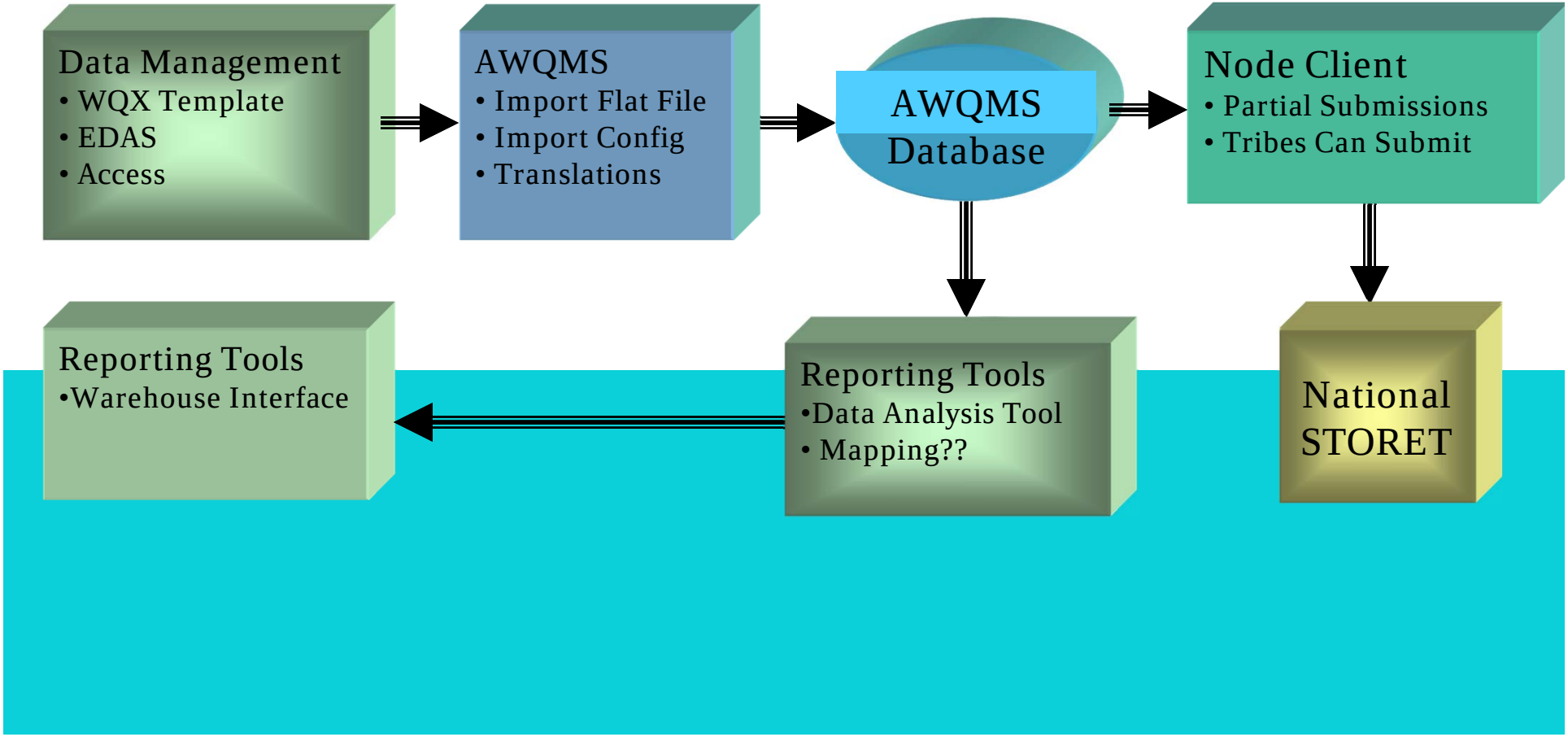
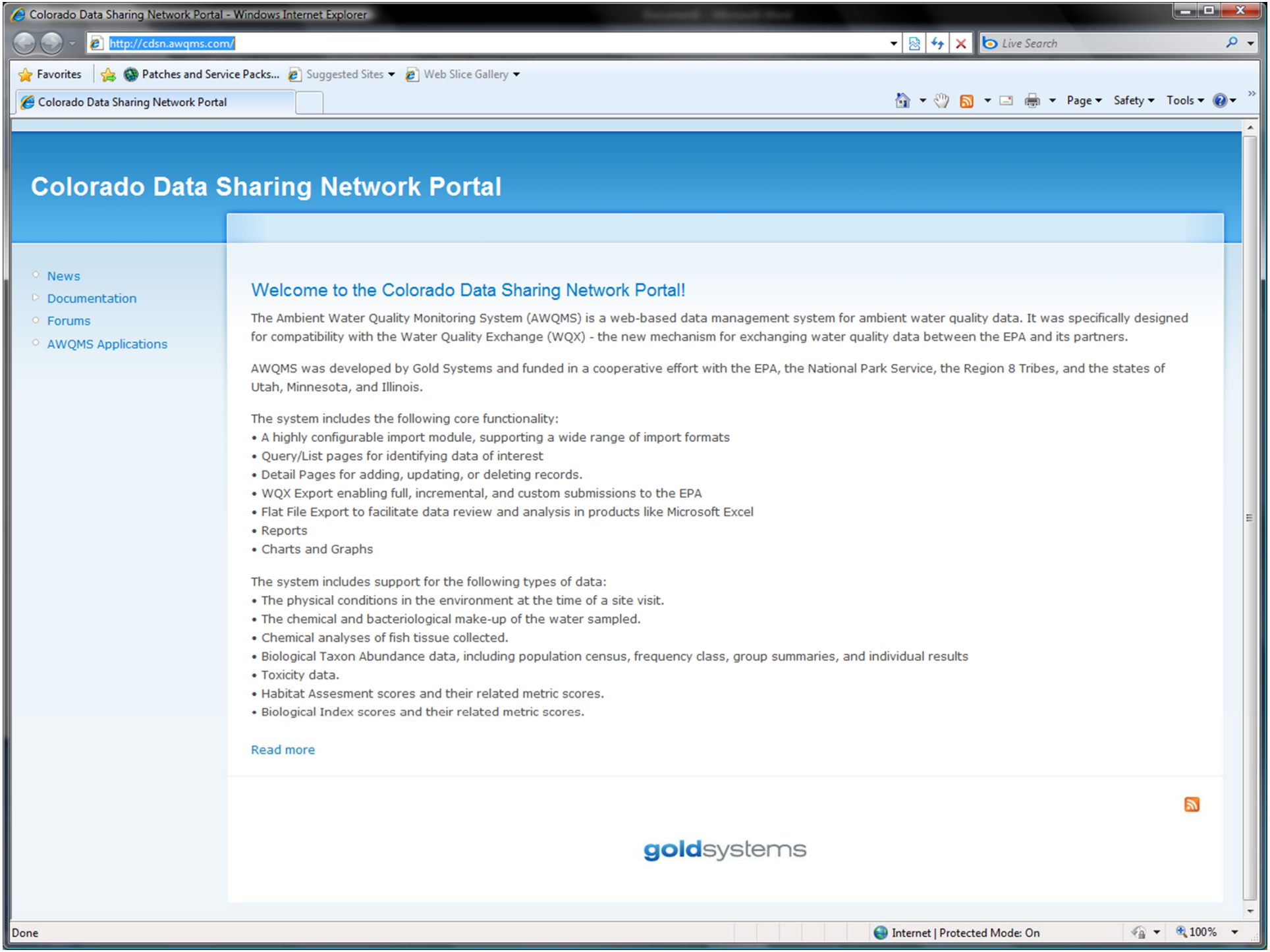
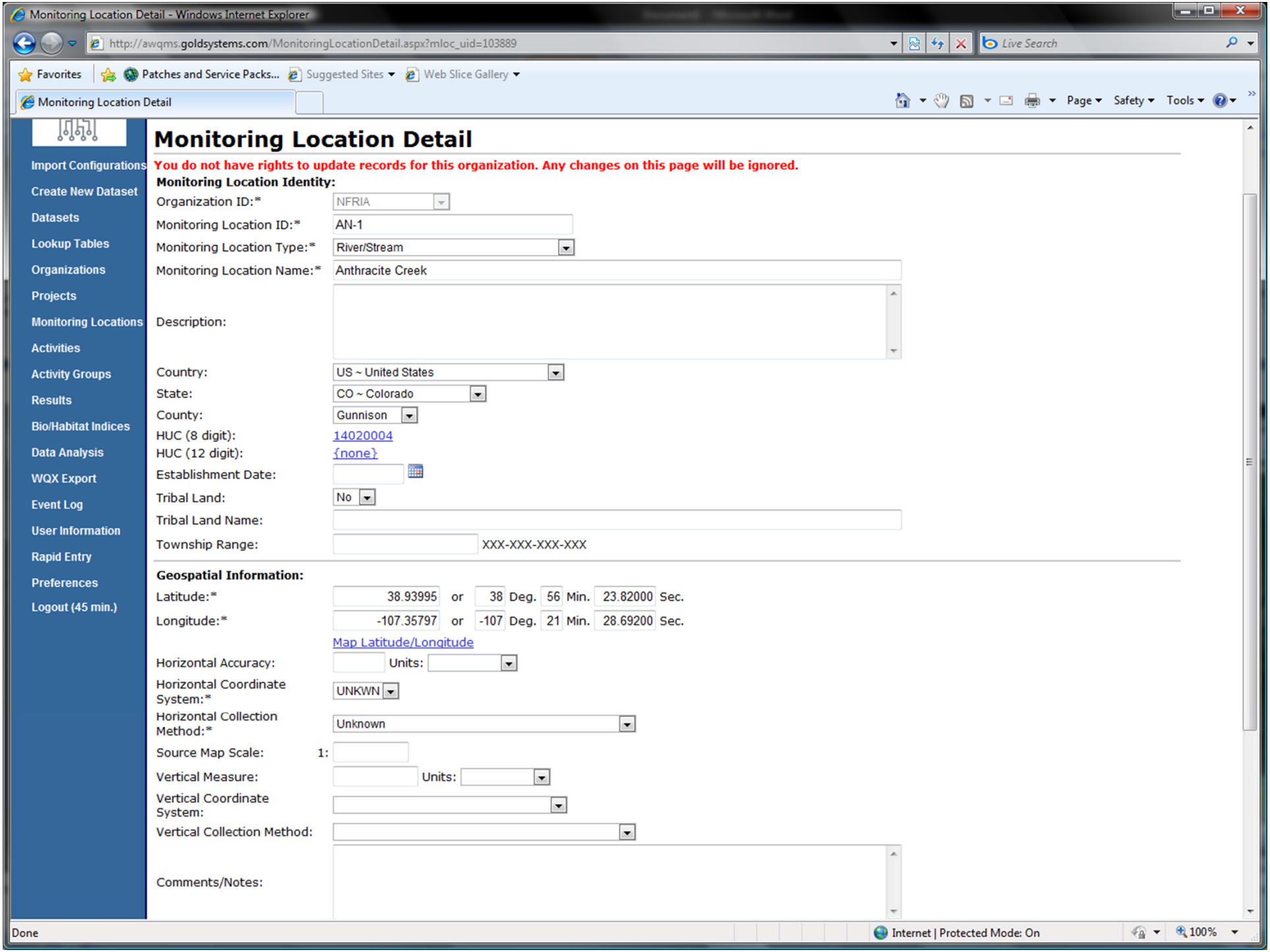
Hosting Environment Updates




Colorado Data Sharing Network Portal - Windows Internet Explorer
http://cdsn.awqms.com/
Live Search
Favorites
Patches and Service Packs...
Suggested Sites
Web Slice Gallery
Colorado Data Sharing Network Portal
Page
Safety
Tools
Colorado Data Sharing Network Portal
News
Documentation
Forums
AWQMS Applications
Welcome to the Colorado Data Sharing Network Portal!
The Ambient Water Quality Monitoring System (AWQMS) is a web-based data management system for ambient water quality data. It was specifically designed for compatibility with the Water Quality Exchange (WQX) - the new mechanism for exchanging water quality data between the EPA and its partners.
AWQMS was developed by Gold Systems and funded in a cooperative effort with the EPA, the National Park Service, the Region 8 Tribes, and the states of Utah, Minnesota, and Illinois.
The system includes the following core functionality:
• A highly configurable import module, supporting a wide range of import formats
• Query/List pages for identifying data of interest
• Detail Pages for adding, updating, or deleting records.
• WQX Export enabling full, incremental, and custom submissions to the EPA
• Flat File Export to facilitate data review and analysis in products like Microsoft Excel
• Reports
• Charts and Graphs
The system includes support for the following types of data:
• The physical conditions in the environment at the time of a site visit.
• The chemical and bacteriological make-up of the water sampled.
• Chemical analyses of fish tissue collected.
• Biological Taxon Abundance data, including population census, frequency class, group summaries, and individual results
• Toxicity data.
• Habitat Assesment scores and their related metric scores.
• Biological Index scores and their related metric scores.
Read more
goldsystems
Done
Internet | Protected Mode: On
100%


Monitoring Location Detail - Windows Internet Explorer
http://awqms.goldsystems.com/MonitoringLocationDetail.aspx?mloc_uid=103889
Live Search
Favorites
Patches and Service Packs...
Suggested Sites
Web Slice Gallery
Monitoring Location Detail
Page
Safety
Tools
Import Configurations
Create New Dataset
Datasets
Lookup Tables
Organizations
Projects
Monitoring Locations
Activities
Activity Groups
Results
Bio/Habitat Indices
Data Analysis
WQX Export
Event Log
User Information
Rapid Entry
Preferences
Logout (45 min.)
Monitoring Location Detail
You do not have rights to update records for this organization. Any changes on this page will be ignored.
Monitoring Location Identity:
Organization ID:*
NFRIA
Monitoring Location ID:*
AN-1
Monitoring Location Type:*
River/Stream
Monitoring Location Name:*
Anthracite Creek
Description:
Country:
US ~ United States
State:
CO ~ Colorado
County:
Gunnison
HUC (8 digit):
14020004
HUC (12 digit):
{none}
Establishment Date:
Tribal Land:
No
Tribal Land Name:
Township Range:
XXX-XXX-XXX-XXX
Geospatial Information:
Latitude:*
38.93995
or
38
Deg.
56
Min.
23.82000
Sec.
Longitude:*
-107.35797
or
-107
Deg.
21
Min.
28.69200
Sec.
Map Latitude/Longitude
Horizontal Accuracy:
Units:
Horizontal Coordinate System:*
UNKWN
Horizontal Collection Method:*
Unknown
Source Map Scale:
1:
Vertical Measure:
Units:
Vertical Coordinate System:
Vertical Collection Method:
Comments/Notes:
Done
Internet | Protected Mode: On
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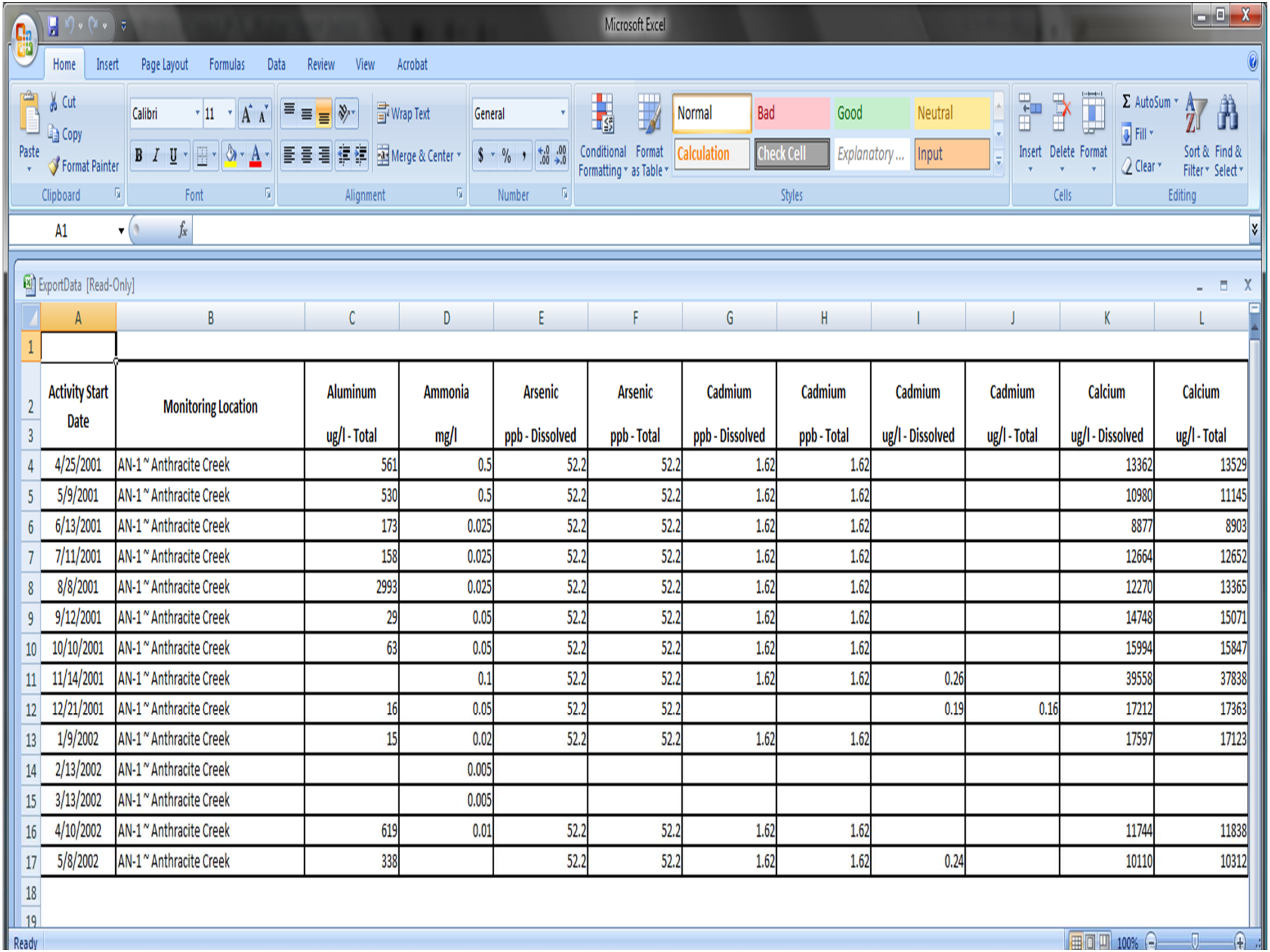

	A	B	C	D	E	F	G	H	I	J	K	L
1												
2	Activity Start Date	Monitoring Location	Aluminum ug/l - Total	Ammonia mg/l	Arsenic ppb - Dissolved	Arsenic ppb - Total	Cadmium ppb - Dissolved	Cadmium ppb - Total	Cadmium ug/l - Dissolved	Cadmium ug/l - Total	Calcium ug/l - Dissolved	Calcium ug/l - Total
3												
4	4/25/2001	AN-1 ~ Anthracite Creek	561	0.5	52.2	52.2	1.62	1.62			13362	13529
5	5/9/2001	AN-1 ~ Anthracite Creek	530	0.5	52.2	52.2	1.62	1.62			10980	11145
6	6/13/2001	AN-1 ~ Anthracite Creek	173	0.025	52.2	52.2	1.62	1.62			8877	8903
7	7/11/2001	AN-1 ~ Anthracite Creek	158	0.025	52.2	52.2	1.62	1.62			12664	12652
8	8/8/2001	AN-1 ~ Anthracite Creek	2993	0.025	52.2	52.2	1.62	1.62			12270	13365
9	9/12/2001	AN-1 ~ Anthracite Creek	29	0.05	52.2	52.2	1.62	1.62			14748	15071
10	10/10/2001	AN-1 ~ Anthracite Creek	63	0.05	52.2	52.2	1.62	1.62			15994	15847
11	11/14/2001	AN-1 ~ Anthracite Creek		0.1	52.2	52.2	1.62	1.62	0.26		39558	37838
12	12/21/2001	AN-1 ~ Anthracite Creek	16	0.05	52.2	52.2			0.19	0.16	17212	17363
13	1/9/2002	AN-1 ~ Anthracite Creek	15	0.02	52.2	52.2	1.62	1.62			17597	17123
14	2/13/2002	AN-1 ~ Anthracite Creek		0.005								
15	3/13/2002	AN-1 ~ Anthracite Creek		0.005								
16	4/10/2002	AN-1 ~ Anthracite Creek	619	0.01	52.2	52.2	1.62	1.62			11744	11838
17	5/8/2002	AN-1 ~ Anthracite Creek	338		52.2	52.2	1.62	1.62	0.24		10110	10312
18												
19												

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AWQMS Website

http:cdsn.awqms.com

- Documentation
- Data Portal – Login Organization ID/Password
- Tutorials (LearningZen) – Login Demo/Demo
- Public Access – cdsnpublic/cdsnpublic

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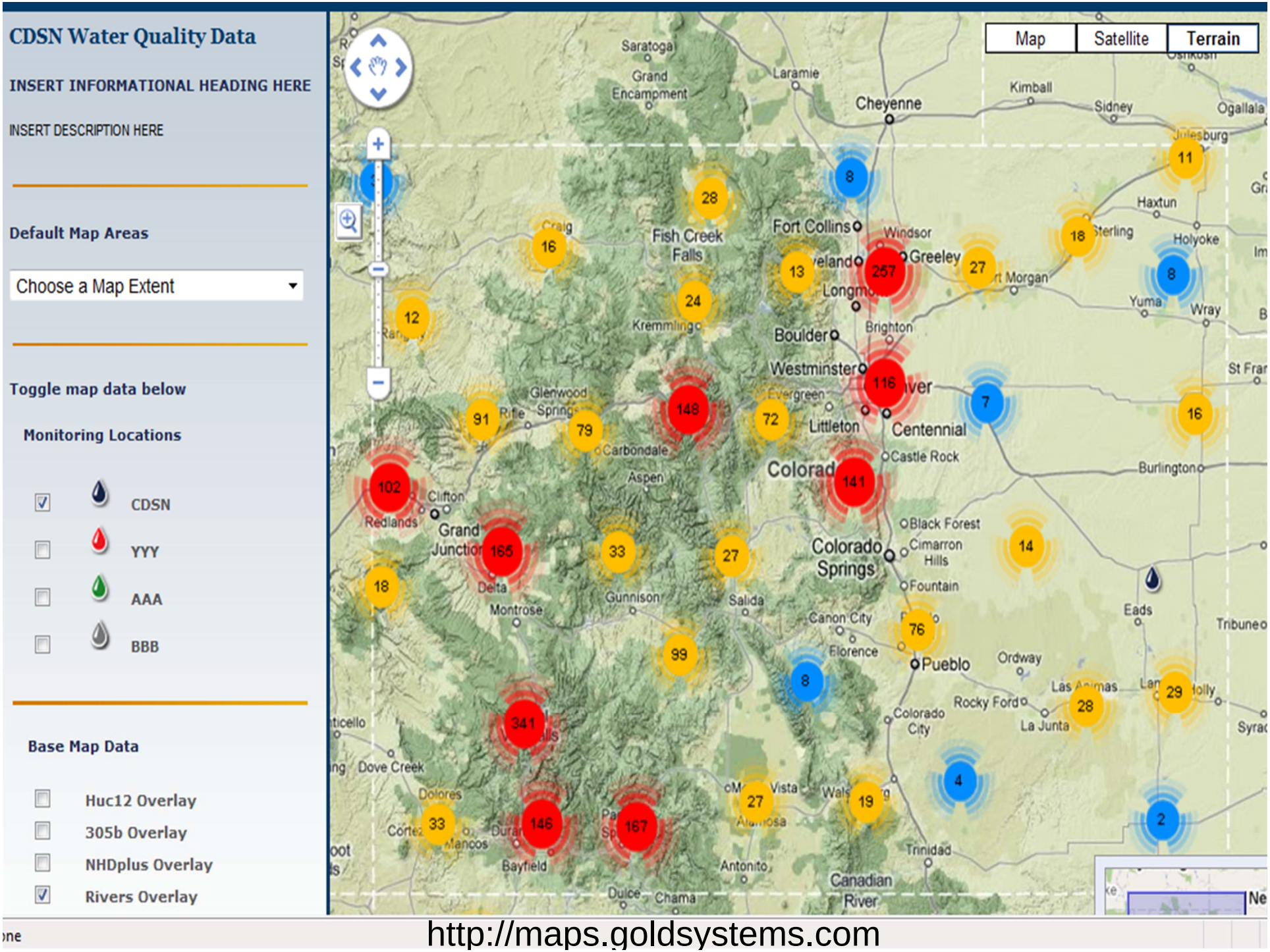
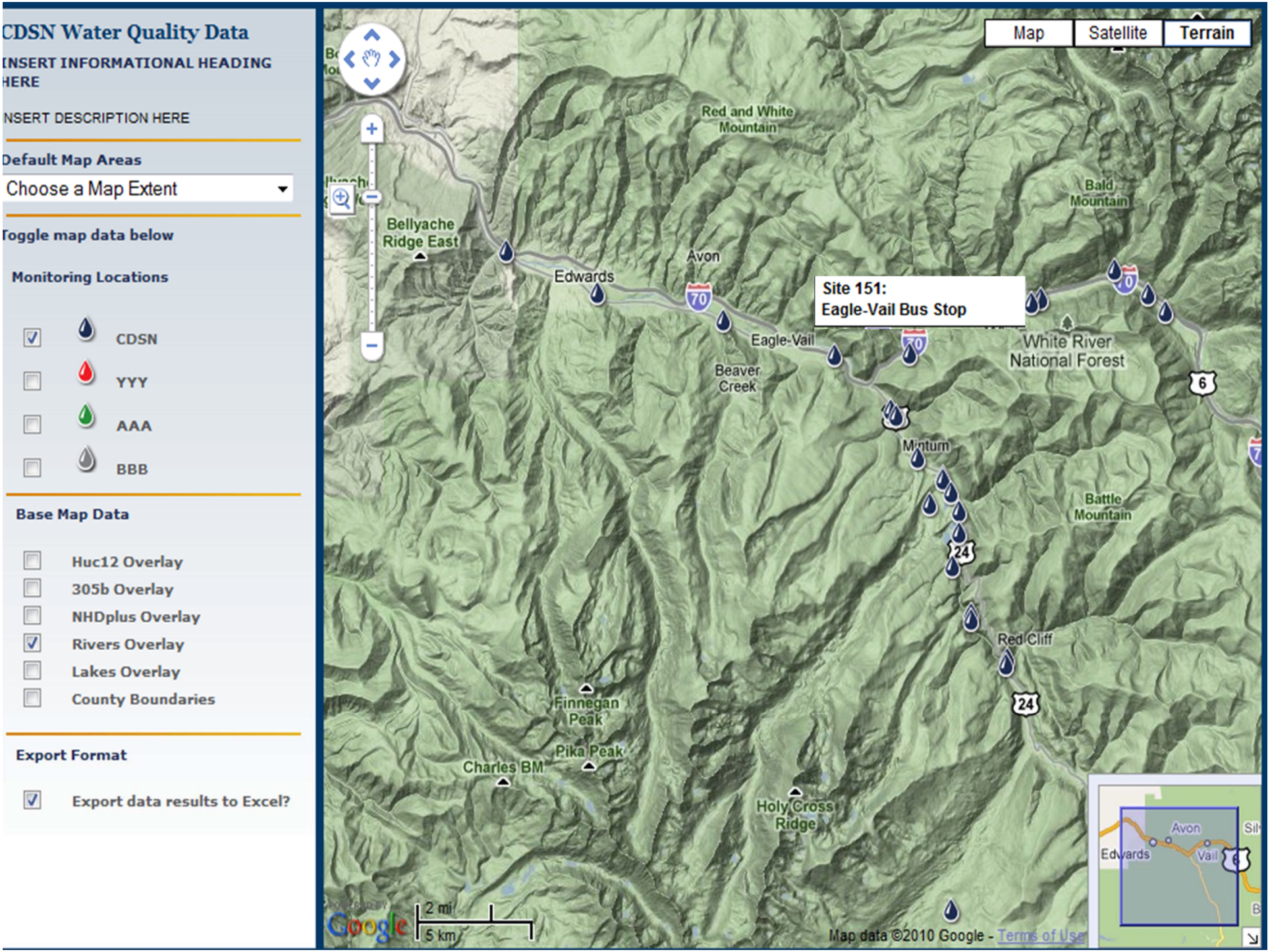
AWQMS was developed by Gold Systems and funded in a cooperative effort with the EPA, the National Park Service, the Region 8 Tribes, and the states of Utah, Minnesota, and Illinois.



http://maps.goldsystems.com


CDSN Water Quality Data
INSERT INFORMATIONAL HEADING HERE
NSERT DESCRIPTION HERE
Default Map Areas
Choose a Map Extent
Toggle map data below
Monitoring Locations
CDSN
YYY
AAA
BBB
Base Map Data
Huc12 Overlay
305b Overlay
NHDplus Overlay
Rivers Overlay
Lakes Overlay
County Boundaries
Export Format
Export data results to Excel?
Map
Satellite
Terrain
Site 151:
Eagle-Vail Bus Stop
Red and White Mountain
Bald Mountain
Bellyache Ridge East
Edwards
Avon
Eagle-Vail
Beaver Creek
White River National Forest
Minturn
Battle Mountain
Red Cliff
Finnegan Peak
Pika Peak
Charles BM
Holy Cross Ridge
2 mi
5 km
Map data ©2010 Google - Terms of Use

Monitoring Location ID	Monitoring Location Name	Monitoring Location Latitude	Monitoring Location Longitude	Activity Media Name	Activity Type	Activity Start Date	Activity Start Time	Characteristic Name	Result Measure Value	Result Measure Unit
151	Eagle-Vail Bus Stop	39.6193	-106.466	Biological	Field Msr/Obs-Habitat Assessment	10/12/2007	9:30:00 AM	Count	10	count
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Alkalinity, total	90	mg/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Calcium carbonate	16	mg/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	pH	8.67	None
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Hardness, Ca, Mg	120	mg/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Temperature, water	9	deg C
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Flow	72	cfs
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Field Msr/Obs	10/10/2000	9:30:00 AM	Dissolved oxygen (DO)	8.7	mg/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Sample-Routine	10/10/2000	9:30:00 AM	Iron	312	ug/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Sample-Routine	10/10/2000	9:30:00 AM	Calcium	31854	ug/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Sample-Routine	10/10/2000	9:30:00 AM	Zinc	54.5	ug/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Sample-Routine	10/10/2000	9:30:00 AM	Selenium	0	ug/l
151	Eagle-Vail Bus Stop	39.6193	-106.466	Water	Sample-Routine	10/10/2000	9:30:00 AM	Magnesium	7550	ug/l

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- **Watershed Data Swaps are a gathering of all entities in a basin that are engaged in watershed management, data collection, or need. These Watershed Swaps are networking events hosted by the CWQMC and local watershed leaders and become part of a collective statewide voice for monitoring and watershed issues.**
- **SWAP schedule follows WQCC Basin Hearing schedule.**
- **Eleven SWAPs to date.**

Black Canyon of the Gunnison

Upper Gunnison & Tribs, Gunnison 11/6/2007

Expectations: *See DSN as a solution for their need to share data and information as part of their mission – DSN as a possibility to store generated in a way it can be shared – Desire to know what activities are going on and what data exists – Desire for a long term data storage solution – Inform others of what we are doing and learn what they are doing*

Watershed SWAP Priorities and Concerns:

- There is a lot of monitoring activity occurring in the upper basin but the efforts are not necessarily coordinated and data are not shared. The desire is there; existing coordination in the basin is working
- Need to increase our capacity to share data to help our mission, need a tool such as DSN
- Need a long term and sustainable data storage solution for stakeholder, cooperative monitoring efforts
- Need a way to manage and store the large amounts of data generated from grants in Lake City area
- Basic routine parameter needs in Gunnison area are physical habitat, chemical indicators and E. coli.
- Group goal is an overall and common understanding of the health, condition and management solutions of the River, even though each member may have a different perspective on overall issues
- Need to protect the water resources within the National Recreation Area for the public. Relatively no impacts at this time, but threats exist and need to be able to detect change, trends and react accordingly
- Would like to propose outstanding waters for many of Recreation Area waters but need to make sure it is the right proposal at the right time
- Protect public and environmental health in the Basin while ensuring own operations are non impacting
- Each septic system in county needs a permit and is monitored by specialists who need too keep up to speed on water quality issues. UEA is a good source. Need to monitor and regulate septic systems.
- Concern about emerging contaminants and the ability to manage or treat the problem
- Priority to acquire long term funding for monitoring, data management and reporting
- Producing a watershed plan and need to identify current and future monitoring needs and gaps. Currently working on small scale TMDL and characterization studies, then move to implementation and evaluation
- Need a reference site for macroinvertebrate and nutrients comparisons
- Need to share Discharge Monthly Reports and integrate them with other data sources
- Below Standard Mine Superfund site: need to distinguish source loading from the fen versus the mine discharge, storm water and ground water influences
- Monitoring sheds light on issues or problems but not sure who is at fault or who should take next steps
- Need funds to support water quality monitoring and analyses for any work to take place
- Funding existing monitoring programs is increasingly difficult, costs increase but USGS contribution is flat and thus less funds are available for actual work
- Need to exchange information but also help with interpretation of reports and data that does come in from the USGS. More effort is needed to put this data to use and help others understand.
- Would be helpful to have the Water Resource Division and Water Quality Division use the same language. These two agencies need to be linked better at all levels.
- Inconsistent regulation on oil and gas fracking material: finding material in local soils.
- TMDL's being developed for Lake City may not be achievable; need to determine background levels to know what is feasible and achievable? Concern about which should come first, standard or TMDL? The WS plan is very comprehensive, more than water and goes all the way to Blue Mesa Reservoir.
- Speed at which data is made available to public; turning data to information takes too long
- Degrading water quality (nutrient & metals loading) and aquatic life health in National Recreation Area

EVALUATION:

- Content and pace about right (100%)
- Unanimous increased knowledge of DSN and difference between Database and map
- Limited data generators in the basin. Most of work done by USGS, NPS projects, tamarisk removal or typical municipality data.
- All participants need data and plan to use the database and map where appropriate.
- 7 out of 8 participants plan to upload data or need to get permission it, those that were not did not have data to upload
- 3 of participants have legacy data to upload and 6 requested help loading data into DSN

FREQUENCY:

- Yes, no other outlet for this at this time
- Yes, right scale. I
- Frequency 1-3 years
- Future topics: upper and lower basins, data and policy presentations, review local issues, share with public and decision makers, half day technical and have day public presentations

Sponsors

Colorado Data Sharing Network in Review: The Gunnison Basin – Upper Gunnison River & Tribs

Who attended?

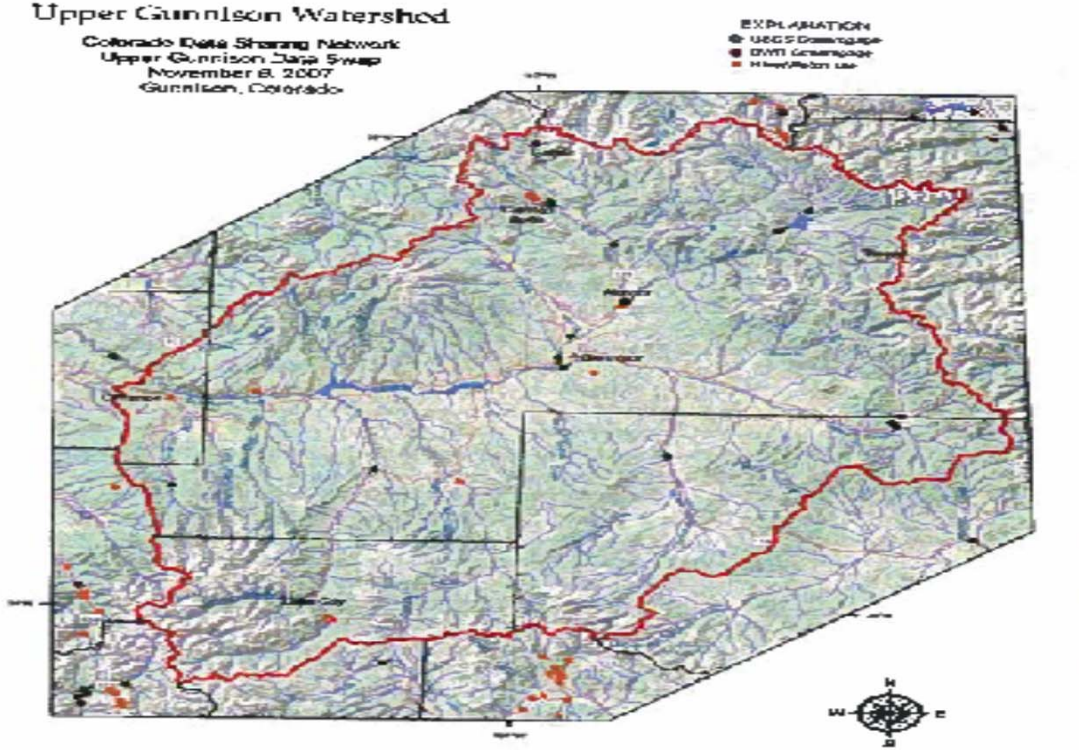
Anthony Poponi,
Coal Creek Watershed Coalition
Barbara Hite,
BLM
Edward Balch,
Town of Crested Butte
Frank Kugel,
Upper Gunnison River Water
Conservancy District
Jeremy Yoh,
Rio Grande Headwaters
Restoration Project
Kirstin Brown,
Division of Reclamation Mining &
Safety
Matthew Mallick,
National Park Service
Tyler Martineau,
Upper Gunnison River Water

Who was missing?

Rocky Mountain Biological Lab
Trout Unlimited
Rafting community
Scenic River Tours
Almont Resort
Halliburton
NRCS
Lucky Jack Mine
Power Horn Group
Crested Butte Ski Area
Hinsdale County
Crested Butte South Metropolitan
District

Upper Gunnison Watershed

Colorado Data Sharing Network
Upper Gunnison Data Swap
November 8, 2007
Gunnison, Colorado



USGS
Map created by staff detailed from USGS

Who was invited?

BLM
Selenium Task Force
CO Watershed Assembly
San Juan SWCD
Willow Creek
Coal Creek Watershed
Coalition
Sky Island Water District
Gunnison Utilities
Lake City WQ Stakeholders

USGS
USFWS
CU
Bug Specialist
Delta County
Gunnison County GIS
State Division Engineer
Gunnison County
Town of Gunnison
Rocky Mountain Biological

Laboratory
Battlement Mesa Water
Conservancy District
Grand Mesa Water
Conservancy District
Upper Gunnison River Water
Conservancy District
Crawford Water Conservancy
District
National Park Service

Gunnison County
Upper Gunnison River Water
Conservancy District
Division of Reclamation Mining
& Safety
Gunnison NRCS Field Office
Gunnison Conservation District
Town of Crested Butte
Crested Butte Water and
Sanitation District

CWQMC COLORADO WATER QUALITY MONITORING COUNCIL

Members/Contributors:

Big Thompson Watershed Forum | Northern Colorado Water Conservancy District | North Fork River Improvement Association | South Platte River Coalition for Urban Evaluation (SPCURE) | City of Aurora |City of Brighton | City of Centennial | City of Englewood | City of Glendale | City of Littleton | City of Thornton | City of Denver Department of Environmental Health | Metro Wastewater and Reclamation District | South Adams County Water and Sanitation District | North Front Range Water Quality Planning Association | Big Dry Creek Watershed Association | Barr Lake/Milton Watershed Association | Animas River Stakeholders Group | Coal Creek Watershed Coalition | City of Fort Collins / Friends of the Poudre | Colorado State University Selenium and Iron Studies | U.S. Geological Survey Colorado Selenium Studies | Centennial Water & Sanitation District | Littleton/Englewood Wastewater Treatment Plant | Lake Fork Watershed Stakeholders | Colorado River Watch

South Platte River Coalition for Urban Evaluation (SPCURE)

State of Colorado Non-Point Source Program

More Information - www.coloradowaterquality.org

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Who Can I Call for Help?

DSN Coordinators

Lynn Padgett

Jeff Litteral

970-626-4045