



deep

West Virginia Division of Mining and Reclamation

Lewis A. Halstead

Deputy Director

March 2014



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“Status of West Virginia Mining and Reclamation” Division of Mining and Reclamation



What's happened in the last year?



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MCHM and other chemicals

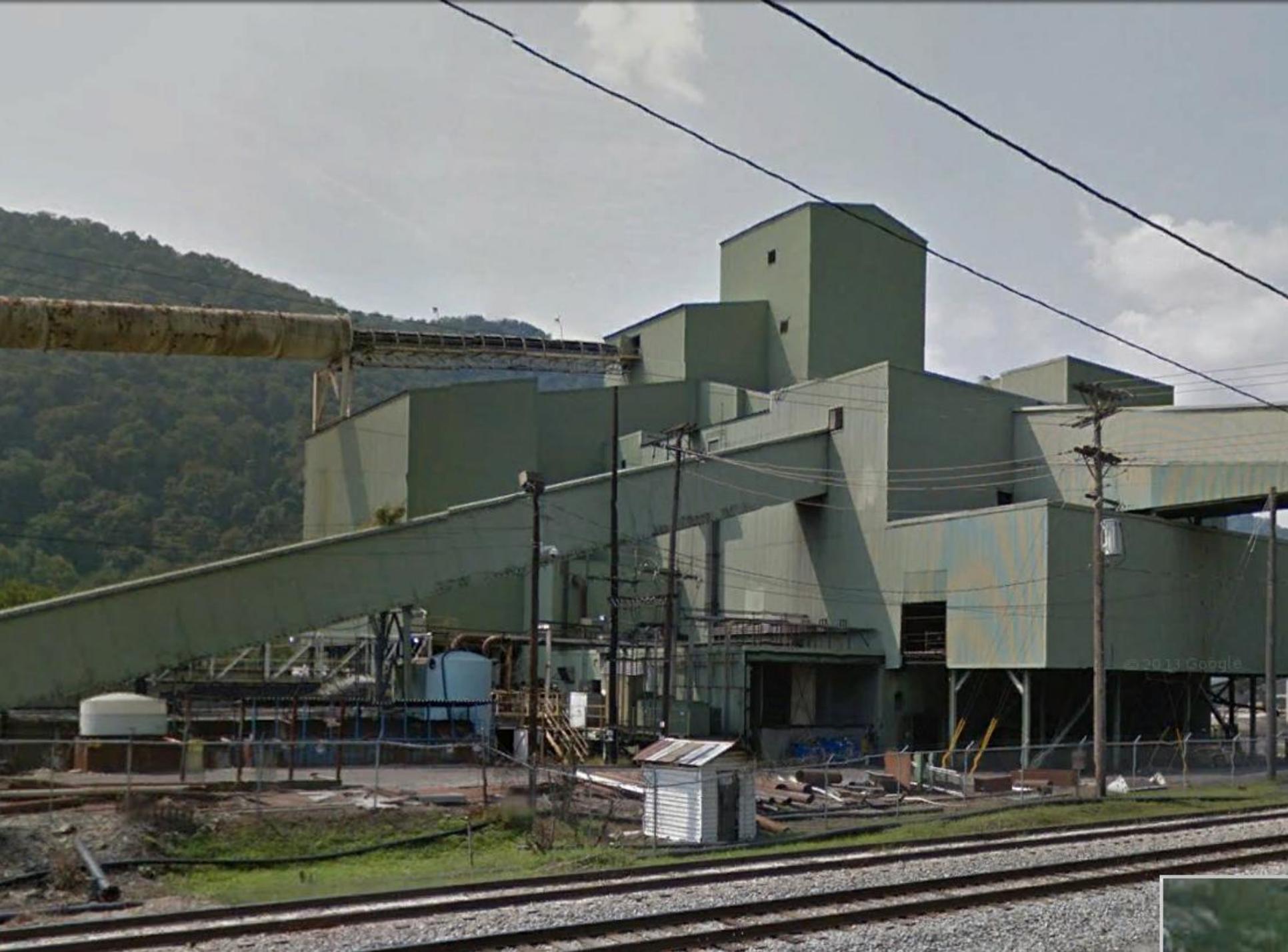


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What does this have to do with Mining and Reclamation?



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GPP

Module 14 of the NPDES application

- list of all chemicals stored and MSDS that is current
- Secondary containment



Senate Bill 373

A device made to contain

- An accumulation of more than 1320 gallons of fluids
- More than 90% of its capacity aboveground.
- constructed of “primarily non-carbon materials, including wood, concrete, steel, plastic or fiberglass reinforced plastic.
- includes “all ancillary aboveground pipes and dispensing systems up to the first point of isolation and all ancillary underground pipes and dispensing systems connected to the aboveground containers to the first point of isolation.”
- All mobile devices that remain in one location continuously for 60 or more days

Registration and permitting



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After October 1, 2014, it will be unlawful to own or operate a if it has not been registered and a registration fee paid.



733 petition



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National Wildlife Federation
Northeast Regional Center
149 State Street
Montpelier, VT 05602
802.552.4325 (James Murphy Direct)
jmurphy@nwf.org

SENT VIA EMAIL AND FIRST CLASS MAIL

June 24, 2013

Joseph Pizarchik
Director
Office of Surface Mining Reclamation and Enforcement
1951 Constitution Avenue, N.W.
Washington, D.C. 20240
Email: Director_Pizarchik@osmre.gov

RE: Section 733 Petition Seeking Termination of West Virginia's Approved SMCRA Program and the Immediate Implementation and Promulgation of a Federal Regulatory Program

Dear Director Pizarchik:

Pursuant to 30 U.S.C. § 521(b) and 30 C.F.R. § 733.12, please find enclosed a Section 733 petition seeking termination of West Virginia's approved Surface Mining Control and Reclamation Act program and the immediate implementation and promulgation of a Federal regulatory program, along with Appendices. This petition is filed by eighteen concerned organizations, listed in the petition. Also enclosed is a CD-ROM containing several documents supporting the petition.

As required by 30 C.F.R. § 733.12(a)(2), we expect a response within sixty days.

SECTION 733 PETITION BEFORE THE
UNITED STATES DEPARTMENT OF
INTERIOR, OFFICE OF SURFACE
MINING RECLAMATION AND
ENFORCEMENT SEEKING
TERMINATION OF WEST
VIRGINIA'S APPROVED SMCRA
PROGRAM AND THE IMMEDIATE
IMPLEMENTATION AND
PROMULGATION OF A FEDERAL
REGULATORY PROGRAM



**APPALACHIAN CATHOLIC WORKER;
APPALACHIAN VOICES;
CATHOLIC COMMITTEE OF APPALACHIA;
CENTER FOR BIOLOGICAL DIVERSITY;
CENTER FOR HEALTH, ENVIRONMENT & JUSTICE; CHRISTIANS
FOR THE MOUNTAINS;
COAL RIVER MOUNTAIN WATCH;
EARTHJUSTICE;
KEEPER OF THE MOUNTAINS FOUNDATION;
LEAGUE OF WOMEN VOTERS OF WEST VIRGINIA;
MOUNTAIN HEALTH AND HERITAGE ASSOCIATION;
NATIONAL WILDLIFE FEDERATION;
OHIO VALLEY ENVIRONMENTAL COALITION;
SIERRA CLUB;
WEST VIRGINIA CITIZEN ACTION;
WEST VIRGINIA ENVIRONMENTAL COUNCIL;
WEST VIRGINIA HIGHLANDS CONSERVANCY; and
WEST VIRGINIA RIVERS COALITION**



Filed With:

**JOSEPH PIZARCHIK DIRECTOR
OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT
1951 CONSTITUTION AVENUE, N.W.
WASHINGTON, D.C. 20240**

EMAIL:

DIRECTOR_PIZARCHIK@OSMRE.GOV



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United States Department of the Interior

OFFICE OF SURFACE MINING
RECLAMATION AND ENFORCEMENT

Charleston Field Office
1027 Virginia Street, East
Charleston, West Virginia 25301



DEC 31 2013

Randy Huffinan, Cabinet Secretary
West Virginia Department of
Environmental Protection
601 57th Street, SE
Charleston, West Virginia 25304

Dear Mr. Huffinan:

Enclosed is a copy of the Office of Surface Mining Reclamation and Enforcement's (OSM) response to the June 24, 2013, petition requesting an evaluation of West Virginia's program under the procedures outlined in 30 CFR 733. We advised the petitioners that 14 of the 19 allegations will not be further evaluated under the 30 CFR 733 procedures. We will review the following remaining five allegations pursuant to 30 CFR Section 733.12(a)(2):

1. WVDEP Fails to Address Potential Flooding Impacts in the Permitting Process with Storm Water Runoff Analysis (SWROA);
2. WVDEP Fails to Issue SMCRA Violations Where National Pollutant Discharge Elimination System (NPDES) Violations Exist;
3. WVDEP Fails to Regulate Selenium Pollution;
4. WVDEP Fails to Properly Define Impacted Areas in Cumulative Hydrologic Impact Analysis (CHIA) Results in Harm to Watersheds; and
5. WVDEP Fails to Require Properly Protective Soil Removal and Reclamation Measures for Mining Sites.

The review and decisions under 30 CFR 733.12(a)(2) are delegated to the Regional Director so the five reviews will be conducted under his authority. We will conduct the evaluations in a manner similar to that provided for under the existing oversight performance agreement between your office and mine. Under that agreement, you have the opportunity to assign team members to each evaluation and work with us to develop a work-plan for management review. We will contact your office shortly for participants on the review teams. Additionally, while 14 allegations do not warrant further evaluation under the 30 CFR 733(a)(2) process, several of the areas covered in those allegations are still included as topics in the existing performance agreement.

We anticipate initiating all five evaluations this year, developing a work plan for each but, due to their complex nature, do not expect to complete all in 2014. We will work with the individual



Five aspects OSM
identified to further
evaluate



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- WVDEP fails to address potential flooding impacts with Storm Water Runoff Analysis(SWROA)
- WVDEP Fails to Regulate Selenium Pollution.
- WVDEP fails to issue SMCRA violations where NPDES violations exist.
- WVDEP Fails to Properly Define Impacted Areas in Cumulative Hydrologic Impact Analysis (CHIA) Results in Harm to watersheds.
- WVDEP Fails to Require Properly Protective Soil Removal and Reclamation Measures for Mining Sites



HB 2579

Revision of water quality criteria (aquatic life) for selenium

Summary

- Adopted by WV Legislature during 2013 Regular Session; Effective July, 2013
- Requires WVDEP to establish an implementation plan within six months
- Mandates WVDEP to propose new selenium criteria within two years for legislative approval
- Prescribes a monitoring plan, including water chemistry and fish population studies
- Results of studies to be used by WVDEP to develop state-specific criteria



WV Selenium Monitoring Plan

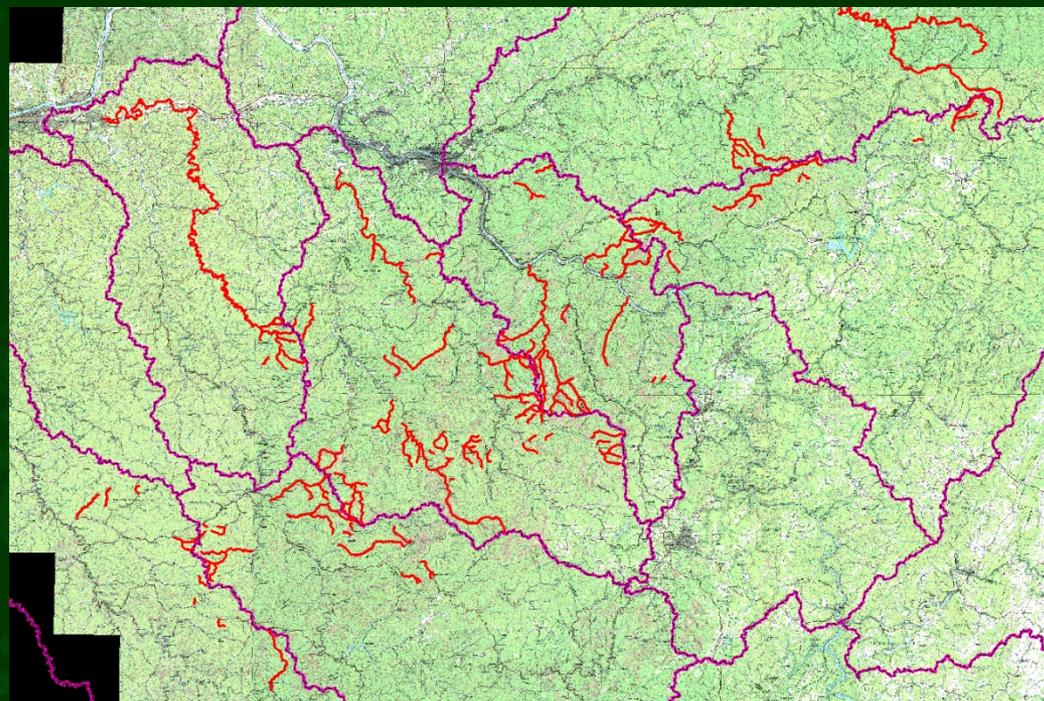
Major Components

- Study initiation and monitoring plan proposal
- Monitoring site locations
- Water chemistry monitoring and speciation analyses
- Fish tissue monitoring
 - Whole body
 - Egg/Ovary
 - Stomach contents
- Early life stage evaluations
 - Deformity rate determinations
- Data reporting
- Criteria calculation



WV Selenium Monitoring Plan

Study Initiation and Monitoring Locations



- 20-30 locations
- Perennial, wadeable
- Flow sufficient to support fish spawning



WV Selenium Monitoring Plan

Data Reporting and Criteria Calculation

- Water chemistry data reported to WVDEP quarterly
- Speciation analyses reported within six months of collection
- Selenium concentrations in tissues will be reported within two months of collection
- Results of deformity evaluations will be reported within six months of completion
- Formal report will be completed and submitted within one year



- Data for individual studies compiled with existing information
- 5th percentile of established tissue thresholds becomes criterion—protective of population
- Water column translation based on dietary uptake, information for





WV Selenium Monitoring Plan

Data Reporting and Criteria Calculation

- Thresholds for tissue matrices (whole body or egg/ovary) based on levels @ EC₁₀ larval deformity rates
- Data for individual studies compiled with existing information
- 5th percentile of established tissue thresholds becomes criterion—protective of population
- Water column translation based on dietary uptake, information for stomach content analyses



FISH-SCI

- Index of Biological Integrity development for wadeable streams in West Virginia
- Alison M. Anderson and J. Todd Petty
- Nearing completion



Hardness based Aluminum



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

January 30, 2014

Mr. Scott G. Mandirola, Director
Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, West Virginia 25304

Dear Mr. Mandirola:

Thank you for soliciting EPA's views on the West Virginia Department of Environmental Protection (WVDEP) proposed revision of statewide aluminum water quality criteria for the protection of aquatic life. As you may know, EPA is in the process of updating the existing Clean Water Act Section 304(a) criteria recommendations for aluminum. EPA's updated criteria will reflect consideration of the latest scientific information on aluminum toxicity, including new data on mussels' sensitivity and pH effects on aluminum toxicity.

EPA encourages West Virginia to monitor the latest research and any updates to EPA's 304(a) aluminum criteria in order to ensure that West Virginia's criteria are based on sound scientific rationale and are protective of aquatic life. As such, WVDEP should consider whether the proposed criteria are protective of mussels in West Virginia, as well as appropriately take into consideration potential pH interactions with aluminum toxicity, as well as hardness. EPA believes the results of the on-going research on aluminum toxicity will provide valuable information to aid West Virginia in development of an appropriate statewide aluminum criteria revision.

EPA reviewed West Virginia's proposed revisions to the aluminum criteria in 47CSR2 "Requirements Governing Water Quality Standards," and provided comments on July 29, 2013, asking West Virginia to consider a list of the latest studies on aluminum toxicity to aquatic life. EPA also shared West Virginia's revisions with the U.S. Fish and Wildlife Service (USFWS), who provided comments on July 19, 2013, expressing concerns regarding aluminum toxicity to mussel species, including federally listed endangered mussels, in West Virginia and citing two studies on impacts to

EPA

- Updating 304(a) criteria recommendations for aluminum
- Latest scientific information on Al toxicity, including
 - Mussels sensitivity and pH effects on aluminum toxicity



2014 Range-wide Indiana Bat Summer Survey Guidelines

Northeast and Appalachian Recovery Units

Mist-netting:

- 42 net nights per 123 acres of forested habitat (trees >5 in. DBH)
- Increase of 18 net nights per 123 acres from 2013 season (24 net nights per 123 acres)
- Major Increases in prices to conduct surveys

Acoustics:

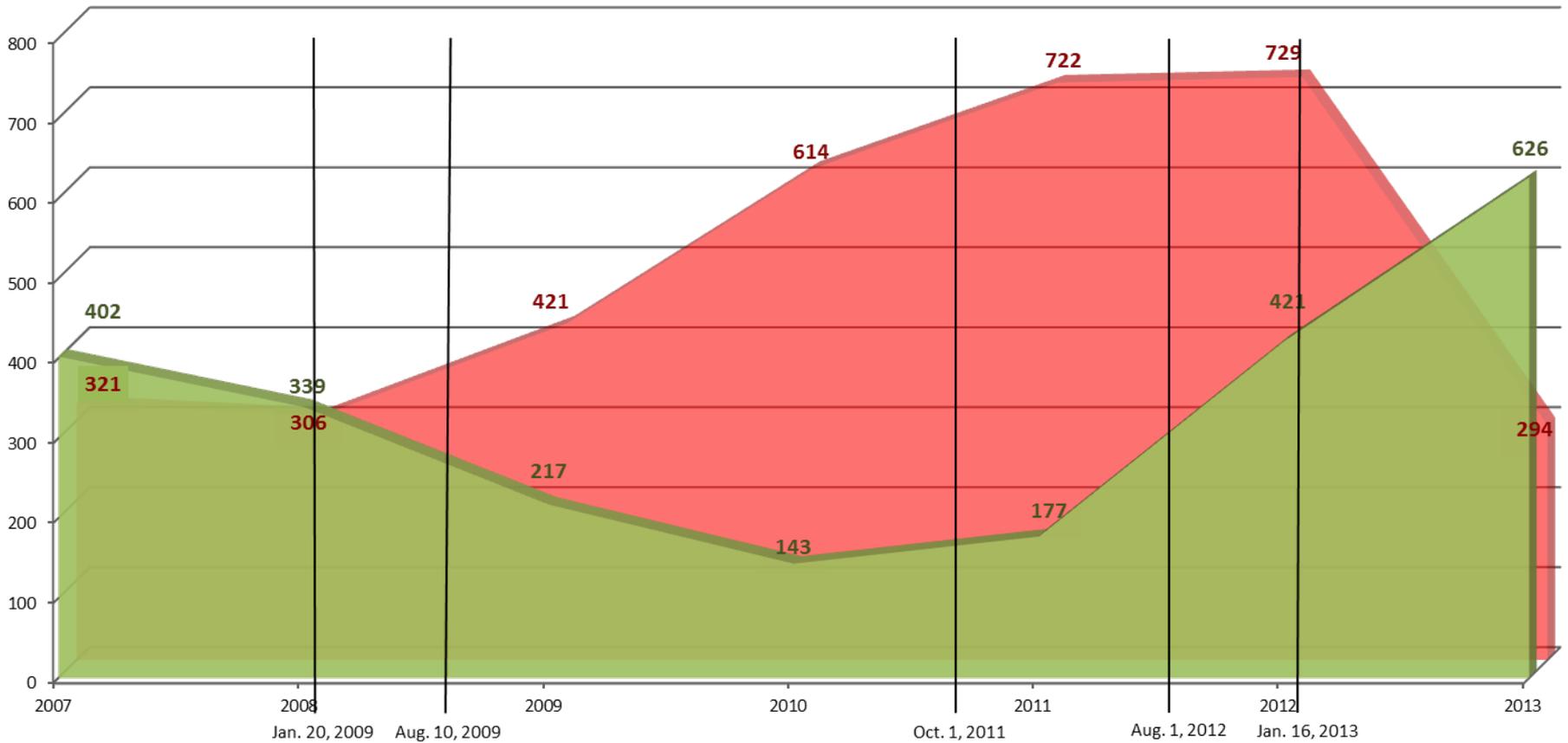
- 2 detector locations per 123 acre location shall be sampled until at least “4 detector nights” has been completed over 2 calendar nights
- If no positive high frequency calls, no further surveys necessary
- If positive high frequency calls are identified then you may “Assume Presence” or conduct additional acoustic analyses
- Acoustic echo-call analyses requires the use of two candidate acoustic bat ID programs
- Currently there is no approved identification software or a call library for species identification.

The U.S. Fish and Wildlife Service and WVDEP have recently renegotiated the state specific (informal consultation) guidelines and now ALL projects may ‘Assume Presence’ of Indiana bats.



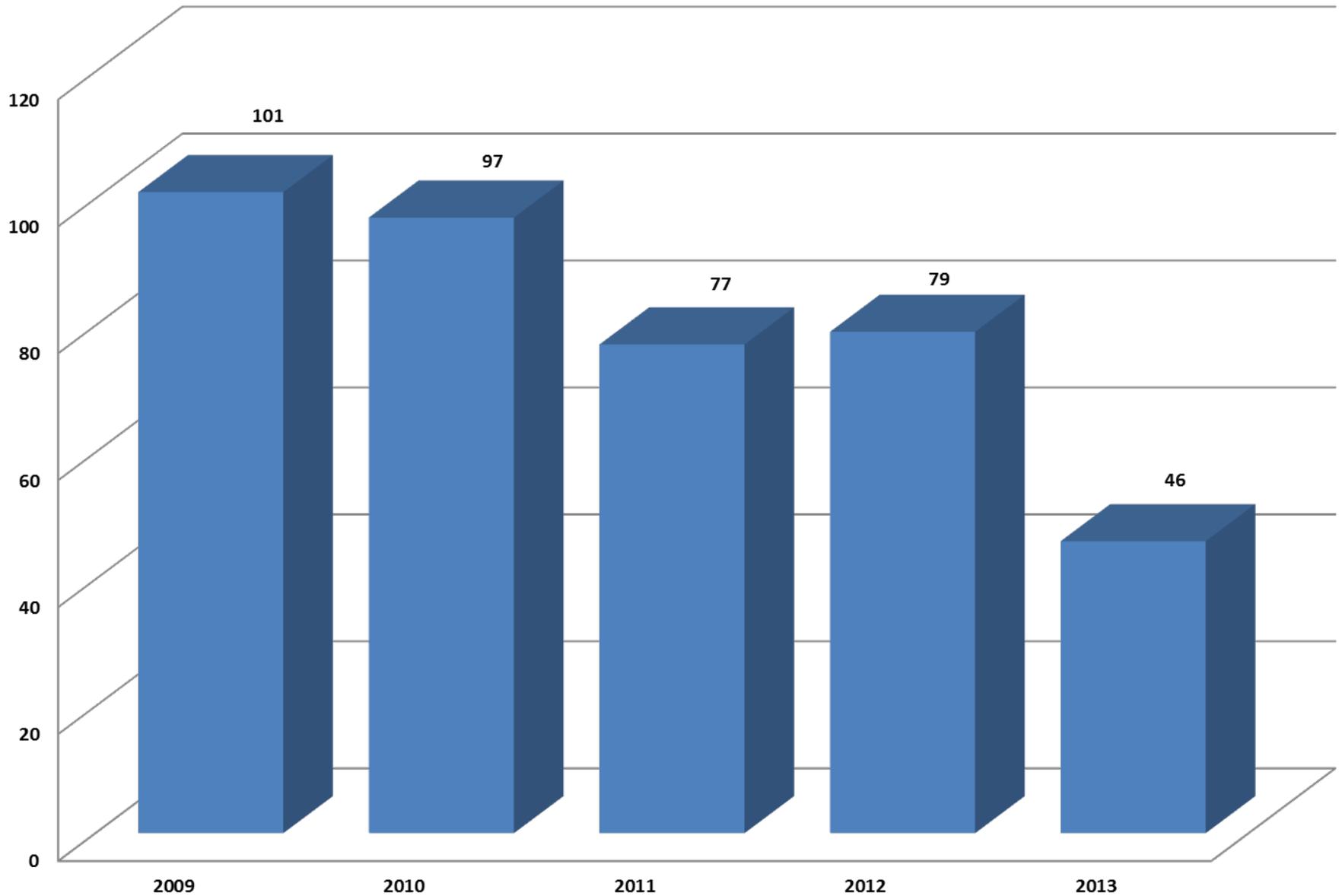
NPDES

***State Issued Water Permits**
 (require approval by EPA as of Aug. 10, 2009)

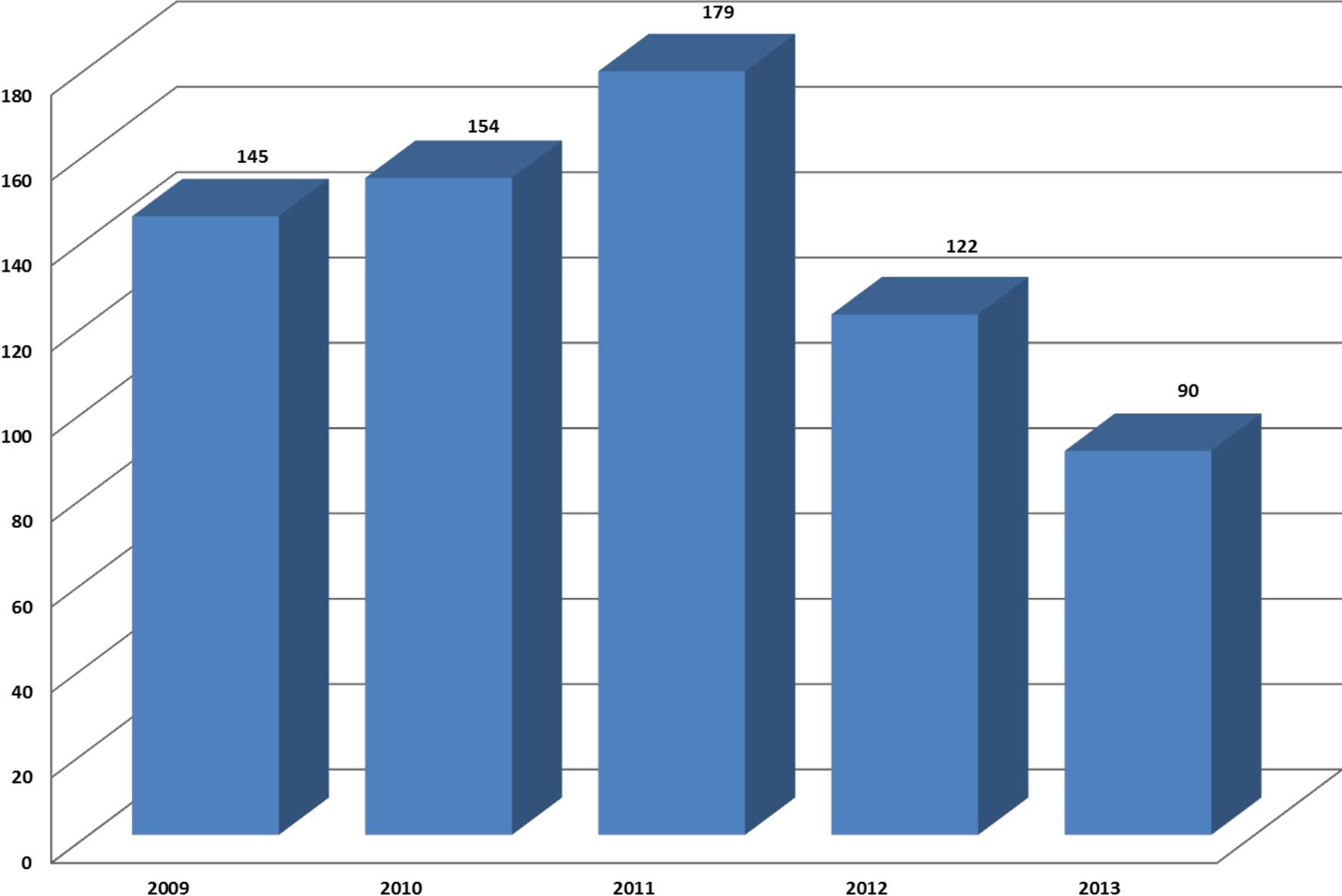


- January 20, 2009 EPA's first objection to a coal permit.
- August 10, 2009 EPA revoked the 1982 MOU waiver requiring full EPA review of all State NPDES permits for coal.
- October 1, 2011 Internal Evaluation of NPDES Functions
- May 1, 2012 Implemented Accountability Measures for NPDES Writers
- August 1, 2012 Won EPA Lawsuit

Mining Submitted - New Permit and Amendment Applications



Mining Submitted - Prospect Applications



- 2013 OSM Annual Report for West Virginia

- www.osmre.gov

- Customer Service-Emergency Warning Plans
Overall good

- Off-Site Impacts- 94 percent of the currently bonded permits were off-site impact free.

- Of those, 99.5 percent were considered minor and 65% were hydrology related

- Reclamation Success-83 Phase III releases totaling 5,210 acres



West Virginia Department of Environmental Protection (WVDEP) Permitting Activities During EY 2013

- **The WVDEP Executed 108 More Permitting Actions than in EY 2012**
- **The Number of Inspectable Units Increased from 2,096 to 2,107, a 1% increase**
- **Permitted Acreage increased From 352,125 to 360,155, a 2.3% Increase**
- **25 New Surface Mine Permits were Issued, vs. 25 in EY 2012**
- **19 New Underground Mine Permits were Issued, vs. 17 in EY 2012**
- **19 New Permits for Other Facilities were Issued, vs. 11 in EY**



(WVDEP) Success in Meeting Inspection Frequency during EY 2013

- **Conducted 8,518 Complete Inspections vs. 7,453 during EY 2012, an Increase of 14%**
- **Conducted 17,994 Partial Inspections vs. 16,214 in EY 2012, and increase of 11%**
- **Statewide, 12% More Complete Inspections Conducted than Required, Based on the Number of Inspectable Units.**
- **85% More Partial Inspections Conducted than Required**



WVDEP Enforcement Actions (No Significant Change from EY 2012)

➤ EY 2013

- 691 Notices of Violations
- 68 Failure to Abate Cessation Orders
- 12 Imminent Harm Cessation Orders

➤ EY 2012

- 775 Notices of Violations
- 58 Failure to Abate Cessation Orders
- 11 Imminent Harm Cessation Orders



National Measurement Elements

OFFSITE IMPACTS

- **Total Percentage of Sites Free of Offsite Impacts Remained the Same as Was the Case in EY 2012 at 88%**
- **Percentage of Non-Forfeited Sites Free of Offsite Impacts Increased from 88% to 91%**
- **In EY 2013 – 335 Offsite Impacts on 210 Permits**
- **In EY 2012 – 345 Offsite Impacts on 223 Permits**
- **Impacts were: 49% Minor, 45% Moderate, and 6% Major**
- **67% of Offsite Impacts were Related to Hydrology**
- **Evaluation Included Root Cause Analysis – Primary Cause of Offsite Impacts was Operator Negligence**



National Measurement Elements

CUSTOMER SERVICE

➤ **During EY 2013, The Customer Service Evaluation Covered Slurry Impoundment Emergency Warning Plans (EWP)**

➤ **EWPs for 32 Impoundments Selected for Evaluation**

➤ **Many Not Entirely Complete, but in All Cases, Necessary Information Had Been Provided to Emergency Response Entities**

➤ **WVDEP Agreed to Require EWPs for Impoundments Being Abandoned, Until the Abandonment Process Was Complete**

It is Noteworthy That SMCRA Regulations do Not Currently Require EWPs, and that the WVDEP Requirement is Proactive.



WVDEP Bond Calculation Matrix

During EY 2013, The CHFO Reviewed the WVDEPs Site Specific Bonding Procedures for 45 Permits

- Determined the Site Specific Bond Calculation Matrix Functions as Intended
- User Friendly, and Automatically Calculates Bond Amount for a Given Permit
- Revealed that Closer Attention to Completing the Matrix is Warranted
- More Emphasis Should be Placed on Bond Review at Permit Renewal



CHFO Oversight Inspections

During EY 2013, The CHFO Conducted 327 Oversight Inspections, of which 17 were Conducted in Response to Citizen Complaints. During these Inspections, 171 Violations of the State Program Were Noted, on 82 Permitted Sites.

- 37 Violations had been Previously Cited by WVDEP
- 75 Violations were Cited by WVDEP at time of Inspection
- 23 Ten-Day-Notices (TDNs) were Issued for 52 Violations
- 13 Violations were Appropriately Resolved in State Responses to TDNs
- WVDEP Responses were Considered Appropriate for 11 TDNs
- 12 Remaining TDNs are Pending OSM Review of State Responses
- Two Federal Notices of Violations Issued During a Previous Evaluation Year , to Two Companies, at the Same Site, Remain Active



CHFO Oversight Inspections (Continued)

PRECIPITATION EVENT MONITORING

- CHFO Evaluates Daily Precipitation on a Weekly Basis
- WVDEP and CHFO Inspection Supervisors are Notified of Permits at which Precipitation in Excess of the 1-year, 24-hour Event is Noted
- Permits Slated by CHFO for Inspection During the Year, that Experience Such Events, are Moved Forward In the Order of Inspection.
- If a Larger Event (i.e. 5-year, 24-hour event) is noted, Sites are Inspected Immediately, Even if Not Slated for Inspection During the Year
- Nine Permits Experienced Events in Excess of the 1-year event.
- Onsite Rain Gages Confirmed that the 1-year event Was Exceeded at 5 of the Sites
- No Onsite or Off Site Damage was Observed at Any of the Sites



Ongoing Oversight Studies and Activities

Numerous Oversight Studies had Been Initiated in Previous Years and Carried Over Through EY 2013. One is Completed, but Required an Action Plan. That Action Plan is Discussed Here. The Remainder are Ongoing, with Status Reports Provided in This Year's Annual Report:

- Slurry Impoundment Breakthrough Potential (Action Plan)
- Liability Insurance Review*
- Incidental Boundary Revision (Pending Amendment Decision)
- Special Reclamation of Sites With Third Party Liabilities*
- Inspection Frequency of Bond Forfeiture Sites
- Acid Mine Drainage Inventory of Active Permits
- Reforestation Activities
- Lands Unsuitable Petitions
- State Regulatory Staffing/Program Funding

***Studies For Which Other Priorities Precluded Progress During EY 2013**



Technical Assistance

➤ Underground Mine Monitoring:

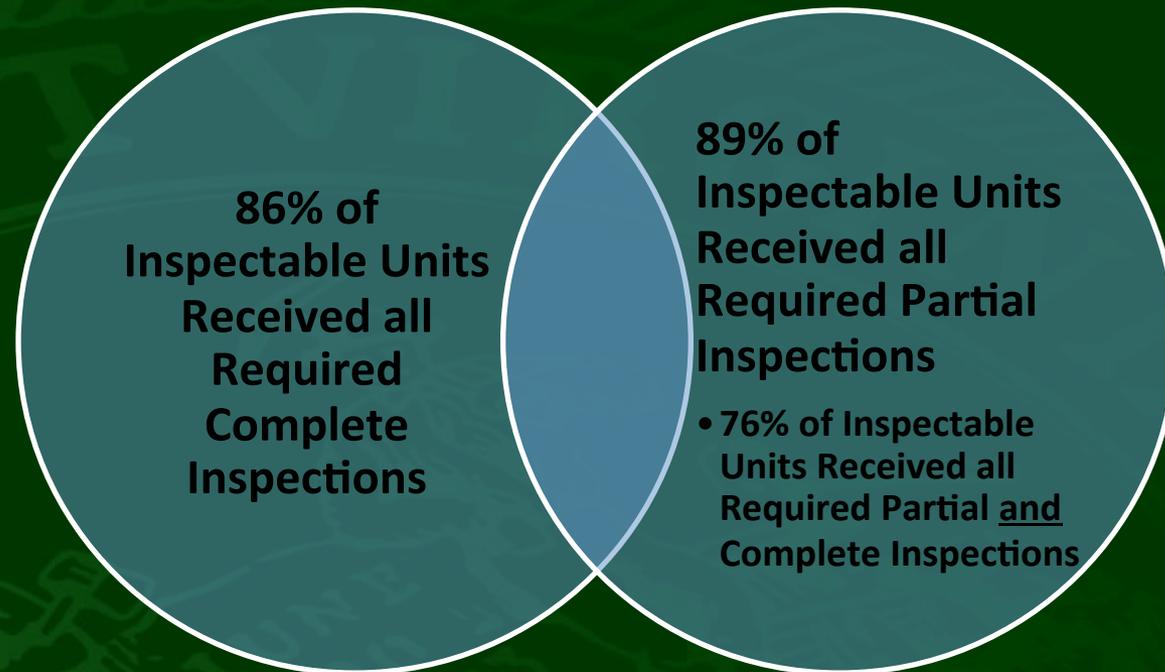
- The CHFO is Assisting the WVDEP in Developing a Guidance Manual Covering Hydrologic Portions of Underground Permits
- A Draft is Under Review and Completion is Expected During EY 2014

➤ Underground Mine Pool Evaluations:

- Monitoring of the Fairmont Mine Pool Continues, to Verify Water is Below the Breakout Elevation, and to Track Water Quality
- A Draft OSM Report on Mine Pool Research is Under Review and is Expected to be Finalized During EY 2014



WVDEP Success in Meeting Inspection Frequency during EY 2013



Excess Complete and Partial Inspections at Some Sites, Conducted in Response to Citizen Complaints, Follow-Ups, and Known Issues, Contributed to the Less than 100% Inspection Rates Shown Here



FOIAs

DEP has processed 1,700+ FOIA
request in 2013.



- Web site

www.wvdep.org



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WV Department of Environmental Protection - Windows Internet Explorer

http://www.dep.wv.gov/Pages/default.aspx

west virginia State Agency Directory | Online Services

Search WV DEP

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DEP Offices | Agency History | News | Outlook Web Access | Text size A A A





Air

Division of Air Quality Home
Air Quality Index
Open Burning Regulations
Air Monitoring Data
Permit Application Forms
Policies

[See More](#)



Land

Abandoned Mine Lands and Reclamation
Division of Mining and Reclamation
Office of Oil and Gas
Special Reclamation of Industrial Lands

[See More](#)



Water and Waste

Water and Waste Home
2012 303(d) List
Water Withdrawal Guidance Tool
Permitting
Water Use
Special Studies

[See More](#)



Inside DEP

Environmental Advocate
Contact the Executive Office
Environmental Enforcement
Youth Environmental Program
Public Information Office
Agency Budget

[See More](#)

Permitting

Narrative Water Quality
Permitting Guidance
e-Permitting/eDMR

[See More](#)

How Do I...?

Find a job with DEP
File a FOIA Request
Find a Public Notice
Report a Spill
Volunteer

[See More](#)

Agency Geospatial Technologies

ITO's GIS Unit
Map Applications
GIS Data

[See More](#)

Events

Cabell County Tire Collection
03/08/2014
ePermitting and eDMR/eReporting Training
03/20/2014
Licensed Remediation Specialist exam set
03/26/2014

[See More](#)

[Click Here for Chemical Spill Information](#)

System Upgrade Underway

The West Virginia Department of Environmental Protection is undergoing a major overhaul of its electronic data information system. WVDEP's new Integrated Regulatory

Spotlight



- Post Mining Limits under 47CSR30
- Selenium Implementation Guidance
- Bioreactors-NPDES and Art 3



TAGIS Flex Searchers

The screenshot shows a web browser window titled "Mapping Applications | WVDEP/TAGIS Server - Windows Internet Explorer". The address bar shows the URL "http://tagis.dep.wv.gov/home/Applications". The page features the TAGIS logo and the text "WVDEP Technical Applications and GIS Unit". A navigation menu includes "APPLICATIONS", "REPORTS", "GIS DATA", "MAP SERVICES", "CONTACT", and "DEP HOME". The main content area is titled "Mapping Applications" and includes a "Recent" sidebar with links to "site usage", "Mine Near Kanawha State Forest", and "LIDAR data downloads available". The main text describes the applications and lists three tools: "Coordinate Conversion Tool", "Mining Data Explorer", and "Oil and Gas Permit Locations". The browser's taskbar at the bottom shows the Start menu and several open applications, including "IOS Devices for GIS...", "Lewis 2012.pptx - Mc...", and "Mapping Applications...". The system tray shows the time as 11:07 AM.

Mapping Applications | WVDEP/TAGIS Server - Windows Internet Explorer

http://tagis.dep.wv.gov/home/Applications

File Edit View Favorites Tools Help

Google WVDEP Search Share More

Sign In

Mapping Applications | WVDEP/TAGIS Server

Page Safety Tools

TAGIS
WVDEP Technical Applications and GIS Unit

APPLICATIONS REPORTS GIS DATA MAP SERVICES CONTACT DEP HOME

Home / Mapping Applications

Mapping Applications

The following geospatial applications allow access to WVDEP environmental data using only an Internet connection and a web browser.

Applications are organized on the web page based on frequency of use. The applications are developed using ESRI's Flex and Javascript API's running on the Agency's ArcGIS Server cluster.

Coordinate Conversion Tool

This application allows it's user to input location based on either latitude and longitude, UTM or state plan coordinates. It then allows the user to convert these values.

Coordinate Conversion Tool

Mining Data Explorer

This applications allows the users to look at information dealing with water based datasets that are released after being tested through out the state of West Virginia.

Mining Data Explorer

Oil and Gas Permit Locations

This application uses Oil and gas permit information and production data available to the general public through this internet service free of charge. These oil and gas related data are originated from the information reported to the Office of Oil and Gas at WVDEP.

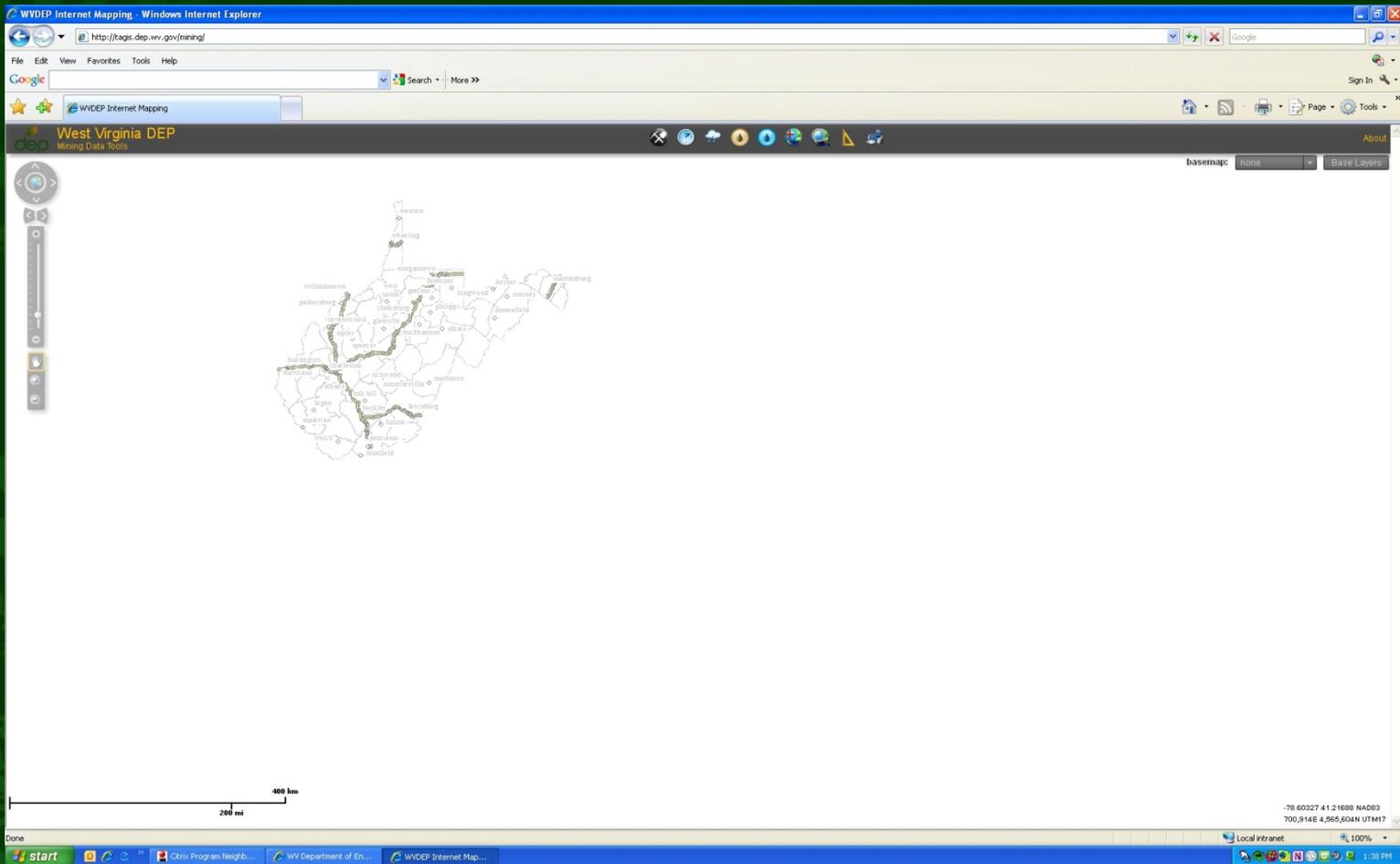
Recent

- site usage
- Mine Near Kanawha State Forest
- LIDAR data downloads available

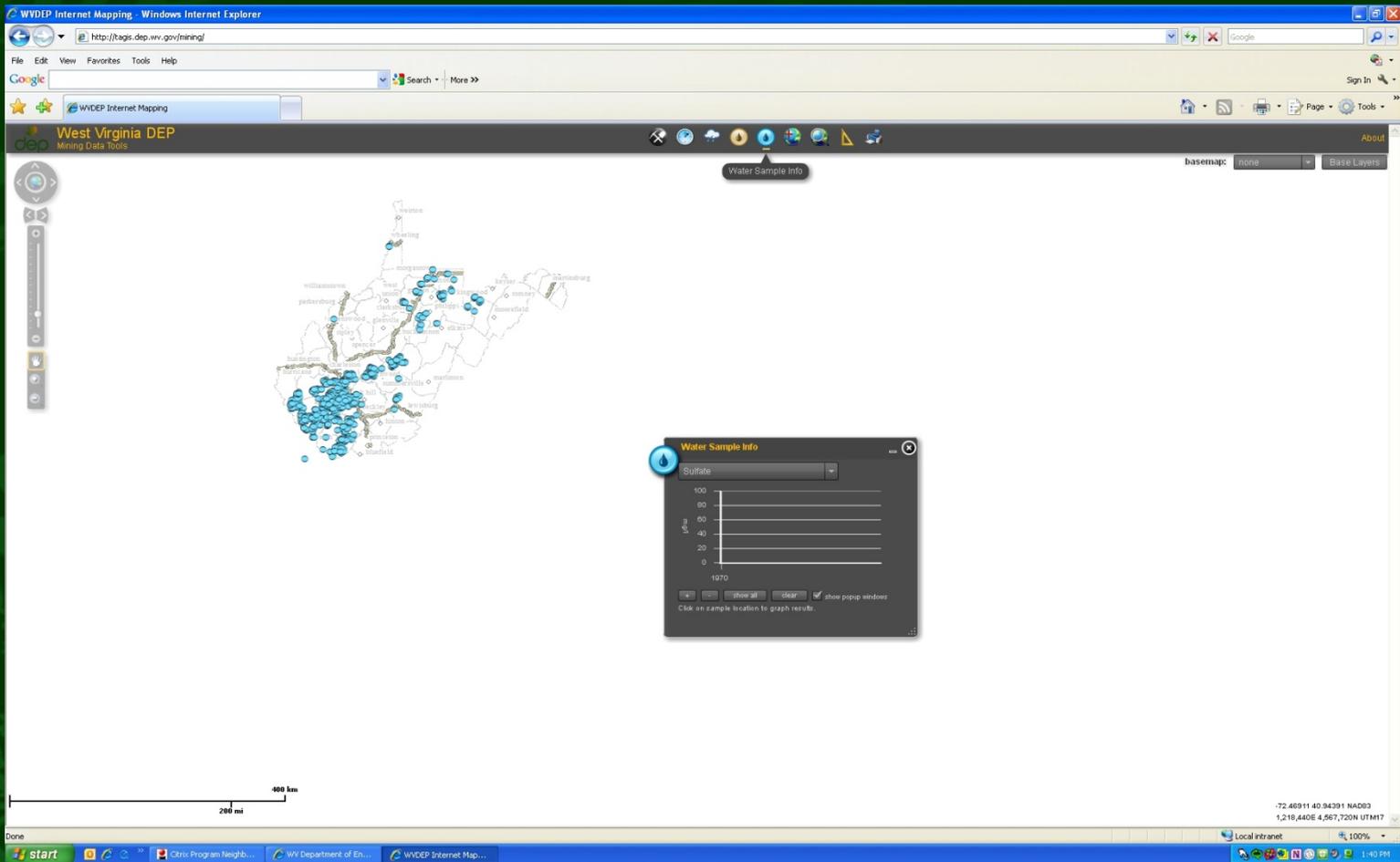
Local Intranet 100%

start iTunes Start Menu IOS Devices for GIS ... Lewis 2012.pptx - Mc... Mapping Applications ... 11:07 AM

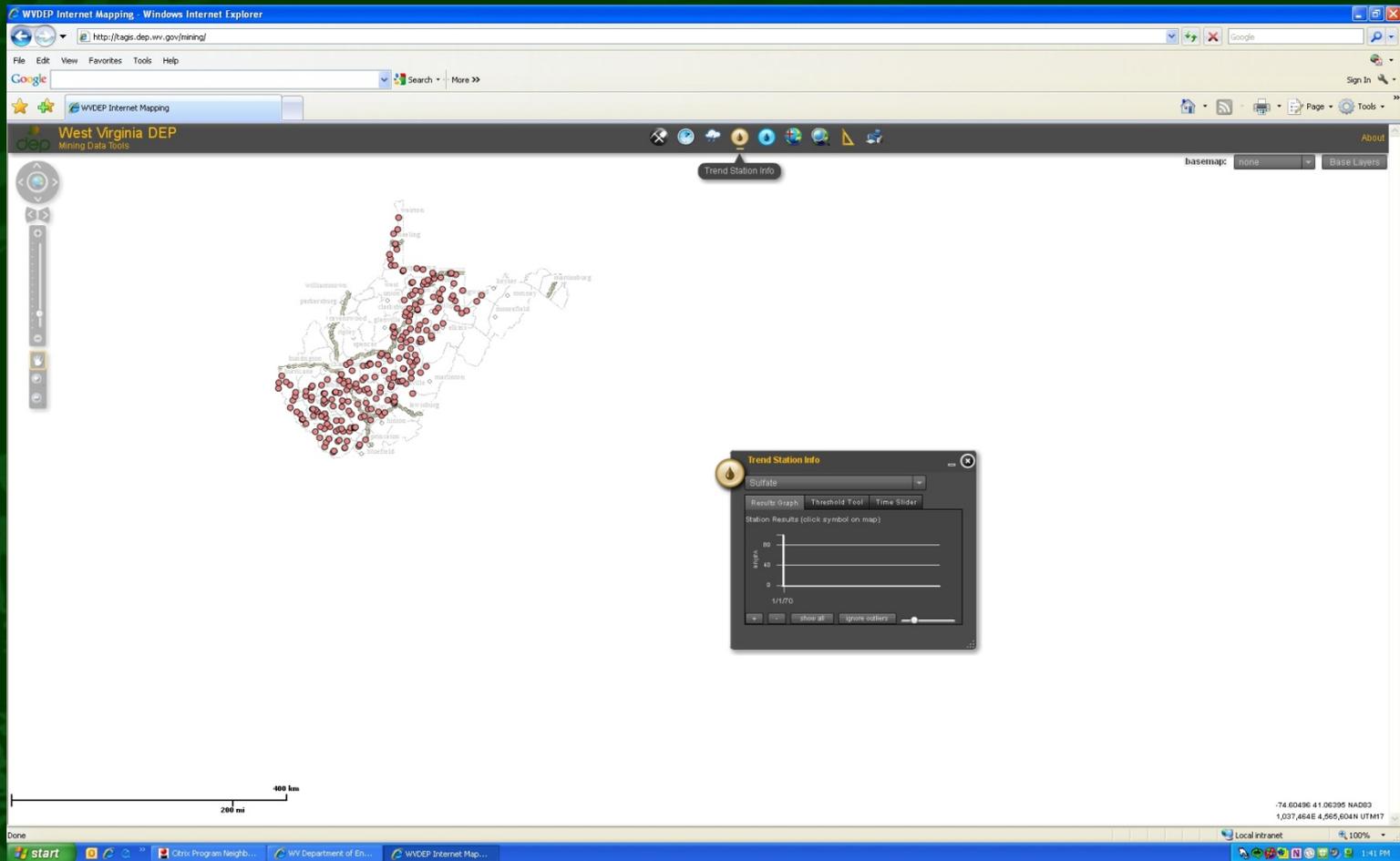
Mining Data Explorer



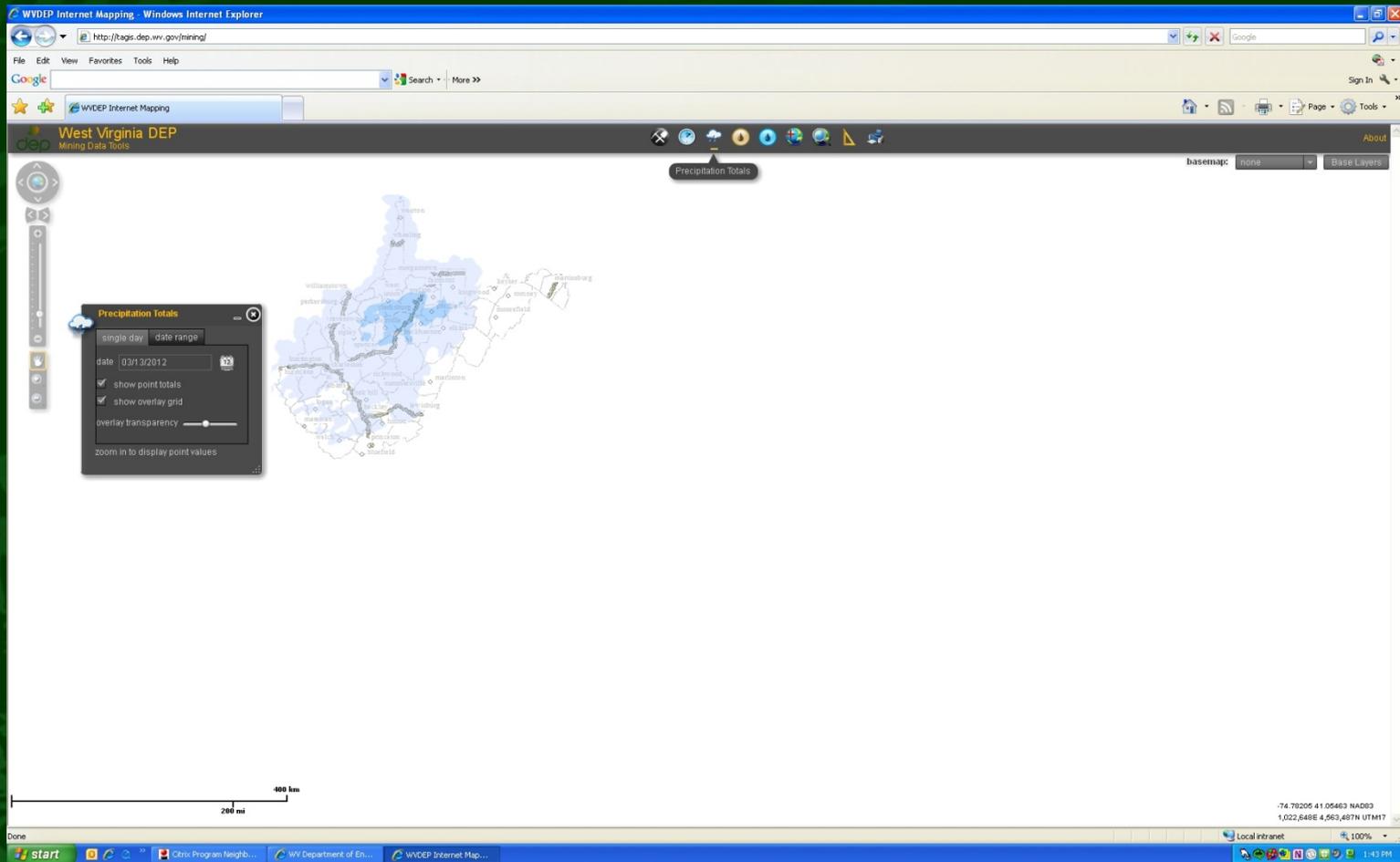
EQUIS Art III Water Quality Data



Trend Station Data



NexRAD Rainfall Data March 13th 2012



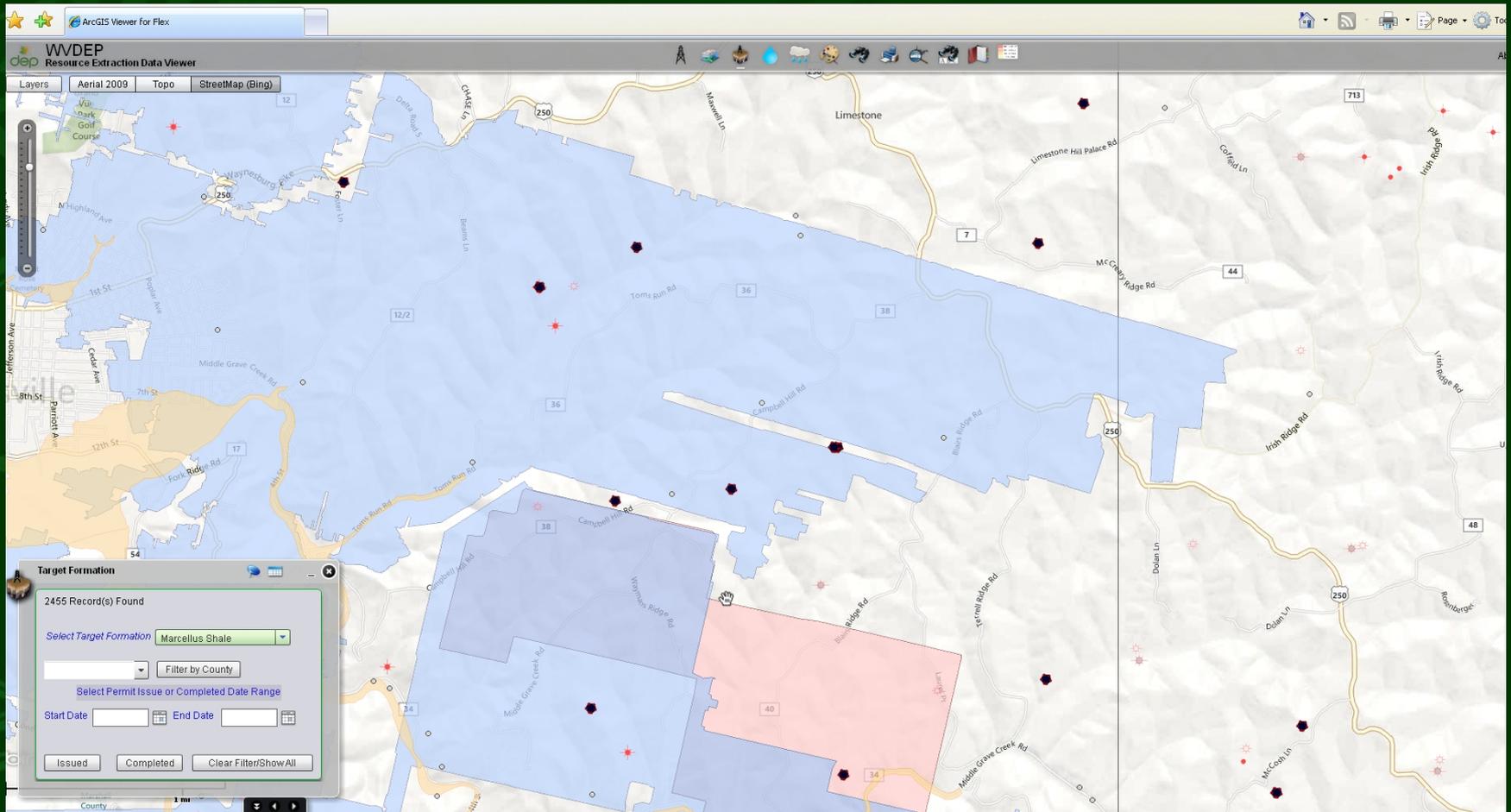
New in 2014 Master Geo-PDF Quads

- Master Quad Map
- http://tagis.dep.wv.gov/maps/quad_index.pdf
- WV Active Mining Program Topo
- <http://tagis.dep.wv.gov/maps/DMRQuadMaps/>
- WV AML Program
- <http://tagis.dep.wv.gov/maps/AMLQuadMaps/>
- WV Oil and Gas Program Topo
- <http://tagis.dep.wv.gov/maps/OGQuadMaps/>
- WV Oil and Gas Program Ortho
- <http://tagis.dep.wv.gov/maps/OGPhotoMaps/>



Resource Extraction Viewer

Marcellus Shale wells near the Alexander Mine



Pending Applications

(77) Pending Applications for All Applicants

<u>Applicant</u>	<u>Type</u>	<u>Seq #</u>	<u>Permit ID</u>	<u>Region</u>	<u>Submitted Date</u>	<u>Admin Complete</u>	<u>Tech Review Complete</u>	<u>Facility Name</u>	<u>Current Status</u>
ALEX ENERGY INC	Surface Mine Application	1	S300907	Oak Hill	05/02/07	12/13/07		Lonestar Surface Mine	SMA # Issued
ALEX ENERGY INC	Surface Mine Application	1	S301107	Oak Hill	05/14/07	08/13/07		Federal Surface Mine No.1	Tech Corr Received
ALEX ENERGY INC	Surface Mine Application	1	U302307	Oak Hill	08/03/07	10/26/07		Deep Mine 22	Tech Corr Received
APPALACHIAN FUELS, LLC.	Surface Mine Application	1	O302507	Oak Hill	08/17/07	01/22/08		Alloy Dock	Tech Corr Requested
APPALACHIAN FUELS, LLC.	Surface Mine Application	1	U303407	Oak Hill	10/26/07			Eagle No. 2 Deep Mine	Pending
ARACOMA COAL COMPANY INC	Surface Mine Application	1	U500308	Logan	01/24/08			Upper Cedar Grove Deep Mine	Pending
ARGUS ENERGY WV LLC	Surface Mine Application	1	S501107	Logan	08/10/07	11/09/07		Jims Branch Surface Mine	Tech Corr Received
ATLANTIC LEASECO, LLC	Surface Mine Application	1	S300407	Oak Hill	03/19/07	05/09/07		Muddlety Surface Mine No. 1	Tech Corr Received
ATLANTIC LEASECO, LLC	Surface Mine Application	1	S302807	Oak Hill	09/14/07	10/24/07		Clear Fork No. 1 Surface Mine	Tech Corr Received
ATLANTIC LEASECO, LLC	Surface Mine Application	1	U300308	Oak Hill	02/26/08	03/26/08		Black Pearl Underground Mine	SMA # Issued
ATLANTIC LEASECO, LLC	Surface Mine Application	1	U300807	Oak Hill	04/30/07	08/24/07		Peerless No. 1 Deep Mine	Tech Corr Received





4/2/1996



Image U.S. Geological Survey



Google™ earth

1996

Imagery Date: 4/2/1996 37°51'47.28" N 80°48'32.81" W elev 3082 ft eye alt 3676 ft

9/5/2013



1996

Imagery Date: 9/5/2013 37°51'47.28" N 80°48'32.81" W elev 3082 ft eye alt 3676 ft

THANKS



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