

Drinking Water Update

2013



Kentucky
UNBRIDLED SPIRIT™

TM

Presentation Outline

- DOW Organization
- Drinking Water
 - Federal Level
 - State Level
 - System Level
- CWA Impacts on PWSs

69% of Americans generally take access to clean water for granted

DOW Organization



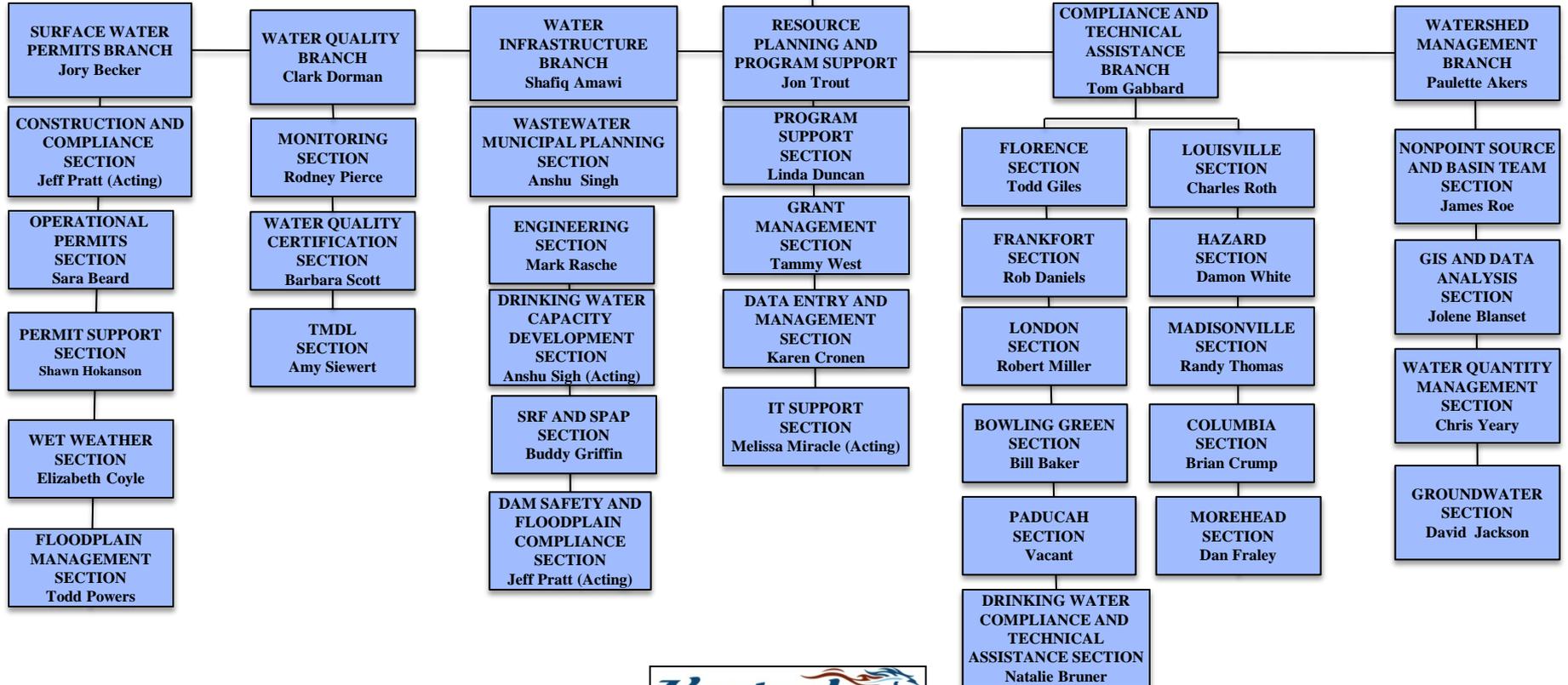
**DCA
DENF
DEPS**

Department for Environmental Protection
Division of Water
200 Fair Oaks Lane
Frankfort, KY 40601
502-564-3410

DIRECTOR
Sandy Gruzesky

← Julie Roney
Drinking Water Program Coordinator

ASSISTANT DIRECTOR
Peter Goodmann



DOW Organization

- New DOW Staff

- Jon Trout RPPS Branch Manager
- Danielle Crosman DOW Reg Writer/Legislation

- New DW Staff and/or positions

- Natalie Bruner DWCTA Supervisor
- Rodney Ripberger PN/CCR Manager
- Eileen Burke SWTR/MOR Manager
- Jason Lambert Capacity Development
- Shannon McLeary Paducah RO Supervisor
- Linda Metts Hazard RO TA/Enforcement



Federal Drinking Water News



Federal Drinking Water News

EPA Priorities

- Budget
 - Federal level
 - State SRFs
- Nutrients and nutrient reduction
- Integrated planning
- SDWA/CWA collaboration
 - Source water protection
- Infrastructure (“green”)
- Children’s health (schools, daycares)
- New rules and policies
- SDWIS NextGen
- Small systems
- Resiliency and disaster response
- Partnerships
- Climate change
- How we look at water



Federal Budget

- Continuing Resolution through September 2012
- Sequestration has a 5% across-the-board cut
 - Affects STAGs and SRFs and EPA staff for 10 years
- ASCE 2013 Report Card on America's Infrastructure
 - Water and wastewater both received a “D”
 - In KY water received a “C+”
 - Roughly \$325B needed in DW alone
 - 75% for main replacement/repair

Federal Drinking Water News

Revised Total Coliform Rule

- Signed in late December 2012 and in the Federal Register
- Effective date is April 1, 2013
- PWS Compliance is April 1, 2016

Carcinogenic VOCs by Group

- Proposed Rule ~October 2013
- Final Rule ~June 2015

Perchlorate

- Proposed Rule ~December 2013 (misses February 2013 deadline)
- Final Rule ~August 2014



Federal Drinking Water News

Electronic Delivery of CCRs

- Guidance to States on January 3, 2013
 - There will not be a regulation change
- Must be able to notify all customers of the electronic availability of the CCR
- Examples of electronic delivery
 - Direct URL to the CCR (i.e., few clicks)
 - Example: Monthly bill with URL prominently displayed
 - Email with CCR attached
 - React to failed emails
- Must have the ability to be notified by a customer wanting a “paper” CCR



Federal Drinking Water News

- Unacceptable electronic delivery methods
 - URL that requires additional navigation
 - Social media
 - Automated phone calls
- Tier 3 Public Notification and the CCR
 - Have received written documentation from EPA that Tier 3 PNs for the applicable CCR year can be included with eCCRs

More details later in presentation



Federal Drinking Water News

Lead and Copper Long Term Revisions

- Proposed Rule ~September 2013
- Final Rule ~May 2014 **but EPA indicates this will be delayed**
- Initial proposals include
 - Separate lead and copper monitoring sites
 - Revising the lead service line replacement requirements
- Lead Reduction in DW Act
 - Effective January 2014
 - EPA has draft FAQs out for comment:
<http://water.epa.gov/drink/info/lead/index.cfm#lfree>
- Issues with maintenance/small part replacements



Federal Drinking Water News

Lead Act (“No Lead” Rule)

- Amends the SDWA language on the prohibition of lead pipes/solder/flux
 - “Lead-free” now defined as no more than 0.25% lead in the wetted surface material based on a weighted average
 - Affects both the PWS and customers (home plumbing fixtures are included)
 - NSF website has vendors listed that meet the new criteria (www.nsf.org)
- Plumbing code overlaps
- States are very concerned with the impacts on systems and a possible strict interpretation



Federal Drinking Water News

UCMR 3

- Monitoring in 2013-2015; Round 3 includes purchasing systems
- EPA Region 4 directly implementing this rule
- Contaminants include hormones, perfluorinated compounds (PFOA/PFOS), VOCs, metals (Cr-6), 1,4-dioxane, chlorate and pathogens

LT₂ SWTR Review

- Review involves improvements to the Crypto method, comments on uncovered finished water reservoirs, bins and microbial toolbox
- Some speculation that the review may affect the next round of source water monitoring scheduled to begin in 2015



Federal Drinking Water News

SDWIS Next Gen 1.0

- EPA goal is to convert in September 2014
 - Intermediate may be SDWIS 3.2 through 9/2015 (KY migrated to 3.2 in March)
- “Cloud” storage versus server storage
 - Direct lab/system input??
 - Cost
- Initial version will be bare bones, just what is needed for inventory and to run compliance
 - Focus on core PWS information, requirements, notification, monitoring, compliance
 - Will not include flexibility for state rules and “add-ons”, operator certification, plan review, permitting, billing



Kentucky and PWS Drinking Water News

54% of Americans estimate they use 50 gallons or less of water daily when they actually use almost 2X that amount

Kentucky
UNBRIDLED SPIRIT™



State Budget

- Let's just say it's not looking good
 - Cuts in general funds
 - Staffing caps
 - Coupled with cuts in Federal funding
- “Same with less” or even “Less with less”

Potential State Regulatory Changes

- For 2013
 - Rewrite the bottled water regulations in 8:700
- For 2014
 - Revised Total Coliform Rule
 - Perchlorate (possibly late in 2014)
- Under consideration
 - Water Supply Planning
 - Submetering

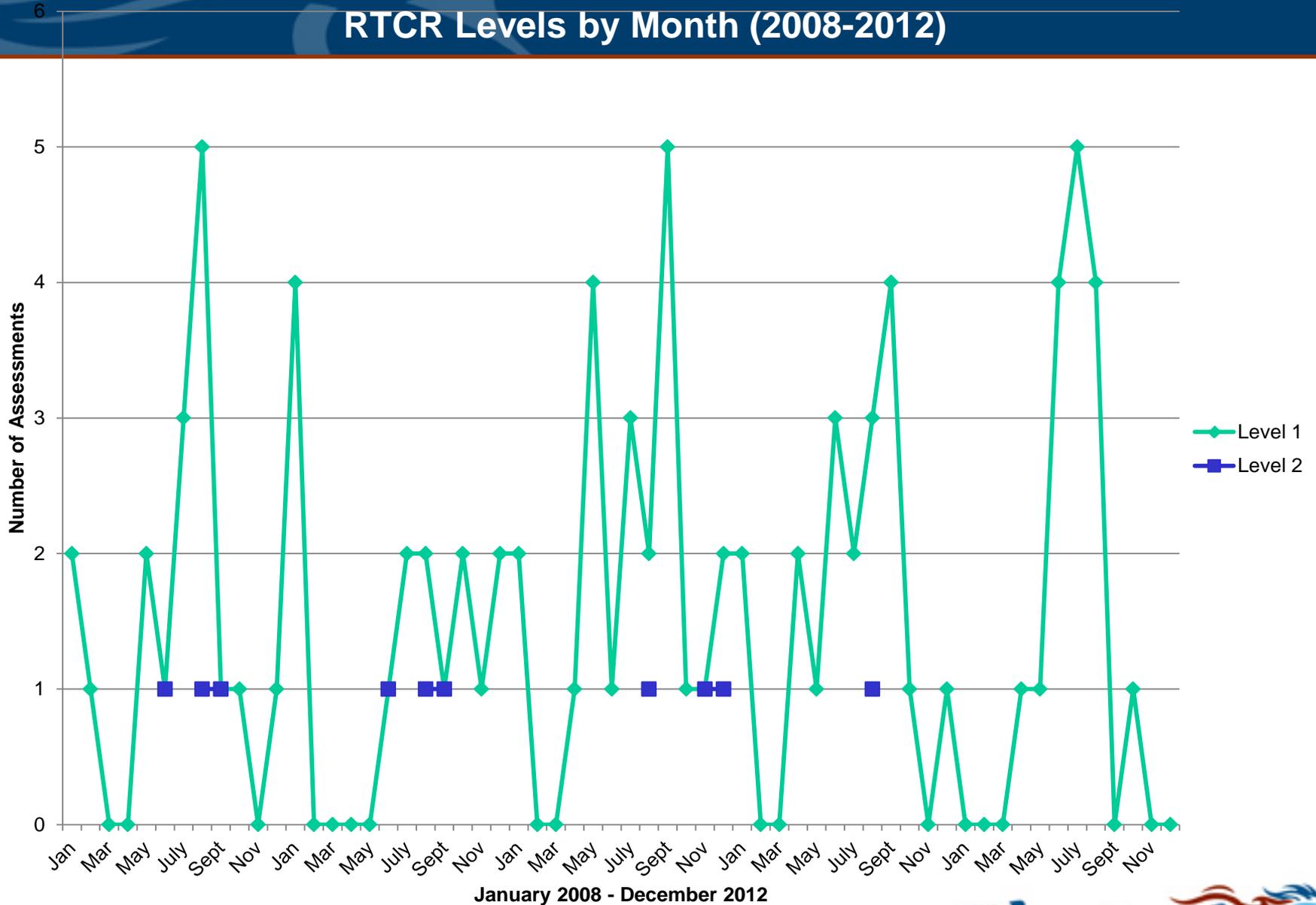
RTCR Assessment Impact

Year	Level 1	Level 2	Comment on Level 2
2008	17	3	All CWS (2 SW, 2 SWP)
2009	17	3	1 CWS, 1 TNC
2010	22	3	2 CWS (1 SW, 1 SWP), 1 TNC
2011	19	1	CWS (1 SWP)
2012	16	0	

In wine there is wisdom, in beer there is strength, in water there is bacteria (David Auerbach 2002)



RTCR Levels by Month (2008-2012)



KY Drinking Water Systems

- Public Water Systems (as of 12/31/2012) **457**
 - 144 Surface Water (31%)
 - 179 Surface Water Purchasers (40%)
 - 111 Ground Water (24%)
 - 23 Ground Water Purchasers (5%)
- Population Breakdown
 - 23% with population over 10K
 - Of those 108 PWS, 11 have more than 1 plant but not more than 3
 - 77% with populations less than 10K
 - 58% with populations less than 5000

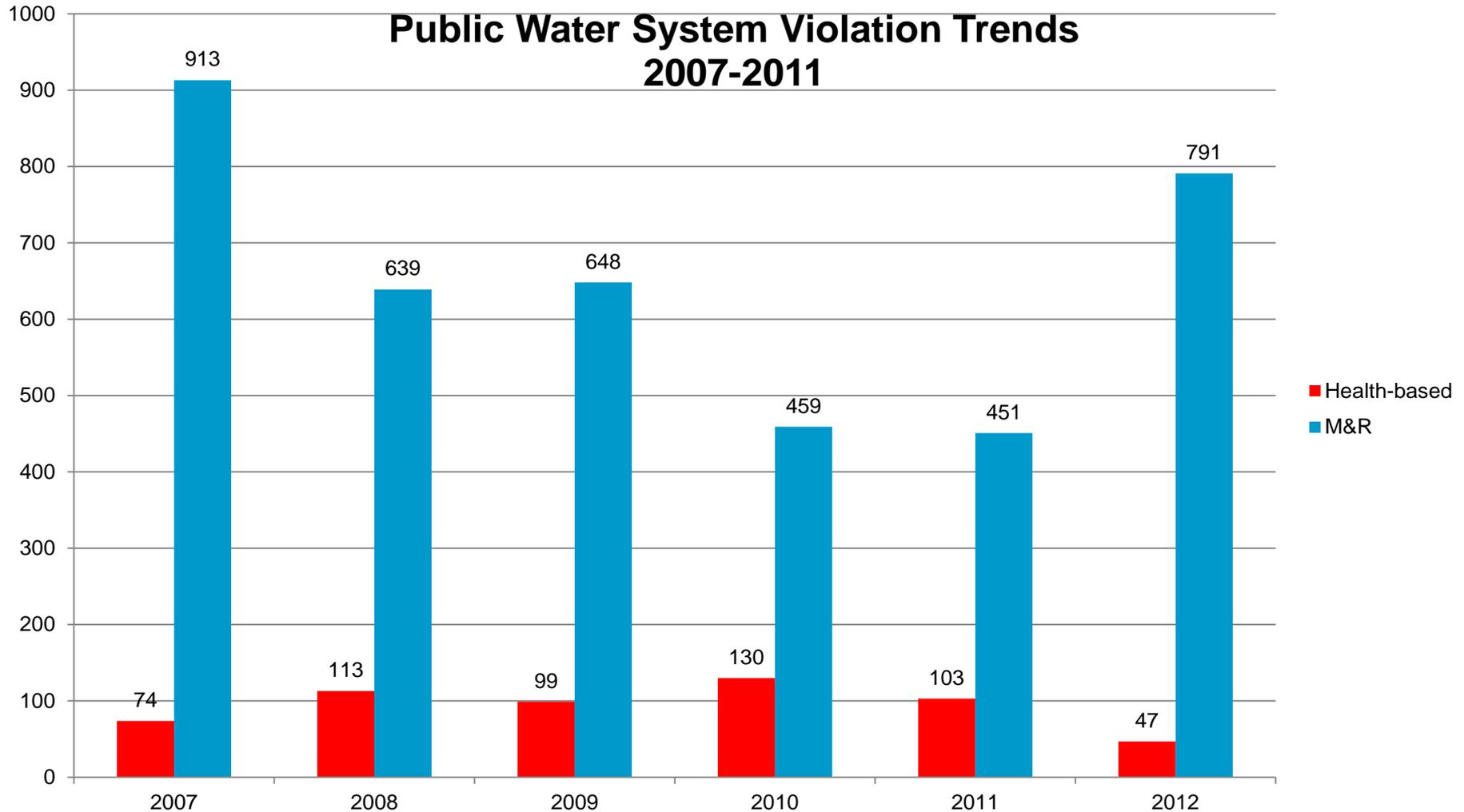
In 1996—713 PWSs

44% purchase
56% produce

KY is considered a
small system state

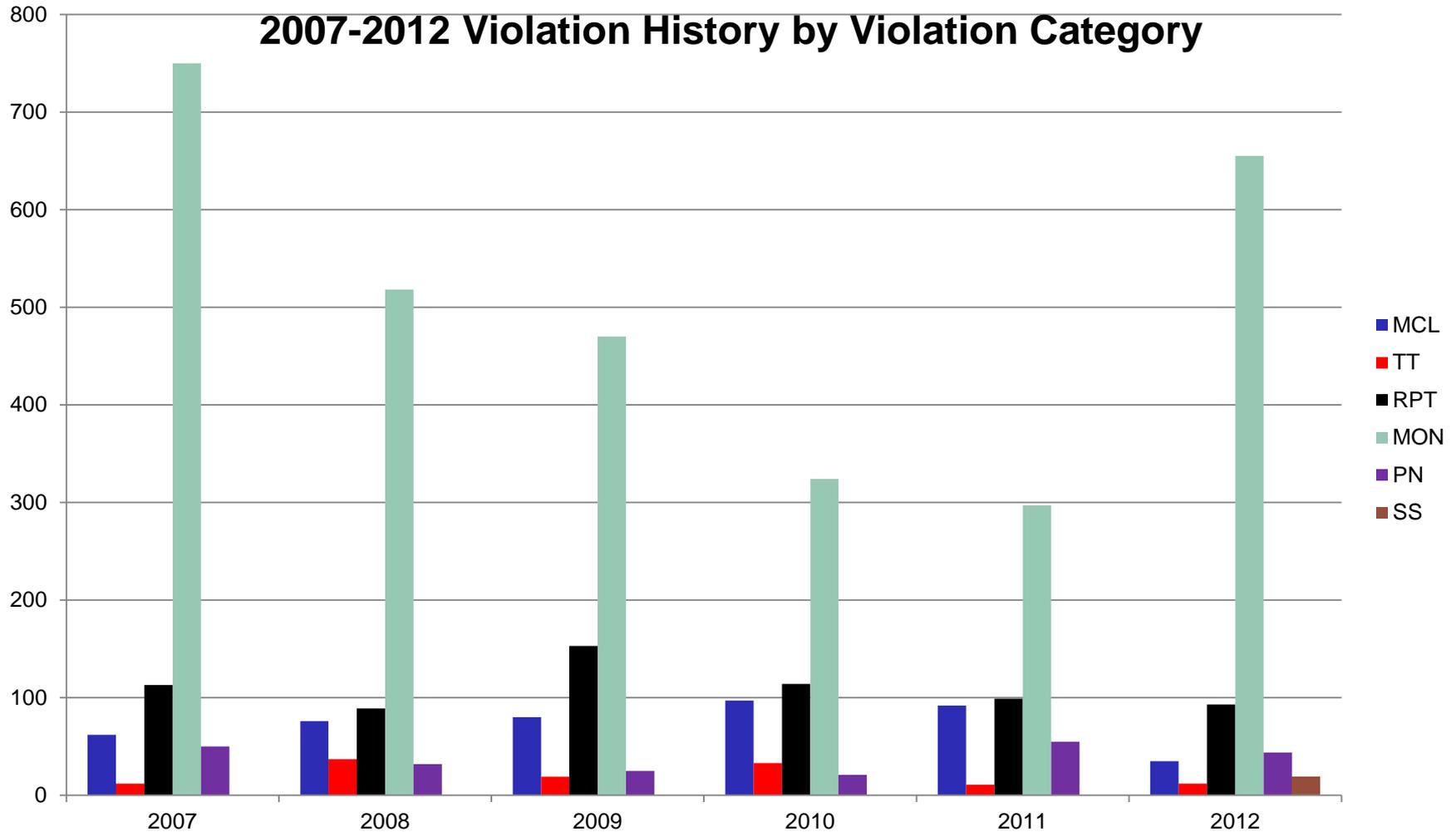


KY Public Water System Violation Trends



2012: Chlorine, TOC, Coliforms, CCR, MOR

KY Public Water System Violation Trends



Enforcement Targeting Tool

- Since January 2012
 - 9 PWS referred for “formal enforcement” due to having 11 or more points on the ETT list
 - 3 had CCR and PN violations only
 - 7 had CCR and/or PN violations along with other violations (primarily DBPs and TOC)
 - January 2013 “Watch List” (5-10 points or schools)
 - All 4 have PN and/or CCR violations
 - All 4 have M&R violations

PWS Inventory

- Any change in PWS “inventory” must be sent to DOW
 - Inventory means addresses, official contact, operators, treatment processes, storage, sources, new wells, etc
 - Often the information comes internally
- Any change or modification of a system’s “sanitary features of design” must be approved by DOW
 - New chemical feed processes, booster stations, baffling, etc

PWS Approvals

- Treatment Chemicals
 - Both trial and permanent use of new treatment chemical must be approved (Don DeKoster)
 - Information now being included in the approval letter regarding possible additional approvals if the new chemical requires a new feed system, containment or other engineering review items

Monthly Operating Reports

- DOW considering revisions to the MOR
 - Return to 3 separate documents (surface producer, groundwater producer, purchaser)
 - Adding in the GWR requirements (currently a separate file)
 - Cleaning up/improving the calculations, automatic page pre-population, etc
- True “eMOR” cannot be developed until approval is received from EPA on how DEP accepts outside data and SDWIS NextGen is implemented

KY CCRs for 2012

- KY will accept eCCRs for the 2012 year with the following requirements:
 - Will still require hard-copy CCR with CCR certification and PN certification (if applicable)
 - CCR certification will be revised to include eCCR option, URL, etc.
 - Primary distribution shall be via a bill insert or bill with a clear, easily seen web address that takes a customer directly to the CCR
 - Shall also include a brief summary on the bill or insert as to what this URL is



KY CCRs for 2012

- eCCR requirements (continued)
 - Those customers that use electronic or direct bill pay shall be sent an email with the eCCR link
 - A checkbox on the bill pay stub for those that want a paper CCR
 - The eCCR and the paper CCR shall be identical
 - PDF format
 - The eCCR shall remain on the utility website for at least 3 months
 - “Good Faith” efforts to reach non-bill paying customer shall continue
 - At least 1 method to be “paper” with others such as social media, other websites, etc.
 - Sign-up for such customers to receive future utility emails

Stage 2 DBP Rule

- First round of compliance was run in April 2013 for Schedule 1 systems
 - Initially, no non-compliance
 - Anticipating DBP non-compliance to begin to increase in the summer months
- First OELs received in January 2013
- Schedule 3 and most 4 systems begin compliance monitoring in October 2013
 - Based on what was seen with Schedules 1 and 2, these systems will not be ready

Preparing for Stage 2—Schedules 3 & 4

- Things to do:
 - Locate the IDSE Report
 - Verify the sample sites (what if the business has closed, etc) and sample schedule
 - **DBP site codes must be 3 digits for SDWIS to accept the data**
 - So if your IDSE used a different naming process, you need to complete a “Specific Site Information Form” for DBPs
 - You can’t change the schedule if it changes the month of warmest temperature



Preparing for Stage 2—Schedules 3 & 4

- Things to do (continued):
 - Contact your lab
 - Re-educate yourself on the rule requirements
 - Compliance is now by site
 - OELs must be calculated each quarter
 - TOC monitoring is still required if a SW producer
 - Develop a working relationship with your producers and/or purchasers
 - Purchasers are going to be especially challenged
 - Distribution system operators need to request water quality data from their purchasers—Know your source water!

Dealing with Stage 2—DOW Level

- Working with Engineering to review impacts of proposed projects on DBP levels
 - Need to develop projects that solve today's problems without creating future ones
- Over 93% of Kentuckians have access to potable water
 - Bigger distribution systems, more tanks, longer lines, less turnover == possibly higher DBPs
 - Challenge to continue to regionalize while maintaining water quality
- Re-evaluating C-T inactivations on a case by case basis
- Increased technical assistance
 - Using the Enforcement Targeting Tool



Capacity Development/Sustainability

- After 7 years and 2 sanitary survey cycles, the DOW may be considering a new programmatic approach to capacity development
 - May consider capacity development as “planning”
 - May incorporate critical capacity items such as budgets, asset management, water audits, emergency response, etc
 - As a need but not necessarily a “metric”

*Broken/leaking infrastructure loses 1.7
Trillion gallons of water each year*



CDAP 2013

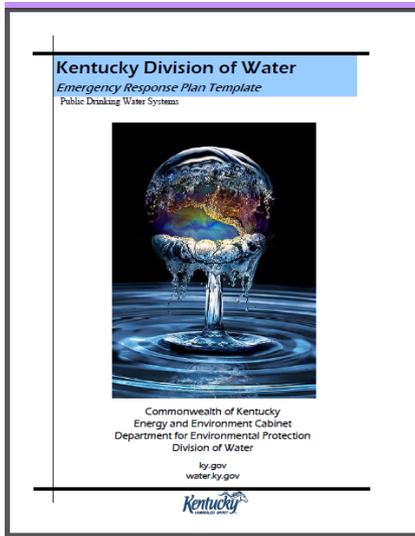
- DOW and RCAP partnership—Round 2
- Call for projects from small systems with sanitary survey deficiencies or recommendations that impact “capacity”
- 72 projects received
 - 22 PWSs will receive assistance for 25 projects totaling ~\$280,000
 - Projects include O&M manuals, mapping, leak detection/water loss, tank inspections, rate studies

*240,000 main breaks each year
(ASCE 2013 Report Card)*



Emergency Response Planning

- Working with KRWA to improve emergency response planning at PWSs
 - DOW developed a format
- <http://water.ky.gov/DrinkingWater/Pages/CapDev.aspx>
- KRWA working with selected PWSs on developing a good, usable ERP



Contact Anne Powell with DOW (Anne.Powell@ky.gov) or Joe Burns with KRWA (j.burns@krwa.org) for more information.

DW SRF

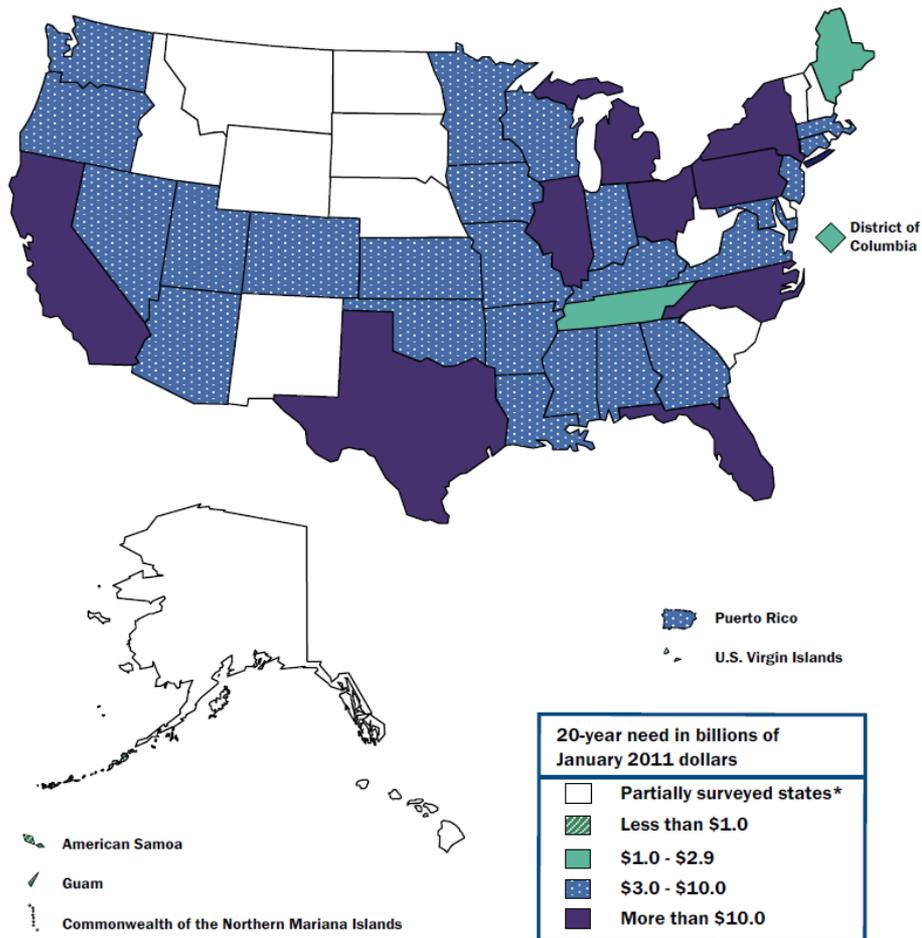
- 2014 Intended Use Plan is final
 - 8 projects will receive letters
- Unliquidated Obligations (both capital and set-asides)
 - “Just-in-time” thinking with no banking of funds
- Watching Congressional actions
 - Both CW and DW SRFs
 - WIFIA (proposed)

A water main breaks every 2 minutes in America

2011 Drinking Water Needs Survey

- 2011 DW Needs Survey is final
 - \$384.2 billion projected for the 20-year period from January 2011-December 2030
 - Does not include projects for dams, raw water reservoirs, future growth and fire protection
- Medium size systems (3301-10,000) have the greatest need at 43%

Exhibit 2.3: Overview of 20-Year Need by State



Total 20-Year Need by Project Type
(in billions of January 2011 dollars)

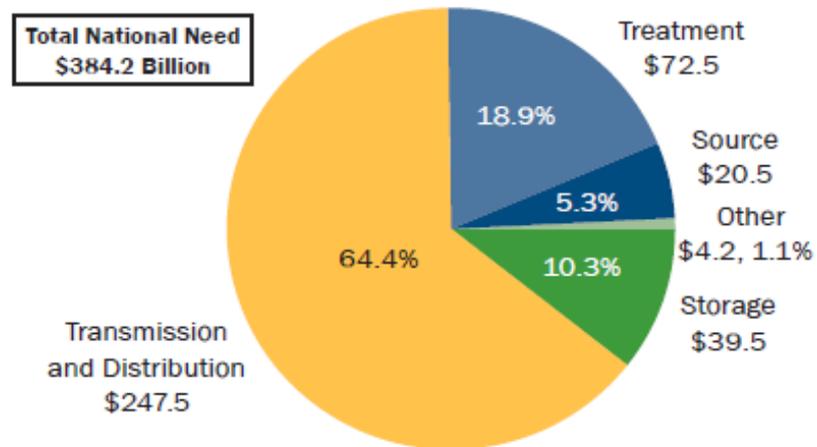
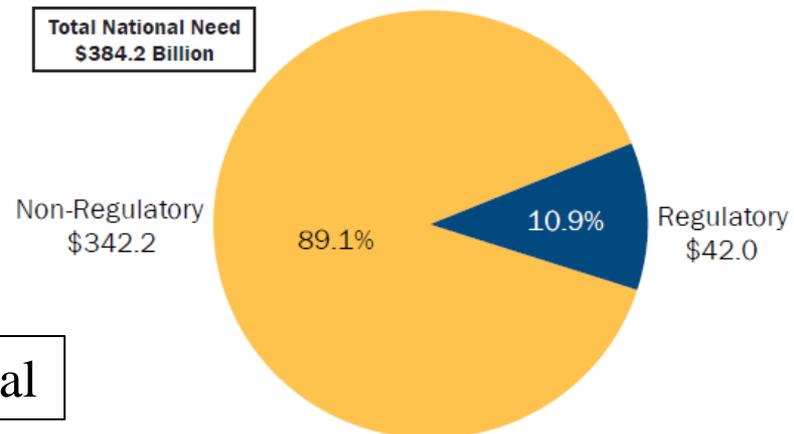


Exhibit 1.7: Total Regulatory vs. Non-Regulatory 20-Year Need
(in billions of January 2011 dollars)



65% of regulatory need is microbial

State	Transmission and Distribution	Source	Treatment	Storage	Other	Total
Alabama	\$6,115.2	\$142.7	\$918.8	\$639.8	\$133.2	\$7,949.8
Arizona	\$4,974.6	\$334.7	\$1,416.9	\$684.9	\$29.6	\$7,440.7
Arkansas	\$4,391.6	\$195.5	\$857.0	\$574.3	\$79.9	\$6,098.4
California	\$26,752.1	\$2,564.5	\$8,467.3	\$6,403.9	\$325.3	\$44,513.0
Colorado	\$4,136.4	\$223.6	\$1,915.4	\$816.5	\$32.2	\$7,124.0
Connecticut	\$2,584.3	\$146.6	\$545.1	\$267.3	\$35.0	\$3,578.3
District of Columbia	\$1,448.7	\$0.0	\$43.3	\$104.4	\$10.2	\$1,606.7
Florida	\$10,153.6	\$1,348.2	\$3,561.8	\$1,060.5	\$346.8	\$16,471.0
Georgia	\$6,732.1	\$297.0	\$1,371.8	\$813.8	\$53.5	\$9,268.2
Illinois	\$12,673.7	\$1,575.5	\$2,786.2	\$1,551.1	\$398.4	\$18,984.9
Indiana	\$4,522.3	\$334.5	\$1,036.7	\$618.2	\$35.3	\$6,546.9
Iowa	\$4,189.7	\$294.9	\$900.1	\$509.6	\$35.9	\$5,930.2
Kansas	\$3,066.7	\$190.7	\$572.9	\$351.8	\$12.5	\$4,194.7
Kentucky	\$4,848.5	\$96.8	\$708.6	\$524.3	\$50.4	\$6,228.6

Exhibit 2.2: State 20-year Need Reported by System Size (in millions of January 2011 dollars)

State	Large	Medium	Small	NPNCWSs	Total
Alabama	\$1,570.2	\$5,951.9	\$423.3	\$4.3	\$7,949.8
Arizona	\$3,987.1	\$2,463.9	\$968.7	\$21.0	\$7,440.7
Arkansas	\$696.0	\$4,354.9	\$1,039.2	\$8.3	\$6,098.4
California	\$27,369.9	\$13,317.8	\$3,710.3	\$115.0	\$44,513.0
Colorado	\$2,708.2	\$3,222.5	\$1,191.8	\$1.5	\$7,124.0
Connecticut	\$1,735.3	\$1,137.7	\$674.1	\$31.2	\$3,578.3
District of Columbia	\$1,606.7	\$0.0	\$0.0	\$0.0	\$1,606.7
Florida	\$8,258.6	\$6,147.8	\$1,919.7	\$144.8	\$16,471.0
Georgia	\$3,283.0	\$4,197.4	\$1,772.2	\$15.6	\$9,268.2
Illinois	\$8,640.7	\$7,135.7	\$3,083.7	\$124.9	\$18,984.9
Indiana	\$1,791.2	\$3,416.3	\$1,139.3	\$200.0	\$6,546.9
Iowa	\$447.9	\$3,821.2	\$1,640.3	\$20.9	\$5,930.2
Kansas	\$1,045.3	\$1,762.7	\$1,382.8	\$3.9	\$4,194.7
Kentucky	\$1,206.2	\$4,662.0	\$359.1	\$1.2	\$6,228.6

2011 Drinking Water Need Survey--History

State	1995	1999	2003	2007	2011
Alabama	\$2,724.6	\$1,610.2	\$2,293.7	\$4,649.8	\$7,949.8
Alaska	\$1,266.4	\$871.8	\$925.5	\$921.4	*
Arizona	\$2,222.9	\$2,416.8	\$12,386.1	\$8,405.6	\$7,440.7
Arkansas	\$3,324.4	\$2,285.2	\$4,806.1	\$5,987.2	\$6,098.4
California	\$30,894.6	\$26,053.0	\$37,853.7	\$44,288.8	\$44,513.0
Colorado	\$3,200.6	\$3,769.5	\$7,230.1	\$7,259.4	\$7,124.0
Connecticut	\$2,227.8	\$1,499.7	\$887.0	\$1,581.1	\$3,578.3
Delaware	\$610.2	\$452.9	\$327.1	*	*
District of Columbia	\$216.1	\$616.8	\$202.9	\$991.6	\$1,606.7
Florida	\$7,119.0	\$5,548.0	\$20,427.6	\$14,544.8	\$16,471.0
Georgia	\$5,410.4	\$3,584.7	\$12,247.2	\$10,137.8	\$9,268.2
Hawaii	\$707.6	\$218.5	\$1,103.5	*	*
Idaho	\$969.2	\$768.5	\$987.3	*	*
Illinois	\$8,784.8	\$9,160.8	\$18,330.7	\$17,033.4	\$18,984.9
Indiana	\$2,750.0	\$2,522.8	\$5,475.9	\$6,742.6	\$6,546.9
Iowa	\$3,704.4	\$4,240.5	\$4,758.9	\$6,933.8	\$5,930.2
Kansas	\$3,245.6	\$2,451.8	\$2,622.5	\$4,571.3	\$4,194.7
Kentucky	\$3,652.4	\$2,635.6	\$3,814.8	\$5,646.5	\$6,228.6
Louisiana	\$3,003.0	\$1,800.4	\$5,533.0	\$7,800.5	\$5,200.0

Simultaneous Compliance

- When compliance activities for one rule affects another rule—often adversely
 - Chlorine residual and DBPs
 - Corrosion control and DBPs and secondaries
- When compliance activities in one Act affects another Act
 - CWA and SDWA overlaps
 - SDWA and CAA overlaps

*“We are all downstream”
(Ecologist’s Motto)*



2012 AWOP

- Microbial
 - 54 water treatment plants met the more stringent AWOP turbidity goals in 2012
 - 2.2 million people receiving safer water
 - Lawrenceburg and Williamsburg were recognized as Microbial AWOP Champions
- DBP
 - 4 water systems met the more stringent DBP goals
- Press release is being drafted



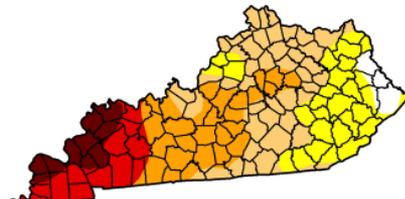
2012 Drought

U.S. Drought Monitor Kentucky

July 17, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	3.52	96.48	74.68	43.92	20.32	7.81
Last Week (07/10/2012 map)	0.00	100.00	86.84	46.86	20.32	2.49
3 Months Ago (04/17/2012 map)	61.71	38.29	8.16	0.00	0.00	0.00
Start of Calendar Year (12/27/2011 map)	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	86.72	13.28	0.04	0.00	0.00	0.00
One Year Ago (07/12/2011 map)	100.00	0.00	0.00	0.00	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, July 19, 2012
Richard Heim, National Climatic Data Center, NOAA

Drought Monitor maps is Tuesday at 7 a.m. Eastern Time. The maps, which are based on analysis of the data, are released Time.

U.S. Drought Monitor Kentucky

November 20, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.72	60.28	8.17	4.35	0.00	0.00
Last Week (11/13/2012 map)	53.64	46.36	8.17	4.35	0.00	0.00
3 Months Ago (08/21/2012 map)	34.13	65.87	41.75	25.28	17.88	6.16
Start of Calendar Year (12/27/2011 map)	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year (09/25/2012 map)	40.18	59.82	26.60	15.35	2.96	0.00
One Year Ago (11/15/2011 map)	90.59	9.41	0.00	0.00	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, November 22, 2012
National Drought Mitigation Center,

[PDF](#) [Tabular Statistics](#) [About the DIR](#)

[Drought Monitor](#) | [Forecasts](#) | [What's New](#) | [Current Conditions](#) | [About Us](#) | [Archive](#) | [Contact Us](#) | [Links](#)

[Return to U.S. Drought Monitor](#) [Return to Region](#)

The data cutoff for Drought Monitor maps is Tuesday at 7 a.m. Eastern Time. The maps, which are based on analysis of the data, are released each Thursday at 8:30 a.m. Eastern Time.

U.S. Drought Monitor

Kentucky

February 12, 2013
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	100.00	0.00	0.00	0.00	0.00	0.00
Last Week (02/05/2013 map)	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago (11/13/2012 map)	53.64	46.36	8.17	4.35	0.00	0.00
Start of Calendar Year (01/01/2013 map)	73.25	26.75	5.68	0.00	0.00	0.00
Start of Water Year (09/25/2012 map)	40.18	59.82	26.60	15.35	2.96	0.00
One Year Ago (02/07/2012 map)	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>

Released Thursday, February 14, 2013
Michael Brewer, National Climatic Data Center, NOAA

The solution to our water problems is more rain (Mark Twain)



Clean Water News
(Yes it does impact drinking water)



Federal Clean Water News

- Integrated Planning
 - Primarily wastewater and stormwater
 - DOW may look at holistic planning and include DW
- Waters of the US
- Nutrients
- Stormwater
 - KYR00 Industrial Storm Water Discharge Permit out for public notice in February

*The sewer is the
conscience of the city
(Victor Hugo, Les
Miserables 1862)*

Kentucky Clean Water Regulatory Actions

- Wastewater Laboratory Certification
 - Responded to public comments by June 14
 - To ARRS Committee in July (tentative)
- Clarification Nationwide Permit #12 for Utility Line Backfill and Bedding
 - Applicants now required to submit a water quality certification application and sediment/erosion plan to quality for a general permit
 - <http://migration.kentucky.gov/Newsroom/water/dow401.htm>

PSC/ICIS and DMRs

- ICIS (Integrated Compliance Information System)
 - Conversion from PSC is complete
 - NetDMR (online) being used by ~250 permittees
 - Currently NetDMR is voluntary
 - Mandatory use being phased in for **all** permittees (except home units) from May 2013-March 2014
 - New permits or renewals will require NetDMR within 1 year of permit issuance

Net DMR Roll Out Schedule

Permit Type	Approximate Letter Send Date	Initial NetDMR	# Permits Yet to Convert to NetDMR
Monthly: Landfills - 16 / Oil Leases - 18, Water Plants - 19	9/19/2013	February 2014	182

This website can be used to determine your NetDMR compliance date—all you need is your permit number

http://dep.gateway.ky.gov/eSearch/Search_Required_NetDMR.aspx



Kentucky Clean Water “Hot Topics”

- Potential for increasing levels of source water bromide
 - Downstream impacts for DW systems (carcinogenic DBPs)
- EPA looking at “hydrologic flow” to protect downstream water quality
- Mining impacts on drinking water sources

Questions?? Comments??

Julie W. Roney

Drinking Water Program Coordinator

Julie.Roney@ky.gov

