



Water Management Plan Update: Oil and Gas Workshop, 10/30/2013



Presented by:
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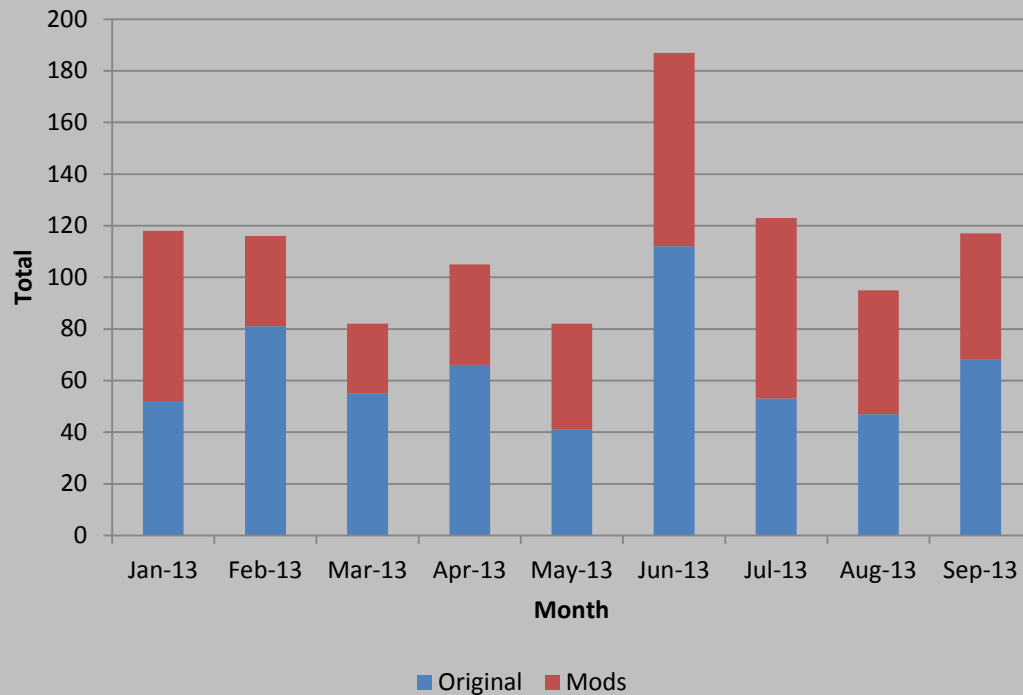
west virginia department of environmental protection

Agenda items

- 2013: Year in review
- Water Management Plan Program Changes
 - §35-8-5.6d,e; §35-8-9.1a,b
- §22-26 requirements reminder
- WMP Loose Ends

2013: Year in Review

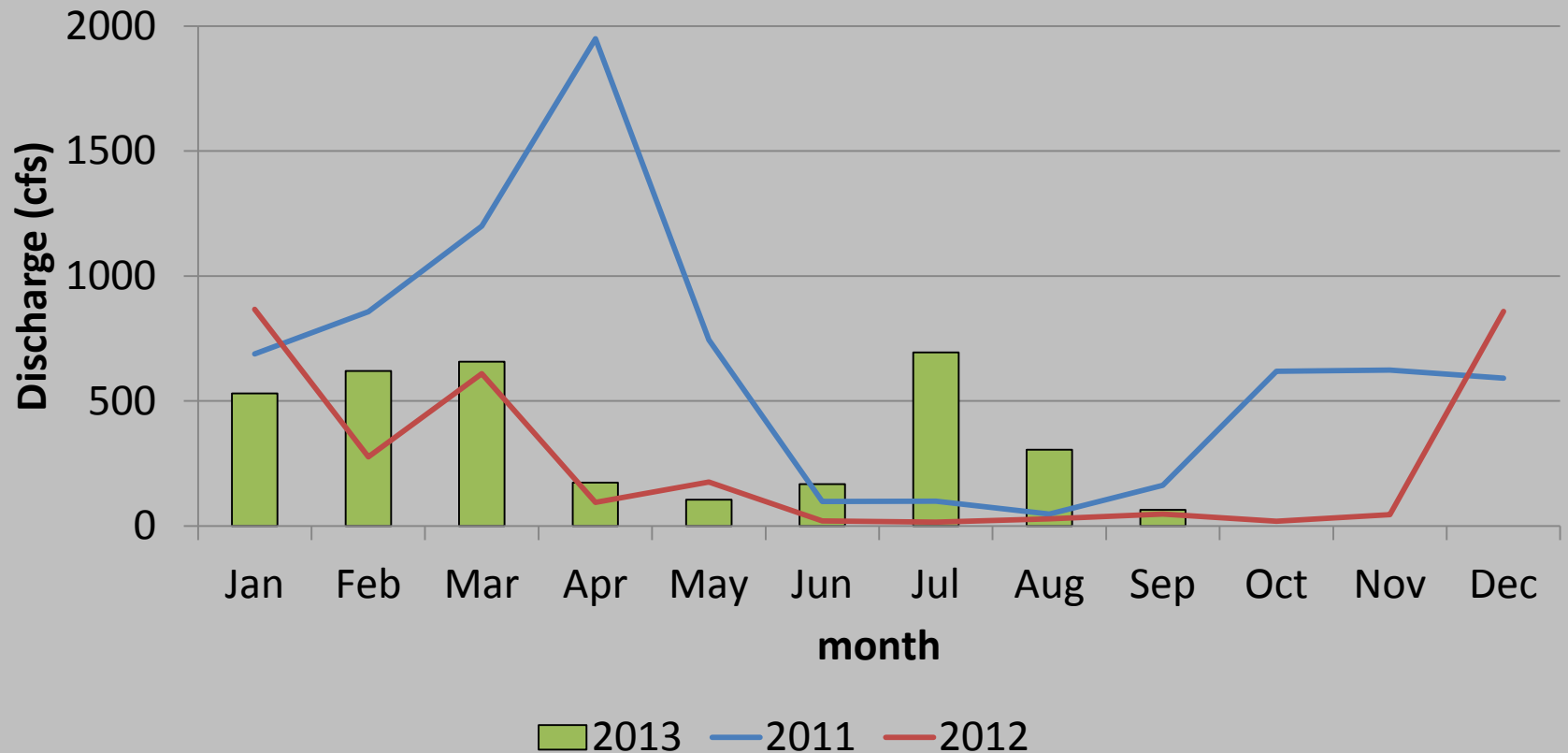
WMP Approvals by Month - 2013



Month	Original	Mods	Total	% Mod
Jan-13	52	66	118	56%
Feb-13	81	35	116	30%
Mar-13	55	27	82	33%
Apr-13	66	39	105	37%
May-13	41	41	82	50%
Jun-13	112	75	187	40%
Jul-13	53	70	123	57%
Aug-13	47	48	95	51%
Sep-13	68	49	117	42%
2013 Totals	575	450	1025	44%

2013 Water Availability

Middle Island Creek @ Little, WV



What's new with §35-8?

§22-6A

- Signage identifying location as a withdrawal site:
 - Operator Name
 - API Number
 - Emergency Contact

§35-8-5.6e

- Signage identifying location as a withdrawal site:
 - Operator Name
 - API Number
 - Emergency Contact
 - How to obtain a WMP
 - DEP Phone #
 - DEP Website

What's new with §35-8?

§22-6A

- Pass-by requirements
 - Methods approved by the Secretary
 - Min. flow on reference gauge
 - Min. flow on-site (no measurement requirement, just compliance requirement)

§35-8-5.6d

- Pass-by requirements
 - Min. flow on reference gauge
 - Min. flow on-site

OR

- Min. flow on-site as certified by a professionally installed, and calibrated staff-gauge

What's new with §35-8?

§22-6A

- Staff-gauges:
 - None

§35-8-9.1.a.1

- Staff-gauges:
 - DEP may require staff gauges to be professionally installed and calibrated
 - DEP shall establish forms and instructions
 - In development
 - Contact DEP for questions on implementation

What is a staff-gauge?

- §35-8-2.20
 - “Staff gauge” means a continuously functioning measuring device in the field designed to record the height of water in a stream or river.



Staff Gauge Certification

- Step 1: Site selection
 - DEP discretion
 - By request
 - 1 gauge completed (example below)
 - 10 gauges in progress

Example:

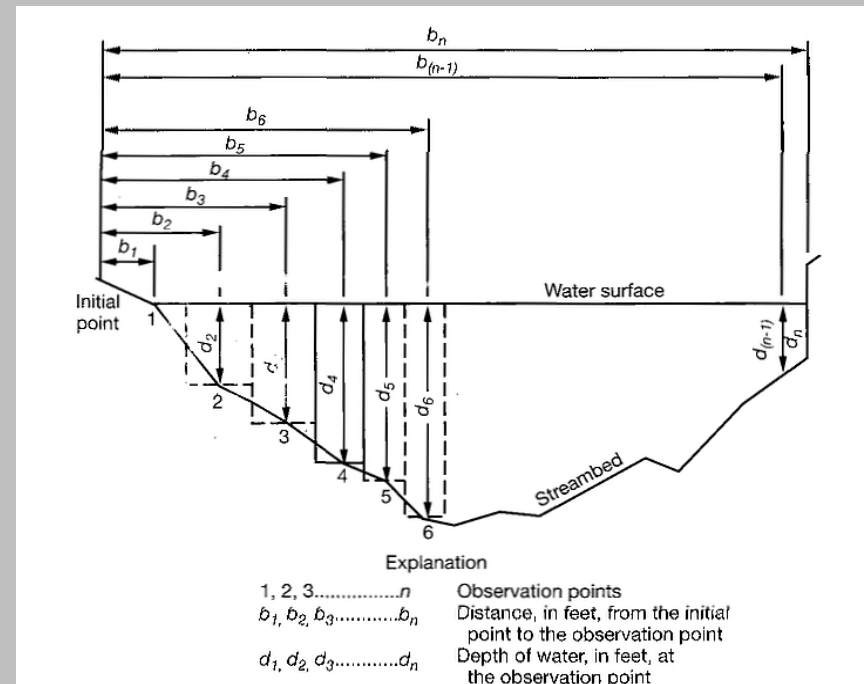
Dunkard Creek @ Statler Withdrawal Site
(121.19 sq.mi)

Decker's Creek @ Morgantown: **21.51 cfs**
Passby: **33.56 cfs**



Staff Gauge Certification

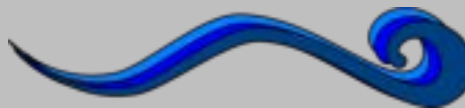
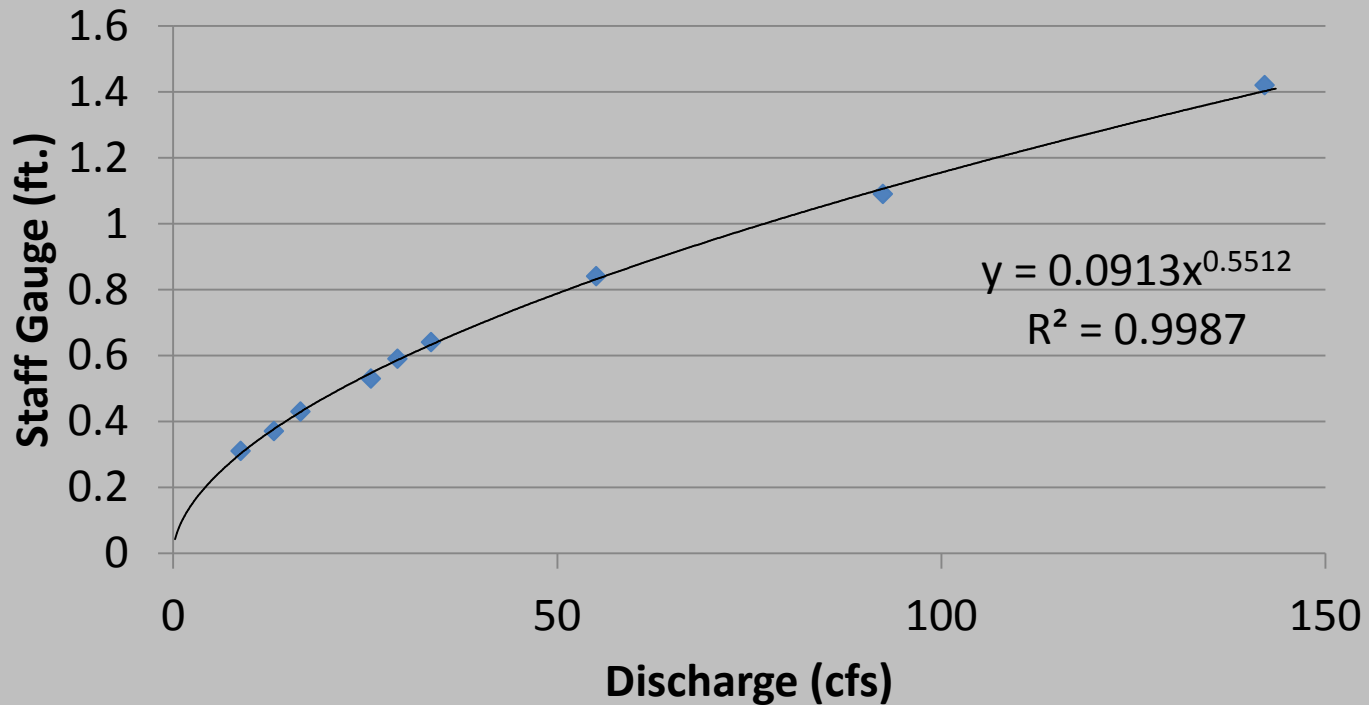
- Step 2: Data collection
 - Obtain stream flow measurements using a 3/3/2 collection pattern
 - 3 low flow
 - 3 moderate flow
 - 2 any flow
 - Sum of partial discharges method (*math, math, math*)



Staff Gauge Certification

- Step 3: Data analysis

Dunkard Creek Staff Gauge Calibration

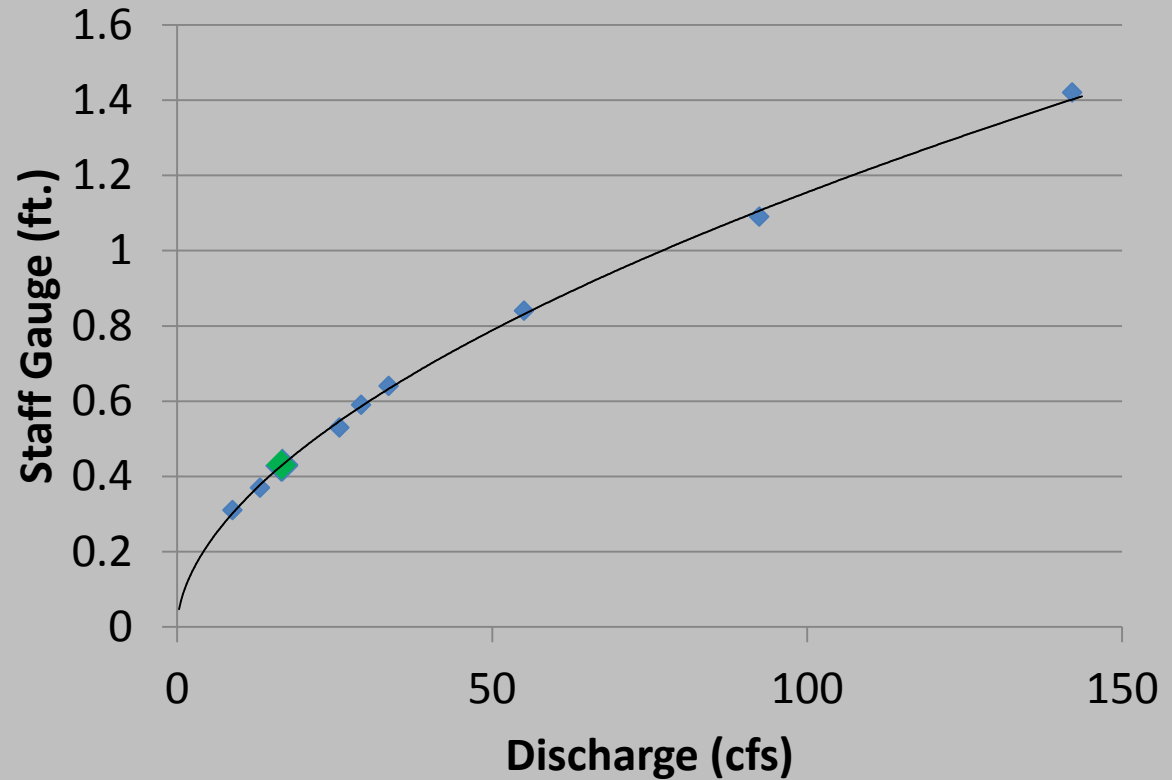


Staff Gauge Certification

- Step 4: Data validation

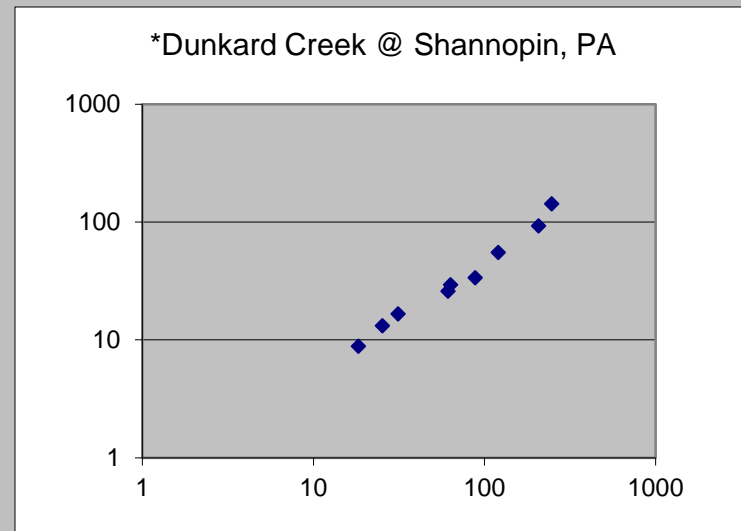
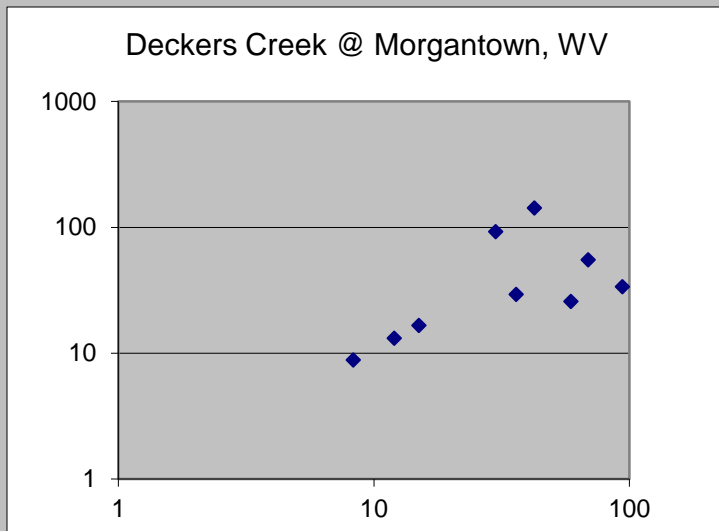


Dunkard Creek Staff Gauge Calibration



Staff Gauge Certification

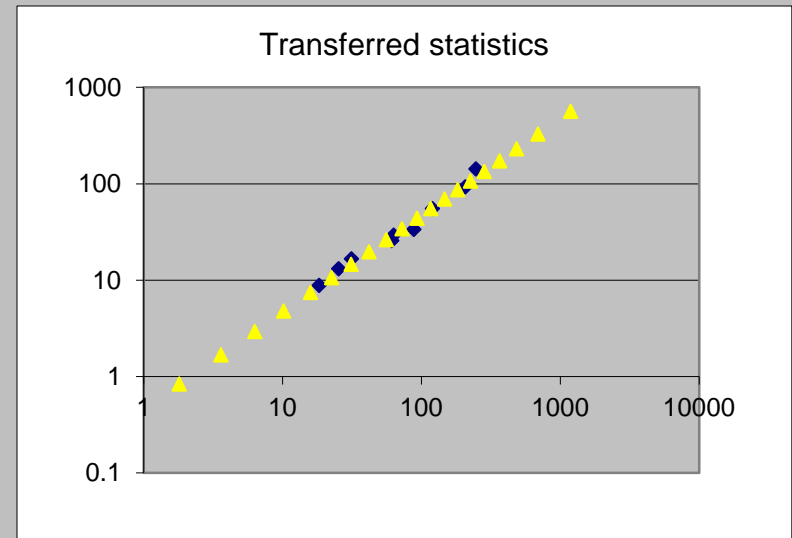
- Step 5a: Setting pass-by flow requirement
 - Correlation to Reference Gauge (*math, math, math*)



*16.7 cfs removed from each discharge reading to compensate for Shannopin mine dewatering project

Staff Gauge Certification

- Step 5b: Setting pass-by flow requirement
 - Transfer statistics from gaging station to withdrawal site (*math, math, math*)
 - Pass-by requirement may go up or down. The point of this process is increasing accuracy, not decreasing thresholds.
 - 75th percentile at withdrawal site is 10.58 cfs (vs. 33.56 cfs)



Staff Gauge Certification

- Step 6: Following the staff-gauge
 - Passby requirement is related to a position on the staff gauge (*math, math, math*)
 - Above or below the line determination

Staff gauge = 0.34 ft



Staff Gauge Certification

- Step 7: Site Maintenance
 - Stream must remain free of collected debris, leaves, downed, trees, etc.
 - If the stream bed changes in any significant way, gauge must be re-calibrated.
 - Withdrawal requirements revert to previously established reference gauge thresholds.



Water Resources Protection and Management Act

- §22-26
 - Large quantity water users
 - Any facility using more than 750,000 gallons of water in any month
 - Annual certification process
 - Facilities must report 3 years withdrawal and water disposal data
 - Facilities must certify that water use hasn't changed by more than 10% every year thereafter

Water Resources Protection and Management Act

- §22-26-1
 - Hydraulic fracturing facilities
 - Well = Facility
 - 1-and-done large quantity water use
 - Annual reporting requirement → one-time reporting within one year of frac
 - Reporting is REQUIRED, record auditing will begin 4th quarter 2013. Fines for non-compliance range from \$1,000 - \$5,000 per facility (well).
 - Efforts are underway to reduce the 1-year reporting requirement.

WMP Loose Ends

...if the drilling, fracturing or stimulating of the horizontal well requires the use of water obtained by withdrawals from waters of this state in amounts that exceed two hundred ten thousand gallons during any thirty day period, the application for a well work permit shall include a water management plan...

But what does the plan actually cover? §22-6A is silent on the issue.

WMP Loose Ends

- Why is this an issue?
 - Confusion, complaints, inconsistent rules, and perception
- The solution?
 - The agency has established that under the broad authority granted in §22-6A-2, the WMP shall cover all aspects of water use related to H6A activity.
- What does that mean for you?
 - All water needs to be acquired from approved sources, during approved conditions.

WMP Loose Ends

- To accommodate broad WMP authority, DEP is *considering*:
 - Well pad water management plans
 - Modification of date range criteria
 - Until then, keep one plan per well pad activated

Questions?

- Contact

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