

Department for Natural Resources

Energy and Environment Cabinet

Update 2017

Allen Luttrell, Commissioner

Professional Engineers in Mining
September 15, 2017



Overview – DNR Topics

Shadow Area

Reduction of Reclamation Bond Liability

OSM Oversight

AML Pilot Project

Mine Safety Specialists Program

Aerial Technology

Shadow Area

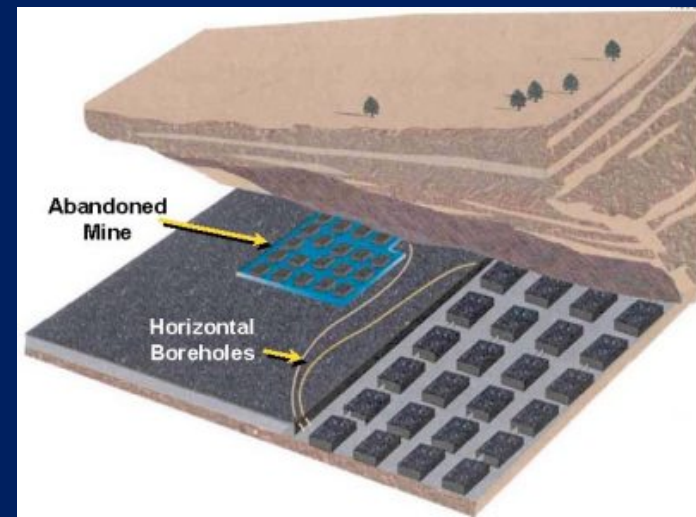
Anticipated effective date: January 1, 2018

Proposed amended regulation

Shadow area- the surface area overlying underground mine works and surface area associated with auger and in situ mining means the surface area.

Shadow area will not be permitted and public notification of landowners in the shadow area will not be necessary. Landowner notification continues to be required prior to under mining.

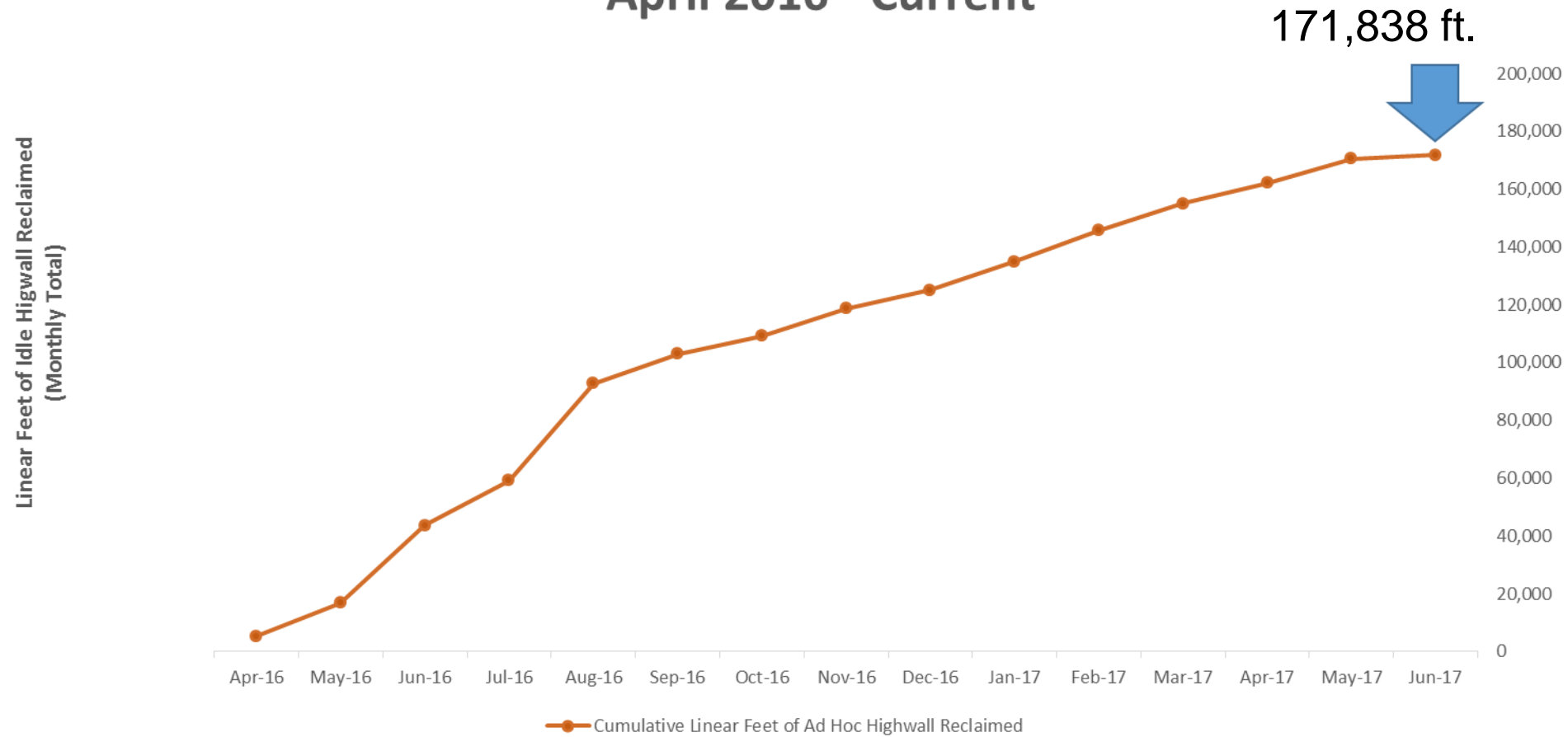
No change in “underground mining only” permits



DNR Strategies to Reduce Reclamation Liability

1. Reduce the length of open (idled) highwall
2. Close and reclaim slurry impoundments in the eastern coalfield.
3. A more robust review of contemporaneous reclamation variance requests

Linear Feet of Idle Highwall Reclaimed April 2016 - Current



Applies to the outstanding 733 letter
and the viability of KRGF

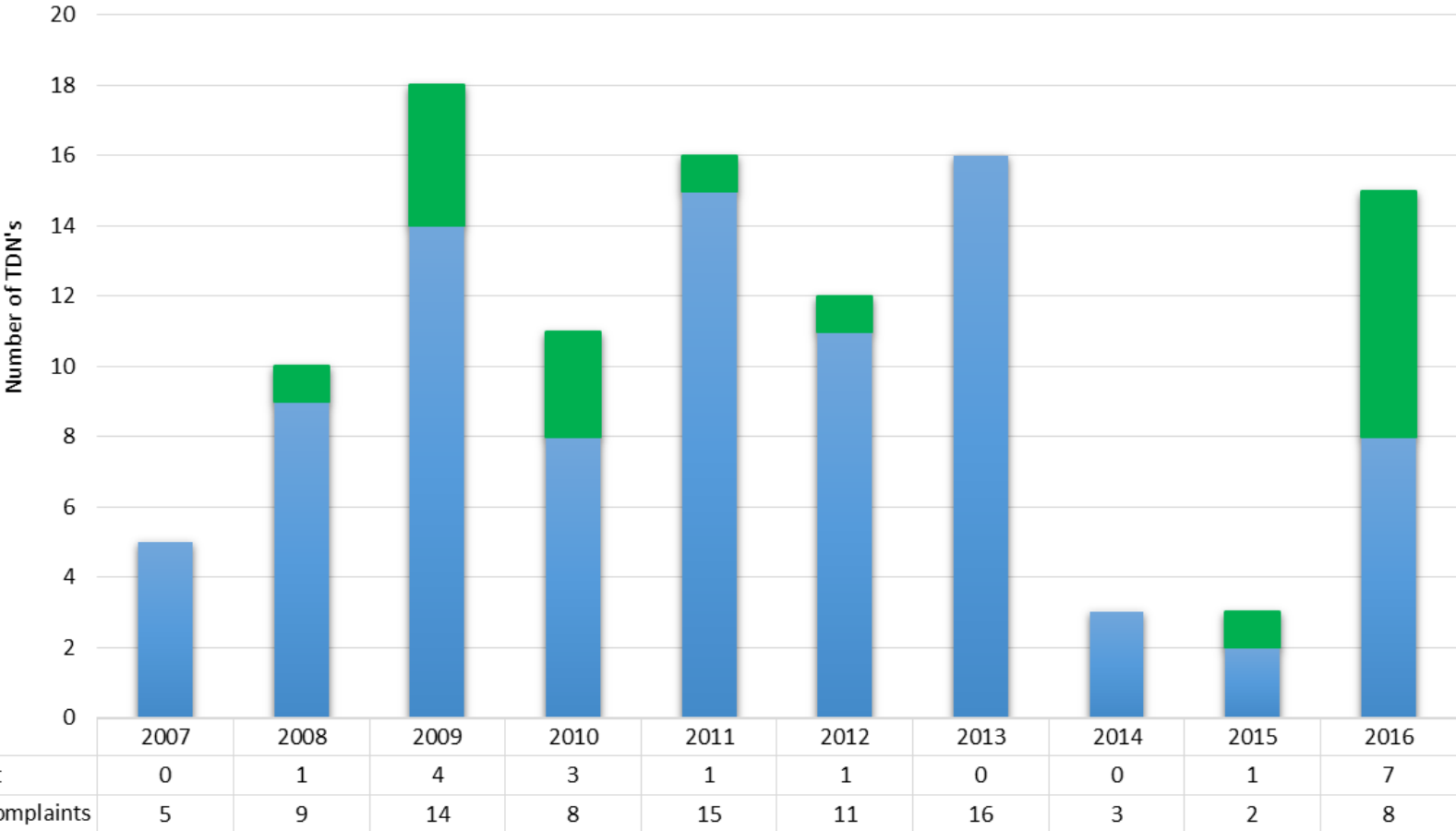
OSM Oversight

Increased staff levels at OSM has resulted in increased oversight involvement:

- **CHIA**
- **Bond Forfeitures**
- **Phase I Bond Release Inspections**

But has not included State participation and consultation

Number of TDN's Received 2007-2016



AML Pilot Project

\$ 30 million for economic development in the eastern coalfield

- Allocated to 9 projects
- One project under construction

The Eastern Kentucky Advanced Manufacturing Institute (Johnson County) to provide computer training for 100 students/yr.

AML Pilot Project

**Kentucky was awarded an additional
\$ 25 million for FY 2017**

**Applications for this Pilot grant runs from
August 2017-November 3, 2017**

MESA seals Scotia mine indefinitely

The bodies of 11 men, killed March 11 in a second methane gas explosion at Scotia Coal Company's bottom mine, are being sealed within the mine, at the mouth of the dangerous 2 1/2-mile section where they were found.

Kent French, U.S. Undersecretary of the Interior, announced Saturday that the "gassy" mine would be sealed for two or three months, or until it is considered safe. The announcement followed a conference among officials of the coal company, the state Department of Mines and Reclamation, the Federal Mining Enforcement and Safety Administration (MESA) and a representative of the Scotia miners' union.

The 11 dead were part of a crew that had been sent two-and-a-half miles into the mine to start repairs on tunnel badly damaged by a March 9 methane explosion that killed 17 miners in the 2 1/2-mile section.

The bodies of the 11 were found March 12 by rescue teams, but the risk to the miners of attempting to retrieve the corpses was considered prohibitive. The crew wanted to try to seal-off gases the mine that had exploded twice.

The sealing operation involves chipping off the mine's upper panels and sealing "back hauls."

Investigation launched

The Mining Enforcement and Safety Administration (MESA) is conducting a formal investigation into the Scotia mine disaster to see whether criminal negligence is involved.



Scotia Mine Disaster, 1976

THE SCOTIA BOTTOM MINE, where 11 bodies will lie, will be sealed indefinitely. That was the announcement made Saturday afternoon by Kent French, U.S. Undersecretary of the Interior at a press conference at the Scotia mine. The announcement followed a conference of officials from the Federal Mining Enforcement and Safety Administration (MESA), coal company officials, mine union officials and a representative of the Scotia miners' union. Robert Shaver, MESA administrator, is at the right of French, and Dave McKnight, Scotia union president, is at the left.

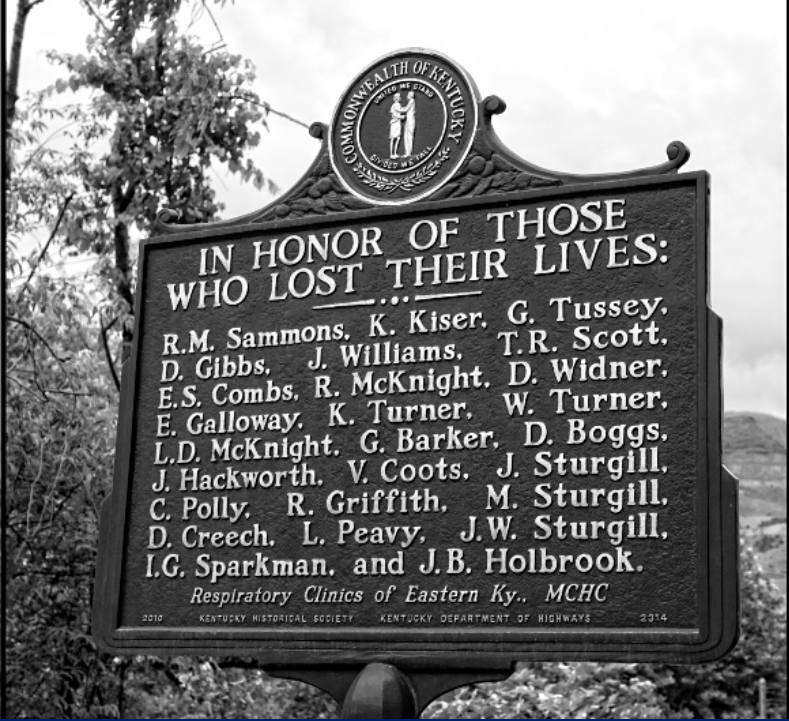
Survivors . . . They say two 'miracles' saved them

11 more found dead in Scotia coal mine where 15 died earlier

11 more found dead in Scotia coal mine where 15 died earlier

The goodbyes

Miners who died Tuesday are buried as mourners await news of other victims



vors vote on ERA

Division of Mine Safety

Mine Safety Specialist Program

- DMS Director Jim Vicini was awarded the Joseph A. Holmes National Mine Rescue Association award for the “National Mine Rescue Man of the Year” for his leadership in behavior-based training.
- Mine Safety Specialists have conducted safety training at 175 mines
- DMS has provided 4-10 judges for 8 mine rescue contests
- 1500 miners have received electrical and safety training
- DMS employees have provided logistic support for Kentucky fire crews

Unmanned Aerial Vehicles

DNR has 4 drones

- Used by DMRE and AML in
- Investigations
- Inspections
- Design



UAV applications:

Investigating a slide on a bond forfeiture site



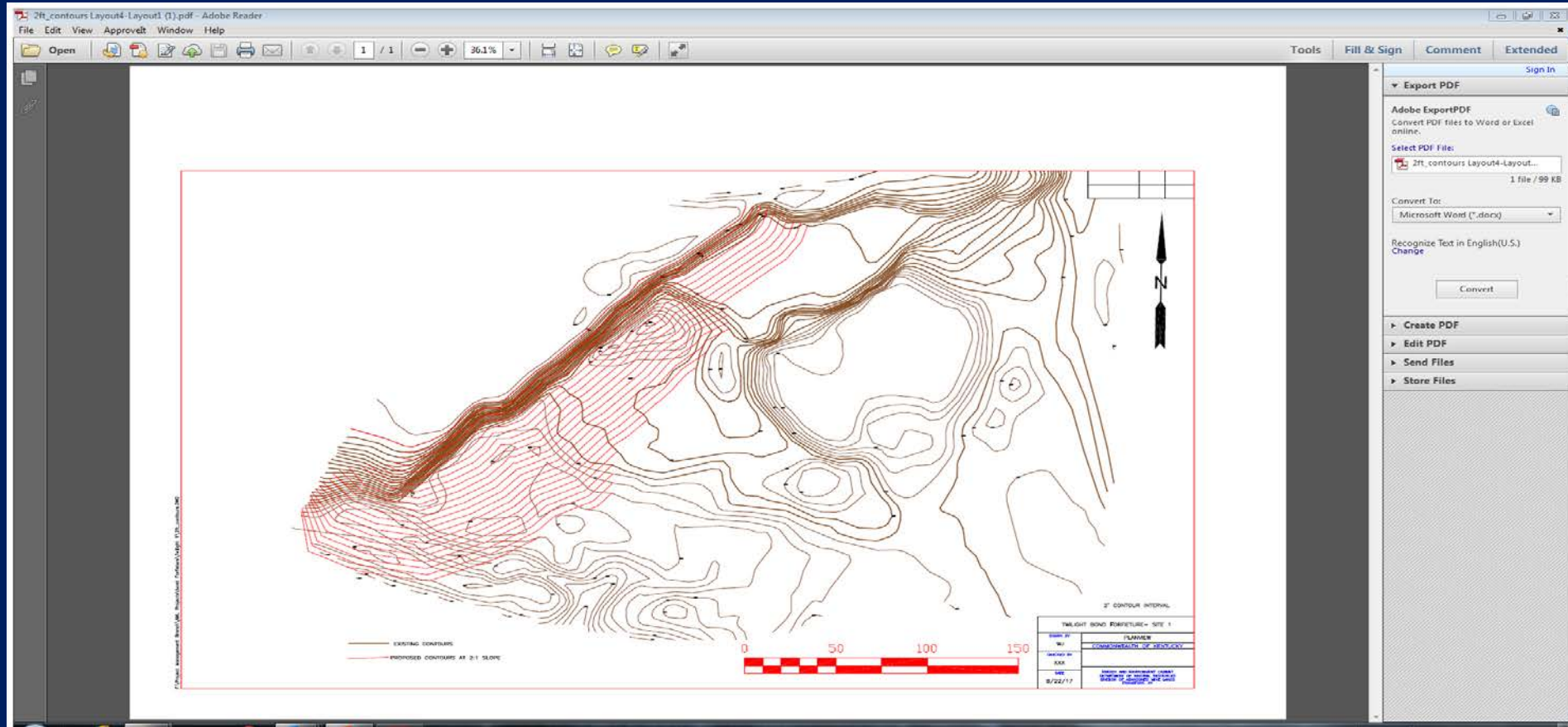
UAV applications:

Inspecting active sites, particularly high priority



UAV applications

Generating contour maps



UAV applications: Volume calculations for backfilling highwalls



Volume 1



Terrain 3D Area:

51504.57 US survey foot²

Cut Volume:

10837.95 ± 678.35 US survey foot³

Fill Volume:

-698293.19 ± 5116.47 US survey foot³

Total Volume:

-687455.24 ± 5794.82 US survey foot³



Help

UAV applications: Producing survey grade elevations

