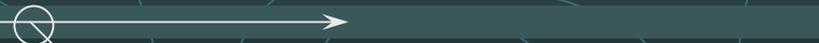




# OSM's Underground Mine Map Initiative



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# Reasons for needing accurate underground mine maps

- Breakthrough prevention (impoundments, mines)
- Subsidence prediction/avoidance
  - Protection of homes/businesses/infrastructure
- Underground mine pools
- AMD issues

Bottom line: Protection of miners, the public, and the environment

# Two Significant "Triggering" Events

- Martin County Coal Company impoundment failure in Kentucky, October, 2000
- Queecreek Mine breakthrough in Pennsylvania, July 2002



# NRC Report

- Mandated by Congress following the MCCC incident
- Focused on slurry impoundments in a broad sense rather than on MCCC
- Completed by October 2001
- Included 28 recommendations for action by MSHA and OSM

# NRC recommendations

- OSM and MSHA grouped into 6 categories
  - Administrative Issues
  - Technical Review Issues
  - Mine Surveying and Mapping Issues
  - Use of Geophysical Methods
  - Chemical Properties of Coal Waste
  - Alternative Coal Waste Disposal Methods



# Primary technical issues

- Technical review criteria
  - Siting, failure evaluation, etc.
- Mapping standards
  - Map availability and quality
- Geophysical techniques



# Issues of concern

- Getting maps into digital format
- Managing data and data standards
- Georeferencing and GIS issues
- Availability of maps and liability for use



# Summary of OSM Initiative

- GOAL: Making as many accurate UG mine maps available to as many customers as possible
- Includes and builds on ongoing State and Federal efforts
- Builds on TIPS and other OSM/State partnerships
- Focused on delivering the needed product and capacity building
- Serves AML, regulatory and health and safety goals

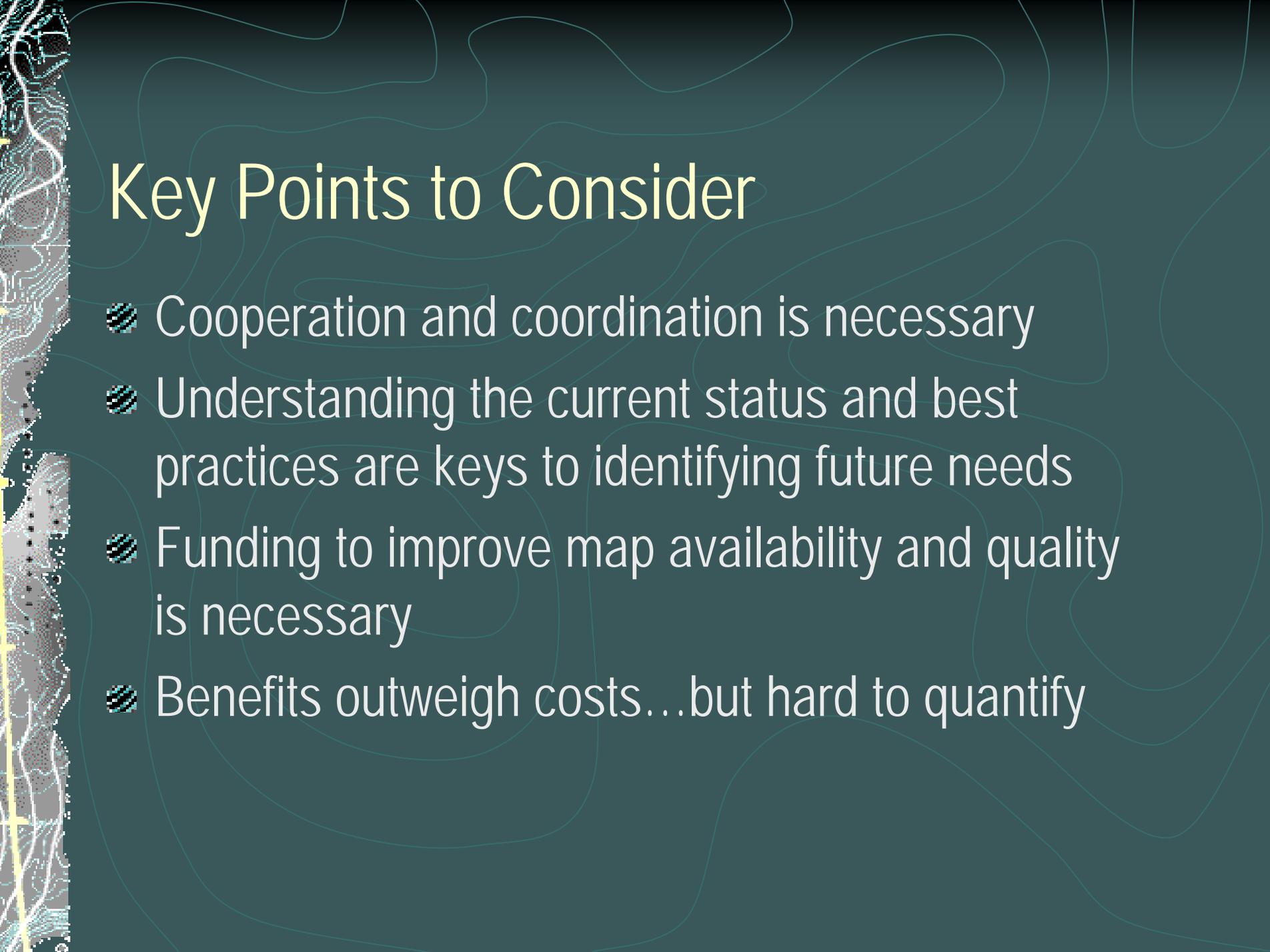


# Details of the Initiative

- Identification of best practices and creation of voluntary standards
- Establishment of underground mine mapping centers of expertise (including NMMR)
- Acquisition of underground mine maps
- Development of distributed “structure” to provide maps over the internet

# Current Status

- Working with States on follow up to 2003 benchmarking meeting
  - Next meeting in 2005 related to best practices/standards
- Working with lessors/States on liability issues
- Development of geo-referencing class
- FY '06 Budget proposal
  - Funding building of State capability and additional resources for NMMR



# Key Points to Consider

- Cooperation and coordination is necessary
- Understanding the current status and best practices are keys to identifying future needs
- Funding to improve map availability and quality is necessary
- Benefits outweigh costs...but hard to quantify

# Potential potholes

- Available funding and resources may limit scope
- Lack of continued support from “powers that be”
- Lack of clear vision/goals/leadership/ability to define benefits/costs
- Bad timing to start a big initiative
- Other priorities (e.g., AML reauthorization)



# Future efforts

- Continued cooperation with the States and others to use/develop the best available tools
- Rallying continued support
- Capability building
- Addressing existing mine maps and availability of those maps