

# **THE CASE FOR MARYLAND'S PROPOSED COMPREHENSIVE GAS DEVELOPMENT PLAN PROGRAM**

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- ▶ Clear and present need for CDP
- ▶ Strong, cross-sectoral support
- ▶ Already being done
- ▶ Implementation suggestions

# NEED: SCALE

Figure 1. Map of basins with assessed shale oil and shale gas formations, as of May 2013



Source: United States basins from U.S. Energy Information Administration and United States Geological Survey; other basins from ARI based on data from various published studies.

# IMPACTS: TNC'S PA ENERGY IMPACTS ASSESSMENT:

- ▶ 60K wells (very conservative) by 2030
- ▶ >17K miles gathering/transmission lines
- ▶ 500K-1.3M acres cleared/damaged
  - ▶ 3%-8% of total PA forest cover
  - ▶ 40% rare/endangered habitat
  - ▶ 80% trout-supporting watersheds
- ▶ Landscape-level planning has strongest scientific support of BMP's TNC reviewed

# OTHER EARLY STUDIES DITTO:

- ▶ *PSU – food vs. fuel*
- ▶ *USGS – 8 PA counties*

"The widespread use of hydraulic fracturing ...is...modifying the landscape at an unprecedented rate compared with other forms of energy development."

# INDUSTRY ANALYSTS:

- ▶ @ 12 natgas pipeline projects in service in the Northeast U.S. by the end of 2012.
- ▶ Industry analysts: gap between demand for low-price gas and pipeline capacity is huge.
- ▶ They estimate it would take **10 times more pipeline expansions** than what's already in place to significantly reduce the price spikes seen during times of concentrated cold.

# AND IN MARYLAND...

- ▶ A 2012 assessment of undiscovered natural gas resources by USGS: significant potential for additional shale gas development in Maryland beyond Marcellus.



The potential development of these basins - in addition to Marcellus - underscores the importance of comprehensive planning.

# SUPPORT FOR CDP

- ▶ Government agencies
- ▶ National and international NGOs
- ▶ Experts
- ▶ The general public
- ▶ Investors
- ▶ Industry leaders

# GOV'TS, NGOS

- ▶ Shale Gas Subcommittee of Secretary of Energy Advisory Board
- ▶ International Energy Agency's *Golden Rules for a Golden Age of Gas*
- ▶ European Commission
- ▶ PA Marcellus Shale Advisory Commission
- ▶ Pennsylvania Governor's Office *Report to the General Assembly on Pipeline Placement of Natural Gas Gathering Lines*

# EXPERTS

- ▶ Resources for the Future's *Pathways to Dialogue: What the Experts Say about the Environmental Risks of Shale Gas Development* - a survey of 256 shale gas experts

# THE PUBLIC

- ▶ Bloomberg National Poll: 66% of Americans want more government oversight of fracking;
- ▶ Poll by ORC International for Civil Society Institute and Environmental Working Group: 94% of Americans want to balance new energy production with protecting clean water and air.

# INVESTORS

- ▶ 55 major investment organizations, institutional investors w/@ \$1 trillion in assets under management
- ▶ 9 leading oil/gas companies have faced shareholder actions calling for disclosure of the way they are managing, measuring risks of hydraulic fracturing, shale gas transmission - specifically voicing support for comprehensive planning.

# INDUSTRY LEADERS

- ▶ Royal Dutch Shell CEO Peter Voser
  - ▶ Operating principles embrace CDP
- ▶ Southwestern Energy's Executive Vice President, General Counsel, and Secretary Mark K. Boling

# THE HOW – 6 EXAMPLES

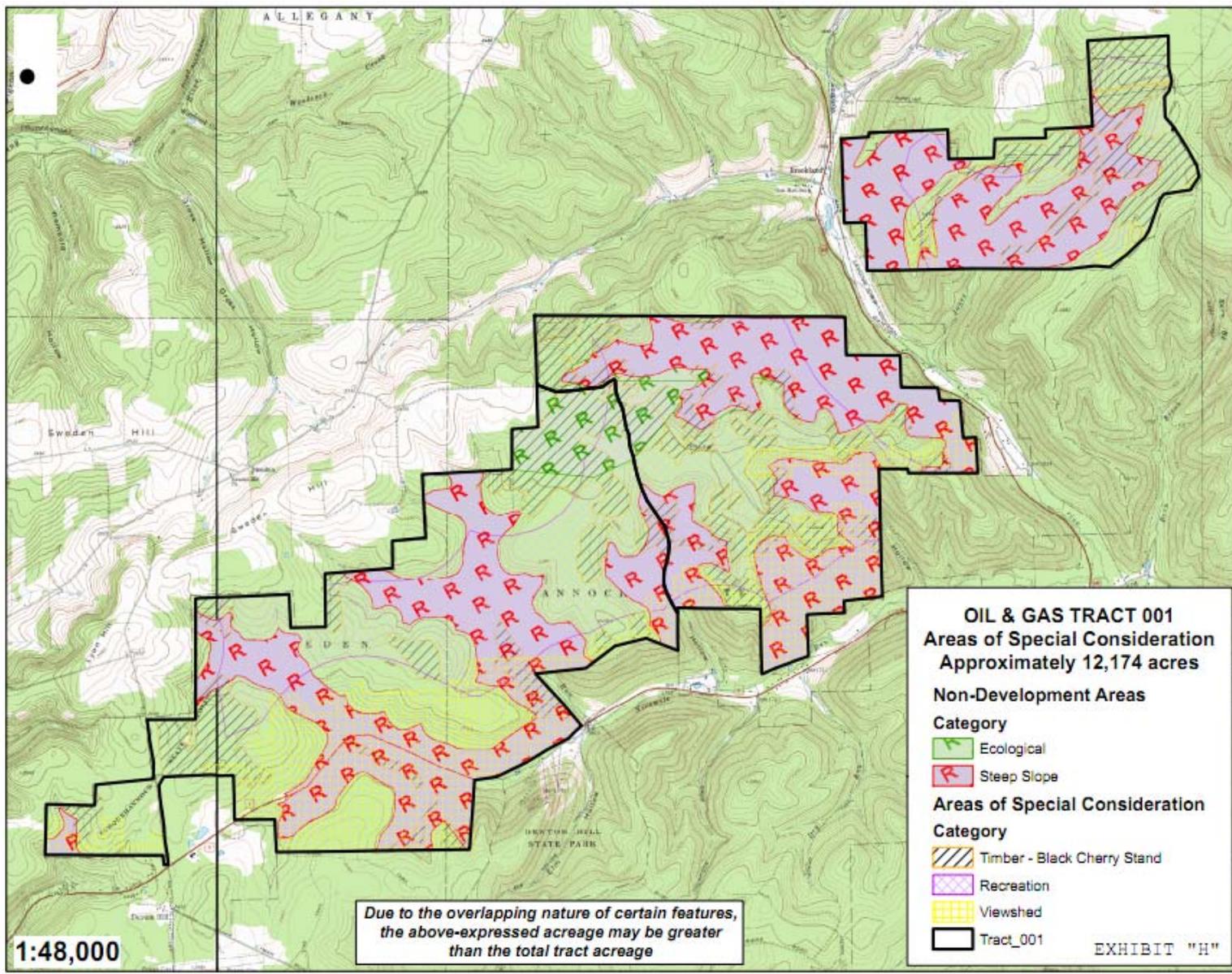
- ▶ U.S. Department of Interior Bureau of Land Management
- ▶ Anadarko Petroleum's Greater Natural Buttes (UT) project
- ▶ Colorado Department of Natural Resources

# THE HOW (CONT'D)

- ▶ American Petroleum Institute's *Practices for Mitigating Surface Impacts Associated with Hydraulic Fracturing*
- ▶ Det Norske Veritas' *Recommended Practice on Shale Gas Extraction*
- ▶ Pennsylvania Department of Conservation and Natural Resources

# PA DCNR

- ▶ Standard policy: no drilling/production activity/pipeline/compressor station/road permitted in any State Forest Wild Area or Natural Area.
- ▶ Pre-lease planning - environmental review results in detailed specification of any lease tract, i.d. areas of non-development or special consideration due to ecological, topographical, timber, recreation, viewshed values.

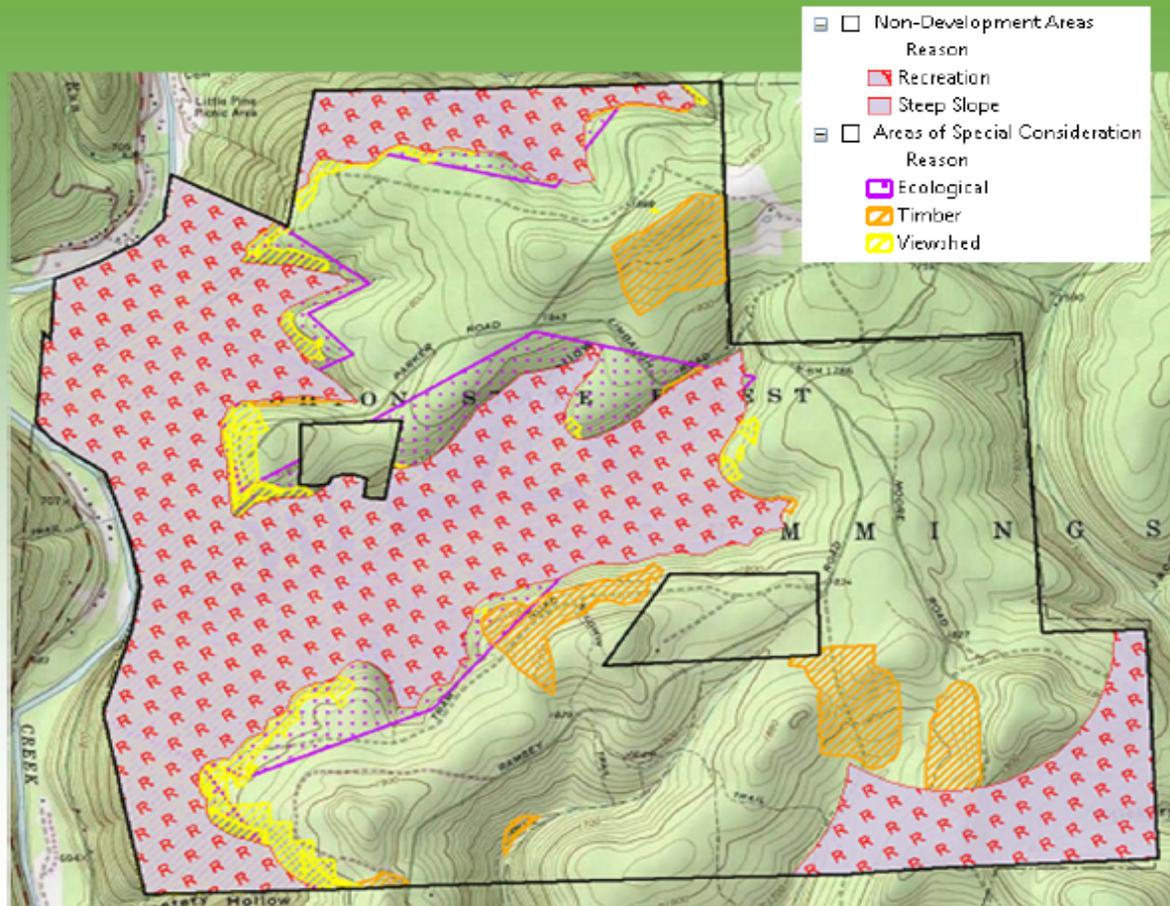


# CDP: ITERATIVE PROCESS

- ▶ ER results incorporated into lease documents, which require gas companies to coordinate, pre-plan all exploration, development activities w/DCNR.
  - ▶ Tract-level development plan
    - ▶ I.D infrastructure sharing opportunities
    - ▶ Coordinate with timbering, recreational uses
    - ▶ Restoration planning
    - ▶ Minimize: disturbance, fragmentation, traffic, impacts
  - ▶ Extensive engagement, communication with lessees
-

# NON-DEVELOPMENT AREAS, AREAS OF SPECIAL CONCERN

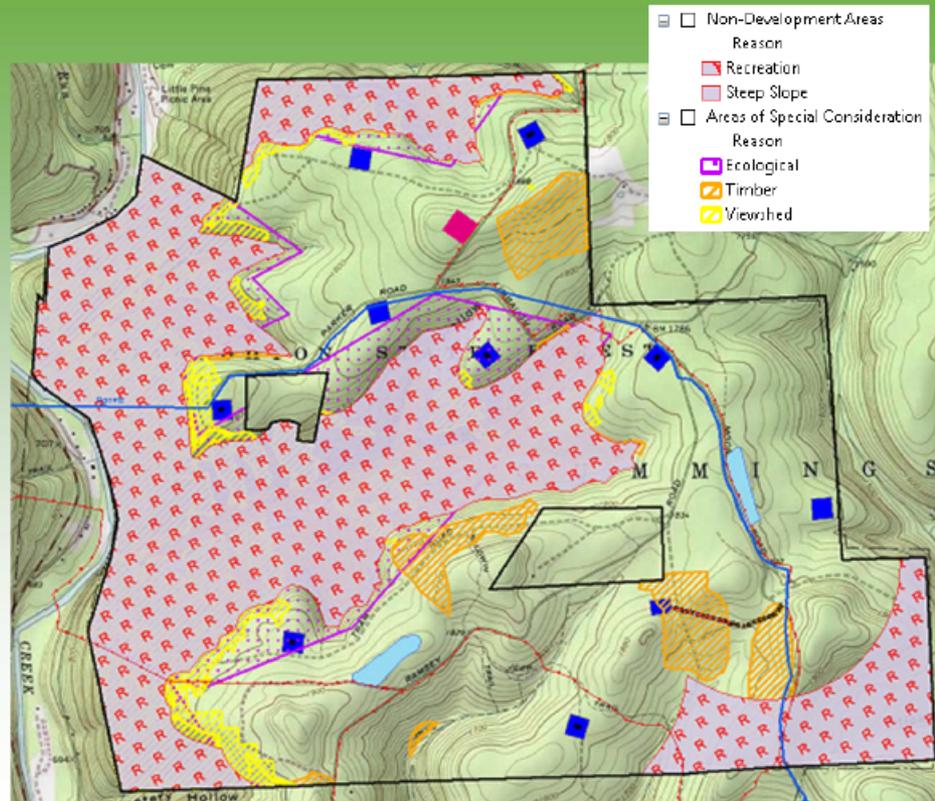
## Tract-level Development Planning





# PLAN RECONFIGURED TO AVOID NON-DEVELOPMENT, SPECIAL CONCERN AREAS AMAP

## Tract-level Development Planning



# CAPACITY

- ▶ Maryland's capacity to require landscape level planning will rest on:
  - ▶ Data it has/maintains on natural resources
  - ▶ Add'l data developers required to gather
  - ▶ GIS capacity, skills sets
  - ▶ Ways data are interpreted/used

# GAPS?

- ▶ Define internal resource needs
- ▶ Conduct organizational analysis – a gap analysis – that looks at how well appropriate departments are positioned to undertake, manage, enforce the CDP requirement

# COMMUNICATION/COLLABORATION

- ▶ **A successful comprehensive planning requirement - iterative process, intensive communication/collaboration with industry, stakeholders – to arrive at win-win solutions that protect natural resources and allow responsible energy development.**
- ▶ **Careful review of those organizational capacities, crafting of appropriate internal and external guidance documents and procedures are recommended.**

# TRANSPARENCY

- ▶ Iterative processes must be **transparent** to industry, stakeholders, public to win industry confidence, stakeholder/public understanding, support.
- ▶ Clear, early explanations of planning requirements to industry, stakeholders, local and county governments will help ensure **common expectations**.

# TRANSPARENCY (CONT'D)

- ▶ Detailed **record-keeping, publicly available data** on process, outcomes are essential.
- ▶ Ongoing commitment to **measuring, monitoring, reporting** results of CDP requirement.

# CONTINUOUS IMPROVEMENT

- ▶ A commitment to **continuous improvement** has been recognized in several of the reports cited in this document.
- ▶ Maryland should commit to and design a **continuous improvement process** as an early step in the development and promulgation of planning and other regulatory requirements.

# SUMMING UP....

- ▶ There is a critical need, extensive support for CDP in development of shale gas resources, and robust recommendations for and an emerging practice of it.
- ▶ Maryland has the opportunity to take a national leadership position in demonstrating how smart planning can achieve environmental and business “win-wins” that will go a long way to ensuring responsible production of shale gas – and citizen acceptance of it.

# CONTACT

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