

How Will NAQSAT Be Used in Pennsylvania?

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Why NAQSAT?

- No other NRCS-approved tool to use for evaluating air quality resource concerns from confinement-based livestock operations
- NAQSAT was developed for NRCS via 2 national CIG projects
 - Success story! – We have CIG results we can use

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Why NAQSAT?

- NRCS National Instructions 190-309 (July 2015)
 - Use NAQSAT for assisting in resource concern identification and conservation planning efforts for confinement-based livestock and poultry operations
 - By the end of CY15, NAQSAT use is required for all new NRCS assistance requests at these operations with a maximum capacity of ≥ 300 animal units for applicable species

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Where Does NAQSAT Fit In?

- Assist in air quality resource concern identification and conservation planning efforts for confinement-based livestock and poultry operations
 - Identify areas at these operations where there are opportunities to make changes that result in reduced air emissions
- REMEMBER – NAQSAT is just a tool for resources assessment to help meet clients' objectives

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When to Use NAQSAT

- Possibility of an air quality resource concern
 - Producer concern or interest
 - Local data/history of issues
 - Nonattainment, odor/dust complaints, local regulations, etc.
- Developing a CNMP

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New CNMP Policy

- General Manual 190-405 was updated in October 2015
 - Air quality is one of three resource concerns to be addressed at a minimum (along with soil erosion and water quality)
 - No further guidance on how to address air quality, other than achieve planning criteria in the NPPH

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NAQSAT and CNMP

- NAQSAT covers the primary nutrient flows at confinement-based livestock and poultry operations
- NAQSAT can identify areas for further analysis
- NAQSAT will not give you the final answer, but can point you in the right direction

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Using NAQSAT Results in Planning



- Identify opportunities and problems
- Develop appropriate alternatives
- Understanding solutions
- Support decisions

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Using NAQSAT Results – Where Do We Start?

- Look at each AQ resource concern
 - Emissions of Particulate Matter (PM) and PM Precursors
 - Emissions of Ozone Precursors
 - Objectionable Odors
 - Emissions of Greenhouse Gases

- Some may be more important for your site than others

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Particulate Matter Resource Concern

- Focus on score bars for:
 - Particulate matter
 - Ammonia



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Particulate Matter

- Focus on score bars for:
 - Animals and Housing
 - Onfarm Roads
 - Manure Storage – if dry manure is managed
 - Land Application – if dry manure is managed
 - Feed and Water – if dry feed ingredients are stored or mixed onsite

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Ammonia

- Focus on score bars for:
 - Feed and Water
 - Manure Storage
 - Land Application
 - Animals and Housing
 - Collection and Transfer

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Particulate Matter Resource Concern



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Ozone Precursors Resource Concern

- Focus on score bar for:
 - Volatile organic compounds



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Volatile Organic Compounds

- Focus on score bars for:
 - Manure Storage
 - Feed and Water
 - Animals and Housing

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Ozone Precursors Resource Concern



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Odors Resource Concern

- Focus on score bars for:
 - Odor
 - Volatile organic compounds
 - Hydrogen sulfide
 - Ammonia



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Odor

- Focus on score bars for:
 - Mortalities
 - Manure Storage
 - Feed and Water
- Likely also:
 - Land Application
 - Animals and Housing

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Volatile Organic Compounds

- Focus on score bars for:
 - Manure Storage
 - Feed and Water
 - Animals and Housing

Hydrogen Sulfide

- Focus on score bars for:
 - Manure Storage
 - Feed and Water

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Ammonia

- Focus on score bars for:
 - Feed and Water
 - Manure Storage
 - Land Application
 - Animals and Housing
 - Collection and Transfer

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Odors Resource Concern



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GHG Resource Concern

- Focus on score bars for:
 - Methane
 - Nitrous oxide



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Methane

- Focus on score bars for:
 - Manure Storage
 - Feed and Water

Nitrous Oxide

- Focus on score bars for:
 - Feed and Water
 - Manure Storage
 - Land Application

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GHG Resource Concern



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Implementing Practices

- What practices apply?
 - See NRCS National Air Quality Initiative matrix for overall list of practices with air quality purposes
 - A smaller subset are specific to confinement-based livestock and poultry systems

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NAQI Practices

- Air Filtration and Scrubbing (372)
- Amendments for Treatment of Agricultural Waste (591)
- Anaerobic Digester (366)
- Animal Mortality Facility (316)
- Composting Facility (317)
- Dust Control from Animal Operations on Open Lot Surfaces (375)
- Dust Control on Unpaved Roads and Surfaces (373)

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NAQI Practices

- Feed Management (592)
- Heavy Use Area Protection (561)
- Nutrient Management (590)
- Roofs and Covers (367)
- Waste Separation Facility (632)
- Waste Treatment (629)
- Waste Treatment Lagoon (359)
- Windbreak/Shelterbelt Establishment (380)
- Windbreak/Shelterbelt Renovation (650)

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Questions?

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