



Ohio Environmental Protection Agency

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**Biosolids Rule Update**  
**(Ohio Administrative Code Chapter 3745-40)**  
**for**  
**OWEA 2009 Biosolids Systems Workshop**  
**December 10, 2009**

**Presented by:**  
**Jacob Howdysell, Ohio EPA Central Office**

# The Current Rules (OAC Chapter 3745-40)

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The Current Rules in Chapter 3745-40 of the Administrative Code:



- Became effective October 1, 2007;
- Included 7 rules;
- Included only minor, administrative changes from the previous rulemaking; and
- Were scheduled for a new rulemaking within 2 years to address the past IPR comments.

# Goals of Any New Rulemaking:

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- To protect public health and the environment;
- To maintain a transparent process, and obtain comprehensive public input during rule development, including input from environmental groups, groups that are regulated and the general public;
- To encourage beneficial use (in this case, the beneficial use of biosolids); and
- To create rules that are easy to navigate and understand.



# Draft Rules Background

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- An initial draft of the biosolids rules was made available for public comment July 28, 2008 – October 10, 2008
  - Ohio EPA received 214 comments and questions

# Draft Rules Background

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- The Agency considered comments submitted, made changes in response to the comments, and offered a second opportunity to comment
- The second draft was made available for public comment on April 10, 2009 with comments due by May 22, 2009
- The Agency received 132 comments on the second draft of the rules

# The New Draft Rules



The new rulemaking package proposes to:



- Include 12 rules in lieu of the current 7 rules;
- Create rule titles that are more intuitive to the rule's content;
- Locate all definitions in Rule 3745-40-01; and
- Include tables and graphics throughout the rules to simplify regulatory requirements for the regulated community.

# A Quick Comparison - Old vs. New

<b>Rule</b>	<b>“Old” Current Title</b>	<b>“New” Draft Title</b>
40-01	Definitions.	Definitions.
40-02	Purpose, applicability and exclusions.	Purpose, applicability, general requirements, exclusions and prohibitions.
40-03	Permits, plans and authorizations.	NPDES permit requirements and management plan requirements.

# A Quick Comparison - Old vs. New

<b>Rule</b>	<b>“Old” Current Title</b>	<b>“New” Draft Title</b>
40-04	Land application agronomic management.	Biosolids classifications.
40-05	Land application restrictions.	Notice and necessary information requirements for biosolids and other notification requirements.
40-06	Land application monitoring and reporting.	Authorization for a beneficial use site, site transfer requirements and site amendment requirements for class B biosolids

# A Quick Comparison - Old vs. New

<b>Rule</b>	<b>“Old” Current Title</b>	<b>“New” Draft Title</b>
40-07	Other management practices; prohibition.	Requirements for the storage of biosolids: isolation distance requirements and requirements for field and regional facility storage.
40-08	N/A	Requirements for the beneficial use of biosolids: general requirements, prohibitions, isolation distance requirements, site specific requirements and additional site restrictions for the beneficial use of Class B biosolids
40-09	N/A	Monitoring and reporting requirements and record retention.

# A Quick Comparison - Old vs. New

<b>Rule</b>	<b>“Old” Current Title</b>	<b>“New” Draft Title for Next Rulemaking</b>
40-10	N/A	Facility storage requirements.
40-11	N/A	Signage requirements for beneficial use sites receiving class B biosolids.
40-12	N/A	Compliance, enforcement and spill notification requirements.

# Quick Overview of the Draft Rules

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# Quick Overview of the Draft Rules

Rule	Proposed Draft Change(s)
40-01 Definitions.	<ul style="list-style-type: none"><li>• Eliminated unused definitions;</li><li>• Added additional definitions to clarify existing and new rules; and</li><li>• Clarified some existing definitions.</li></ul>
40-02 Purpose, applicability, general requirements, exclusions and prohibitions.	Added general requirements and prohibitions to 40-02 to make them easier to find.

# Quick Overview of the Draft Rules

Rule	Proposed Draft Change(s)
40-03 NPDES permit requirements and sewage sludge or biosolids management plan requirements.	Created a new rule solely for the NPDES permit and management plan requirements, including those for land reclamation sites.
40-04 Biosolids classifications.	<ul style="list-style-type: none"><li>• Created a new rule solely for Biosolids Classifications, and added a table for quick reference.</li><li>• Also incorporated language and graphics from the White House document regarding specific pathogen reduction alternatives and vector attraction reduction options.</li></ul>

# Quick Overview of the Draft Rules

Rule	Proposed Draft Change(s)
40-05 Notice and necessary information requirements for biosolids.	Created a rule dedicated solely to defining the NANI requirements.

# Quick Overview of the Draft Rules

Rule	Proposed Draft Change(s)
<p>40-06</p> <p>Authorization for a beneficial use site, site transfer requirements and site amendment requirements for class B biosolids</p>	<p>Created a rule dedicated solely to site authorization and transfer requirements for Class B Biosolids.</p> <p>Site authorizations will not be required for the land application of EQ biosolids.</p>

# Quick Overview of the Draft Rules

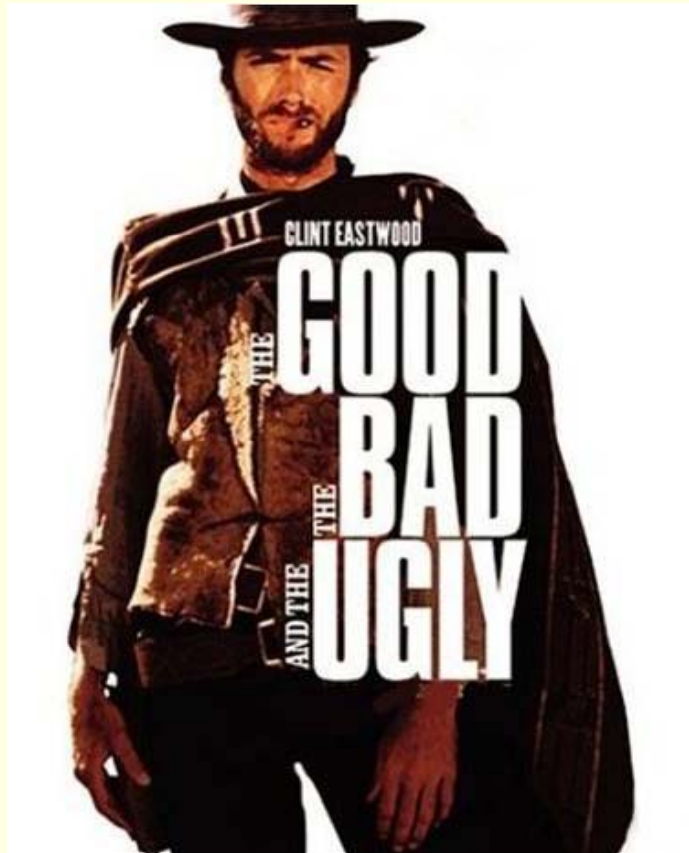
Rule	Proposed Draft Change(s)
40-07 Requirements for the storage of biosolids.	Created a rule dedicated to the isolation distance requirements and field and regional storage requirements.
40-08 Requirements for the beneficial use of biosolids: general requirements, prohibitions and restrictions and site specific requirements.	Created a rule dedicated solely to land application requirements, regardless of method for beneficial use, including land reclamation sites.
40-09 Approved Sampling Methods, monitoring frequency, record retention and annual reporting requirements	Created a rule for all monitoring requirements and record retention requirements.

# Quick Overview of the Draft Rules

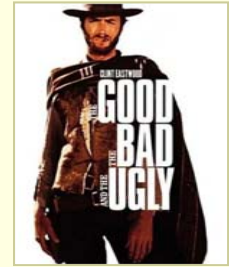
Rule	Proposed Draft Change(s)
40-10 Facility storage requirements.	Created a rule for all requirements for WWTP storage.
40-11 Signage requirements for land application sites receiving class B biosolids.	Created a rule just for signage requirements. Signs will not be required for EQ land application sites.
40-12 Compliance, enforcement and oversight.	Created a rule that defines what information the Director can request and outlines the Director's enforcement and oversight capabilities.

# The Changes Being Considered...

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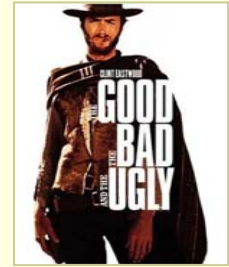


# The Changes Being Considered...



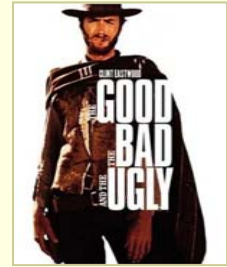
- The draft rules introduces new definitions:
  - “Biosolids” means sewage sludge that has been treated for beneficial use;
  - “Beneficial use” means the placement of biosolids onto the land for agronomic benefit;
  - “Bulk EQ biosolids” means more than 300 dry tons of exceptional quality biosolids that will be used on an agricultural site.

# The Changes Being Considered...



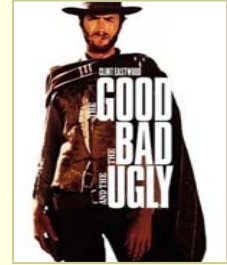
- Agronomic rate will be defined as:
  - “A rate of application of nutrients from any source to the land or an amount of nutrients removed by crop based on:
    - (1) Nutrient content of the biosolids to be applied;
    - (2) Nutrient needs of the current or planned crops; and
    - (3) Nutrient holding capacity of the soil.”
  - As part of this new definition, beneficial users will now have to look at phosphorus loadings as well as nitrogen loadings for beneficial use
  - The limits on application of phosphorus will be based on the phosphorus soil tests for the beneficial use site

# The Changes Being Considered...



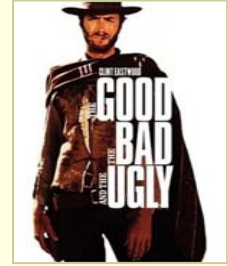
- Definition of Agronomic Rate continued:
  - If available soil phosphorus levels are less than 100 ppm, then beneficial users may apply at the nitrogen rate (the amount of biosolids that will provide the nitrogen for the next crop) or the multi-year phosphorus rate (the amount of biosolids that will provide the phosphorus for the next three years' worth of crop rotations), whichever is less
  
  - If available soil phosphorus levels are above 100 ppm, but less than 150 ppm, then application is limited to the nitrogen rate, a single year phosphorus rate, or application based on a phosphorus index conducted for the site

# The Changes Being Considered...



- Agronomic Rate continued:
  - If available soil phosphorus levels are above 150 ppm, then beneficial use cannot continue at the site until a phosphorus index is conducted and shows that there is not a high potential for phosphorus runoff from the site

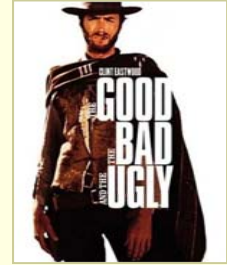
# The Changes Being Considered...



## ■ Land Reclamation

- All land reclamation shall be conducted in accordance with a management plan approved by the Director
- There will no longer be a maximum application rate of 65 dry tons/acre
- All application rates will be determined on a case by case basis and will be approved by the Agency through the management plan approval

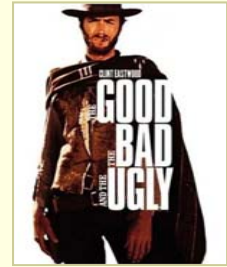
# The Changes Being Considered...



- Frozen and/or snow covered ground:
  - Prohibiting the surface application of bulk biosolids to land from December 15 through March 1 and requiring surface application of bulk biosolids to frozen and snow covered ground during the rest of the year to be in accordance with NRCS Waste Utilization Code 633
  - Biosolids may still be beneficially used during the December 15 to March 1 timeframe if the biosolids are injected or incorporated within 24 hours of application
  - Biosolids may still be stockpiled (as long as a VAR option other than 9 or 10 has been met) at the beneficial use sites for up to 90 days, just not too close to any homes



# The Changes Being Considered...

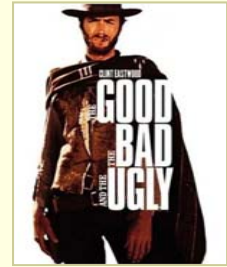


## ■ Screening

- Within five years of the effective date of the rules, any treatment plant who wishes to land apply their biosolids must have a means of screening out manufactured inerts from the influent sewage
- This may be accomplished through fine screening (5/8" max aperture) or other means approved by the Director

# The Changes Being Considered...

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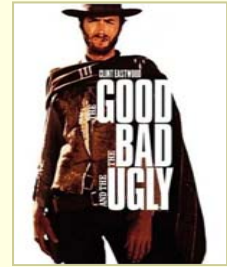


## ■ Daylight Hours

- All beneficial use or delivery of biosolids shall occur between one half hour before sunrise until one half hour after sunset
- Director may approve delivery or beneficial use during other times on a case by case basis

# The Changes Being Considered...

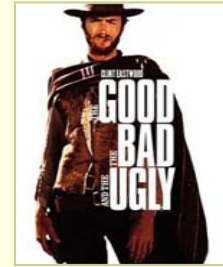
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## ■ Surface Disposal

- All surface disposal of sewage sludge is prohibited and any active surface disposal shall cease within 6 months of the effective date of the rules
- Treatment lagoons are not considered surface disposal

# The Changes Being Considered...

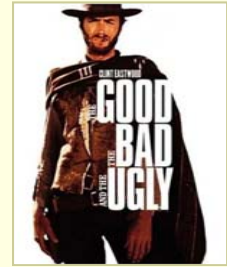


## ■ Biosolids Classifications

- There will be two classifications of biosolids, Class B and Exceptional Quality (EQ)
- Pathogen reduction alternatives will be labeled P-1 through P-16, VAR options will be labeled VAR-1 through VAR-10.
- Class B can meet any of the alternatives, EQ must meet one of P-8 through P-16, and one of VAR-1 through VAR-8

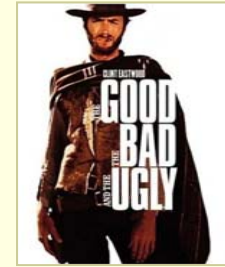
# The Changes Being Considered...

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- Biosolids Classifications continued:
  - There will now be requirements in rule for the records that must be kept to show that pathogen reduction and vector attraction reduction has been met
  - These requirements were taken from the White House document for the most part

# The Changes Being Considered...

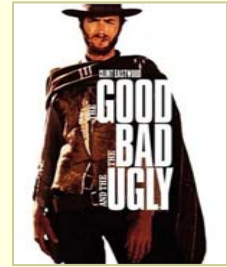


## ■ Biosolids Classifications continued:

- There will no longer be pathogen reduction alternatives for exceptional quality biosolids that allow only pathogen testing (i.e. alternatives 3 and 4 from current rule, helminth ova, enteric virus, salmonella, and fecal coliform monitoring)
- For Class B biosolids, records will have to be kept to document that the biosolids have been stabilized if the treatment plant wishes to rely on only fecal coliform monitoring, pathogen reduction alternative P-1 (e.g. aerobic digestion, anaerobic digestion, lime stabilization)

# The Changes Being Considered...

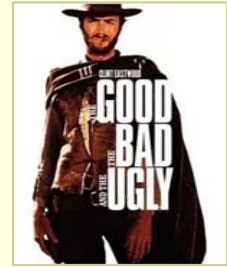
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- Biosolids Classifications continued:
  - For P-1, fecal coliform monitoring shall be conducted every time there is a hauling event (defined as “the removal of biosolids during a timeframe, which does not exceed thirty days, for beneficial use at a single beneficial use site)
  - For composting and anaerobic digestion facilities, it has been clarified that other feedstocks may be taken without having to receive approval from the Division of Solid and Infectious Waste

# The Changes Being Considered...

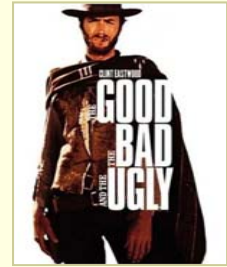
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- Notice and Necessary Information
  - For the person who beneficially uses the biosolids (the land applier), there will be a requirement for notification to the farm operator
  - This notification will contain the application rate of available nutrients in the biosolids that were beneficially used

# The Changes Being Considered...

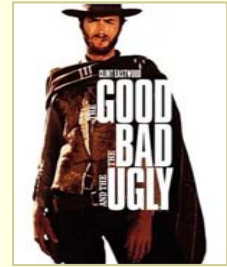
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- Class B Beneficial Use Sites
  - Will be clarified that biosolids from the same entity (i.e. municipality, county, etc.) can be beneficially used on the same site (this would apply if an entity has two different treatment plants)
  - Forms will be developed for transfers and acreage amendments for sites that have already been authorized

# The Changes Being Considered...

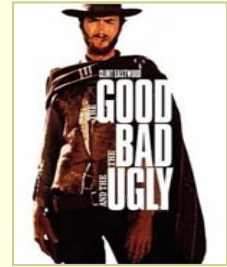
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## ■ Field Storage

- All field storage would be limited to 90 days
- After 90 days, the biosolids would have to be returned to the treatment plant, taken to landfill, taken to another permittee, or taken to another beneficial use site and spread the same day
- There will no longer be a notification requirement if biosolids are to be stored for longer than 30 days
- Surface water runoff diversions will be required for storage areas (e.g. straw bales, silt fence, temporary berms)

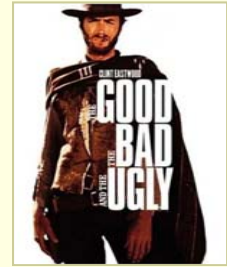
# The Changes Being Considered...



- Precipitation restrictions for Class B and bulk EQ biosolids
  - No beneficial use when the forecast predicts a fifty percent chance that one half inch (or one quarter inch for hydrologic soil group D) of rain will occur within 24 hours of beneficial use
  - Beneficial use may still occur if actual rainfall data indicates that one half inch of rain did not occur even though the forecast predicted that it would

# The Changes Being Considered...

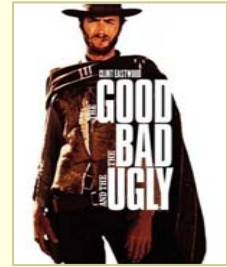
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- Isolation distance requirements for bulk EQ
  - 3 feet to bedrock
  - 33 feet to surface waters of the state
  - 300 feet without a grass buffer or 100 feet with a grass buffer to a sinkhole
  
- All current isolation distances are still applicable to Class B biosolids

# The Changes Being Considered...

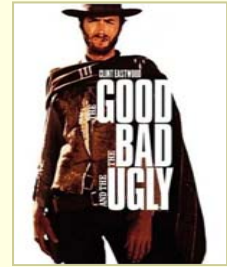
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- Other new restrictions for bulk EQ
  - Same day incorporation for areas that are frequently flooded
  - Slope and ground cover requirements for steep areas in a beneficial use site
  - Soil phosphorus and pH monitoring in accordance with agronomic rate requirements (every 3 years instead of 2)

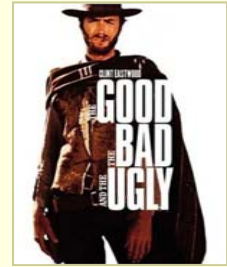
# The Changes Being Considered...

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- Beneficial use sites with tile drainage
  - If liquid Class B or liquid bulk EQ biosolids are to be beneficially used, tile outlet monitoring shall occur before, during, and after beneficial use
  - Rates will be limited to half an inch or 13,000 gallons/acre
  - Tools shall be used to disrupt preferential flow pathways during beneficial use or all tile outlets shall be plugged

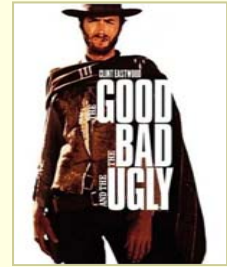
# The Changes Being Considered...



- Monitoring frequencies
  - Monitoring frequencies for metals will be reduced to match 40 CFR Part 503 monitoring frequencies
  - Metals monitoring shall be conducted at least once per reporting period, no matter if biosolids are removed from the facility or not
  - Monitoring for pathogen and vector attraction reduction shall be performed as necessary to show compliance with all processing requirements, and at a minimum, at least once per hauling event
  - Dioxin monitoring will no longer be required unless requested by the Director or his authorized representative

# The Changes Being Considered...

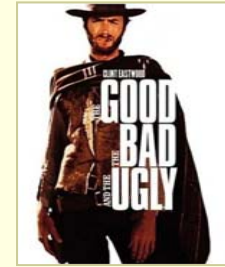
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## ■ Recordkeeping

- Copies of all records will be required to be kept at the treatment works, including those that the land applier generates
- Standard operating procedures will be required for PR and VAR, including:
  - Sample collection or monitoring locations;
  - Sample collection frequency;
  - Sample collection procedures;
  - Sample storage and preservation procedures; and
  - Sample analysis procedures, including calculations

# The Changes Being Considered...

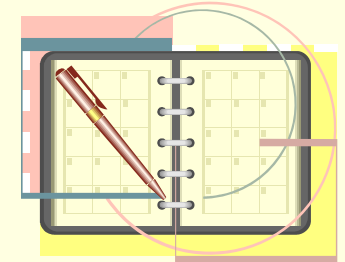


## ■ Signage

- Signs will have to be posted at all Class B biosolids beneficial use sites at least one week prior to delivery of Class B biosolids to the site;
- Records of when the signs are posted and taken down shall be kept



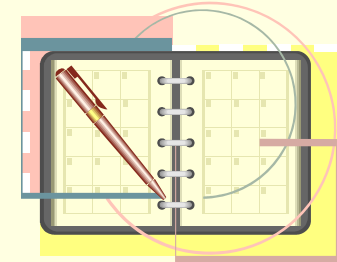
# Future Dates....



## ■ What's next

- The Agency has finished its revisions based on the comments received during the last public notice period
- The rule package is now being compiled for a legal review and the Director's signature
- The rule package will then be proposed to the Joint Committee on Agency Rule Review (JCARR)
- JCARR will then have jurisdiction over the package for 65 days

# Future Dates....



- After both the Agency and JCARR have conducted their public hearings, and JCARR has approved the rule package, the rules will be proposed final
- At that time the Agency will define an adoption date and an effective date
- The Agency hopes to have this process complete by May 2010

# Thank You For Your Attention!

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Comments/Questions?