



# Beneficial Use of Industrial Byproducts in Ohio

November 29, 2012

Ohio EPA, Division of Materials  
and Waste Management

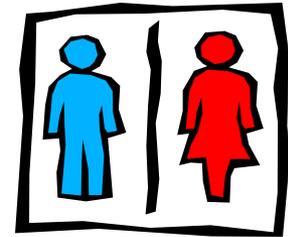
# Ohio EPA and beneficial use

- **Why are we here?**
  - Outreach to stakeholders
  - Open discussion
  - Listening mode
  - Started in 2006...
- **Historical disposal in Ohio**



# Housekeeping

- Cell phones to vibrate, please
- No breaks planned
- Webex
- Introductions
  - *Your name*
  - *Your company/affiliation*





# Overview

- How is beneficial use currently structured in Ohio?
- Why is a new regulatory program needed?
- What is the scope of the new program?
  - Early Stakeholder Outreach
- Moving forward
- Resources

A faded background image of an industrial facility, possibly a steel mill or refinery, with various structures, pipes, and workers visible. The image is semi-transparent, allowing the text to be overlaid clearly.

**Foundry  
sand**

**Alum  
sludge**

**Drill  
cuttings**

**FGD**

**Slag**

**Street  
sweepings**

**PCS**

**Dredge  
materials**

**Coal  
combustion  
byproducts**

**Miscellaneous  
sludges**

# How is beneficial use currently structured in Ohio?

- **Solid waste** (ORC 3734.01)
- **Other waste** and **industrial waste** (ORC 6111.01)
- Director's authorization
- Other wastes not a part of this conversation:
  - C&DD
  - Infectious
  - Hazardous



# Why is a new regulatory program needed?



- Is it **disposal** or is it **use**?
- Departure from *Integrated Alternative Waste Management Program (IAWMP)*
- Diversion from landfills (HB 592)
- National trend
- Will ease process of beneficial use

# Why it makes sense...

- Some industrial byproducts/uses pose little risk to human health and the environment
- Science-based
- Address similar issues in consistent manner

# Avoid duplication with existing programs

- Materials NOT included:
  - Hazardous, radioactive, or infectious wastes
  - Asbestos-containing materials
  - Animal waste
  - Scrap tires
  - Biosolids

**Do not over-regulate**

# Generator options

- Disposal
- Source reduction
- Reuse
- Recycle
- Beneficially use

# Disposal

*the discharge, deposit, injection, dumping, spilling, leaking, emitting, or placing of any solid wastes or hazardous wastes into or on any land or ground or surface water or into the air, except if the disposition or placement constitutes storage or treatment (ORC 3734.01)*



# Source reduction

*For purposes here, “source reduction” has occurred when a manufacturing process, by design, minimizes waste.*



# Reuse

*For purposes here, “reuse” has occurred when a material has been used for its original or similar purpose **in lieu of disposal** without converting the material.*



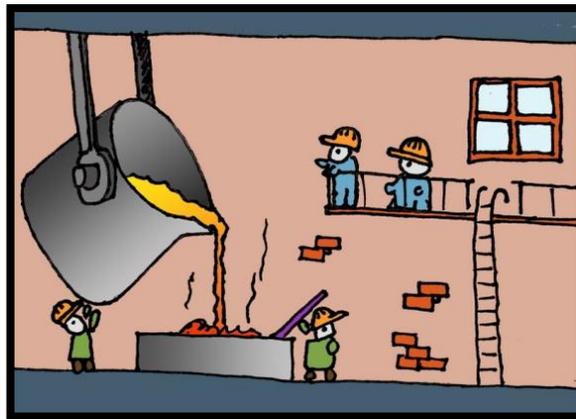
# Recycle

*For purposes here, “recycle” has occurred when a material has been converted **in lieu of disposal** and returned to commerce as a commodity for use or exchange in an established and legitimate market.*



# Beneficially use

*The use of industrial byproduct in lieu of a competing product or raw material in accordance with the **rules** (under construction).*



# What is the scope of the new program?

 Environmental Protection Agency June 2012

**Early Stakeholder Outreach  
Beneficial Use  
Regulatory Program Development**

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**Why is the Agency seeking early stakeholder outreach?**

Ohio EPA's Division of Materials and Waste Management (DMWM) and Division of Surface Water (DSW) are seeking additional early stakeholder input on an approach to promote responsible and beneficial use of industrial byproducts. The approach described here was developed in consideration of earlier comments received through outreach from 2006 related to developing a regulatory program for beneficial use of industrial byproducts in Ohio.

This early stakeholder outreach effort is an additional step added by Ohio EPA in response to Executive Order 2011-01K, to ensure stakeholders are brought into the review process as early as possible. This additional request for stakeholder input allows for early feedback and information sharing before rule language has been developed by the Agency.

**Why develop a regulatory program for beneficial use?**

There is increasing interest in beneficially using industrial byproducts currently being disposed in landfills. DMWM and DSW are suggesting the creation of a regulatory program to manage these industrial byproducts more sustainably. A beneficial use program may offer the following benefits:

- Provide byproduct generators with a science-based protocol for evaluating their byproducts.
- Assure potential users of the safety of these materials.
- Reduce disposal costs for generators.
- Provide sources of raw materials for end users.
- Extend the capacity of landfills and conserve resources.
- Make byproducts resources instead of waste.

**What is beneficial use and what are industrial byproducts?**

In general terms, beneficial use is considered the use of industrial byproducts to replace or supplement a raw material or competing product. Industrial byproducts generally refer to residual materials that could meet the regulatory definition of solid waste or industrial waste or the definition of waste in different regulatory programs. The beneficial use program would not change or replace existing beneficial use programs established in waste-specific reuse rules such as hazardous waste, scrap tires, compost, sewage sludge and clean hard fill.

**What is being suggested?**

DMWM is suggesting that beneficial use rules be created and organized into their own new program chapter.

The attached document, titled *Beneficial Use Rules Development Concepts*, contains a conceptual framework for the program being proposed by DMWM and DSW. The concepts include: who is required to obtain authorizations and permits; the authorization (permitting) structure; and characterization of industrial byproducts, among others. Please refer to the attachment for a brief overview of the concepts for which input is requested.

**Who would be regulated by this new program?**

The new regulatory program would only apply to those wishing to beneficially use industrial byproducts.

**What is the rulemaking schedule?**

DMWM and DSW will evaluate feedback and facilitate additional stakeholder engagement to further develop concepts. DMWM and DSW will then prepare a draft version of rules for interested party review.

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- Early Stakeholder Outreach
- Beneficial Use Rules Development Concepts

# Types of authorizations



- Pre-approved
- General permit
- Individual permit

# Types of authorizations: **Pre-approved**

## Industrial byproduct use examples:

- Asphalt concrete
- Asphalt
- Cement
- Cement concrete
- Chip and seal pavement
- Drywall/Gypsum
- Flowable fill
- Glass
- Grout



# Types of authorizations:

## General Permit

### Requires:

- Voluntary compliance with terms and conditions of general permit
- Materials characterization plan
- Analytical results

### Examples:

- Soil blending of sewage sludge incinerator ash
- Land application or geotechnical fill of FGD
- Fly ash as cold weather road abrasive
- Soil blending of foundry sand



Types of authorizations:

## Individual permit (Site-specific)

- Option for industrial byproducts that don't qualify for *pre-approved* or *general permit*
- Would require description of industrial byproduct, use, and location
- Would require characterization plan
- Five-year permit



# Challenges

- Standards
  - RSLs (Regional Screening Levels) vs. Something Else?
  - $10^{-6}$  vs.  $10^{-5}$  vs. ??
- Human health and Ecological health
- Protection of water quality
- What will be a “pre-approved” beneficial use?
- What general permits should be developed?



# Moving forward

- We need your input
- **Beneficial Use Rules Team** to draft rules
- Public comment (this could take a while...)
- Finalize rules? When?



# Other things from Ohio EPA



***House Bill 592  
revisited***



# Questions?



Contact John Schierberl  
614.644.2955

# Resources

Beneficial Use website:

[www.epa.ohio.gov/dmwm/Home/BeneficialUse.aspx](http://www.epa.ohio.gov/dmwm/Home/BeneficialUse.aspx)

Listserv website:

[ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage](http://ohioepa.custhelp.com/ci/documents/detail/2/subscriptionpage)

DMWM website:

[www.epa.ohio.gov/dmwm/home.aspx](http://www.epa.ohio.gov/dmwm/home.aspx)

How to get to IAWMP form:

[epa.ohio.gov/portals/34/document/guidance/gd\\_689.pdf](http://epa.ohio.gov/portals/34/document/guidance/gd_689.pdf)

HB 592 review:

<http://epa.ohio.gov/hb592.aspx>