

# Successful Regulatory (Ohio EPA) Permitting of Alternative Delivery Municipal Water and Wastewater Projects

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## Agenda:

1. Historical/Past Ohio EPA Permitting
2. Ohio EPA Permitting Requirements
3. Ohio EPA Permitting of Alternative Delivery Projects
4. Future Ohio EPA Permitting of Alternative Delivery Projects



# 1. Historical Ohio EPA Permitting

- When EPA was first established in 1970, permitting requirements were significant
- Procedures, protocols, and regulatory contacts were new for all parties: Owners, Ohio EPA, and Consulting Engineers
- EPA typically funded projects and thus required final and complete drawings; more details may have been required and reviewed
- Permitting may have been a “struggle” ... but the efforts have been worthwhile



Fish killed (June 1972; Bill Gillette)

# 1. Past Ohio EPA Permitting

(Before 2011 Ohio Construction Reform)

- Ohio EPA Permitting requirements had evolved; permitting was familiar and thus more efficiently completed for D/B/B
- EPA funding and staff reductions encouraged a more streamlined approach to permitting
- Ohio EPA primarily focused on Process Systems and treatment capabilities
- Regulators are also focused on site/civil design including flood plain, wetlands, etc.
- Air, noise, and overall surrounding environmental impacts were reviewed as applicable to the project and may have become more complex

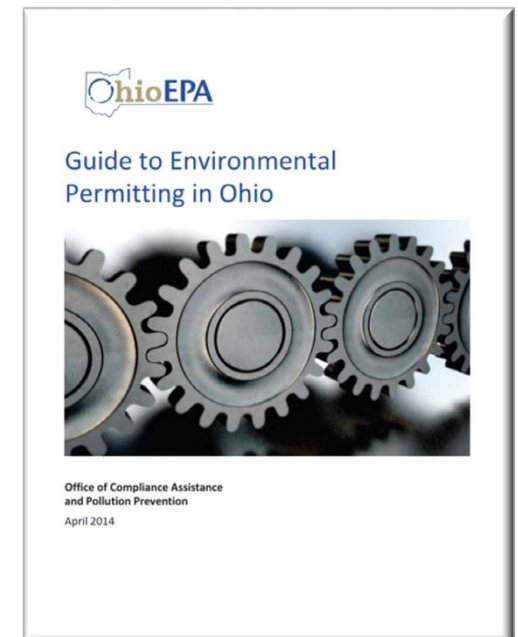


Marysville WRF *Design/Bid/Build*  
New Greenfield Plant



## 2. Ohio EPA Permitting Requirements

- **Criteria for PTI Plan Approval (OAC 3745-42-04) – Director must be able to determine that the installation will:**
  - a) Not prevent or interfere with the attainment or maintenance of applicable water quality standards contained in Chapter 3745-1 of the Administrative Code
  - b) Not result in a violation of any applicable laws; and
  - c) Employ the best available technology.
- **Information not necessarily needed for plan approval (from Ohio EPA PTI Fact Sheet)**
  - a) Laboratory fixtures and equipment;
  - b) Buildings to house a filter or other parts of the plant (while details on the filter or blowers or what is inside the building are necessary, size and placement is sufficient for the building itself);
  - c) Standby equipment – except for critical items like influent and effluent pumps;
  - d) Safety features like rails, fencing, grates, etc.;
  - e) HVAC systems information;
  - f) Architectural features such as doors, windows, finishes, furniture;
  - g) Fire protection for the buildings;
  - h) Electrical plans for lighting or other equipment not directly related to the function of the treatment plant.



<http://epa.ohio.gov/portals/41/sb/publications/permitguide.pdf>



## 2. Ohio EPA Permitting Requirements

- **What is generally required for review?**

- Title Sheet
- General Process Schematics
- Process Drawings & Data Summary
- Hydraulic Profile
- Civil/Site Work
- Electrical One-lines
- P&ID's

- **Up to 180 calendar day review period**



## 2. Ohio EPA Permitting Requirements

### ORC 6111.44

“...no municipal corporation, county, public institution, corporation, or officer or employee thereof or other person shall provide or install sewerage or treatment works for sewage, sludge, or sludge materials disposal or treatment or make a change in any sewerage or treatment works until the plans therefor have been submitted to and approved by the director of environmental protection.”

***Ohio EPA & Attorney General Office may Interpret this to mean  
no work can begin until PTI approval***

Note: ORC 6109.07 Applies to public water systems



## 2. Ohio EPA Permitting Requirements

### **OAC 3745-42-02 Lists some exceptions for work that may begin prior to PTI approval**

e.g. clearing, grading and preparation for structural foundations (including excavation for footers), installation and setup of temporary construction facilities

### **OAC 3745-42-02 (B)(1)(a)(iii)**

If a permit to install is issued, any necessary design changes, and the costs associated with those design changes, including costs due to delayed construction, in order to comply with the terms of the permit to install are entirely at the **owner or operator's risk**.

***Does not guarantee issuance of a PTI or plan approval, and any of these activities implemented prior to issuance of a permit are at sole risk of the facility owner or operator.***

Note: OAC Chapter 3745-91 Applies to public water systems





# 3. Ohio EPA Permitting of Alternative Delivery Projects

- **Project Delivery Methods:**

- Retains multiple-prime Design/Bid/Build (D/B/B) project delivery
- Allows Single-Prime D/B/B
- Retains Construction Manager (CM) as agent delivery
- Allows **Construction Manager at Risk (CMR)\***
- Allows **Design/Build (D/B)\***


**\*Alternative Delivery methods applicable to today's permitting discussions**



***First changes in Ohio's method of performing public construction in over 134 years!***




### 3. Ohio EPA Permitting of Alternative Delivery Projects



<b>Permit</b>	<b>Agency</b>	<b>Familiar with CMR and D/B?</b>
Building	ODOC	Yes
401 /404 Flood Plain	USACE FEMA	Yes
SWP3 PTI Anti-Degradation	Ohio EPA	Less Familiarity

### 3. Ohio EPA Permitting of Alternative Delivery Projects

- **Why use Alternative Delivery to Complete Municipal W/WW Projects?**



Metric	Design-Build vs. Design-Bid-Build	Design-Build vs. CM@R
Unit Cost	6.1% lower	4.5% lower
Construction Speed	12% faster	7% faster
Delivery Speed	33.5 % faster	23.5% faster
Cost Growth	5.2% less	12.6% less
Schedule Growth	11.4% less	2.2% less

*Source: Construction Industry Institute (CII)/Penn State research comprising 351 projects ranging from 5K to 2.5M square feet. The study includes varied project types and sectors.*

- **Obtaining permits from Ohio EPA can be a long process.**
- **How do we realize the time saving benefits of alternative delivery recognizing Ohio EPA's permitting requirements?**



# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Risk Management:

- Alternative delivery, specifically D/B, can shift the risk to obtain the PTI from the owner to the Design/Builder
- If risk to obtain PTI is shifted to the Design/Builder, this entity can determine the cost of assuming this risk
- Design/Builder can determine when construction of excepted activities can begin



*If Design/Builder elects to start portions of construction prior to a PTI, then Design/Builder can determine the risk vs. benefit*

# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Communication:

- Engage your Ohio EPA rep early and often
- Convey important schedule time frames
- Allow them to invest in the project early and provide constructive input, not just as a final review



*Take a hands-on, interactive approach to submitting, managing, and tracking permits*

# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Organization:

- Know your schedule
- Submit all required information for a complete application
- If possible have some preliminary reviews/discussions of critical items with regulators early instead of waiting until final permit submission
- Respond promptly to questions or requests for clarification from the agency

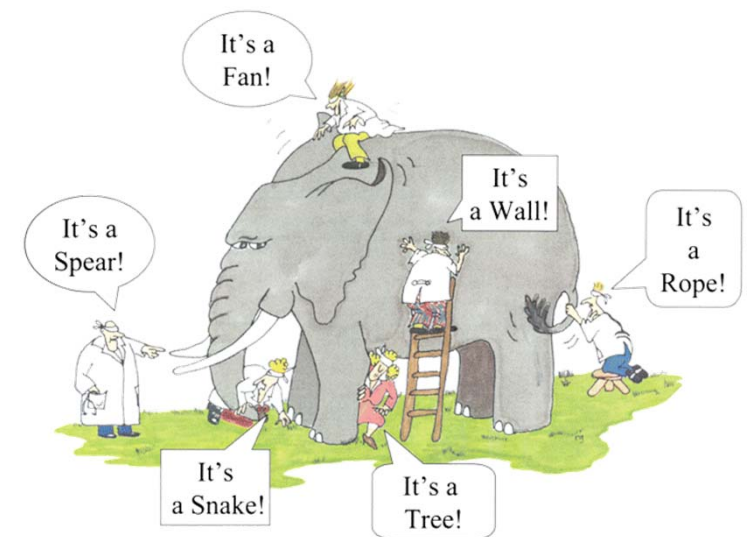


*Everyone needs to know which direction they should be going*

# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Teamwork:

- Create an environment where all parties involved are invested in the success of the project
- Cultivate respect and trust in what can be an adversarial relationship with regulatory agencies
- Be flexible and open to ideas and suggestions from all parties
- Learn and understand the challenges each party faces

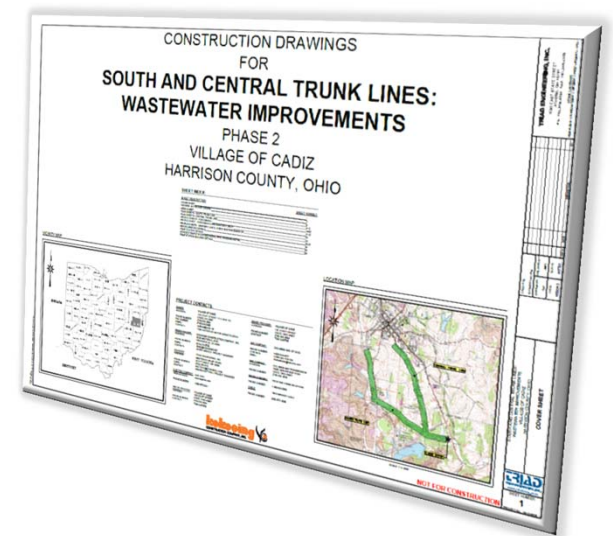


***Integrate different perspectives  
into a comprehensive solution***

# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Cadiz, OH Phase 2 Sewer System Improvements

- Schedule critical project with Ohio EPA Findings & Orders deadlines, and WPCLF funding requirements
- Needed a timely and cost effective solution to improve the Village of Cadiz, Ohio Wastewater System so D/B was selected
- Kokosing/Triad D/B Team and Village of Cadiz met with Ohio EPA early in preliminary design phase





# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Cadiz, OH Phase 2 Sewer System Improvements

- Team worked to keep Ohio EPA regulators involved throughout the design phase
  - Regulators were able to provide input, allowing the team to make design adjustments prior to receiving formal drawing review comments
  - Ohio EPA knew what was coming for review before it was submitted
- **PTI Application approval within 20 calendar days!**
- **Anticipated Construction Completion Late 2014**  
(Ohio EPA F&O Target Dec. 2015)



# 3. Ohio EPA Permitting of Alternative Delivery Projects

## Keys to Success:

- Currently **Nothing** Fundamentally Different about the Permitting Process for Alternative Delivery
- Success Requires **RISK MANAGEMENT**
  - Contractor design participation and constructability reviews mitigates risk during construction
- Success Requires **COMMUNICATION**
  - Open communication between regulators, Owner, and D/B team members contributes to constructive input and timely final review
- Success Requires **ORGANIZATION**
  - Regular meetings and project organization kept everyone on the same page with requirements and upcoming deadlines
- Success Requires **TEAMWORK**
  - D/B Team, Village, and Ohio EPA personnel have worked well together and made the project a success. **THANK YOU!**



# 4. The Future

## Improving the Current System to Allow Better Utilization of New Delivery Methods

- **Alternative Delivery fits within the current permitting procedures, but does it allow D/B at it's best?**
- **With continued evolution of the process, we can better utilize the alternative project deliveries available to us**
- **How would we like to see the system improve?**
  - Ohio EPA review process evolve to allow phased approach or approval and means to allow construction of non-process related items
  - Criteria engineer and owner meet with Ohio EPA before/during proposal period
  - Owners shift risk of obtaining PTI and decision of when to begin construction to Design/Builder
  - Look to other states and federal agencies for examples of what works



**With a little work, the old process can be improved!**

# QUESTIONS?



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# THANK YOU!

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