

Guidance for Temporary Housing Associated with Oil and Natural Gas Drilling Operations



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Environmental
Protection Agency



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Disclaimer

This guidance document identifies the general process and requirements to be followed for siting, permitting and operating potable water and wastewater treatment systems for typical manufactured home parks and/or temporary/permanent housing projects. Additional options or alternative systems may be capable of being utilized in Ohio. If there are any questions concerning the contents of this guidance document or you wish to investigate an alternative water or wastewater management scenario, please contact the Ohio EPA, ODH, or the local health district, as appropriate. Additional contact information can be found in Section IX of this document.

Additionally, this guidance document should not be your only source of information on the regulations, and it does not replace the need to seek assistance from experienced consultants and/or legal counsel to help you to fully understand and comply with Ohio's laws and regulations.

A more detailed *Guide to Environmental Permitting in Ohio* (April 2012) is available at:

www.epa.ohio.gov/portals/41/sb/publications/permitguide.pdf.

Introduction

With almost half of the state sitting over natural-gas rich shale deposits, it is expected that Ohio will see a significant increase in oil and natural gas drilling activities in the Marcellus and Utica shale in the near future.

Along with this, there may be a similar increase in the need for temporary housing (“man-camps”) for the field workers employed at the drill rigs.

Building and operating a temporary housing facility includes providing a clean, reliable source of potable¹ water and the appropriate management of waste/wastewater from toilets, showers, sinks and laundry facilities.

This guidance document has been developed as a tool for drilling companies, entrepreneurs, or other interested parties looking at providing temporary housing facilities for oil/gas field workers.

It summarizes the regulatory requirements and permits you may need from the Ohio Environmental Protection Agency (Ohio EPA), Ohio Department of Health (ODH) and/or local health districts for providing drinking (potable) water and sanitary services to temporary housing facilities for oil/gas field workers. Understanding the regulations and working with the appropriate regulatory agencies early in the process will help minimize permitting delays and ensure temporary housing areas are constructed and operated in a manner that will protect public health and the environment.



Employee Housing

Temporary housing facilities or man-camps using modular or portable housing located off the drill pad for field workers may qualify as a manufactured home park, campground or combined park-camp under Ohio law. ODH has regulations governing manufactured home parks and/or campgrounds:

Manufactured Home Parks

Ohio Administrative Code: Chapter 3701-27-01 (N), “Any tracts of land upon which three or more manufactured homes, used for habitation are parked, either free of charge or for revenue purposes, and includes any roadway, building, structure, vehicle, or enclosure used or intended for use as a part of the facilities of the park. A tract of land that is subdivided and the individual lots are not for rent or rented, but are for sale or sold for the purpose of installation of manufactured homes on the lots is not a manufactured home park even though three or more manufactured homes are parked thereon if the roadways are dedicated to the local government authority.”

Combined Park Camps

Ohio Administrative Code 3701-26-01 (C), “Any tract of land upon which a combination of five or more self-contained recreational vehicles or portable camping units are placed and includes any roadway, building, structure, vehicle, or enclosure used or intended for use as part of the park facilities. A tract of land that is subdivided for lease or other contract of the individual sites is a combined park-camp if a combination of five or more recreational vehicles or portable camping units are placed on it for recreation, vacation, or business purposes. “Combined park camp” does not include any tract of land used solely for the storage or display for sale of self-contained recreational vehicles or portable camping units or solely as a temporary park-camp.

¹ Potable water is water which is satisfactory for human consumption, including water used for drinking, cooking, dishwashing, hand washing, bathing, showering or oral hygiene.

Before developing a manufactured home park and/or campground, plans for the development must be submitted to and approved by the ODH. Forms for the plan review process for each type of development can be found on the ODH website at:

- Manufactured home parks: www.odh.ohio.gov/odhPrograms/eh/mh_park/MHPForms.aspx
- Home parks and campgrounds: www.odh.ohio.gov/odhPrograms/eh/parks/CampForm.aspx

Clean and reliable potable water and appropriate wastewater management is required for a manufactured home park and/or campground. These requirements make the installation of permanent infrastructure appropriate in order to provide for clean water and the proper treatment and disposal of sanitary wastewater.

Potable Water

All potable water sources in Ohio must meet the requirements of either the ODH or Ohio EPA prior to use.

A **public water system (PWS)** is defined as a system that has at least 15 service connections or regularly provides water for human consumption to at least 25 individuals at least 60 days per year. PWSs would include manufactured home parks and other temporary housing facilities that meet the above definition. Some of the key requirements associated with establishing a new PWS are described in the table below.

Potable Water Sources	Key Requirements	Contact/Regulatory Authority
Connection to an existing PWS (e.g. municipal water plant).	Approval from PWS: housing facility may have to be equipped with backflow prevention including an air gap at the connection.	<ul style="list-style-type: none"> • PWS owner • Ohio EPA District Office
Hauled water storage system	PWS supplying water must have an approved conventional overhead fill station; water must be delivered by a water hauler registered with the local health district	<ul style="list-style-type: none"> • Local health district (if no subsequent treatment after delivery) • Ohio EPA District Office (if additional treatment) • PWS owner
Constructing and operating a new PWS using a well	Submit plans for drilling the well to Ohio EPA for review/approval (OAC 3745-91); comply with certified operator requirements (OAC 3745-7) and water well standards applicable to PWSs (OAC 3745-9); file a well log with ODNR	<ul style="list-style-type: none"> • Ohio EPA District Office, Division of Drinking and Ground Waters • ODNR
Constructing and operating a new <u>private</u> water system using a well	Obtain necessary permit(s); use a registered private water systems contractor; comply with private water well construction rules (OAC 3721-28); file a well log with ODNR	<ul style="list-style-type: none"> • Local health district • ODNR

In addition to these requirements, all PWSs must regularly monitor for contaminants in accordance with their monitoring schedule issued by Ohio EPA. PWSs may also meet the classification requirements described in OAC Rule 3745-7-03, in which case additional staffing requirements may be applicable.

Staffing requirements would include the presence of a certified operator of record to oversee the technical operation of the PWS. To become a certified operator, individuals must meet eligibility requirements, apply for and pass the certified operator exam, and document the appropriate level of hands on work experience.

For more information, review *Guidelines for the Design of Small Ground Water Systems* (www.epa.ohio.gov/portals/28/documents/engineering/greenbook.pdf) and contact the appropriate Ohio EPA District Office.

A **private water system** has fewer than 15 service connections and does not regularly provide water to an average of at least 25 individuals daily at least 60 days each year. Private water systems include wells, springs, ponds, cisterns, or hauled water storage tanks (without additional treatment) used for human consumption.

The standards for construction and maintenance of private water systems are established in state administrative rules by ODH and are implemented by the local health districts. Therefore, if your water system meets the definition of a private water system, you must contact the appropriate local health districts for permits and inspections.

ODH requires registration of any person who constructs, alters or seals a private water system. A registered contractor must be used to install or service a private water system at any facility. Information on registration of private water systems contractors can be found at:

www.odh.ohio.gov/odhPrograms/eh/water/PWSreg.aspx.

Local health districts register and inspect any person who hauls potable water to a private water system, and each local health district maintains a list of registered water haulers. A listing of contact information for local health districts can be found at: www.odh.ohio.gov/localHealthDistricts/lhdmain.aspx.

Potential sources of potable water, including private and public water systems, are outlined in the table below along with key requirements and general contact information.

- Under Ohio's regulations, examples of unacceptable sources of potable water include:
- Unauthorized connection to a PWS water line (e.g. fire hydrant)
- Use of surface water without Ohio EPA or ODH approved treatment

Water Resource Management

The Great Lakes–St. Lawrence River Basin Water Resources Compact (Great Lakes Compact) is a binding agreement among the eight states that border the Great Lakes.

The Great Lakes Compact, which has been enacted into Ohio law and carries the force of Federal law, specifically prohibits any new or increased diversions of any amount of water out of the Lake Erie Basin. Therefore, no permits will be issued for the transfer of water out of the Lake Erie Basin for oil and gas operations, or other types of operations.

The Lake Erie Basin includes all or part of 33 counties in Ohio located north of the Lake Erie–Ohio River Basin drainage divide (See map, right). Additional requirements may apply if withdrawing more than 100,000 gallons per day.

For more information, contact ODNR Division of Soil and Water Resources.



Wastewater Collection, Treatment and/or Disposal

If you are planning to develop a manufactured home park and/or campground for drill rig workers (such as a man-camp), you are required to provide adequate facilities to manage sanitary-related wastes from restrooms, sinks, showers and laundry facilities. With any new development, Ohio EPA recommends connecting to an existing sanitary sewer.

Utilizing existing infrastructure is more practical from the environmental and economic perspective and will streamline any necessary authorizations. If there is not an option to tie into an existing sanitary sewer line at or near the site, you will be required to construct a collection, treatment and/or disposal system to manage sanitary waste/wastewater.

It is very important that you determine what options are feasible BEFORE purchasing a site for temporary housing, as not every site is suitable to support a site specific wastewater treatment system. For these systems, important considerations in selecting a site must include:

- Available distance to an adequate receiving stream (e.g. stream quality and size);
- Suitability of soils for soil based treatment;
- Site topography;
- Volume of wastewater to be managed;
- Options for disposal of wastewater byproducts; and
- Resources available (such as the availability of an operator) to operate and maintain the system.

You are required to obtain permits from Ohio EPA or the local health district if applicable BEFORE constructing and operating any wastewater treatment, collection, treatment and/or disposal system (e.g. sanitary sewers, sewer connections, soil based treatment systems, wastewater treatment units, small flow on-site sewage treatment systems (SFOSTS), etc.).

The type and number of dwellings served by a sewage system determines which state agency has program jurisdiction for permitting. Sewage treatment systems that serve one, two or three family dwellings (that are not part of a manufactured home park) are regulated by the Ohio Department of Health and permitted by the local health district. Small flow on-site sewage treatment systems (SFOSTS) that serve multiple dwellings or campers, treat less than 1,000 gallons per day, and where the local health district has delegation of authority for SFOSTS approval, are also regulated by the Ohio Department of Health. . In counties that have not pursued SFOSTS jurisdiction, Ohio EPA has permitting authority for sewage systems that treat greater than 1,000 gallons per day. The listing of local health districts that implement the SFOSTS program may be found at: www.odh.ohio.gov/odhPrograms/eh/sewage/sfosts1.aspx. Local health districts register and maintain a list of all sewage treatment system installers, service providers and septage haulers authorized to perform work in each county

Additional permits or certifications may also be necessary for site preparation and/or modification activities as well (e.g. clearing and grubbing vegetation, modifying topography, encroaching upon waterbodies or wetlands, etc.). These various permits, application requirements, and timeframes are outlined as follows:

Ohio EPA Permit to Install (PTI) for construction of wastewater treatment, collection and/or disposal system, Ohio Administrative Code 3745-42

If existing sanitary sewers are available, then a single PTI application may address both a sewer line extension to existing sewers as well as the collection sewers within the manufactured home park and/or campground.²

If existing sewers are not available, then the PTI application may address collection sewers within the manufactured home park and/or campground and the wastewater treatment system or disposal system.

A complete application includes:

- The proper forms available from Ohio EPA;
- The applicable fees; and
- The engineering plans and specifications, including the design and engineering standards associated with proposed sewers and/or wastewater treatment system or units. Plans and drawings must be submitted by a Professional Engineer (PE) licensed in the state of Ohio and the system must be installed as per the Ohio EPA reviewed and approved plans.

Important Note:
Ohio EPA does not envision or recommend the use of sewage holding tanks for man-camp operations.

² You are required to obtain permits from Ohio EPA BEFORE constructing and operating any wastewater treatment, collection and/or disposal system

In addition, the following PTI review times should be expected:

- If a PTI application is for a sewer line extension and/or collection sewers only for connection to existing sanitary sewers, the review and approval of a permit application typically ranges from 30 to 120 days; or
- If a PTI application is for collection sewers and the construction of a wastewater treatment system that discharges to waters of the state, the review and approval of the permit application typically ranges from 90 to 180 days. An application for a new wastewater treatment system discharge would require:
 - An analysis of various treatment alternatives that may reduce or eliminate discharge including costs and various social and environmental impacts;
 - A 30-day public notice period on application received;
 - A 30-day comment period on draft or proposed permit action; and
 - A possible public hearing on application and/or draft/proposed action.

Ohio EPA National Pollutant Discharge Elimination System (NPDES) Permit for authorization of discharge from wastewater treatment system -- Ohio Administrative Code 3745-33

If existing sanitary sewers are not available and the course of action is the installation of a wastewater treatment system, an NPDES permit authorizing the discharge from the wastewater treatment system must be obtained along with the PTI for the construction.³

It is important to note that an NPDES permit must be issued before or concurrent with PTI for the construction of wastewater treatment system. In addition, for any new wastewater treatment system, the wastewater treatment system must be able to meet best available demonstrated control technology effluent limitations or water quality standards, as identified by Ohio EPA regulations. A complete NPDES application includes:

- The proper forms available from Ohio EPA;
- The applicable fees; and
- Supplemental information, such as:
 - An analysis of various treatment alternatives that may reduce or eliminate a discharge, including costs and various social and environmental impacts; and
 - Details regarding operational, reporting, record keeping and monitoring requirements of the wastewater treatment system.

In addition, the review and approval of an NPDES permit application that authorizes a discharge ranges from 90 to 180 days and includes:

- A 30-day public notice period on application received;
- A 30-day comment period on draft or proposed permit action; and
- A possible public hearing on application and/or draft/proposed action.

Ohio EPA Operator Certification – Ohio Administrative Code 3745-7

An NPDES permitted wastewater treatment or sewerage system must have a designated operator of record to oversee the technical operation of the treatment system and sewerage system. Each operator of record shall have a valid certification issued by Ohio EPA of a class equal to or greater than the classification of the treatment system, sewerage system, or wastewater treatment facility as established in regulations. In addition:

- Within 60 days of the effective date of the NPDES permit, the permittee shall notify the Director of Ohio EPA of the operator of record, using a form acceptable to Ohio EPA; and
- The operator of record shall, at a minimum, be physically present at the treatment system and fulfill the time requirements specified by regulations and perform technical operation as assigned by the permittee of the treatment system.

³ You are required to obtain permits from Ohio EPA BEFORE constructing and operating any wastewater treatment, collection and/or disposal system

Ohio EPA Sewage Sludge/Biosolids – Ohio Administrative Code 3745-40

The treatment, storage, transfer, or disposal of sewage sludge/biosolids shall be in compliance with appropriate regulations and the conditions of an NPDES permit or management plan. The NPDES and PTI applications must identify the disposal method to be utilized, including whether the sewage/biosolids will be:

- Land applied;
- Transferred to another treatment system;
- Transferred to a landfill; and/or
- Incinerated.

Ohio Department of Health Sewage Treatment Systems – Ohio Revised Code Chapter 3718 and OAC Chapter 3701-29

A small flow on-site treatment system (SFOSTS) may be permitted by a local health district that has chosen to implement the SFOSTS under Ohio law and rules. SFOSTS may treat up to 1,000 gallons per day, and may use flow equalization to ensure treatment levels stay below applicable thresholds. ODH has established minimum standards to be followed by local health districts in reviewing and permitting SFOSTS. Local health districts may have more stringent rule requirements for SFOSTS design and installation than the state minimum rules. It is important to work closely with the local health district to ensure compliance with local rule requirements. The following outlines the application and permitting process:

- An application for a permit is obtained from the local health district office.
- The applicant works with the local health district sanitarian and typically a SFOSTS designer or professional engineer to develop an approved SFOSTS design. This process will include installation of test borings or pits to determine site and soil suitability for on-site treatment of sewage.
- After obtaining an approved design, an application is made for installation of a SFOSTS. The permit is reviewed and approved or denied.
- Upon approval of the SFOSTS permit, the system installation can proceed. The local health district will work with the applicant, designer and installer to determine the frequency and timing of all inspections.
- The final system installation is inspected, and if compliance with all rule and permit conditions are met, the system is approved by the local health district.
- An operation permit will be issued by the local health district specifying the operation and maintenance requirements and frequencies for the system. The operation permit may include a periodic inspection by the local health district.
- Septage removed from pretreatment tanks, trash tanks, dosing or septic tanks must be pumped by a hauler that is registered by the local health department that has jurisdiction over the area where the manufactured home park and/or campground is located. All pumped sewage and septage must be taken to a permitted wastewater treatment system or land applied at a site permitted by the local health district in compliance with CFR (Code of Federal Regulations) Part 503 and any local rule requirements.

Other Potentially Pertinent Permits or Certifications

In addition to potable water or wastewater treatment, collection and/or disposal system specific requirements, there may also be additional permitting or certifications associated with site preparation.

Construction Storm Water – Ohio Administrative Code 3745-39

Any construction activity or project that disturbs one or more acres of ground must receive coverage under an Ohio EPA Construction Activity General NPDES permit to discharge storm water from your site. If the activity or project disturbs less than one acre but is part of a larger plan of development or sale, coverage under the general NPDES permit is also necessary. A Permit is terminated once construction is complete and site stabilized. Coverage under a general permit requires:

- A Storm Water Pollution Prevention Plan (SWP3) to be developed for the construction site;
- A Notice of Intent (NOI) requesting coverage for discharges under the general permit, as well as the applicable fees to be submitted to Ohio EPA; and
- Once permit coverage is authorized, that contractors, subcontractors and staff understand the SWP3 conditions and implement it appropriately along with other conditions of permit including regular maintenance and inspection of sediment and erosion controls and storm water management facilities.

Typically, the review and authorization of coverage under a general storm water permit takes less than 30 days.

Section 401 Water Quality Certifications/Isolation Wetlands – Ohio Administrative Code 3745-32

If your project involvements the placement of dredged or fill material into wetlands or streams, you must receive a Section 401 certification from Ohio EPA authorizing these impacts. In addition, you are required to obtain a 404 permit if the project impacts waters that are under the jurisdiction of the U.S. Army Corps of Engineers.

401 Water Quality Certification

A 401 Water Quality Certification requires mitigation for wetland or stream impacts through restoration or enhancement projects or possible purchase of conservation easements. Activities typically requiring 401 certifications include stream rerouting, placing streams in culverts, filling wetlands and filling in lakes. Projects that are typically regulated include construction activities at highways, marinas/docks, shopping malls, housing subdivisions and strip mining operations. A complete application, which must be submitted to Ohio EPA for review and approval before construction can begin, includes:

- The proper forms available from Ohio EPA;
- The applicable fees; and
- Any appropriate supplemental information, including an evaluation of various alternatives that may reduce or eliminate impacts including costs and various social and environmental impacts.
- Review and approval of an application for a Section 401 water quality certification may require up to 180 days, and includes:
 - A 30-day comment period for the application; and
 - A possible public hearing on the permit application and proposed project.

In addition to applying for a 401 Water Quality Certification, an applicant must also contact the U.S. Army Corps of Engineers to determine jurisdiction and delineation of wetlands and/or the need for an individual Section 404 permit or determination, should a nationwide permit not be applicable.

Isolated Wetlands

Ohio EPA also regulates the placement of fill material into “isolated wetlands” under state law. The U.S. Army Corps of Engineers will determine whether a wetland is jurisdictional and regulated under the Clean Water Act, or isolated and subject to state law. This determination will be memorialized in a “jurisdictional determination” letter. If you plan on filling an isolated wetland, the permitting requirements will vary depending upon the acreage of fill and quality of the wetland. State law provides three levels of review for isolated wetlands, as described in the table below:

Isolated Wetland Reviews	
<i>Level 1</i>	<ul style="list-style-type: none">• Impacts to less than 0.5 acre of Category 1 or 2 wetlands.• Approximately 30-day review time, no public comment period.• No alternatives analysis
<i>Level 2</i>	<ul style="list-style-type: none">• Impacts to greater than 0.5 acre of Category 1 wetlands OR• Impacts to 0.6 acre to 3.0 acres of Category 2 wetlands.• 20-day public comment period.• 90-day review time.• Must discuss alternatives.
<i>Level 3****</i>	<ul style="list-style-type: none">• Impacts to greater than 3.0 acres of Category 2 wetlands OR• Any impact to a Category 3 wetland.• 30-day public comment period.• 180-day review time.• Must present a preferred, minimal degradation, and non-degradation alternative.

**** *The Level 3 review is identical to the 401 review above.*

Additional Contact Information

Potable Water

Ohio Environmental Protection Agency
Division of Drinking and Ground Waters
Central Office
P.O. Box 1049
Columbus, OH 43216-1049
(614) 644-2752
Fax: (614) 644-2909
ddagw@epa.ohio.gov

Ohio Department of Health
Residential Water and Sewage Program
246 N. High St.
Columbus, OH 43215
(614) 644-7558
Fax: (614) 466-4556
BEH@odh.ohio.gov

Wastewater

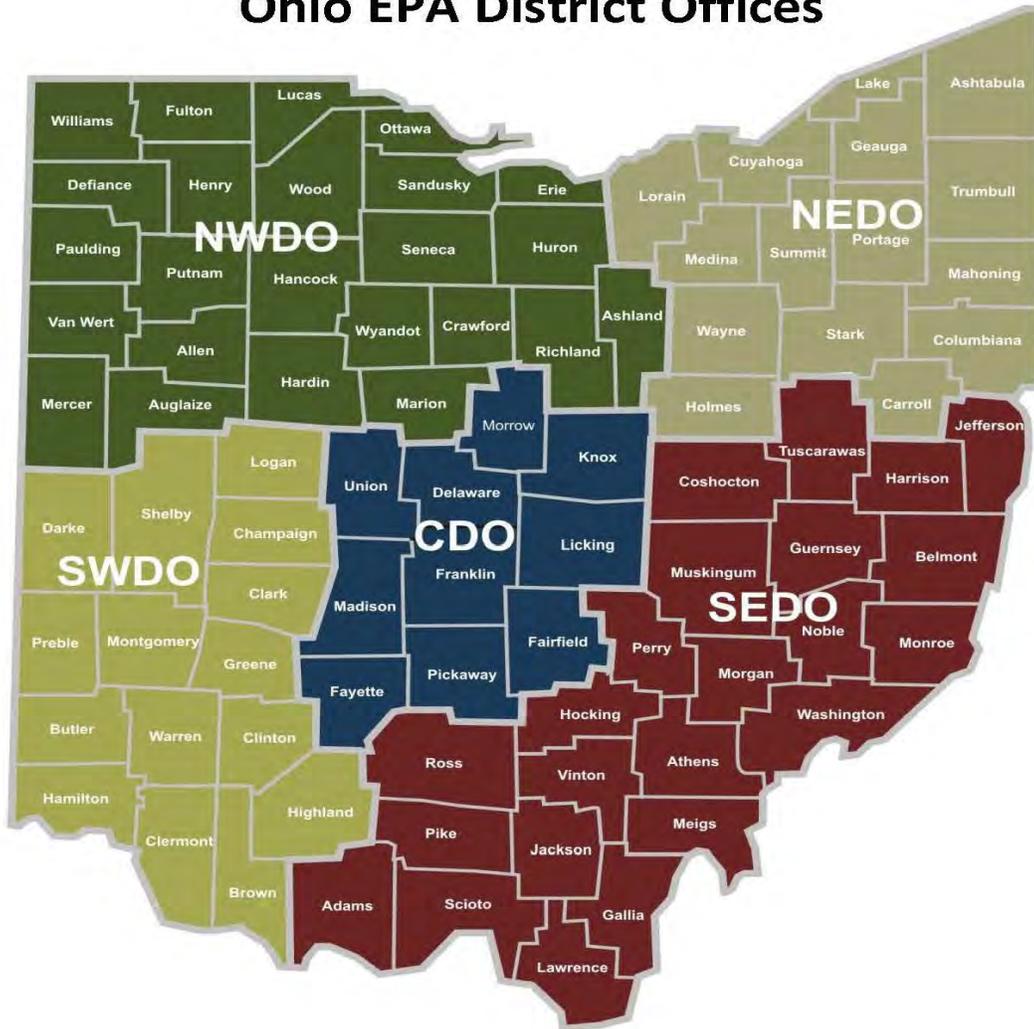
Ohio EPA, Division of Surface Water
Central Office
P.O. Box 1049
Columbus, OH 43216-1049
(614) 644-2001
Fax: (614) 644-2745
dsw.webmail@epa.ohio.gov

Ohio Department of Health
Residential Water and Sewage Program
246 N. High St.
Columbus, OH 43215
(614) 644-7558
Fax: (614) 466-4556
BEH@odh.ohio.gov

Manufactured Homes/Campgrounds

Ohio Department of Health
Recreation Program
246 N. High St.
Columbus, OH 43215
(614) 644-7468
Fax: (614) 466-4556
BEH@odh.ohio.gov

Ohio EPA District Offices



Central Office
 P.O. Box 1049
 Columbus, Ohio 43216-1049
 (614) 644-3020

Central District Office
 P.O. Box 1049
 Columbus, Ohio 43216-1049
 (614) 728-3778

Northeast District Office
 2110 East Aurora Road
 Twinsburg, Ohio 44087-1924
 (330) 963-1200

Northwest District Office
 347 North Dunbridge Road
 Bowling Green, Ohio 43402-9398
 (419) 352-8461

Southeast District Office
 2195 Front Street
 Logan, Ohio 43138-8637
 (740) 385-8501

Southwest District Office
 401 East Fifth Street
 Dayton, Ohio 45402-2911
 (937) 285-6357