

City of Columbia City, Indiana

Water Department

**Wellhead Protection Plan
Indiana Public Water Supply
permit number IN5292004**

Executive Summary

Background

The City of Columbia City Water Department has initiated a comprehensive Wellhead Protection Program to meet the U.S Government requirements of Section 1428 of the Safe Drinking Water Act and State of Indiana Codes 13-18-17-6 and 13-7-26-7. The purpose of these laws is to help protect public water supply wells from contamination.

Water Supply System

The City of Columbia City owns and operates the public water supply system in Columbia City, Indiana; under the authority of Indiana Public Water Supply permit number IN5292004. Columbia City is located in Whitley County on U.S. Highway 30 in the Northeastern part of Indiana. Its water supply serves a population of approximately 7,000.

The Columbia City Water Works dates back to the early 1900s. Its current plant and wells were constructed in the mid-1970s.

Columbia City's water is withdrawn from three wells located in a wellfield near the water treatment facility at 920 E. Van Buren Street. Columbia City's ground water source lies within the Maumee Subbasin aquifer.

Local Planning Team

In November 2000, the City of Columbia City Water Department formed a Local Planning Team to assist it in the development and implementation of its Wellhead Protection Program. The first public meeting was held on November 29 at the City Hall in the City of Columbia City. An advertisement inviting public participation was placed in the November 21 edition of the Post & Mail, a newspaper of general circulation serving the citizens of the City of Columbia City and its Water Department customers.

Wellhead Protection Areas

The City of Columbia City Water Department has employed the services of Peerless-Midwest, Inc., to delineate its wellfields by identifying the one-, five- and 10-year time-of-travel capture areas. A three-dimensional, finite difference, groundwater-flow model known as MODFLOW was used to simulate groundwater flow at steady state.

The wellfield delineations were submitted to the Indiana Department of Environmental Management (IDEM) on July 19, 2000, and approved by IDEM on August 13, 2001.

After review by the Local Planning Team, the wellfield delineations were accepted and formed the basis for the establishment of the Wellhead Protection Area (five-year time-of-travel area).

Potential Sources of Contamination

A search of Federal and state databases was conducted for all regulated sources of contamination located within the one- and five-year time-of-travel areas. Additionally, all time-of-travel areas were visited and non-regulated potential sources of contamination were inventoried.

Maps of the one- and five-year time-of-travel areas were prepared with the land uses and locations of the potential sources of contamination noted.

Lists of the regulated and non-regulated potential sources of contamination were created in tabular form, which allows for cross-reference to the maps.

Local Ordinances and Regulations

The Local Planning Team believes that current state regulations, local Health Department regulations and local building and zoning regulations are valuable tools for managing potential sources of contamination. By employing voluntary “best management” practices in the management of the Wellhead Protection Area, the Local Planning Team believes that no additional ordinances or regulations are being recommended at this time.

Management Measures

The City of Columbia City believes the management measurements developed through its Wellhead Protection Plan are both sufficient and appropriate to meet the requirements of Indiana's Wellhead Protection Rule.

The City of Columbia City also believes that a plan such as this must be dynamic and recognizes that changes in conditions may require appropriate modifications to its plan. The city welcomes comments and suggestions concerning the plan, and will consider appropriate recommendations concerning its Wellhead Protection Plan.

(End of Executive Summary)

Section 1.

Public Outreach and Education

Owners, Operators, Leaseholders and Mineral Holders of Identified Potential Sources of Contamination

The City of Columbia City Water Department's Wellhead Protection Plan will be made available to owners, operators, leaseholders and mineral holders of identified potential sources of contamination.

As part of its Wellhead Protection Program, the City of Columbia City Water Department will notify such owners and operators of their presence in a Wellhead Protection Area through various public notification procedures. The notification will include, in addition to information about wellhead protection and the importance of preventing contamination of wells, instructions for accessing the city's Wellhead Protection Plan.

The notice will be delivered in person to all identified potential sources of contaminants by the Water Department Superintendent. Non-resident owners, operators, leaseholders and mineral holders will be notified by mail after obtaining their address directly from the identified potential sources of contaminants, or from public records such as plat books and county recorder records.

Owners, Operators, Leaseholders and Mineral Holders of Identified Potential Sources of Contamination (continued)

A copy of the Wellhead Protection Plan will be available for review at the City of Columbia City Water Department offices located on the second floor of City Hall, 112 S. Chauncey St., Columbia City, IN 46725.

Resources for Outreach and Education Communications

The formation and ongoing activities of the Local Planning Team during 2000 and 2001 have raised the City of Columbia City community's awareness of wellhead protection. There has been good newspaper coverage of the Local Planning Team, and additional stories are anticipated.

The Local Planning Team has identified and will implement methods for public outreach and education through:

- Placement of signage on the major thoroughfares near the Wellhead Protection Area
- Availability of wellhead protection brochures at the Water Department's offices
- Display of the Wellhead Protection Area maps at the Water Department's offices

- Publication of Wellhead Protection Area information in the City of Columbia City's Consumer Confidence Report
- Placement of Wellhead Protection information on the City's Web Site
- Press releases

All of the above outreach methods will be used to inform the general public about the Wellhead Protection plan.

Signage

Signage indicating the presence of a Wellhead Protection Area will be placed at the following locations:

U.S. Highway 30	Eastbound at Ind. St. Rd. 9
U.S. Highway 30 St. Rd. 9	Westbound 1,600 ft. East of Ind.
Ind. St. Rd. 9	Southbound at U.S. Highway 30
Ind. St. Rd. 9	Northbound at Collinwood Ave.
Van Buren (Ind. St. Rd. 205)	Westbound 1,200 ft. Southwest of U.S. Highway 30
Van Buren (Ind. St. Rd. 205)	Eastbound at Madison St.

(End of Section 1.: Public Outreach and Education)

Section 2.

Wellhead Protection Area

Five-Year Capture Area

After review of the report of Peerless-Midwest, Inc., and discussion, the City of Columbia City Water Department and its Local Planning Team determined that the five-year time-of-travel capture area will encompass the Wellhead Protection Area for its wellfield.

Location of Wellhead Protection Area

The Wellhead Protection Area is inclusive of the one- and five-year times-of-travel. The Wellhead Protection Area is shown on the map in Exhibit 3. of this plan. More detailed maps of this area also may be found in the Wellhead Protection Area Delineation Report prepared by Peerless-Midwest, Inc.

Wellfield Land Use

Two of the City of Columbia City's three wells are located within the confines of the water treatment plant. A third well is located in a city park near the water treatment plant. The water treatment plant is located near Indiana State Road 205. Land use in the area of the wellfield is commercial and light industrial. All buildings are served by sanitary sewers.

Wellhead Protection Area Land Use

The land use within the one- and five-year capture areas (the Wellhead Protection Area) is generally residential, with commercial and some light industrial uses. Virtually all residences and businesses are served by sanitary sewers.

Contaminants Monitoring

Numerous regulated and non-regulated potential sources of contamination in the City of Columbia City's Wellhead Protection Area were revealed through database searches and windshield surveys. Of primary concern are underground storage tanks. Oils and fuel additives were identified as the most likely prevalent contaminants.

The reader is directed to Exhibit 2. for detailed information on specific sites and locations.

The Water Department will request all identified operators, property owners, leaseholders and mineral owners to enter into an agreement to assist the City in its Wellhead Protection Program.

City of Columbia City

Water Department

Wellhead Protection Program

Contaminant Monitoring Agreement

This is a voluntary agreement intended to assist the City of Columbia City Water Department in managing potential sources of contaminants within its Wellhead Protection Area.

I, the following operator, owner, leaseholder or mineral owner, hereby voluntarily agree to assist the City of Columbia City Water Department in managing the city's Wellhead Protection Area by:

1. Using best management practices in the handling, application and storage of pesticides, chemicals and other potential contaminants
2. Notifying the Water Department and other proper authorities of any spills or improper discharges
3. Notifying the Water Department of significant changes in inventory

The City of Columbia City Water Department extends its appreciation for assistance in protecting the public water supply.

Signed this _____ day of _____, 20_____.

Name City of Columbia City Water Dept.

248-5110

Telephone

Address

Contaminants Monitoring (continued)

The City of Columbia City Water Department follows a Standardized Monitoring Framework approved by the Indiana Department of Environmental Management for its water supply entry point (wellfield). Included in the monitoring requirements are, among others, volatile organic compounds and synthetic organic chemicals.

An evaluation was conducted of the potential sources of contamination within the Wellhead Protection Areas, which considered the locations and types of these potential sources as well as the hydrogeologic characteristics of the Wellhead Protection Areas (see the Delineation Report produced by Peerless-Midwest, Inc., which is a part of the City of Columbia City Water Department Wellhead Protection Plan).

Based upon this evaluation, the City of Columbia City Water Department believes its current monitoring practices, combined with procedures to be

implemented through its Wellhead Protection Plan, are sufficient to detect future contamination.

The City of Columbia City Water Department recognizes that additional monitoring may become desirable in the future as the body of environmental knowledge grows and/or regulations change.

The Water Department will continue to evaluate its monitoring practices and will consider appropriate adjustments in the future if warranted.

The Standardized Monitoring Framework for the City's Water Department wellfield may be found in Exhibit 3.

Maintaining and Updating Records

Tracking changes in current pollution source inventories and locating new potential sources of contamination within the Wellhead Protection Area are necessary for a well-run, ongoing Wellhead Protection Program.

The City of Columbia City Water Department will conduct future windshield surveys and record changes at sites located within its Wellhead Protection Area on an annual basis. Additionally, the Water Department will request the local planning department to notify the Water Department of planned development within its Wellhead Protection Area

Abandoned Wells

A search of the Indiana Department of Natural Resources database and windshield surveys did not indicate any improperly abandoned wells within the Water Department's Wellhead Protection Area.

The Water Department will contact the local health department to see if a joint initiative to identify and properly seal any abandoned wells can be pursued. No funding has been identified. However, it may be possible to start such a project using currently available resources.

Management Plan

The City of Columbia City Local Planning Team believes that voluntary “best management” practices are desirable to help manage its Wellhead Protection Area and meet the Wellhead Protection needs of the community.

The Local Planning Team will encourage recycling of waste materials. Owners and operators of potential sources of contaminants will be notified of the property’s presence in a Wellhead Protection Area and offered materials and information concerning recycling and the proper disposal of hazardous materials.

All customers of the Water Department will receive information on Wellhead Protection and the need to protect their drinking water through the City’s annual Water Quality Report.

There are no significant agricultural operations within the Wellhead Protection Area, so farming activities do not appear to pose a contaminant problem. It is recognized, however, that pesticides within the Wellhead Protection Area must be used and stored in accordance with IC 15-3-3.6.

The Local Planning Team will monitor agricultural activities that may develop within the Wellhead Protection Area during its annual windshield surveys and provide written information on the use and storage of pesticides to parties engaging in agricultural activities so as to help ensure compliance with IC 15-3-3.6.

Management Plan (continued)

Additionally, the Water Department Superintendent will visit the local state and county highway departments to provide them with written information on the use and storage of pesticides.

(End of Section 2.: Wellhead Protection)

Section 3.

Sanitary Setback Management Plan

Management Plan Compliance

The City of Columbia City Water Department Sanitary Setback Management Plan is designed to be in compliance with Title 327 of Indiana Administrative Code, Article 8-3. The Utilities Department will obtain proper permits for the construction of any new water supply wells, and such wells will be designed in accordance with appropriate standards and employ approved materials and installation methods.

Based upon a review of the Utilities Department records, the installation of existing wells of the City of Columbia City Water Department has been made in accordance with applicable regulations and standards in effect at the time of installation.

All new wells will be properly spaced and constructed within 100-foot sanitary setbacks controlled by land title or easement.

No sanitary or storm water sewers will be permitted within 50 feet of any well. No construction, other than that designed to contain a well, will be permitted over a well. The only roads or parking areas within 50 feet of a well will be those necessary for access to the well.

Management Plan Compliance (continued)

All wells will be installed in such a manner as to thwart vandalism and to provide security for the well, wellhead and controls.

The sanitary setback areas of all existing wells have been visually surveyed and no significant potential sources of contamination have been located within these areas, with the exception of the 250-gallon above ground generator fuel tank at the water treatment plant that needs containment. This will be budgeted for 2003.

The City of Columbia City controls the 100-foot sanitary setbacks of its wells by land title. New wells will be controlled by land title or restrictive easement to ensure compliance with IAC 8-3.

Prohibition of Chemical Storage or Mixing

As a matter of established practice and policy, the City of Columbia City Water Department does not store or mix non-water treatment chemicals within the 100-foot sanitary setback area of any of its wells.

Well 9 is located in a public park, which is unlikely to have significant sources of contaminants. However, signage stating “Wellhead Protection Area – No Hazardous Materials Allowed” will be placed near the well house.

Transportation Routes

There are no public transportation routes within the 100-foot sanitary setbacks of any of the City of Columbia City's three wells.

Security

A security survey for all wells revealed the following conditions:

Well 7

Well 7 is located within a roofed, block building. The door is secured with an integral lock system. Access to the wellhead, pump, motor and controls is effectively controlled and limited to authorized personnel only.

Well 8

Well 8 is located within a roofed, block building. The door is secured with an integral lock system. Access to the wellhead, pump, motor and controls is effectively controlled and limited to authorized personnel only.

Well 9

Well 9 is located within a roofed, block building. The door is secured with an integral lock system. Access to the wellhead, pump, motor and controls is effectively controlled and limited to authorized personnel only.

Security (continued)

Security at Wells 7, 8 and 9 has been determined by the Local Planning Team to be adequate.

(End of Section 3.: Sanitary Setback Management Plan)

Section 4.

Emergency and Contingency Plan

Background

The City of Columbia City believes that emergency and contingency planning are necessary for the proper operation of its water supply system. In accordance with this philosophy, the city has developed plans and contingencies to deal with a broad range of situations.

Contingency Capacities

The City of Columbia City has three wells, all of which are interconnected. This means all of the wells can provide water to the areas served by the other wells.

The Water Department maintains two elevated storage tanks with capacities of 500,000 and 1,000,000 gallons.

The city's average daily water demand is about 1,200,000 gallons per day. This compares favorably with a system average daily capacity of 3,000,000 gallons per day.

The significance of these statistics means the city can continue to supply water to its customers even with the loss of one or two of its wells.

City of Columbia City

Water Works

Wellhead Protection

Emergency Contingency Plan

