U.S. Environmental Protection Agency

Proposed Plan

WPSC Stevens Point Former Manufactured Gas Plant Site

Stevens Point, Wisconsin

EPA ANNOUNCES PROPOSED PLAN **June 2012**

This Proposed Remedial Action Plan (Proposed Plan) identifies the U.S. Environmental Protection Agency's (EPA) Preferred Alternative for cleaning up contaminated soil, groundwater and sediment at the Wisconsin Public Service Corporation (WPSC) Stevens Point Former Manufactured Gas Plant Superfund Alternative site (Stevens Point MGP) in Stevens Point, Wisconsin. The Proposed Plan describes other cleanup alternatives that were evaluated for use at this site and provides the Agency's rationale for the preferred alternative.

This Proposed Plan is issued by the EPA, the lead oversight agency for the Stevens Point MGP site. The Wisconsin Department of Natural Resources (WDNR) is the support oversight agency. EPA, in consultation with WDNR, will select a final remedy for the site after reviewing and considering all information submitted during a 30-day public comment period. EPA may modify the Preferred Alternative or select another response action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C Section 9617, commonly known as Superfund, and Section 300.430 (f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information from the Remedial Investigation (RI) and Feasibility Study (FS) reports and other documents that comprise the Administrative Record for the Stevens Point MGP site. EPA encourages the public to review the Administrative Record to gain a more comprehensive understanding of the cleanup and investigative activities that have been conducted at the site. The Administrative Record can be accessed at www.epa.gov/arweb, or at the following locations:

Portage County Public Library	EPA Region 5 Records Center
Charles M. White Library Building	77 West Jackson Boulevard
1001 Main Street	Chicago, IL 60604
Stevens Point, WI	By appointment only, Monday-Friday 8 a.m. to 4 p.m.

After the close of the public comment period, EPA will announce its selection of the final remedy for the soil, groundwater and sediment remediation at the site in a document called the Record of Decision (ROD). Public comments will be considered and incorporated into the ROD as part of the Responsiveness Summary.

EPA is issuing this Proposed Plan to solicit comments on the preferred remedy for the remediation of contaminated soil, groundwater and sediment at the Stevens Point MGP site.

EPA will select the final remedy for the site only after the public comment period has ended and comments received during the comment period have been reviewed and considered. Comments should be submitted in writing or e-mailed to:

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SITE BACKGROUND

Site Location and Description

The site encompasses approximately three acres in the city of Stevens Point, Portage County, Wisconsin (Figure 1). It includes the location of the former manufactured gas plant (MGP) facility, which is property of WPSC and is an approximately one and one-half acre grass-covered lot with a mild slope towards the Wisconsin River. The property is bounded by Crosby Avenue to the west; a City of Stevens Point parking lot to the south and east; and residential properties, West Street and an apartment building to the north. Pfiffner Pioneer Park, owned by the city, lies west of the property across Crosby Avenue and is bordered on the west by the Wisconsin River, which lies approximately 300 feet to the west of the original facility (Figure 2). The Stevens Point MGP site includes a portion of the park, a man-made pond, the municipal parking lot, and a portion of the Wisconsin River. Groundwater, soil and sediment at the site are contaminated with benzene (a volatile organic compound, or VOC) and several polycyclic aromatic hydrocarbons (PAHs).

Site History

Manufactured gas plants are facilities that used coal, oil, and other feedstock materials to produce gas for cooking, lighting, and heating. WPSC operated the Stevens Point MGP from the 1890s to the late 1940s or early 1950s, using the carbureted water/gas method to produce gas primarily from oil. The plant ceased production in the late 1940s to early 1950s when piped natural gas became readily available to the Stevens Point area. The former MGP process structures were located on the west side of the MGP facility, while the east side was used as storage and disposal of MGP process wastes and other materials. A slough was formerly located along the south property boundary, which served as a storm water outfall to the Wisconsin River. Between 1981 and 1985 the city of Stevens Point filled the slough as part of a storm sewer reconstruction project. WPSC has been a subsidiary of Integrys Energy Group since 2007.

Site Hydrology

Approximately 5 to 30 feet of sand, gravel and clay, deposited in the Wisconsin River valley by glaciers and flowing water, overlie the granite bedrock at the Stevens Point MGP site. The groundwater aquifer is highly permeable and productive. Regionally, groundwater flows to the west toward the river, where it would be expected to discharge. However, a man-made dam dating to the early 20th century is approximately 0.5 mile downstream from the site. This dam creates mounding of the groundwater in the vicinity of the site, causing the groundwater to flow roughly east. In an area east of the site, the westward regional flow and the eastward dam-induced flow converge and flow south around the dam.

History of Previous Environmental Investigations and Removal Actions

Site investigation and remediation activities have been undertaken by WPSC at the Stevens Point MGP site since the mid-1980s. Investigations completed prior to 1998 focused on locating the former MGP structures, identifying contaminant source areas, and conducting an initial groundwater assessment. Investigative work included soil borings, test pits, surface soil and surface water samples, and groundwater samples from monitoring wells.

In 1998, WPSC performed a number of response actions under the oversight of the WDNR. More than 16,000 tons of contaminated soil and debris were excavated from the site between February and June 1998. Areas targeted for removal were the former MGP operations area and vicinity where potential sources of coal tar and/or other MGP residuals were identified by previous investigation work. Soil and debris were either thermally treated or disposed off-site. Former underground structures or remnants of structures with visible evidence of MGP residuals in the surrounding soil and debris were removed and the site was backfilled and the surface was restored.

Additional investigations in 1999 and 2002 evaluated other portions of the site to assess the overall effect of the initial cleanup actions. Supplemental site investigation activities focused on the former slough, Wisconsin River sediment, groundwater monitoring, and issues related to groundwater infiltration into a storm sewer.

In 2006, WPSC entered into a multi-site agreement with EPA to conduct a remedial investigation and feasibility study (RI/FS) at six WI MGP sites, including the Stevens Point MGP site. As a result, WPSC collected additional soil, groundwater, sediment and surface and storm water data at the Stevens Point MGP site between June 2007 and January 2008. These activities focused on off-property soil quality, groundwater interaction with the perforated storm sewer, the potential for contaminant source areas in the vicinity of the pond and the Wisconsin River, the distribution of MGP-residuals in sediment and surface water, and potential for vapor migration. In October 2008, WPSC installed monitoring wells to define the down-gradient extent of affected groundwater. Additional monitoring wells were installed in January 2011 and grab samples collected for the same purpose. Also in January 2011, samples of soil and soil gas were collected to assess the potential for vapor intrusion into buildings adjacent to the site, which can occur if chemicals in groundwater become vapors and seep into building spaces.

SITE CHARACTERISTICS

Remedial Investigation and Feasibility Study

The RI/FS, completed in April 2012, used all available sampling data for the site. The RI identified the types, quantities and locations of contaminants at the site, and the FS developed ways to address the contamination problems. The RI determined that:

- The media of concern include subsurface soil, groundwater, and sediment in the Pfiffner Pioneer Park Pond and an adjacent portion of the Wisconsin River.

- There are no source materials at the site that pose principal threats to human health and the environment. Contaminated subsurface soil that remains on-site is not acting as a source for groundwater contamination. Although contaminated sediments are likely a source of contamination for pond water, the pond water only significantly exceeded ecological screening levels for two PAHs, which are metabolized by fish. In addition, the size and water depth of the pond limit its availability as aquatic habitat, so the pond water does not pose a principal threat.

- Surface soils in the park contained levels of benzo[a]pyrene and arsenic that exceeded residential soil screening levels (SSLs). Surface soils exceeded commercial worker SSLs for arsenic only, but levels are below background concentrations in the area.

- Subsurface soils at the site contain trace MGP residuals and have elevated concentrations of PAHs to about 15 feet below ground surface. Benzene, arsenic, lead, and 10 PAHs (benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-cd]pyrene, naphthalene, and pyrene), were identified above residential SSLs. All of these contaminants except benzene, fluoranthene and pyrene were also detected above commercial worker SSLs.

- A groundwater plume consisting of volatile and semi-volatile organic contaminants extends from the site eastward several hundred feet (Figure 4). The contaminants that exceed groundwater screening levels are benzene and 11 PAHs: benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-cd]pyrene, 2-methylnaphthalene, naphthalene and pyrene. Iron levels also slightly exceed the screening levels. The contaminants that exceed either the Maximum Contaminant Levels (MCLs) under the Safe Drinking Water Act or the Wisconsin Department of Natural Resources (WDNR) 140 Groundwater Enforcement Standards (GESs) are benzene, iron and six PAHs: benzo[a]pyrene, benzo[b]fluoranthene, chrysene, fluoranthene, naphthalene and pyrene.

- Sediment and underlying sand in the Wisconsin River exceed residential risk-based concentrations (RBCs) for five PAHs: benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene. Sediment PAH concentrations in approximately 0.4 acres are likely to be toxic to benthic organisms, while an additional 0.9 acres have PAH that may have toxic effects on some benthic organisms (Figure 3).

- Sediment in the Pfiffner Pioneer Park Pond exceeded residential risk-based concentrations (RBCs) for arsenic and six PAHs: benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenzo[a,h]anthracene, and indeno[1,2,3-cd]pyrene. The PAH concentrations in pond sediments are likely to be toxic to benthic invertebrates (Figure 3).

- Soil vapor sampling next to three adjacent buildings shows that there are some elevated levels of volatile organic compounds, but they do not appear to be caused by MGP-related groundwater contamination (Figure 4).

Based on the results of the RI and after consultation with WDNR, EPA proposes the action described in the following sections.

SCOPE AND ROLE OF THIS ACTION

EPA's Preferred Alternative uses a combination of institutional controls (ICs), maintenance of a cover on contaminated soil, monitored natural attenuation of groundwater contamination, sediment dredging, and a sediment cover to provide short- and long-term protection of human health and the environment. ICs will protect against human exposure to contaminated groundwater and soil by restricting use of contaminated groundwater and limiting the Site to non-residential uses. Maintenance of the existing parking lot, which acts as a cap on contaminated soil, will further prevent human exposure, while monitored natural attenuation will restore the groundwater to its beneficial use in the long-term. Dredging the most highly contaminated sediment from the river and covering sediment in the pond will reduce the exposure of benthic organisms to contamination both in the short- and long-term. The Preferred Alternative does not use treatment, but there are no principal threat wastes at the site.

The remedy selected will be the final action under the only operable unit (OU) for the site.

SUMMARY OF SITE RISKS

As part of the 2011 RI, WPSC conducted a Baseline Risk Assessment (BLRA). The BLRA evaluated the potential for both human health and ecological risks associated with the site. The media of potential concern include surface and subsurface soil and groundwater in the upland areas where the former MGP processes were located, as well as surface water and sediment in the Wisconsin River and the Pfiffner Pioneer Park decorative pond. The contaminants of concern for soil, groundwater and sediment are shown in Table 1.

Human Health Risk Assessment

The human health risk assessment (HHRA) component of the RI evaluated two current land uses and exposure pathways, which include outdoor workers and recreational users of the park, river and pond. It also considered two hypothetical future land-use scenarios for the upland area—residential use and industrial/commercial use. Residences are located near the site, but due to the position of the site in a downtown commercial area and municipal park, as well as the current zoning of the site as commercial and conservancy, EPA does not consider residential use of the site to be reasonably anticipated.

In assessing the risks to humans, residential and industrial/commercial worker screening levels were based on a target carcinogenic risk of 10^{-6} , or one instance of cancer in one million persons exposed, and a noncancer hazard quotient of one (1). The hazard quotient is a way of expressing the potential for noncarcinogenic health effects that may occur due to exposure to a dose of a chemical. A hazard quotient greater than one indicates that there may be a concern for potential health effects. The target carcinogenic risk is at the low end of EPA's acceptable cumulative cancer risk range of 10^{-6} to 10^{-4}. Soil screening levels are not established for recreational use, so the BLRA used residential exposure values for the recreational scenarios, ensuring a conservative overestimate of the risk. Commercial/industrial worker values were used for both the outdoor worker scenario and commercial/industrial worker scenario.

Table 1: Contaminants of Concern by Environmental Medium

Soil	Groundwater	River and pond sediment
Benzene	Benzene	Xylenes (total)
Benzo[a]anthracene	Benzo[a]anthracene	Total PAHs
Benzo[a]pyrene	Benzo[a]pyrene	Lead
Benzo[b]fluoranthene	Benzo[b]fluoranthene	Mercury
Benzo[k]fluoranthene	Benzo[k]fluoranthene	
Chrysene	Chrysene	
Dibenz[a,h]anthracene	Dibenz[a,h]anthracene	
Indeno[1,2,3-cd]pyrene	Fluoranthene	
Naphthalene	Indeno[1,2,3-cd]pyrene	
Pyrene	Naphthalene	
	Pyrene	
	Iron	

Surface soil concentrations of arsenic exceed residential and commercial SSLs, but represent background levels for the area. Benzo[a]pyrene also slightly exceeds residential SSLs in surface soil, but the exposure of a recreational user is much lower than that of a resident, so the cumulative cancer risk associated with exposure to surface soils is less than 10^{-6}.

Subsurface soils contain MGP-related contamination above the residential and commercial SSLs, but under current land use, there is no exposure to those soils. However, future residential and construction scenarios could involve exposure to subsurface soils if they were excavated for the construction of building foundations, basements or utilities. The levels of several PAHs in small, discontinuous areas in the former slough would be associated with a 10^{-3} residential and 10^{-4} commercial cumulative cancer risk. Residential exposure to subsurface soil would therefore present an unacceptable cancer risk, but the zoning of this area as conservancy and its use as a city park make residential use of the property unlikely.

Outside of the former slough, on the property owned by WPSC (shown outlined in red on Figure 2), subsurface soil samples were taken in 1998. Many of these samples were taken from the walls of the excavation pits, and they show that, in some locations, subsurface soil posing a potential cumulative cancer risk of 10^{-3} to10^{-1} for the residential scenario and 10^{-4} to 10^{-2} for the commercial scenario was not excavated. These levels of residential and construction cancer risk would be unacceptable if human exposure were to occur, but there is currently no human exposure to the subsurface soil. The highly contaminated soil is found more than ten feet below the ground surface, so it would not be disturbed by future utility work or many construction activities. In addition, the soils associated with the elevated cancer risks are not representative of the property as a whole; lower levels of PAHs were found in most sample locations on the property, including the excavated areas where clean fill was placed.

Exposure to contaminated groundwater may occur if it were to be used for drinking water or if chemical vapors volatize from the groundwater and migrate to building spaces. The groundwater exceeds drinking water standards for several contaminants, and is unsuitable for consumption. Currently there are no known users of the groundwater for drinking water or any other purpose in proximity to the site, so there is no current human health risk.

Soil vapor samples were collected next to buildings adjacent to the site during January 2011 and March 2011 and analyzed for benzene and naphthalene. Although a few locations had benzene above the health-based screening levels, the greatest exceedance was by a factor of three, and the soil vapor showed generally low levels of both benzene and naphthalene. In addition, there did not appear to be a relationship between the concentrations of these contaminants in the deep and shallow soil vapor, or between soil vapor concentrations and the groundwater plume or known preferential migration pathways. These lines of evidence suggest that MGP-related groundwater contamination is unlikely to be a source of benzene or naphthalene vapor intrusion.

Although human exposure to contaminated surface water and sediments of the Wisconsin River are expected to be very minimal, these pathways were examined. Standards for surface water and sediment do not exist, so risk was evaluated using drinking water and residential soil standards as proxies. Water samples from both the river and the pond exceed drinking water standards, but the reasonable maximum exposure to the surface waters would be far less than the level assumed in those standards, and the risk falls below the 10^{-6} threshold. The contaminated area of the river is not large enough to cause significant bioaccumulation of metals in fish, and PAHs do not bioaccumulate, so human consumption of fish does not pose a health risk. One sample of river sediment exceeds residential soil SSLs, but the reasonable level of exposure to the sediment from wading in the river is far less than for a residential scenario. However, pond sediments contain levels of PAHs that pose a somewhat higher risk. Using the residential screening values as a semi-quantitative comparison, it is estimated that an individual could contact the pond sediment approximately 20 days per year over a 30-year period without exceeding a carcinogenic risk of 10^{-4}. At one day of exposure per year for 30 years, the risk would be 5×10^{-6}, still above the minimum screening value but below the upper threshold.

It is EPA's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the proposed Plan, is necessary to protect public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

Ecological Risk Assessment

The screening-level ecological risk assessment (SLERA) focused on the aquatic habitat at the site because the site does not contain terrestrial habitat that would require ecological evaluation.

Screening levels for surface water and sediment were determined from a hierarchy of criteria of sediment ecological benchmarks approved by EPA and WNDR.

Polycyclic aromatic hydrocarbon (PAH) analyses in sediment included the parent and alkylated PAHs identified in the EPA methodology for estimating risks to benthic invertebrates (EPA, 2003). The probable effects concentration (PEC), or the concentration at which an adverse effect is likely to occur, was exceeded for total PAHs, xylenes, and several metals in the sediments of the entire pond and within approximately 0.4 acres in the river. These areas are likely to be toxic to benthic invertebrates. An additional 0.9 acres in the river exceed the threshold effects concentration (TEC), or the level at which adverse effects are possible. The river sediment is discontinuous and contains little fine-grained sediment, and there is therefore likely discontinuity in the levels of toxics in the river at the site.

The composite sample of river water collected along a transect across the river near the pond exceeded the ecological screening threshold for silver, which is a contaminant of concern. All other metals and PAHs were below screening levels. The measured silver concentration, 0.15 µg/L, is on the order of the screening value, 0.12 µg/L; accounting for the dilution that may have occurred from compositing the sample, the maximum possible concentration is 0.45 µg/L. No exceedances were found downstream, and based on finding a minor and localized exceedance, river water was excluded as a medium of concern. Pond water, however, showed several exceedances and could potentially cause toxicity to aquatic species such as fish and aquatic invertebrates due to exceedances of benz[a]anthracene, benzo[a]pyrene, and lead in the water.

Summary

Under current conditions, the site does not appear to pose health concerns to human receptors based on potential exposures to contaminated soil, surface water, or sediment. However, under hypothetical future uses, exposure to groundwater and subsurface soil present unacceptable risks. In addition, pond sediment and a localized area of river sediment is toxic to benthic organisms. It is EPA's current judgment that the Preferred Alternative identified in this Proposed Plan, or one of the other active measures considered in the Proposed Plan, is necessary to protect human health and the environment from releases of contaminants at this site.

REMEDIAL ACTION OBJECTIVES

To protect the public and the environment from potential current and future health risks, the following Remedial Action Objectives (RAOs) have been developed to address the contaminated groundwater, soil and sediment at the Stevens Point MGP site;

1. Prevent human exposure, including dermal contact, incidental ingestion, and inhalation as a result of soil disturbance, to subsurface soil containing levels of MGP-related contaminants that present a carcinogenic risk to outdoor construction workers greater than 10^{-4} to 10^{-6} or a non-carcinogenic hazard quotient greater than one;

2. Prevent human exposure, including dermal contact, ingestion, and inhalation (as a result of vapor intrusion) to groundwater containing levels of MGP-related contaminants that exceed MCLs or GESs;

3. Restore groundwater to achieve MCLs or the GESs;

4. Reduce the exposure of benthic organisms in the Wisconsin River to levels of MGP-related contaminants that are above the PEC;

5. Reduce the exposure of benthic organisms in the Pfiffner Pioneer Park Pond to levels of MGP-related contaminants that are above the PEC.

SUMMARY OF REMEDIAL ALTERNATIVES

Remedial alternatives for each medium at the site are presented below.

Summary of Remedial Alternatives Stevens Point Former Manufactured Gas Plant Site		
Medium	**Alternative**	**Description**
Soil	**S1**	No action
	S2	Institutional controls and maintenance of clean soil cover and cap
	S3	Excavation and off-site disposal of contaminated soil from the former slough, and institutional controls
Groundwater	**G1**	No action
	G2	Institutional controls
	G3	Monitored natural attenuation and institutional controls
	G4	Groundwater extraction, ex-situ treatment and discharge to the public wastewater treatment plant, and institutional controls
River sediment	**R1**	No action
	R2a	Placement of a sand cover over river sediment that exceeds the probable effects concentration (PEC)
	R2b	Placement of a sand cover over river sediment that exceeds the threshhold effects concentration (TEC)
	R3a	Placement of a sand cover and an armor layer over river sediment that exceeds the PEC
	R3b	Placement of a 6-inch sand cover and a 6-inch armor layer over river sediment that exceeds the TEC
	R4a	Dredge river sediment that exceeds the PEC and place a sand cover over river sediment that exceeds the TEC
	R4b	Dredge river sediment that exceeds the TEC and place a sand cover over the dredged area
	R4c	Dredge river sediment that exceeds the PEC and place a sand cover only over the dredged area
Pond sediment	**P1**	No action
	P2	Placement of a 6-inch sand cover over the pond sediment
	P3	Placement of a 6-inch sand cover with activated carbon over pond sediment
	P4	Dredging of contaminated pond sediment and clean sand layer

Common elements

Under the no-action alternatives, S1, G1, R1 and P1, EPA would take no action to address site contaminants. All of the active alternatives except R4a/b/c and P4 leave contamination in place and therefore would require monitoring to ensure the effectiveness of the remedy, as well as five-year reviews virtually in perpetuity.

Alternatives S2, S3, G2, G3 and G4 would use ICs (e.g., the Wisconsin GIS registry, deed restrictions such as an easement or covenant, etc.) to limit human exposure to contaminated soil and groundwater. The type of restriction and enforceability would need to be determined for the selected remedy in the ROD. Consistent with expectations set out in the Superfund regulations, none of the remedies rely exclusively on ICs to achieve protectiveness.

NO ACTION ALTERNATIVES

Alternatives S1/G1/R1/P1: No Action

Estimated Capital Cost: $0
Estimated Annual O&M Cost: $0
Estimated Present Worth Cost: $0
Estimated Construction/Implementation Timeframe: None
Estimated time to Achieve RAOs: Does not achieve RAOs

Under these alternatives EPA would take no action at the site to prevent exposure to the groundwater, soil and sediment contamination. There is no cost associated with these alternatives. These alternatives are developed and retained as baseline scenarios to which the other alternatives may be compared.

SOIL ALTERNATIVES

Alternative S2: ICs and Maintenance of Clean Soil Cover and Cap

Estimated Capital Cost: $28,800
Estimated Annual O&M Cost: $24,600
Estimated Total Present Worth Cost: $169,000
Estimated Construction/Implementation Timeframe: 2 months
Estimated time to Achieve RAOs: 2 months

Approximately 5.4 acres, including 2.4 acres owned by the City of Stevens Point, would be subject to ICs that notify present and future property owners of the presence of affected subsurface soil (Figure 5). Future development, construction, or utility work that involves subsurface activities would need to develop a soil management plan, and unauthorized excavations would be prevented. The property owned by WPSC would be restricted to conservancy and non-residential use. The existing cover of clean soil, and a parking lot that acts as a "cap" over the contaminated soil, would be monitored and maintained. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative S3: Soil Excavation and ICs

Estimated Capital Cost: $2,960,000
Estimated Annual O&M Cost: $24,600
Estimated Total Present Worth Cost: $3,100,000
Estimated Construction/Implementation Timeframe: 3 months
Estimated time to Achieve RAOs: 3 months

In addition to the ICs described above, this alternative would remove soil from approximately 0.4 acres in the vicinity of the former slough (northeast of the pond) to a depth of approximately 16 feet (Figure 5). The deeper soil containing MGP residuals would be removed to an approved landfill off-site. The excavated area would be restored to grade with both imported soil and removed soil that is suitable for reuse, and the original grass or asphalt cover would be reestablished. Because some contaminated subsurface soil would remain on the WPSC property, EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

GROUNDWATER ALTERNATIVES

Alternative G2: ICs

Estimated Capital Cost: $35,000
Estimated Annual O&M Cost: $15,000
Estimated Total Present Worth Cost: $77,000
Estimated Construction/Implementation Timeframe: None
Estimated time to Achieve RAOs: Does not achieve RAO-3

This alternative would use only ICs, such as restrictive covenants or ordinances, to prohibit consumption or other use of contaminated groundwater. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative G3: Monitored Natural Attenuation and ICs

Estimated Capital Cost: $72,500
Estimated Annual O&M Cost: $72,000
Estimated Total Present Worth Cost: $991,000
Estimated Construction/Implementation Timeframe: None
Estimated time to Achieve RAOs: 40-100+ years

In addition to the groundwater ICs described above, this alternative would use monitored natural attenuation (MNA), which relies on natural processes to break down, dilute, or disperse groundwater contaminants to achieve groundwater clean-up standards. A network of monitoring wells would be sampled regularly to monitor progress toward the standards and ensure that the contaminant plume is stable and will reach cleanup goals in a reasonable timeframe. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative G4: Groundwater Extraction and Ex-situ Treatment and ICs

Estimated Capital Cost: $601,000
Estimated Annual O&M Cost: $230,000
Estimated Total Present Worth Cost: $3,950,000
Estimated Construction/Implementation Timeframe: 3 months
Estimated time to Achieve RAOs: 40-100 years

In addition to the groundwater ICs described in Alternatives G2 and G3, this alternative would install two extraction wells, approximately 30 feet deep, that would pump contaminated groundwater out of the aquifer at a total rate of approximately 50 gallons per minute. Groundwater extraction conveyance piping and treatment facilities including a filter system and activated carbon or air stripper, would be constructed to treat the contaminated groundwater. The treated water would be discharged to the municipal wastewater treatment plant via the city's sanitary sewer system. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

RIVER SEDIMENT ALTERNATIVES

Alternative R2a: Sand Cover over River Sediment Exceeding the PEC

Estimated Capital Cost: $438,000
Estimated Annual cost: $15,000
Estimated Total Present Worth cost: $480,000
Estimated Construction/Implementation Timeframe: 1-2 weeks
Estimated time to Achieve RAOs: 1-2 weeks

This alternative would cover the Wisconsin River sediment that exceeds the PEC within the top six inches with a minimum of six inches of sand. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative R2b: Sand Cover over River Sediment Exceeding the TEC

Estimated Capital Cost: $696,000
Estimated Annual cost: $15,000
Estimated Total Present Worth cost: $738,000
Estimated Construction/Implementation Timeframe: 3-4 weeks
Estimated time to Achieve RAOs: 3-4 weeks

This alternative would cover the Wisconsin River sediment that exceeds the TEC within the top six inches with a minimum of six inches of sand. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative R3a: Sand Cover and Armor Layer over River Sediment Exceeding the PEC

Estimated Capital Cost: $477,000
Estimated Annual cost: $15,000
Estimated Total Present Worth cost: $519,000

Estimated Construction/Implementation Timeframe: 1-2 weeks
Estimated time to Achieve RAOs: 1-2 weeks

A 6-inch layer of sand and a protective layer of material such as 3-inch clean stone would cover sediment that exceeds the PEC. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative R3b: Sand Cover and Armor Layer over River Sediment Exceeding the TEC

Estimated Capital Cost: $821,000
Estimated Annual cost: $15,000
Estimated Total Present Worth cost: $863,000
Estimated Construction/Implementation Timeframe: 3-4 weeks
Estimated time to Achieve RAOs: 3-4 weeks

A 6-inch layer of sand and a protective layer of material such as 3-inch clean stone would cover sediment that exceeds the TEC. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative R4a: Dredge River Sediment Exceeding the PEC and Place a Sand Cover over the Dredged Area and River Sediment Exceeding the TEC

Estimated Capital Cost: $1,461, 000
Estimated Annual cost: $0
Estimated Total Present Worth cost: $1,461,000
Estimated Construction/Implementation Timeframe: 5-6 weeks
Estimated time to Achieve RAOs: 5-6 weeks

Sediment that exceeds the PEC, totaling approximately 2,080 tons, would be mechanically dredged in the wet and disposed off-site in an approved landfill. A minimum 6-inch layer of sand to manage dredging residuals and prevent benthic exposure to marginally contaminated sediment would cover the dredged surface and the sediment that exceeds the TEC. No monitoring, maintenance or five year reviews would be required after completion of the dredging.

Alternative R4b: Dredge River Sediment Exceeding the TEC and Place a Sand Cover over the Dredged Area

Estimated Capital Cost: $2,294, 000
Estimated Annual cost: $0
Estimated Total Present Worth cost: $2,294,000
Estimated Construction/Implementation Timeframe: 7-8 weeks
Estimated time to Achieve RAOs: 7-8 weeks

Sediment that exceeds the TEC, totaling approximately 5,710 tons, would be mechanically dredged in the wet and disposed off-site in an approved landfill. A minimum 6-inch layer of sand to manage dredging residuals would cover the dredged surface. No monitoring, maintenance or five year reviews would be required after completion of the dredging.

Alternative R4c: Dredge River Sediment Exceeding the PEC and Place a Sand Cover only over the Dredged Area

Estimated Capital Cost: $1,269, 000
Estimated Annual cost: $0
Estimated Total Present Worth cost: $1,269,000
Estimated Construction/Implementation Timeframe: 5-6 weeks
Estimated time to Achieve RAOs: 5-6 weeks

Sediment that exceeds the PEC, totaling approximately 2,080 tons, would be mechanically dredged in the wet and disposed off-site in an approved landfill. A minimum 6-inch layer of sand to manage dredging residuals would cover the dredged surface. No monitoring, maintenance or five year reviews would be required after completion of the dredging.

POND SEDIMENT ALTERNATIVES

Alternative P2: Six-inch Sand Cap on Pond Sediments

Estimated Capital Cost: $182,000
Estimated Annual O&M Cost: $21,900
Estimated Total Present Worth Cost: $258,000
Estimated Construction/Implementation Timeframe: 3 days
Estimated time to Achieve RAOs: 3 days

This alternative would place a six-inch layer of sand over the existing pond sediment to reduce benthic exposure to contaminated sediment. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative P3: Six-inch Sand Cap with Activated Carbon on Pond Sediments

Estimated Capital Cost: $198,000
Estimated Annual O&M Cost: $21,900
Estimated Total Present Worth Cost: $273,000
Estimated Construction/Implementation Timeframe: 3 days
Estimated time to Achieve RAOs: 3 days

In addition to the six-inch sand layer proposed in Alternative P2, activated carbon would be added to the sand layer to absorb organic contaminants. EPA would conduct a five-year review at the site to ensure the continued protectiveness of the remedy.

Alternative P4: Dredging of Pond Sediments and Placement of Sand Layer

Estimated Capital Cost: $661,400
Estimated Annual O&M Cost: $15,000
Estimated Total Present Worth Cost: $703,000
Estimated Construction/Implementation Timeframe: 1 month
Estimated time to Achieve RAOs: 1 month

This alternative would remove up to 3.5 feet and 1,860 tons of sediment in the Pond and dispose of the sediment off-site in an approved landfill. A 6-inch sand layer would cover the pond bottom. No monitoring, maintenance or five year reviews would be required after completion of the dredging.

EVALUATION OF ALTERNATIVES

Nine criteria are used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. The selection of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine criteria are summarized and discussed below. The "Detailed Analysis of Alternatives" can be found in the FS, and although there is no explicit discussion of Alternative R4c, it shares features of Alternatives R1 and R4a. The comparison of the alternatives with respect to the criteria is summarized in Table 2.

EVALUATION CRITERIA FOR SUPERFUND REMEDIAL ALTERNATIVES
Threshold Criteria
1. Overall Protection of Human Health and the Environment determines whether an alternative eliminates, reduces, or controls threats to the public health and the environment through institutional controls, engineering controls, or treatment**.**
2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) evaluates whether the alternative meets Federal and State environmental statutes, regulations, and other requirement that pertain to the site, or whether a waiver is justified.
Balancing Criteria
3. Long-term Effectiveness and Performance considers the ability of an alternative to maintain protection of human health and the environment over time.
4. Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.
5. Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, residents, and the environment during implementation.
6. Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as relative availability of goods and services.
7. Cost includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total of an alternative over time in today's dollar value. Cost estimates are expected to be accurate within a range of +50% to -30%.
Modifying Criteria
8. State Acceptance considers whether the State agrees with EPA's analyses and recommendations, as described in the RI/FS and the Proposed Plan.
9. Community Acceptance considers whether the local community agrees with EPA's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

Table 2: Comparison of Remedial Alternatives against the Superfund Remedy Selection Criteria

Evaluation Criteria	**Soil Alternatives**		
	1	**2***	**3**
Overall protection of human health and the environment	□	■	■
Compliance with ARARs	□	■	■
Long-term effectiveness and permanence	□	▢	■
Reduction of toxicity, mobility, or volume through treatment	□	□	▢
Short-term effectiveness	▢	■	▢
Implementability	■	■	■
Cost	■	■	▢

Evaluation Criteria	**Groundwater Alternatives**			
	1	**2**	**3***	**4**
Overall protection of human health and the environment	□	■	■	■
Compliance with ARARs	□	□	■	■
Long-term effectiveness and permanence	□	▢	■	■
Reduction of toxicity, mobility, or volume through treatment	□	▢	▢	■
Short-term effectiveness	▢	■	■	■
Implementability	■	■	■	■
Cost	■	■	■	▢

Evaluation Criteria	**River Sediment Alternatives**							
	1	**2a**	**2b**	**3a**	**3b**	**4a**	**4b**	**4c***
Overall protection of human health and the environment	□	■	■	■	■	■	■	■
Compliance with ARARs	■	■	■	■	■	■	■	■
Long-term effectiveness and permanence	□	□	▢	▢	▢	■	■	■
Reduction of toxicity, mobility, or volume through treatment	□	□	□	▢	▢	▢	▢	▢
Short-term effectiveness	▢	▢	▢	▢	▢	▢	▢	▢
Implementability	■	■	■	■	■	■	■	■
Cost	■	■	■	■	■	▢	□	▢

Evaluation Criteria	**Pond Sediment Alternatives**			
	1	**2**	**3***	**4**
Overall protection of human health and the environment	□	■	■	■
Compliance with ARARs	■	■	■	■
Long-term effectiveness and permanence	□	▢	■	■
Reduction of toxicity, mobility, or volume through treatment	□	▢	▢	▢
Short-term effectiveness	▢	■	■	■
Implementability	■	■	■	■
Cost	■	■	■	▢

Fully meets criteria	Partially meets criteria	Does not meet criteria
■	▢	□

*Denotes EPA's preferred alternative.

1. Overall Protection of Human Health and the Environment

Alternatives S1, G1, R1 and P1 would not provide any protection of human health and the environment. These "no action" alternatives do not reduce the human health risks of exposure to contaminated soils or groundwater, or the ecological risks to benthic organisms of exposure to contaminated sediment in the Wisconsin River or the pond. Therefore, these four alternatives are eliminated from further consideration under the remaining eight criteria.

All other alternatives provide overall protection of human health and the environment by eliminating, reducing, or controlling risk through treatment, engineering controls, and/or ICs. Alternatives S2, S3, G2 and G3 use ICs to prevent exposure to contaminated soil or groundwater. Alternatives R2a/b, R3a/b, P2 and P3 use a cap on contaminated sediment in the River or Pond to control exposure of benthic organisms to the contaminants. Alternative S3 would remove contaminated soil and dispose of it in an approved landfill, and Alternatives R4a/b/c and P4 would remove contaminated sediment from the river or the pond. Alternative G4 would pump and treat contaminated groundwater to reduce contaminant levels to MCLs or GESs.

2. Compliance with ARARs

All remaining alternatives except G2 would meet their respective soil, groundwater, or sediment ARARs from Federal and State laws. Alternative G2 does not monitor, and therefore does not ensure attainment, of Safe Drinking Water Act MCLs or WDNR ESs. Therefore, this alternative is eliminated from further consideration under the remaining seven criteria.

3. Long-Term Effectiveness and Permanence

Alternatives S2 and S3 would prevent exposure to contaminated soils through ICs, but the ICs would need to be continually enforced and reviewed for effectiveness. Alternative S3 would permanently reduce the risks of exposure to soil contaminants by excavating highly contaminated soil and placing it in an approved off-site landfill.

Alternatives G3 and G4 would both prevent exposure to contaminated groundwater through ICs, but the ICs would need to be continually enforced and reviewed for effectiveness. Alternative G3 is likely to reduce contaminant concentrations in the groundwater, although the timeframe needed to reach cleanup levels is uncertain and would at least be many decades. It is possible that Alternative G3 may not be effective at achieving all of the groundwater cleanup levels within a reasonable timeframe if some site contaminants are resistant to natural attenuation. Alternative G4 would permanently remove groundwater contaminants from the site, but computer modeling shows a virtually equal length of time required for both pump-and-treat and MNA to attain RAO-3. Alternative G4 is subject to the potential "rebound" of contaminant concentrations, and would create treatment residuals, although these residuals could be reliably managed and pose little risk.

Alternative R2a/b may not be effective in the long-term because water currents and bioturbation of sediments may bring contaminated sediment back to the surface. Alternative R3a/b is somewhat more likely to maintain protectiveness over time because the armor layer would prevent disturbances of the sediment. Alternatives R2a/b and R3a/b do not address the possibility of ebullition, the release of petroleum-related contaminants from river sediment by the bubbling of methane generated by bacterial decay of organic matter. However, ebullition has not been observed at the site and river sediments are low in the organic matter required for ebullition to occur, so the likelihood of ebullition is low. Concentrations of contaminants are likely to slowly decrease over time through natural processes in both R2a/b and R3a/b. Alternatives R4a/b/c are the most effective in the long term because all contaminated sediment above the PEC (R4a/c) or TEC (R4b) is permanently removed, and residual contamination would naturally decrease over time.

The clean sand layer proposed in Alternative P2 may be somewhat effective at preventing benthic organisms from being exposed to the contaminants in the underlying pond sediment. However, bioturbation of the clean sand cap may cause mixing with the contaminated sediments and lead to ongoing exposure. This is also true for Alternative P3, but the inclusion of activated carbon in the sand layer would sequester PAHs, reducing their mobility and leading to greater long-term protection. Concentrations of contaminants in the pond sediment would slowly decrease over time through natural processes under both P2 and P3. Alternative P4 would permanently prevent exposure to contaminated pond sediment because the contaminated sediment would be removed from the site.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

Previous remedial actions at the site have significantly reduced the toxicity, mobility and volume of affected media, and natural processes would likely cause further reductions over time. With the exception of Alternative G4, none of the alternatives proposed complete treatment.

None of the remedial alternatives for soil address the toxicity or volume of soil contaminants. Alternative S2 would reduce the mobility of soil contaminants by maintaining the existing parking lot and clean surficial soil cover. Alternative S3 would reduce the mobility of soil contaminants because the highly contaminated soil would be removed and placed in an approved landfill. However, the soil would not be treated prior to disposal, so in both these cases the mobility reduction is achieved via containment and not treatment.

Alternative G3 would use the natural processes of degradation, dilution and dispersion to reduce the toxicity and volume of contaminants, and would monitor the groundwater plume to ensure that it is stable. Alternative G4 would use treatment to reduce the toxicity and volume of contaminants in groundwater, because they would be concentrated within the treatment residuals and properly disposed of off-site, and would also monitor the stability of the plume.

None of the remedial alternatives for river sediment reduce the toxicity or volume of contaminants through treatment. Alternatives R2a/b would provide some protection from the potential for contaminated sediment to be transported downstream, and therefore reduce the mobility of the contaminants through containment, but the layer of clean sediment would still be subject to bioturbation. Alternatives R3a/b would be more effective at reducing the mobility of contaminated sediment via containment because the armor layer capping the sediment would prevent it from being disturbed by river currents or benthic organisms. Alternatives 4a/b/c would be the most effective at reducing the mobility of contaminated sediment because sediment would be removed and disposed in an approved landfill. The mobility reductions realized however would be from containment, not treatment.

Alternative P2 may reduce the mobility of the contaminants in the pond sediment by covering them with a layer of clean sediment, but the clean layer would be subject to bioturbation. The carbon included in the sand layer in Alternative P3 would limit the mobility of the contaminants to a greater extent than sand alone and serve as some treatment. Alternative P4 would reduce mobility of contaminants by dredging the contaminated sediment and placing it in an approved off-site landfill, but the contaminated sediment would not be treated prior to disposal.

5. Short-Term Effectiveness

Alternative S2 presents no short-term risks, and exposure prevention is achieved quickly through ICs (See Table 3 for a summary of the construction/implementation timeframes for each alternative). Alternative S3 may cause some minor short-term risks, such as fugitive volatile organic emissions from the excavation of soil containing MGP residuals, which would last approximately three months.

Alternatives G3 and G4 both present no short-term risks, and prevention of exposure to contaminated groundwater is achieved quickly through ICs.

Alternatives R2a/b and R3a/b would disrupt the existing benthic community and water quality in the Wisconsin River during the 1-2 weeks of sand or sand/armor placement. However, a clean sediment layer would be expected to be recolonized by benthos. Alternative 4a/b/c would remove any existing benthic community, and would increase truck traffic and the possibility of human exposure to volatile organic emissions. However, the clean sediment layer would be expected to be recolonized by benthos and risks to human health in the short-term are manageable.

Alternatives P2 and P3 would disrupt the existing benthic community in the pond sediment over the short term, and Alternative P4 would eliminate the benthic community in the short term. However, Alternatives P2, P3 and P4 all result in a clean top sediment layer that would be expected to be recolonized by benthos.

6. Implementability

The degree of implementability for all the alternatives is high. There are no difficulties in implementing Alternatives S2, G3, G4, P2 and P3, and all services are readily available. The alternatives that involve excavation or dredging, Alternatives S3, R4/a/b/c, and P4, would require a greater degree of coordination with local entities due to the disturbance that these activities would cause in public areas. Alternatives R2a/b and R3a/b may be somewhat difficult to implement due to the current in the Wisconsin River. Areas in the river where sediment is mixed with larger rocks may increase the difficulty of implementing Alternative R4a/b/c.

7. Cost

Table 3 summarizes the capital, annual operating and maintenance, and present worth costs for each alternative. The uncertainty associated with these costs is +50% and -30%. The no-action alternatives, Alternatives S1, R1, R1 and P1 have no costs associated with them. Each of the other alternatives have the cost of five-year reviews, estimated at $15,000 per review for 30 years and $42,000 present worth cost, factored into their annual and present worth costs.

However, when the media-specific alternatives are assembled into a site-wide alternative, the cost of five-year-reviews is factored in only once for all four media.

Table 3: Comparison of Costs and Timeframes of the Remedial Alternatives

	Component	Capital Cost	Annual O&M Cost	Total Present Worth Cost	Construction/ Implementation Timeframe	Time to Completion
Soil						
S1	No action	$0	$0	$0	None	N/A
S2	ICs	$28,800	$24,600	$169,000	2 months	2 months
S3	Excavation and ICs	$2,960,000	$24,600	$3,100,000	3 months	3 months
Groundwater						
G1	No action	$0	$0	$0	None	N/A
G2	ICs	$35,000	$15,000	$77,000	2 months	Hundreds of years
G3	MNA and ICs	$72,500	$72,000	$991,000	2 months	40-115 years
G4	P&T and ICs	$601,000	$230,000	$3,950,000	3 months	40-110 years
River Sediment						
R1	No action	$0	$0	$0	None	N/A
R2a	Sand cover – PEC	$438,000	$15,000	$480,000	1-2 weeks	1-2 weeks
R2b	Sand cover – TEC	$696,000	$15,000	$738,000	3-4 weeks	3-4 weeks
R3a	Sand cover/armor – PEC	$477,000	$15,000	$519,000	1-2 weeks	1-2 weeks
R3b	Sand cover/armor – TEC	$821,000	$15,000	$863,000	3-4 weeks	3-4 weeks
R4a	Dredging – PEC, Sand cover – TEC	$1,461,000	$0	$1,461,000	5-6 weeks	5-6 weeks
R4b	Dredging – TEC	$2,294,000	$0	$2,294,000	7-8 weeks	7-8 weeks
R4c	Dredging – PEC	$1,269,000	$0	$1,269,000	5-6 weeks	5-6 weeks
Pond Sediment						
P1	No action	$0	$0	$0	None	N/A
P2	Sand cover	$182,000	$22,000	$258,000	3 days	3 days
P3	Sand cover/activated carbon	$198,000	$22,000	$273,000	3 days	3 days
P4	Removal and placement of clean sand	$661,000	$15,000	$703,000	1 month	1 month

8. State Acceptance

State acceptance of the Preferred Alternative will be evaluated after the public comment period ends. The State's comments and EPA's responses to all comments will be available in the Responsiveness Summary of the ROD.

9. Community Acceptance

Community acceptance of the Preferred Alternative will be evaluated after the public comment period ends. Community comments and EPA's responses to all comments will be available in the Responsiveness Summary of the ROD.

EPA'S PREFERRED ALTERNATIVE

EPA's Preferred Alternative combines soil Alternative S2, groundwater Alternative G3, river sediment Alternative R4c, and pond sediment Alternative P3, as described below. The Preferred Alternative has combined costs, maximum construction timeframe, and maximum time to achieve RAOs as shown below:

Estimated Capital Cost: $1,568,000
Estimated Annual O&M Cost: $73,500
Estimated Total Present Worth Cost: $2,577,000
Estimated Construction/Implementation Timeframe: 2 months
Estimated time to Achieve RAOs: 2 months (soil and sediment), 40-115 years (groundwater)

Under Superfund law, the selected remedy must meet the threshold criteria of Overall Protection of Human Health and the Environment, and Compliance with ARARs. EPA's Preferred Alternative meets the first criterion by using institutional and engineering controls to prevent exposure to contaminated soil and groundwater, dredging contaminated sediment from the river, and providing a clean sediment layer for a healthy benthic community in the pond. The Preferred Alternative also meets ARARs in that it prevents exposure to contaminated soil and groundwater and uses MNA to restore drinking water to SDWA MCLs and WDNR ESs.

In addition to meeting the two threshold criteria, the selected remedy best fulfills the five balancing criteria. With respect to Long-term Effectiveness and Permanence, the Preferred Alternative will permanently reduce groundwater and sediment contamination at the site; soil contamination may persist, but ICs will prevent exposure to contaminated soil. The Preferred Alternative has virtually the same timeframe to achieve RAO-3 as does groundwater extraction and treatment; therefore, 40 to 115 years to achieve RAO-3 is considered a reasonable length of time for this site, and ICs will prevent exposure to contaminated groundwater until the aquifer is restored. Multiple lines of evidence indicate that natural attenuation processes are active at the site, and that MNA will be effective over the long-term at reducing the volume of contaminants in groundwater, including:

- Much source material was removed during the 1998 soil removal, and the remaining contaminated soil does not appear to be acting as a source for ongoing groundwater contamination because GW contamination is not increasing;
- The extent of the groundwater plume has been defined and appears to be stable;
- With the groundwater velocity of 40 to 140 feet per year, the leading edge of the benzene and naphthalene plume would have traveled a minimum of three to four times farther than its observed location, if attenuation processes were not actively restricting plume expansion; and

- Groundwater data collected since 2000 indicate stable or decreasing concentrations of benzene and naphthalene at all monitoring locations since 2005; between 2000 and 2004, two monitoring locations had increasing trends that have since stabilized.

The Preferred Alternative does not use treatment to reduce the toxicity, mobility or volume. The mobility of contaminants is limited through containment by maintaining the parking lot and clean soil cover over contaminated soil, monitoring the groundwater plume to ensure stability, removing highly contaminated sediment in the River, and covering contaminated sediment in the Pond with a sand layer containing activated carbon.

The Preferred Alternative will be effective in the short term. It presents no short-term human health risks and achieves protection from contaminated soil and groundwater within a few months. Dredging the river sediment and covering the pond sediment will disrupt or eliminate the existing benthic community and temporarily increase the suspended solids in the water column in the short-term. However, benthos will recolonize the clean fill or cover placed on these areas resulting in a healthier benthic community.

All actions in the Preferred Alternative are implementable. The ICs, MNA of groundwater, and sediment cap in the pond are easily implementable; dredging river sediment is also expected to be implementable despite the somewhat rocky conditions on the river bottom.

The Preferred Alternative is cost-effective. MNA will restore groundwater at a much lower cost than extraction and treatment. ICs will prevent exposures to contaminated soil and groundwater at minimal cost. Clean sediment will be available for benthic recolonization at a lower cost than dredging all affected sediment.

The final two criteria, state acceptance and community acceptance, will be evaluated after the public comment period for this Proposed Plan.

COMMUNITY PARTICIPATION

EPA relies on public input so that the remedy selected for each Superfund Alternative Site meets the needs and concerns of the local community.

Public Comment Period – To ensure that the community's concerns are being addressed, a public comment period will open on July 2, 2012 and close August 3, 2012. During this time the public is encouraged to submit comments on the Proposed Plan to EPA. The public may also request that a public meeting in Stevens Point be held to discuss the Proposed Plan.

It is important to note that although EPA has proposed a Preferred Alternative, the final remedy has not yet been selected for the site. All comments received will be considered and addressed by EPA before the final remedy is selected.

Detailed information on the material discussed in this document may be found in the Administrative Record for the site. These materials include the Completion Report, the RI, the FS and other information used by EPA in the decision making process. EPA encourages the public to review the Administrative Record in order to gain a more comprehensive understanding of the Site and the Superfund activities that have taken place there. Copies of the Administrative Record are available at the following locations:

Portage County Public Library
Charles M. White Library Building
1001 Main St.
Stevens Point, WI

U.S. EPA Region 5
Record Center, Room 711
77 West Jackson Boulevard
Chicago, IL 60604
Monday – Friday 8 a.m. to 4 p.m.

Written comments, questions about the Proposed Plan, and requests for information or a public meeting can be sent to either representative below:

Leslie Patterson (SR-6J)
Remedial Project Manager
Region 5 EPA
77 West Jackson Blvd
Chicago, IL 60406
patterson.leslie@epa.gov

Susan Pastor (SR-5J)
Community Involvement Coordinator
Region 5 EPA
77 West Jackson Blvd
Chicago, IL 60406
pastor.susan@epa.gov

Following the conclusion of the public comment period on the Proposed Plan, a Responsiveness Summary will be prepared. The Responsiveness Summary will summarize and respond to comments on EPA's Preferred Alternative. EPA will then prepare a formal decision document, the Record of Decision (ROD), that summarizes the decision process and the alternative selected for the Site. The ROD will include the Responsiveness Summary. Copies of the ROD will be available for public review in the information repositories, as described above.

Figure 1: WPSC Stevens Point MGP Location Map

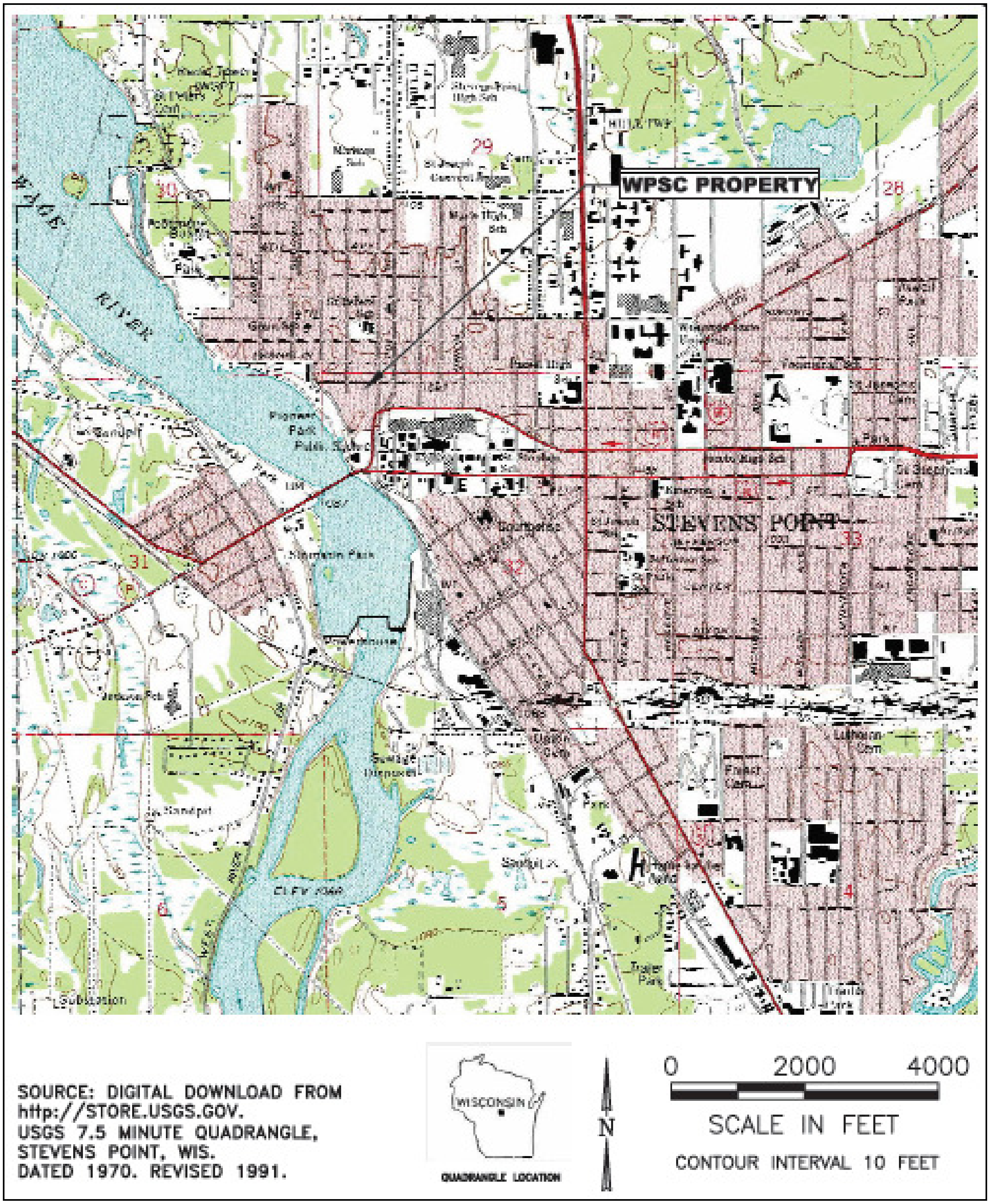

Figure 2: WPSC Property, Location of former MGP Structures, and Adjacent Properties

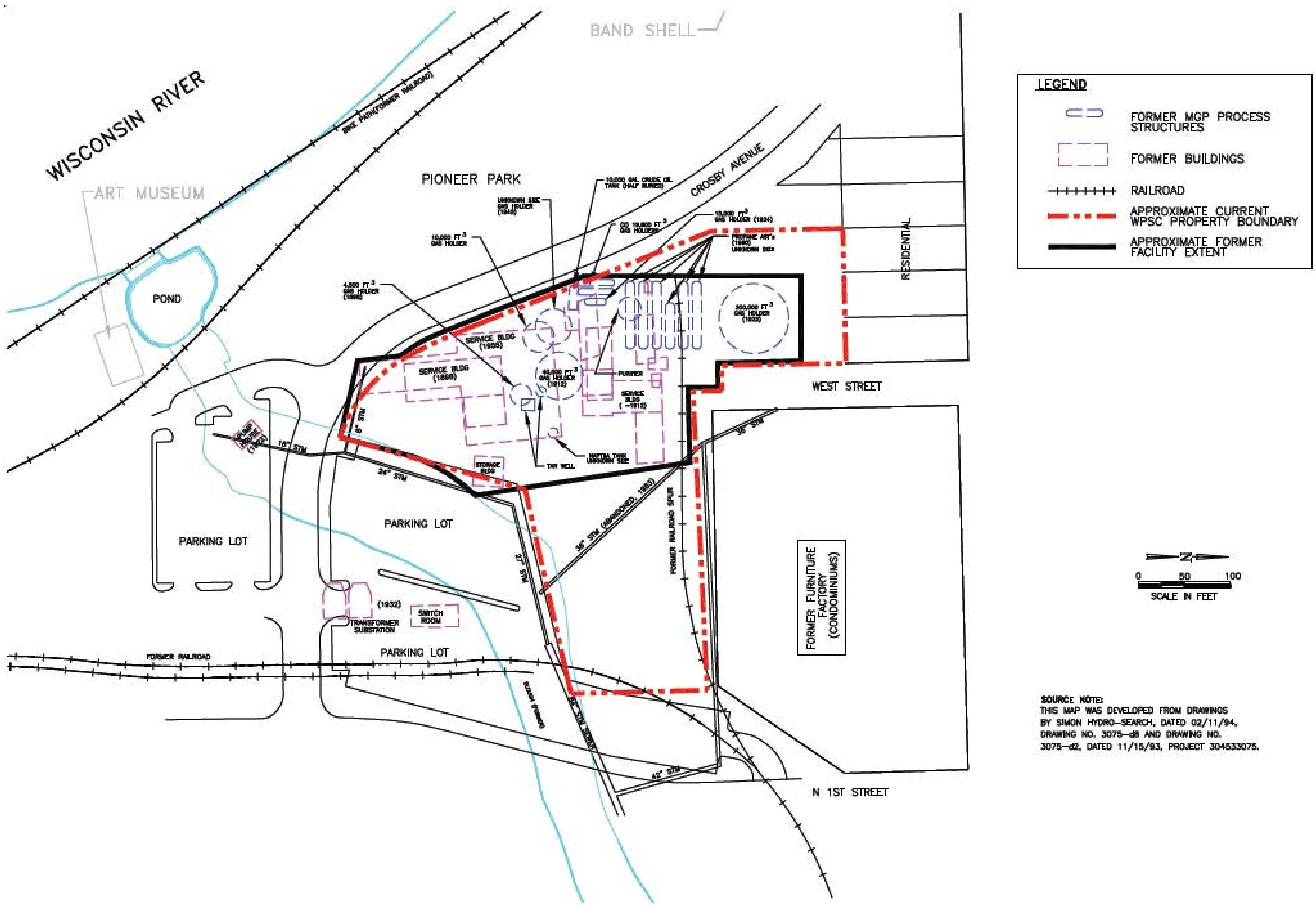

Figure 3: Areas of Contaminated Sediment above the Threshold Effects Concentration and Probable Effects Concentration

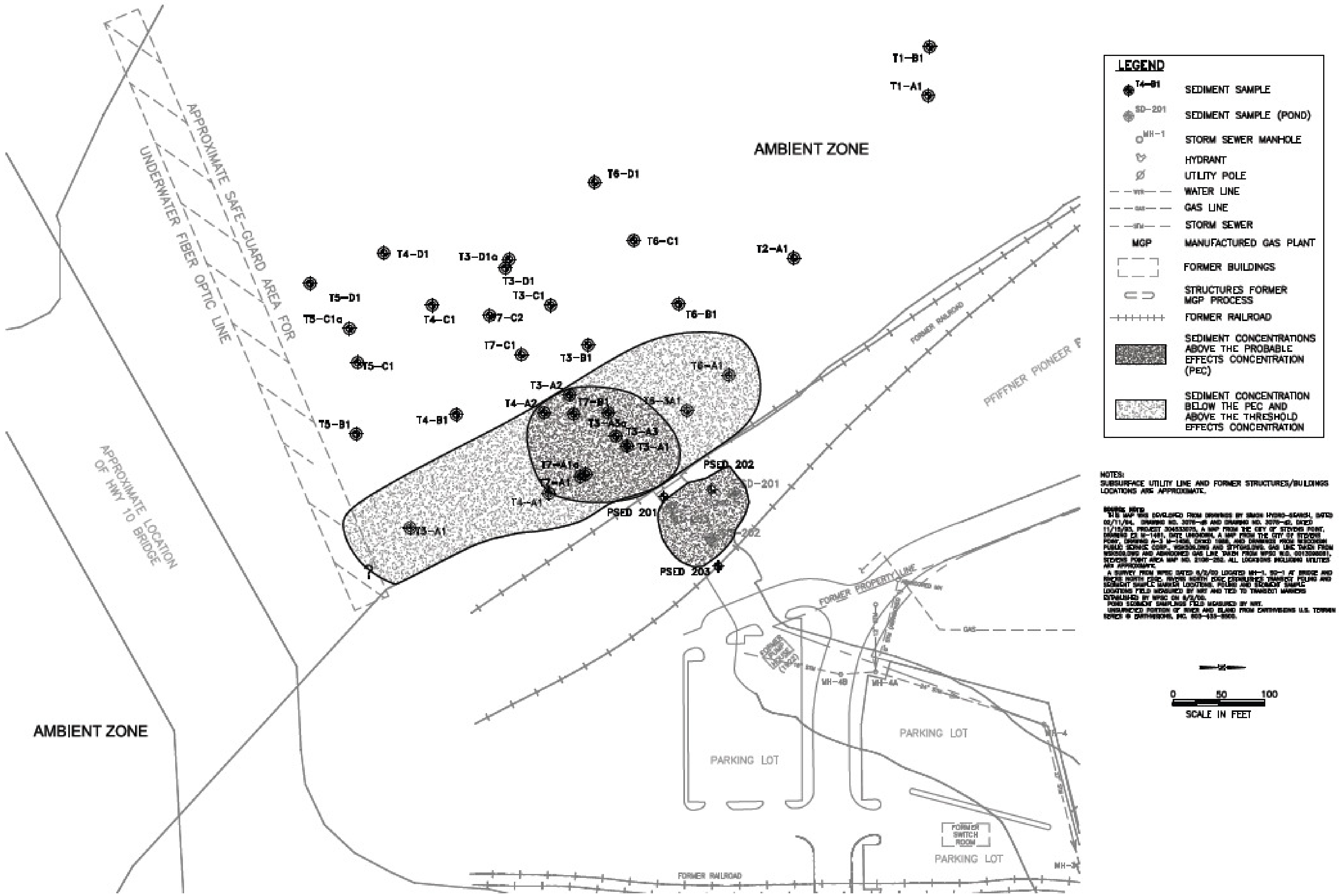

Figure 4: Benzene and Naphthalene Groundwater Plumes and Soil Vapor Sampling Results, March 2011

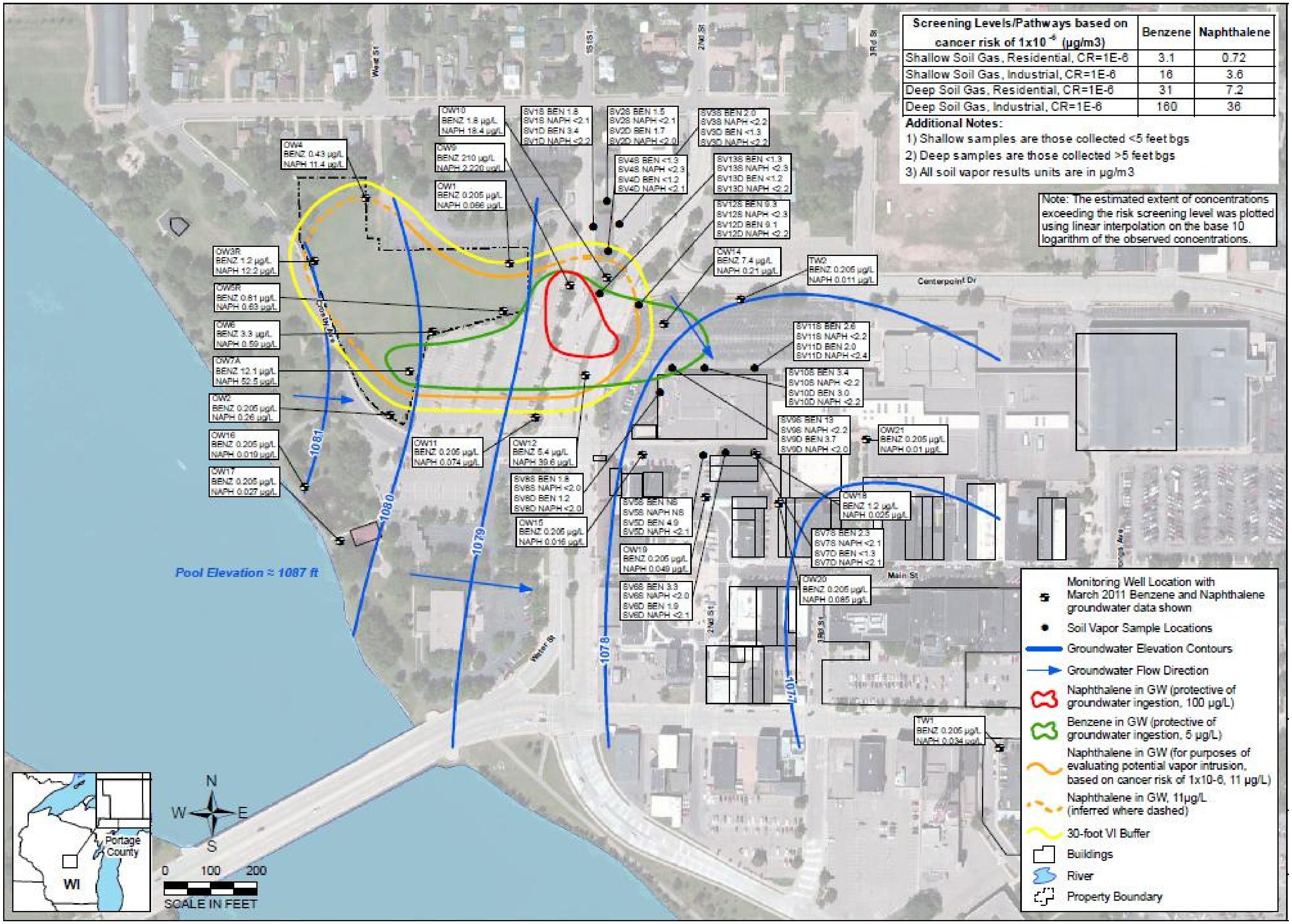

Figure 5: Area of Soil to be placed under Institutional Controls (grey shaded area)