

The risk characterization steps combine the RBTLs and representative exposure point concentrations to estimate the IELCR and HI associated with the complete and potentially complete exposure pathways. The results indicate that even using the conservative assessment methodologies included in this HHRA (in particular the use of the screening version of the J&E model for indoor air inhalation pathways), the IELCR and HI for off-site residents under current land use conditions are insignificant. In particular, the IELCR for current off-site residents from the indoor air vapor intrusion/inhalation from groundwater (both from the “perched zone” and “deep” aquifer) within the impacted plume is always less than 6E-07. All HIs associated with this pathway are below 1.0

Assuming a hypothetical residential future land use for the former lagoon, the cumulative IELCR and HI from the indoor air vapor intrusion/inhalation from soil are also insignificant, 7E-07 and 3.2E-02, respectively. These levels are below the MDNR’s risk levels of concern for soil (a cumulative IELCR of 1E-04 and a segregated HI of 1.0) (MDNR, 2003). Therefore, no further remediation of the former lagoon soil for protection of human health is necessary.

Should the “deep” aquifer groundwater be used for potable/domestic purposes, the range of IELCRs for the direct ingestion/inhalation of VOCs and direct dermal contact pathways is 8E-07 (MW-1) to 1E-04 (MW-19); the range of HI is 3.1E-02 to 5.3, respectively. Thus, although the cumulative IELCRs are at or below the MDNR’s risk level of concern (1E-04), the cumulative HI at certain well locations is above the target HI set by MDNR (HI of 1.0). It should be noted that these risk levels represent hypothetical future potential risks. If groundwater within the “deep” aquifer plume is not allowed to be used for potable/domestic purposes, current and future on-site/off-site residents will not incur these risk levels.

The uncertainty associated with the risk characterization results was qualitatively evaluated for each step of the HHRA process and then integrated to qualitatively evaluate the overall uncertainty. Based on a consideration of uncertainty associated with each step of the TRA process, the overall uncertainty is low to moderate with a bias toward overestimation of risks. It should be noted that the real risks to residential receptors of concern will be much less due to natural attenuation and continuing mitigation efforts within the Study Area, such as operation of the Mulberry well to extract contaminated groundwater from the “deep” aquifer.

Based on the results of the qualitative ESE, it was determined that there is no potential wildlife use of the former lagoon site. The former lagoon is located within a developed residential area and the presence of residences does diminish the intrinsic ecological value of the Site.

The sole issue at the former lagoon (and the Study Area) is impacted groundwater at more than 100 feet bgs, which is beyond the depth of root penetration into the soil. Thus, there is no potential for uptake of constituents in impacted groundwater into plants that might serve as food for wildlife. Since impacted "perched zone" or "deep" aquifer groundwater is not expected to discharge to any surface water body, there are no issues associated with exposure of aquatic life to constituents that might enter surface water.

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<http://www.epa.gov/safewater/dwh/t-voc/12-dich2.html> (for DCE)

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ATTACHMENTS



Memo

To: SECOR, Inc.
From: Mary Lou Goodpaster
CC: George F. Jamison, Environmental Operations, Inc.
Date: April 9, 2004
Re: Former Hulett Lagoon, Camdenton, MO: Environmental Resource Site Review

A field review of the environmental resources at the former Hulett Lagoon was conducted on December 5, 2003 by Mary Lou Goodpaster of Goodpaster and Associates, Inc. The site is located south of Missouri Route 5/7, about 0.6 miles northwest of central Camdenton, MO. The site consists of the former wastewater lagoon and immediate vicinity. The purpose of this field review was to document current site conditions for evaluation of Applicable, or Relevant and Appropriate Regulations (ARARs) or regulations To Be Considered (TBCs) for site remediation.

Potential Environmental Resource Considerations

Potential environmental resource regulations related to natural and cultural resources include:

- Section 404 of the Clean Water Act (Wetlands)
- National Historic Preservation Act
- Fish and Wildlife Coordination Act
- National Wildlife Refuge System Administration Act
- Wild and Scenic Rivers Act
- Endangered Species Act
- Wildlife Code of Missouri
- Wilderness Act
- Flood Control Act

These regulations are described below.

Section 404 of the Clean Water Act regulates the discharge of dredged or fill materials into Waters of the United States, including wetlands. Recent decisions by the United States Supreme Court have limited the application of this federal regulation to wetlands that have an apparent surface connection to Water of the United States. Activities within isolated wetlands are not currently regulated in Missouri by either the State of Missouri or the Corps of Engineers. Executive Order 11990 further requires federal agencies to avoid, minimize and mitigate adverse impacts to wetlands and establishes a goal of no net loss of wetlands.

The National Historic Preservation Act of 1966 and amendments provide for preservation of significant historical features (buildings, objects and sites). Federal agencies are directed to take into account the effects of their actions on items or sites listed or eligible for listing in the National Register of Historic Places. Review of the impacts of federal projects on historic resources within Missouri has been delegated to the Missouri Department of Natural Resources, Division of State Parks, Office of Historic Preservation.

area does not constitute a wetland as defined by the 1987 Corps of Engineers Wetland Delineation Manual.

The former lagoon and surrounding area were also reviewed to determine the potential for providing habitat to species listed as threatened or endangered by the State of Missouri or U.S. Fish and Wildlife Service. The former lagoon area does not provide potential habitat for any listed species that has been recorded for Camden County. The area surrounding the lagoon is forested. The canopy is dominated by oaks that are generally less than 12 inch dbh, indicating that this area was cleared at some point, probably less than 50 years ago. A few larger trees are present, but no trees exceeding 24 inch dbh were observed. Some large oak snags with exfoliating bark and/or hollow trunks were noted. These individuals may provide summer resting habitat for bats, including the federally endangered Indiana bat.

The understory includes eastern cedar, dogwood, and bush honeysuckle, with multiflora rose along the margins of the woods; the understory is probably densely vegetated in summer.

The area along the small drainageway on the west edge of the former lagoon is densely vegetated with Osage orange and multiflora rose.

Conclusions

The site does not contain wetlands.

Because surface soils at the site have been substantially altered by historic excavation and filling of the former lagoon, there is no credible potential for encountering intact prehistoric deposits within this area. However, if remedial actions require excavation or construction outside of the area of the former lagoon, the Missouri Department of Natural Resources Division of State Parks Office of Historic Preservation may require an archaeological survey to identify historic or prehistoric resources within the proposed area of disturbance. The site is not located within a National Wildlife Refuge and no refuges are located within a mile of the site.

If remedial actions require impoundment or diversion of surface waters, coordination with the US Fish and Wildlife Service will be required under the Fish and Wildlife Coordination Act.

The site is not located within a National Wildlife Refuge and no refuges are located within a mile of the site.

The site is not located in the vicinity of any wild and scenic river.

Two threatened and two endangered species are listed as having been found in Camden County. There is no potential for occurrence of the Niangua darter, bald eagle or gray bat at this site. There is potential for the endangered Indiana bat to exist seasonally in the forested areas surrounding the former lagoon, though not within the former lagoon, itself. Actions requiring disturbance of potential habitat (large, loose barked trees) during the summer should be avoided. The Indiana bat is also listed as endangered under the Wildlife Code of Missouri.

The site is not located in or near any designated wilderness area.

The site is not within a federally mapped floodplain or flood prone area.

Based on the information reviewed and site observations, the following ARARs and TBCs related to natural and cultural resources may apply to remedial activities at this site under some action-specific circumstances:

- National Historic Preservation Act
- Endangered Species Act, Missouri Rule 3CSR10-4.111 of the *Wildlife Code of Missouri*
- Fish and Wildlife Coordination Act

Checklist for Ecological Assessment/Sampling

I. SITE DESCRIPTION

1. Site Name: Former Hulett Lagoon
Location: West of West Mulberry Lane and east of Dawson Street
County: Camden City: Camdenton State: MO

2. Latitude: 521504E Longitude: 4207135N
Based on data provided by topozone.com

3. What is the approximate area of the site? one acre

4. Is this the first site visit? yes no If no, attach trip report of previous site visit(s), if available.
Date(s) of previous site visit(s): _____

5. Please attach to the checklist USGS topographic map(s) of the site, if available.
Attached

6. Are aerial or other site photographs available? yes no If yes, please attach any available photo(s) to the site map at the conclusion of this section.
Site photos attached.

7. The land use on the site is:

The area surrounding the site is:

0.5 mile radius

___ % Urban

25 % Urban Commercial

___ % Rural

___ % Rural

___ % Residential

50 % Residential

___ % Industrial (light heavy)

25 % Industrial (light heavy)

___ % Agricultural

___ % Agricultural

(Crops: _____)

(Crops: _____)

___ % Recreational

___ % Recreational

(Describe; note if it is a park, etc.)

(Describe; note if it is a park, etc.)

___ % Undisturbed

___ % Undisturbed

100 % Other

___ % Other

8. Has any movement of soil taken place at the site? yes no. If yes, please identify the most likely cause of this disturbance:

___ Agricultural Use

X Heavy Equipment

___ Mining

___ Natural Events

___ Erosion

___ Other

Please describe:

Former lagoon area has been graded and filled with locally available soil material.

9. Do any potentially sensitive environmental areas exist adjacent to or in proximity to the site, e.g., Federal and State parks, National and State monuments, wetlands, prairie potholes? *Remember, flood plains and wetlands are not always obvious; do not answer "no" without confirming information.*

No

Please provide the source(s) of information used to identify these sensitive areas, and indicate their general location on the site map.

Data sources reviewed:

National Wetland Inventory (NWI) map for Camdenton, MO Quad
Camden County, MO Soils Report (NRCS)
Federal Emergency Management Agency (FEMA) Flood Insurance Maps
Missouri Department of Conservation Heritage Database

10. What type of facility is located at the site?

Chemical Manufacturing Mixing Waste disposal

Other (specify) _____

11. What are the suspected contaminants of concern at the site? If known, what are the maximum concentration levels?

Volatile Organic Compounds

12. Check any potential routes of off-site migration of contaminants observed at the site:

Swales Depressions Drainage ditches

Runoff Windblown particulates Vehicular traffic

Other (specify) _____

13. If known, what is the approximate depth to the water table? _____

14. Is the direction of surface runoff apparent from site observations? yes no If yes, to which of the following does the surface runoff discharge? Indicate all that apply.

Surface water Groundwater Sewer Collection impoundment

15. Is there a navigable waterbody or tributary to a navigable waterbody? yes no

16. Is there a waterbody anywhere on or in the vicinity of the site? If yes, also complete Section III: Aquatic Habitat Checklist -- Non-Flowing Systems and/or Section IV: Aquatic Habitat Checklist -- Flowing Systems.

yes (approx. distance adjacent) no

17. Is there evidence of flooding? yes no *Wetlands and flood plains are not always obvious; do not answer "no" without confirming information.* If yes, complete Section V: Wetland Habitat Checklist.

18. If a field guide was used to aid any of the identifications, please provide a reference. Also, estimate the time spent identifying fauna. [Use a blank sheet if additional space is needed for text.]

Biotic Consultants, Inc., Undated. *Midwestern Wetland Flora, Field Office Guide to Plant Species*, USDA Soil Conservation Service, Midwest National Technical Center, Lincoln, NE.
Petrides, George A., 1972. *A Field Guide to Trees and Shrubs, Northeastern and north-central United States and south-central Canada, Second Edition*, Houghton-Mifflin, NY.
Yatskievych, George, 1999. *Steiermark's Flora of Missouri*, MO Department of Conservation.
Approximately 2 hours spent on-site.

19. Are any threatened and/or endangered species (plant or animal) known to inhabit the area of the site? yes no
If yes, you are required to verify this information with the U.S. Fish and Wildlife Service. If species' identities are known, please list them next.

The area surrounding the former lagoon may provide summer roosting habitat for the Indiana bat (Myotis sodalis)

20. Record weather conditions at the time this checklist was prepared:

DATE: 12/5/2003

36 Temperature (°C/°F)

_____ Normal daily high temperature

_____ Wind (direction/speed)

Light rain Precipitation (rain, snow)

Overcast Cloud cover

II. TERRESTRIAL HABITAT CHECKLIST

IIA. WOODED

1. Are there any wooded areas at the site? yes no If no, go to Section IIB: Shrub/Scrub.
2. What percentage or area of the site is wooded? (____% ____ acres). Indicate the wooded area on the site map which is attached to a copy of this checklist. Please identify what information was used to determine the wooded area of the site.
The area surrounding the lagoon is wooded.
3. What is the dominant type of vegetation in the wooded area? (Circle one: Evergreen/Deciduous/ Mixed) Provide a photograph, if available.

Dominant plant, if known: oak species

4. What is the predominant size of the trees at the site? Use diameter at breast height.
 0-6 in. 6-12 in. > 12 in.
5. Specify type of understory present, if known. Provide a photograph, if available.

Site visit was conducted outside the growing season when herbaceous vegetation was senescent. Species noted included eastern cedar, bush honeysuckle, dogwood and multiflora rose.

IIB. SHRUB/SCRUB

1. Is shrub/scrub vegetation present at the site? yes no If no, go to Section IIC: Open Field.
2. What percentage of the site is covered by scrub/shrub vegetation? (____% ____ acres). Indicate the areas of shrub/scrub on the site map. Please identify what information was used to determine this area.
3. What is the dominant type of scrub/shrub vegetation, if known? Provide a photograph, if available.
4. What is the approximate average height of the scrub/shrub vegetation?
 0-2 ft. 2-5 ft. > 5 ft.

5. Based on site observations, how dense is the scrub/shrub vegetation?

- Dense Patchy Sparse

IIC. OPEN FIELD

1. Are there open (bare, barren) field areas present at the site? yes no If yes, please indicate the type below:

- Prairie/plains Savannah Old field Other (specify) _____

2. What percentage of the site is open field? (_____% 1 acres). Indicate the open fields on the site map.

3. What is/are the dominant plant(s)? Provide a photograph, if available.

Former lagoon area is old field dominated by common fescue and forbs including goldenrod, Queen Anne's lace, clover, fall asters, and some little bluestem. Blackberries and bush honeysuckle have invaded the northern portion of the former lagoon area.

4. What is the approximate average height of the dominant plant? 2 ft.

5. Describe the vegetation cover: Dense Sparse Patchy

IID. MISCELLANEOUS

1. Are other types of terrestrial habitats present at the site, other than woods, scrub/shrub, and open field? yes no
If yes, identify and describe them below.

2. Describe the terrestrial miscellaneous habitat(s) and identify these area(s) on the site map.

IA. SUMMARY OF OBSERVATIONS AND SITE SETTING

The former lagoon area (now filled) currently consists of a nearly level field vegetated with common fescue and forbs. Fescue is the dominant plant species, comprising greater than 90% of the surface cover throughout the lagoon area. Forb species include common goldenrod, Queen Anne's lace, clover, fall asters, and a few little bluestem plants. Blackberries and bush honeysuckle have invaded the northern portion of the former lagoon area. None of the dominant species within the former lagoon area are classified as facultative or obligate wetland species. According to the Remedial Investigation Report, soils within the former lagoon area consist of fill comprised of material excavated from the lagoon sidewalls.

Surface water flows from the surrounding uplands across the former lagoon from east and south to the west, where it enters a drainage swale at the edge of the fill area and drains thence to a small, unnamed intermittent tributary to the Lake of the Ozarks, an impoundment of the Niangua River, west of the site. A small area of surface water ponding was observed within the former lagoon area north of MW-5. This depression has apparently been created by rutting from vehicles traversing the former lagoon to sample the monitoring well. The area immediately surrounding this ponded area was also wet at the surface. However, the vegetation in this area was identical to the vegetation in the remainder of the former lagoon, indicating that water does not pond in this area for long enough periods to create anoxic conditions in the surface soils or alter the vegetative cover. Based on these observations, this area does not constitute a wetland as defined by the 1987 Corps of Engineers Wetland Delineation Manual.

The former lagoon and surrounding area were also reviewed to determine the potential for providing habitat to species listed as threatened or endangered by the State of Missouri or U.S. Fish and Wildlife Service. The former lagoon area does not provide potential habitat for any listed species that has been recorded for Camden County. The area surrounding the lagoon is forested. The canopy is dominated by oaks that are generally less than 12 inch dbh, indicating that this area was cleared at some point, probably less than 50 years ago. A few larger trees are present, but no trees exceeding 24 inch dbh were observed. Some large oak snags with exfoliating bark and/or hollow trunks were noted. These individuals may provide summer resting habitat for bats, including the federally endangered Indiana bat.

The understory includes eastern cedar, dogwood, and bush honeysuckle, with multiflora rose along the margins of the woods; the understory is probably densely vegetated in summer.

The area along the small drainageway on the west edge of the former lagoon is densely vegetated with Osage orange and multiflora rose.

Completed by Mary Lou Goodpaster Affiliation Goodpaster & Associates, INC.

Additional Preparers _____

Site Manager _____

Date December 5, 2003

III. AQUATIC HABITAT CHECKLIST -- NON-FLOWING SYSTEMS

Note: Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type of open-water, non-flowing system is present at the site?
 Natural (pond, lake)
 Artificially created (lagoon, reservoir, canal, impoundment)

2. If known, what is the name(s) of the waterbody(ies) on or adjacent to the site?

3. If a waterbody is present, what are its known uses (e.g.: recreation, navigation, etc.)?
4. What is the approximate size of the waterbody(ies)? _____ acre(s).

5. Is any aquatic vegetation present? yes no If yes, please identify the type of vegetation present if known.
 Emergent Submergent Floating

6. If known, what is the depth of the water? _____

7. What is the general composition of the substrate? Check all that apply.
 Bedrock Sand (coarse) Muck (fine/black)
 Boulder (>10 in.) Silt (fine) Debris
 Cobble (2.5-10 in.) Marl (shells) Detritus
 Gravel (0.1-2.5 in.) Clay (slick) Concrete
 Other (specify) _____

8. What is the source of water in the waterbody?
 River/Stream/Creek Groundwater Other (specify) _____
 Industrial discharge Surface runoff

9. Is there a discharge from the site to the waterbody? yes no If yes, please describe this discharge and its path.

10. Is there a discharge from the waterbody? yes no If yes, and the information is available, identify from the list below the environment into which the waterbody discharges.

- | | | | |
|---|---------------------------------|----------------------------------|----------------|
| <input type="checkbox"/> River/Stream/Creek | <input type="checkbox"/> onsite | <input type="checkbox"/> offsite | Distance _____ |
| <input type="checkbox"/> Groundwater | <input type="checkbox"/> onsite | <input type="checkbox"/> offsite | |
| <input type="checkbox"/> Wetland | <input type="checkbox"/> onsite | <input type="checkbox"/> offsite | Distance _____ |
| <input type="checkbox"/> Impoundment | <input type="checkbox"/> onsite | <input type="checkbox"/> offsite | |

11. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected provide the measurement and the units of measure below:

- _____ Area
- _____ Depth (average)
- _____ Temperature (depth of the water at which the reading was taken) _____
- _____ pH
- _____ Dissolved oxygen
- _____ Salinity
- _____ Turbidity (clear, slightly turbid, turbid, opaque) (Secchi disk depth _____)
- _____ Other (specify)

12. Describe observed color and area of coloration.

13. Mark the open-water, non-flowing system on the site map attached to this checklist.

14. What observations, if any, were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?

IV. AQUATIC HABITAT CHECKLIST -- FLOWING SYSTEMS

Note: Aquatic systems are often associated with wetland habitats. Please refer to Section V, Wetland Habitat Checklist.

1. What type(s) of flowing water system(s) is (are) present at the site?

- | | | |
|---|--|--|
| <input type="checkbox"/> River | <input type="checkbox"/> Stream | <input checked="" type="checkbox"/> Creek (Intermittent) |
| <input type="checkbox"/> Dry wash | <input type="checkbox"/> Arroyo | <input type="checkbox"/> Brook |
| <input type="checkbox"/> Artificially
created
(ditch, etc.) | <input type="checkbox"/> Intermittent Stream | <input type="checkbox"/> Channeling |
| | <input type="checkbox"/> Other (specify) _____ | |

2. If known, what is the name of the waterbody? Unnamed tributary to Lake of the Ozarks

3. For natural systems, are there any indicators of physical alteration (e.g., channeling, debris, etc.)?

yes no If yes, please describe indicators that were observed.

The stream channel has been eroded by increases in runoff quantity and velocity from paved areas immediately upgradient of the site.

4. What is the general composition of the substrate? Check all that apply.

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Bedrock | <input checked="" type="checkbox"/> Sand (coarse) | <input type="checkbox"/> Muck (fine/black) |
| <input type="checkbox"/> Boulder (>10 in.) | <input type="checkbox"/> Silt (fine) | <input type="checkbox"/> Debris |
| <input type="checkbox"/> Cobble (2.5-10 in.) | <input type="checkbox"/> Marl (shells) | <input type="checkbox"/> Detritus |
| <input type="checkbox"/> Gravel (0.1-2.5 in.) | <input type="checkbox"/> Clay (slick) | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Other (specify) _____ | | |

5. What is the condition of the bank (e.g., height, slope, extent of vegetative cover)?

Eroded, steeply sloping banks, 2-6 ft. Riparian area wooded. Seeps noted within channel.

6. Is the system influenced by tides? yes no What information was used to make this determination?

Inland, nontidal system

7. Is the flow intermittent? yes no If yes, please note the information that was used in making this determination.

The only flow in the stream at the time of the site visit could be traced to small seeps in the stream channel.

8. Is there a discharge from the site to the waterbody? yes no If yes, please describe the discharge and its path.

Surface water flows across the former lagoon area from east to and south to the west, where it enters a drainage swale at the edge of the fill area and drains thence to a small, unnamed intermittent stream.

9. Is there a discharge from the waterbody? yes no If yes, and the information is available, please identify what the waterbody discharges to and whether the discharge is on site or off site.

The stream flows off site to an unnamed tributary to the Lake of the Ozarks.

10. Identify any field measurements and observations of water quality that were made. For those parameters for which data were collected, provide the measurement and the units of measure in the appropriate space below:

_____ Width (ft.)
_____ Depth (ft.)
_____ Velocity (specify units): _____
_____ Temperature (depth of the water at which the reading was taken _____)
_____ pH
_____ Dissolved oxygen
_____ Salinity
_____ Turbidity (clear, slightly turbid, turbid, opaque)
(Secchi disk depth _____)
_____ Other (specify) _____

11. Describe observed color and area of coloration.

None noted

12. Is any aquatic vegetation present? yes no If yes, please identify the type of vegetation present, if known.

Emergent

Submergent

Floating

Vegetation may be present during the growing season

13. Mark the flowing water system on the attached site map.

14. What observations were made at the waterbody regarding the presence and/or absence of benthic macroinvertebrates, fish, birds, mammals, etc.?

None

V. WETLAND HABITAT CHECKLIST

1. Based on observations and/or available information, are designated or known wetlands definitely present at the site?
 yes no

Please note the sources of observations and information used (e.g., USGS Topographic Maps, National Wetland Inventory, Federal or State Agency, etc.) to make this determination.

National Wetland Inventory map for Camden Co., MO
Camden Co., MO Soils Report (NRCS)
Field determination in accordance with 1987 Corps of Engineers
Wetland Delineation Manual

2. Based on the location of the site (e.g., along a waterbody, in a floodplain) and site conditions (e.g., standing water; dark, wet soils; mud cracks; debris line; water marks), are wetland habitats suspected?
 yes no If yes, proceed with the remainder of the wetland habitat identification checklist.

3. What type(s) of vegetation are present in the wetland?

- Submergent Emergent
 Scrub/Shrub Wooded
 Other (specify) _____

4. Provide a general description of the vegetation present in and around the wetland (height, color, etc.). Provide a photograph of the known or suspected wetlands, if available.

5. Is standing water present? yes no If yes, is this water: Fresh Brackish
What is the approximate area of the water (sq. ft.)? _____
Please complete questions 4, 11, 12 in Checklist III - Aquatic Habitat -- Non-Flowing Systems.

6. Is there evidence of flooding at the site? What observations were noted?

- Buttressing Water marks Mud cracks
 Debris line Other (describe below)

7. If known, what is the source of the water in the wetland?

Stream/River/Creek/Lake/Pond

Groundwater

Flooding

Surface Runoff

8. Is there a discharge from the site to a known or suspected wetland? yes no If yes, please describe.

9. Is there a discharge from the wetland? yes no. If yes, to what waterbody is discharge released?

Surface Stream/River

Groundwater Lake/Pond

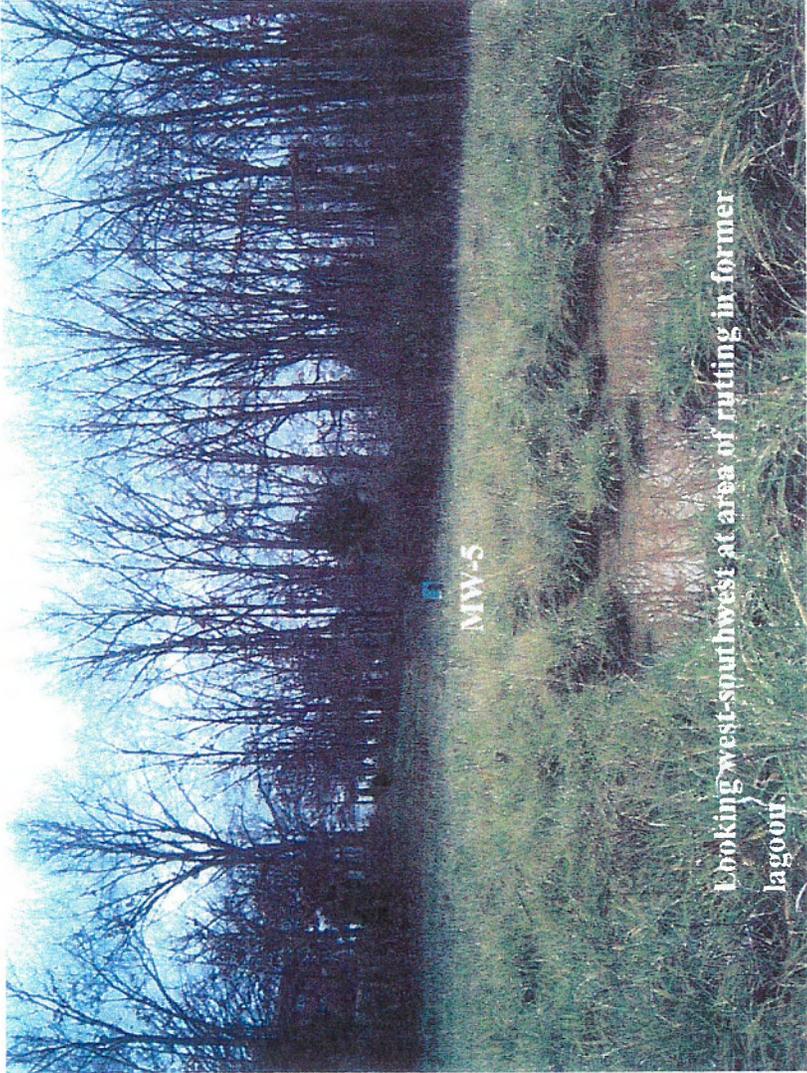
Marine

10. If a soil sample was collected, describe the appearance of the soil in the wetland area. Circle or write in the best response.

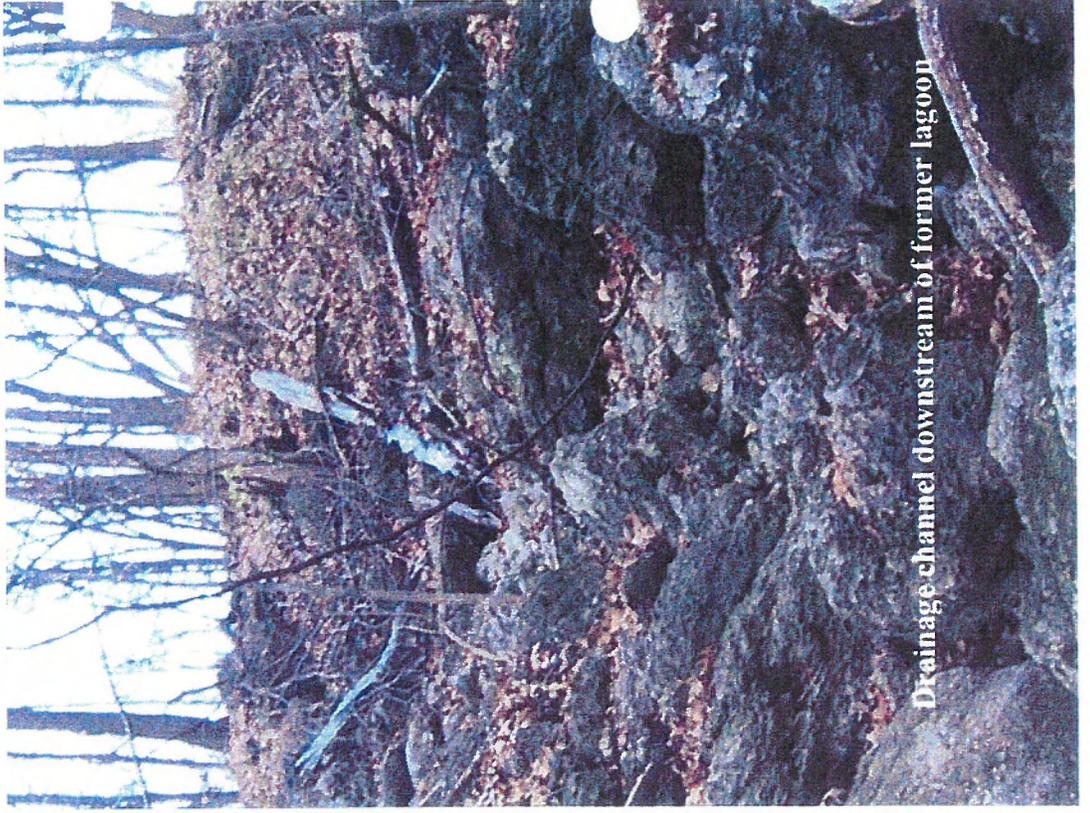
Color (blue/gray, brown, black, mottled) _____

Water content (dry, wet, saturated/unsaturated) _____

11. Mark the observed wetland area(s) on the attached site map.



Looking west-southwest at area of rutting in former lagoon.



Drainage channel downstream of former lagoon



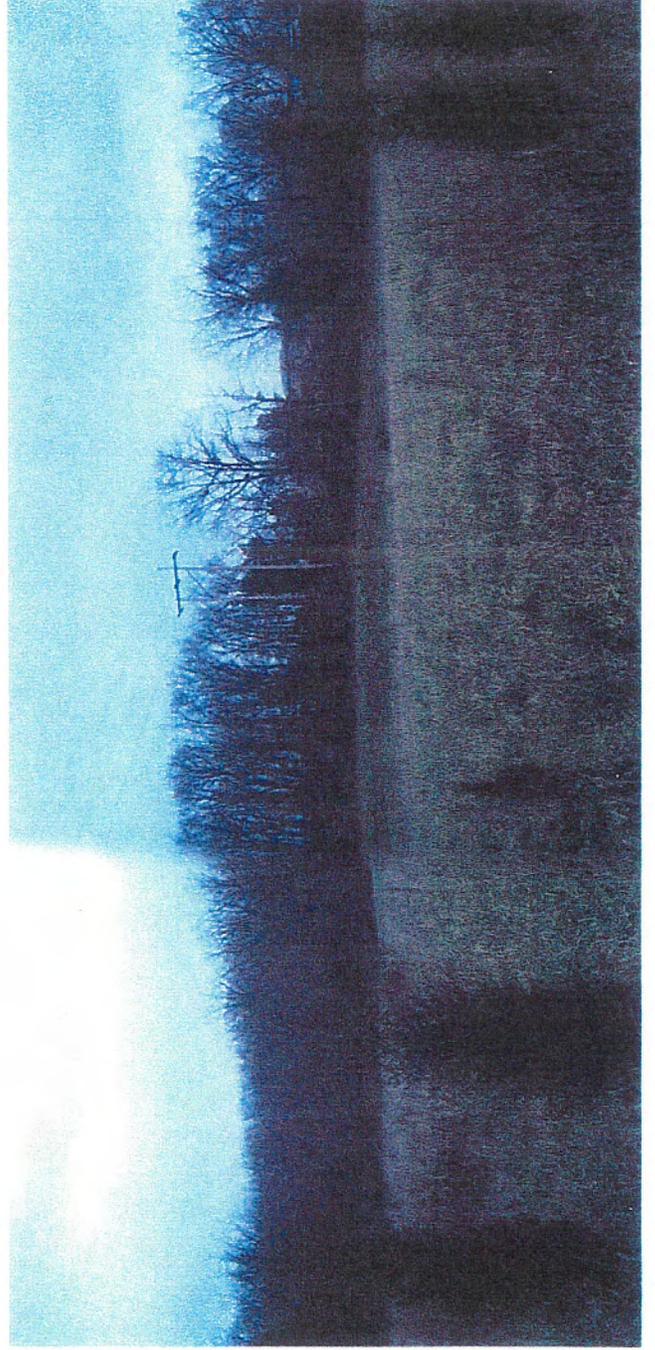
Forested area upslope from former lagoon



Ferns along drainage channel downstream of former lagoon.



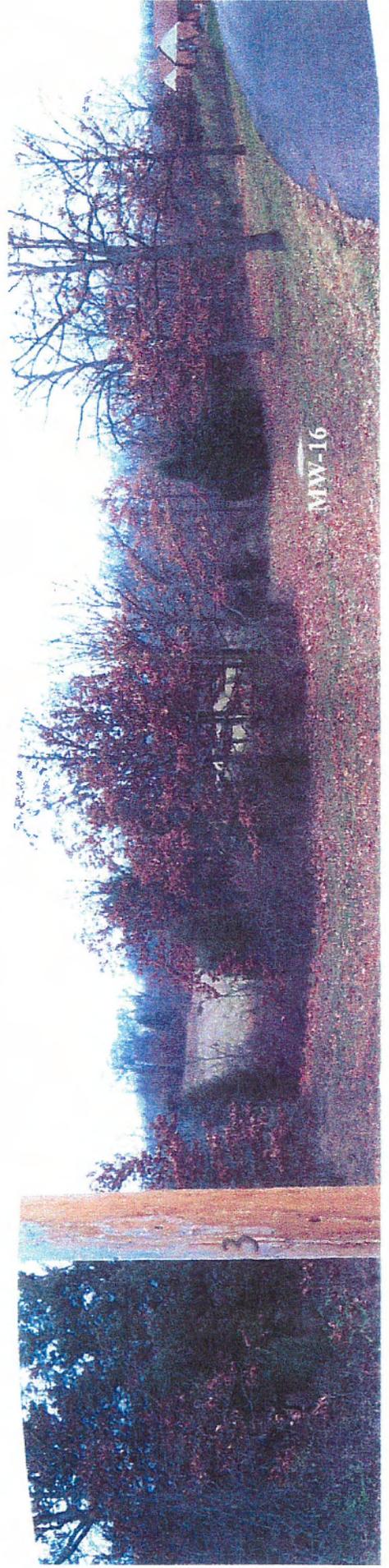
Looking over former lagoon area towards northwest.



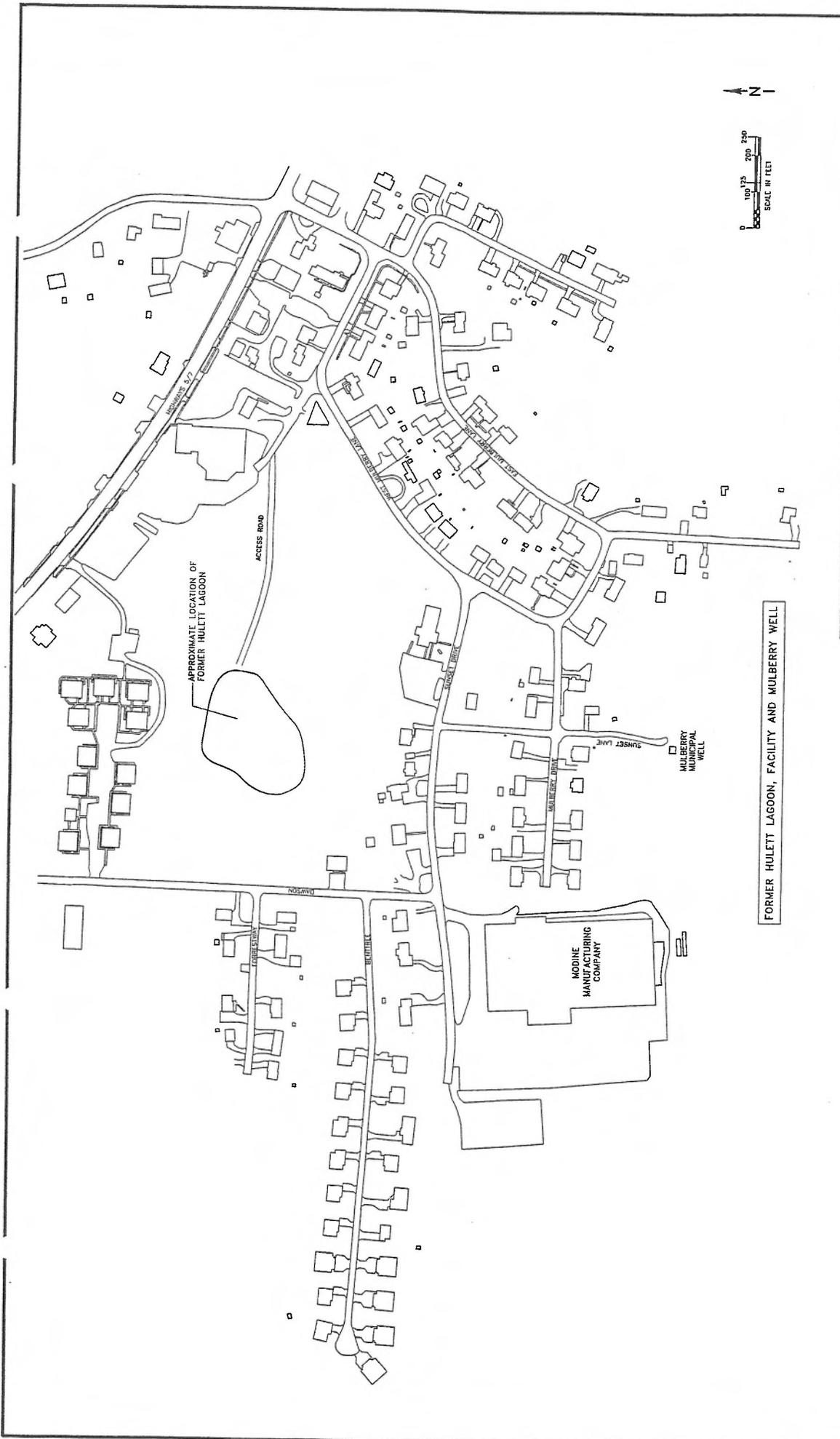
View over former lagoon area towards southeast.



Drainage along north side of former lagoon.



View of former lagoon from driveway for adjacent apartment

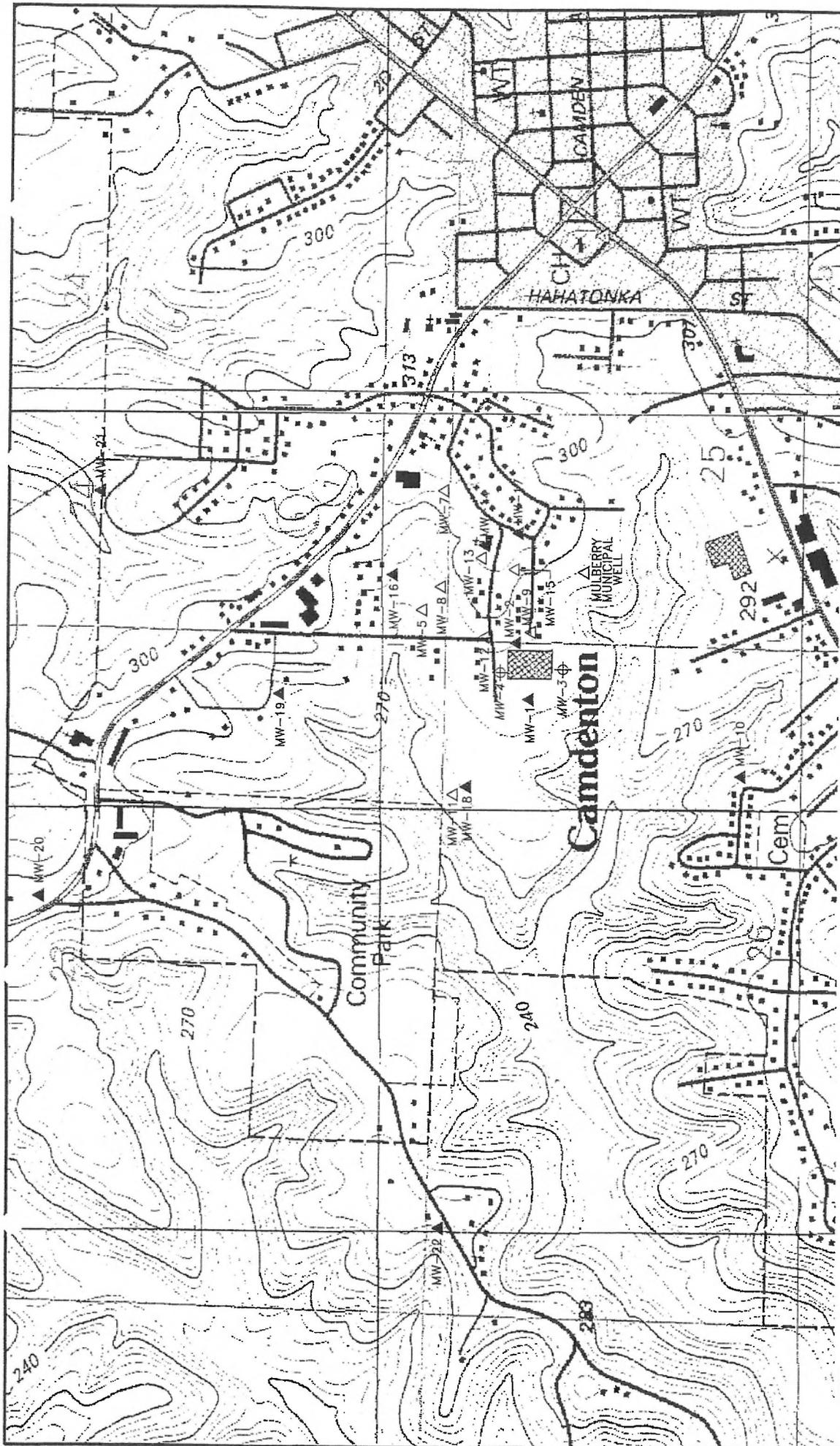


FORMER HULETT LAGOON, FACILITY AND MULBERRY WELL

DESIGNED BY: JGH
 DRAWN BY: WLG
 APPROVED BY: JGH
 DATE: 10-14-03



CONFIGURATION MAP
 FORMER HULETT LAGOON
 HAMILTON SUNDSTRAND
 CAMDEN, MISSOURI
 JOB NO. 61UN.03001.00



LEGEND:

- MW-18 ▲ DEEP WELL
- MW-12 ▲ SHALLOW WELL
- MW-15 ▲ SHALLOW WELL (ABANDONED)
- MW-3 ◻ MODINE DEEP WELL (ABANDONED)

DESIGNED BY: MCD
 DRAWN BY: GLH
 APPROVED BY: MCD
 DATE: 08-29-03

SCALE IN FEET
 0 700 1400

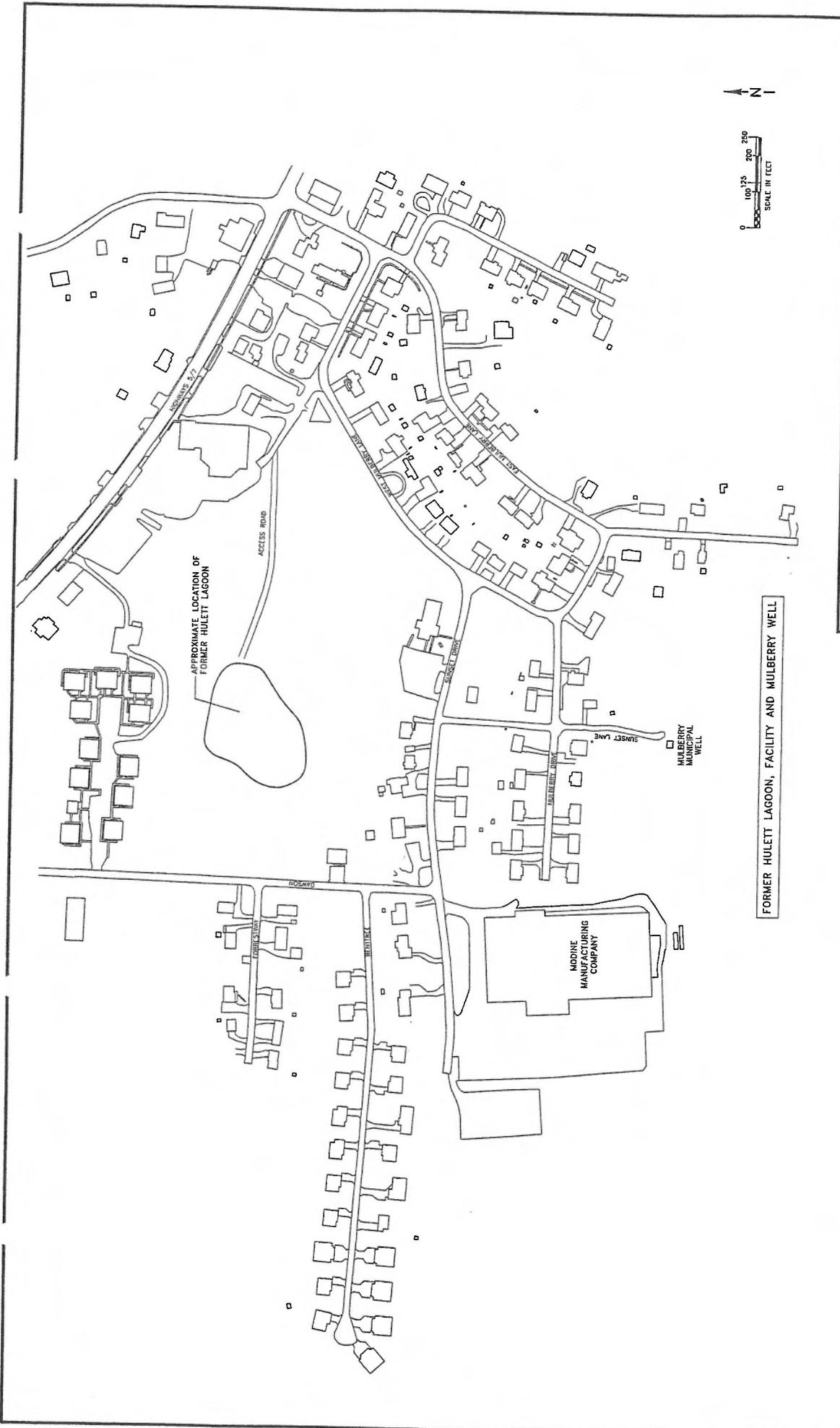
REFERENCE: USGS 7.5 MINUTE QUADRANGLE: GREEN BAY TERRACE, MO 1983
 USGS 7.5 MINUTE QUADRANGLE: CAIDENTON, MO 1983

PROJECTS:01.03 Projects\10103001.00\cad files\VI Summary SPT 03\061 usgs figure\usgs-painop.dwg 07-11-03

SECOR

SITE AREA TOPOGRAPHIC MAP SHOWING
 MONITORING WELL LOCATIONS
 FORMER HULETT LAGOON
 HAMILTON SUNDSTRAND
 CAMDEN, MISSOURI

JOB NO. 61UN.03001.00 FIGURE 2.2



FORMER HULETT LAGOON, FACILITY AND MULBERRY WELL

DESIGNED BY: JGH
 DRAWN BY: WLK
 APPROVED BY: JGH
 DATE: 10-14-03



CONFIGURATION MAP
 FORMER HULETT LAGOON
 HAMILTON SUNDSTRAND
 CAMDENTON, MISSOURI

JOB NO. 61UN.03001.00

FIGURE 2.1