MUNICIPAL STORMWATER MANAGEMENT PLAN

For the

Borough of Lakehurst

Ocean County, New Jersey

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Prepared By

REMINGTON & VERNICK ENGINEERS

9 Allen Street
Toms River, NJ 08753
(732) 286-9220

RVE Project No. Job #1514-T-113

Signature

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Date

Alan Dittenhofer, PE, PP, CME
License # 37672

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I. INTRODUCTION

The original Municipal Stormwater Management Plan (MSWMP) was prepared by Remington, Vernick & Vena Engineers for the Borough of Lakehurst, dated September 2006. The NJDEP "Sample Municipal Stormwater Management Plan" was used as a basis for preparation of the plan, as modified to provide specific information germane to Lakehurst.

The Borough authorized Remington, Vernick & Vena Engineers to update the plan in October 2007 in order to include the Ocean County review comments.

Currently, NJDEP has indicated to the Borough to take immediate actions to develop and update its MSWMP and Stormwater control Ordinances in order that these documents are consistent with N.J.A.C. 7:8. Therefore, Remington & Vernick has been authorized by the Borough to update the Municipal Stormwater Management Plan.

The Municipal Stormwater Management Plan (MSWMP) documents the strategy for the Borough of Lakehurst ("the Borough") to address stormwater-related impacts. The creation of this plan is required by N.J.A.C. 7:14A-25 (Municipal Stormwater Regulations). As required, this plan contains all of the required elements described in N.J.A.C. 7:8 (Stormwater Management Rules).

The plan contained herein addresses groundwater recharge, stormwater quantity and stormwater quality impacts by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one or more acre(s) of land. These standards are intended to minimize the adverse impact of stormwater runoff on water quality/quantity and the loss of groundwater recharge that provides base flow in receiving water bodies.

In addition, this plan describes long-term operation and maintenance measures for existing and future stormwater facilities. In accordance with N.J.A.C. 7:8, a waiver from performing a build-out analysis has been obtained upon Borough adoption and filing of this plan, on the basis that there is less than one (1) square mile of buildable, undeveloped land within the Borough (see Development Constraints Map, /Figure C-7). The plan also addresses the review and update of existing stormwater ordinances and other planning documents to allow for project designs that include low impact development techniques.

The final component of this plan is a mitigation strategy for when a variance or exemption of the design and performance standards are sought. As part of the mitigation section of the stormwater plan, specific stormwater management measures are identified to lessen the impact of existing development.

A "build-out" analysis has not been included in this plan based upon the fact that there is less than one square mile of existing land available for development. The plan also addresses the review and update of the stormwater ordinances and other planning documents to allow for project designs that include low impact development techniques. The final component of this plan is a mitigation strategy for when a variance or exemption of the design and performance standards is sought. As part of the mitigation section of the stormwater plan specific stormwater management measures are identified to lessen the impact of existing development.

II. GOALS

The goals of this MSWMP are as follows:

- Reduce flood damage, including damage to life and property;
- Minimize to the extent practical, any increase in stormwater runoff from any new development;
- Reduce soil erosion from any development or construction project;

- Assure the adequacy of existing and proposed culverts, bridges and other in-stream structures;
- Maintain groundwater recharge;
- Prevent, to the greatest extent feasible, an increase in nonpoint pollution;
- Maintain the integrity of stream channels for their biological functions, as well as for drainage;
- Minimize pollutants in stormwater runoff from new and existing development, to restore, enhance, and maintain the chemical, physical and biological integrity of the waters of the state, protect public health, safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water; and
- Protect public safety through the proper design and operation of stormwater basins.

To achieve these goals, this plan outlines specific stormwater design and performance standards for new development. Additionally, the plan proposes stormwater management controls to address the impacts from existing development. Preventative and corrective maintenance strategies are included to ensure long-term effectiveness of stormwater management facilities. The plan also outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

III. STORMWATER DISCUSSION

Land development can dramatically alter the hydrologic cycle (See Figure C-1) of a site and (ultimately) an entire watershed. Prior to development, native vegetation can either directly intercept precipitation or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration. Development can remove this beneficial vegetation and replace it with lawn or impervious cover, reducing the site's evapotranspiration and infiltration rates. Clearing and grading a site can remove depressions that store rainfall. Construction activities may also compact the soil and diminish its infiltration ability, resulting in increased volumes and rates of stormwater runoff from the site.

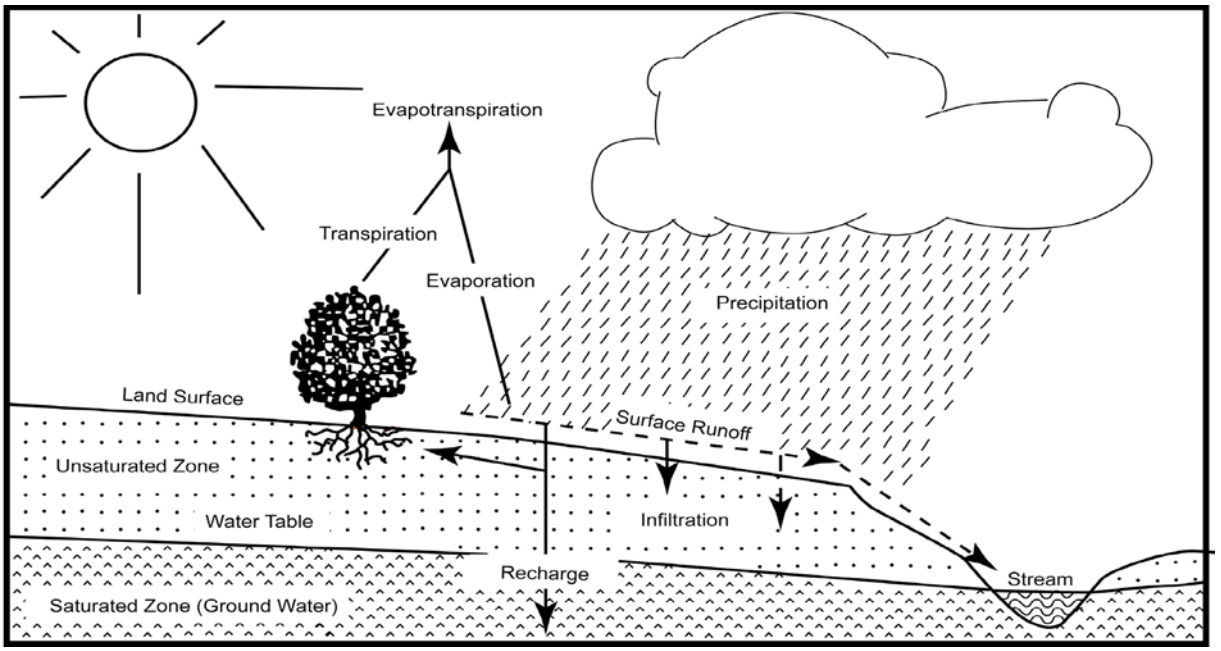
Impervious areas that are connected to each other through gutters, channels and storm sewers can transport runoff more quickly than natural areas. This shortening of the transport or travel time quickens the rainfall-runoff response of the drainage area, causing flow in downstream waterways to peak faster and higher than natural conditions. These increases can create new and aggravate existing downstream flooding and erosion problems and increase the quantity of sediment in the channel.

Filtration of runoff and removal of pollutants by surface and channel vegetation is eliminated by storm sewers that discharge runoff directly into a stream. Increases in impervious area can also decrease opportunities for infiltration, which reduces stream base flow and groundwater recharge. Reduced base flows and increased peak flows produce greater fluctuations between normal and storm flow rates, which can increase channel erosion. Reduced base flows can also negatively impact the hydrology of adjacent wetlands and the health of biological communities that depend on base flows.

Finally, erosion and sedimentation can destroy habitat from which some species cannot adapt.

In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface that runoff can mobilize and transport to streams. New impervious surfaces and cleared areas created by development can accumulate a variety of pollutants from the atmosphere, fertilizers, animal wastes, and leakage and wear from vehicles. Pollutants can include metals, suspended solids, hydrocarbons, pathogens, and nutrients.

Figure C-1: Groundwater Recharge in the Hydrologic Cycle



Source: New Jersey Geological Survey

In addition to increased pollutant loading, land development can adversely affect water quality and stream biota in more subtle ways. For example, stormwater falling on impervious surfaces or stored in detention or retention basins can become heated and raise the temperature of the downstream waterway, adversely affecting cold water fish species such as trout. Development can remove trees along stream banks that normally provide shading, stabilization, and leaf litter that falls into streams and becomes food for the aquatic community.

IV. BACKGROUND

The Borough of Lakehurst is located in central New Jersey, in Ocean County, approximately ten miles from the Atlantic Ocean. Lakehurst is located in the northwest section of Manchester Township and is intersected by several county roads and New Jersey (NJ) State Highway 70. Lakehurst is bordered to the north by the Lakehurst Naval Air Warfare Center and Horicon Lake occupies a significant portion of the Borough along its southern border. Major areas of the Borough are within the jurisdiction of the Coastal Management Area (CAFRA) and the Pinelands Commission.

The Borough of Lakehurst encompasses approximately 1.01 square miles and has a population of approximately 2,728 residents (based on 2020 census data as cited from the Ocean County Data Book. Population has decreased moderately since 1960, with resident populations of 2,780, 2,641, 2,908, 3,078, 2,522, and 2,654 for census years 1960, 1970, 1980, 1990, 2000, and 2010, respectively. There has been a slight increase between 2000 to 2020. Figure C-2 illustrates the waterway in the Borough. Figure C-3 depicts the Borough Boundary on the USGS quadrangle maps.

The Borough of Lakehurst is predominantly developed with almost all remaining undeveloped land consisting of wetlands and threatened species habitats. It should be noted the significant amount of “wooded” land and wetlands, as shown on the enclosed Waterways Map (Figure C-2) and the Wetlands and Water Land Uses (Figure C-7). This low steady population level has not resulted in a considerable demand for new development.

Due to past efforts by the Borough and Ocean County, there are limited existing stormwater drainage problems within the Borough itself. Per consultations with Borough officials, only two existing drainage problems have been identified (i.e., localized flooding during heavy rains):

- At NJ Route 70 and Rose Street; and
- Rose Street, between Cedar and Maple Street.

Per review of United States Geological Survey (USGS) topographic mapping and available NJDEP-GIS data, several streams and Horicon Lake, a major surface water body, occupy a significant portion of the Borough along its northern, eastern, and southern border areas. Manapaqua Brook traverses the Borough from west to east along its northern border. Blacks Branch stream feeds into Horicon Lake. Union Branch stream traverses the Borough from west to east along its southern border. Several cranberry bogs are located along the northern and southern border areas of the Borough.

The New Jersey Department of Environmental Protection (NJDEP) has established an Ambient Biomonitoring Network (AMNET) to document the health of the state's waterways. There are over 760 AMNET sites throughout the state of New Jersey. These sites are sampled for benthic macroinvertebrates by NJDEP on a five-year cycle. Streams are classified as non-impaired, moderately impaired, or severely impaired based on the AMNET data. The data is used to generate a New Jersey Impairment Score (NJIS), which is based on a number of biometrics related to benthic macroinvertebrate community dynamics. Lakehurst is part of the Regional Water Management Area #13 (WM 13). According to the Round 4 study of the AMNET sites, the Borough of Lakehurst has 1 AMNET sites. THE TOMS RIVER IS CONSIDERED FAIR MEANING THAT THERE ARE "MODERATE TO MAJOR CHANGES IN STRUCTURE OF BIOLODICAL COMMUNITY AND MODERATE CHANGES IN ECOSYSTEM FUNCTION. SENSITIVE TAXA ARE MARKEDLY DIMINSHED; CONSPICUOUSLY UNBALANCED DISTRIBUTION OF MAJOR GROUPS FROM THAT EXPECTED; ORGANISM CONDITIONS SHOW SIGNS OF PHYSIOLOGICAL STRESS; SYSTEM FUNCTION SHOWS REDUCED COMPLEXITY".

According to the Round 4 study of the NJDEP AMNET data, there is one (1) AMNET biomonitoring site located within the Borough. AMNET biomonitoring site AN0532 is located in the eastern corner of the Borough at Manapaqua Brook at NJ State Highway 70 of the Borough. However, there is an additional AMNET biomonitoring site (AN0530) which is located in Manchester Township at Blacks Branch Stream and NJ State Highway Route 70 adjacent to the Borough.

Per review of the NJDEP's Integrated Water Quality Monitoring and Assessment Report (Year 2004, 305(b) and 303(d) (Integrated List)), the following water bodies are impaired within Lakehurst;

Station	**Location**	**Impairment Description**
AN0530	Black Branch at NJ State Highway 70 in Lakehurst	Benthic Macroinvertebrates
AN05320	Manapaqua Brook at NJ State Highway 70 in Manchester Township	Benthic Macroinvertebrates

In addition to the AMNET data, the NJDEP and other regulatory agencies collect water quality chemical data on the streams in the state. This data is located on Sublist 5 of New Jersey's Integrated List of Water bodies. The New Jersey Integrated Water Quality Monitoring and Assessment Report (305(b) and 303(d)) (Integrated List) is required by the Federal Clean Water Act to be prepared biennially and is a valuable source of water quality information. This combined report presents the extent to which New Jersey waters are attaining water quality standards, and identifies water that are impaired. Sublist 5 of the Integrated List constitutes the list of waters impaired or threatened by pollutants for which one or more TMDL's

area need. It shows that the Total Coliform Levels of the Toms River frequently exceed the State's criteria. This means that this is an impaired waterway and the NJDEP is required to develop a Total Maximum Daily Load (TMDL) for this pollutant for the waterway. As a result, a TMDL for Total Coliforms was established for the Toms River Estuary as part of the Amendment to the Monmouth and Ocean Counties Water Quality Management Plans, proposed February 21, 2006 and approved September 27, 2006. The amendment targets a 74% reduction in the Toms River Estuary to address shellfish-impaired waters there, as well as other Coastal Waters within the Regional Watershed (Watershed Management Area #13).

In 2006, the report established 14 TMDL's for total coliform to address the impaired shellfish water in the WM #13 for the Barnegat Bay and Toms River.

A TMDL is the amount of a pollutant that can be accepted by a waterbody without causing an exceedance of water quality standards or interfering with the ability to use a waterbody for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require an NJPDES Permit to discharge, and nonpoint source, which includes stormwater runoff from agricultural areas and residential areas, along with a margin of safety. Provisions may also be made for future sources in the form of reserve capacity. An implementation plan is developed to identify how the various sources will be reduced to the designated allocations. Implementation strategies may include improved stormwater treatment plants, adoption of ordinances, reforestation of stream corridors, retrofitting stormwater systems, and other BMPs.

Lakehurst Borough will address stormwater point sources through existing Best Management Practices (BMPs) of the MS4 program, as applicable, and in accordance with its MS4 permit obligations.

It should also be noted that as part of the Borough's Municipal Separate Storm Sewer (MS4) regulations, existing inlets and outfalls will be inspected and repairs/maintenance will be made. At this time, existing water quantity and erosion problems (if any) will be assessed and abated to the maximum extent practicable.

In addition to the above referenced impairments, a TMDL has been established for benthic macroinvertebrates for the Union Branch at Colonial Drive east of the Borough in Manchester Township. However, since this area is outside of the Borough borders and downstream of Borough property, there is no known impact from this TMDL on the Borough at this time.

Since there is limited remaining developable land within the Borough, the potential for additional surface and groundwater degradation in the long-term will be via redevelopment and limited development. Any future major development will comply with the new NJDEP Stormwater design standards (NJAC 7:8), including the average annual recharge. As such, future development/redevelopment will be controlled to the maximum extent practicable with respect to stormwater management, Total Suspended Solids (TSS) minimization and stormwater recharge to the maximum extent practicable. A map of groundwater recharge areas is shown in Figure C-4 and Wellhead protection areas are shown on Figure C-5.

V. DESIGN STANDARDS

The Borough has adopted the design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 to minimize the adverse impact of stormwater runoff on water quality/quantity and loss of ground water recharge in receiving water bodies thru their stormwater management control ordinances Section 25-15. Stormwater Control Ordinances Section 25-15 is in the process of being revised based on the revised NJDEP Stormwater Ordinances Model as outlined in the NJDEP BMP Manual.

The design and performance standards include the language for maintenance of stormwater management

measures consistent with the stormwater management rules at N.J.A.C. 7:8-5.8 (Maintenance Requirements), and language for safety standards consistent with N.J.A.C. 7:8-6 (Safety Standards for Stormwater Management Basins).

The Model Stormwater Ordinance adopted by the Borough contains several key elements of safety-related design features, including:

- Provision of, design for and maintenance of trash racks within Stormwater Basins.
- Provision of, design for and maintenance of overflow grates within Stormwater Basins.
- Escape provisions from Basins, i.e., the permanent installation of ladders, steps, rungs, or other features that provide easily accessible means of egress from Stormwater Management Basins.
- Safety ledges shall be constructed on the slopes of all new Stormwater Management Basins having a permanent pool of water deeper than two and one-half feet.
- In Stormwater Management Basins, the maximum interior slope for an earthen dam, embankment, or berm shall not be steeper than 3 horizontal to 1 vertical.

New Basins will be designed, constructed, and maintained to address all safety features identified above.

Non-structural measures to be considered first shall include site design and preventative source controls. These non-structural measures are to be included in the stormwater management report. To confirm the effectiveness of such measures, applicants must verify the control of stormwater quantity impacts as detailed in the Stormwater Management Rules.

The general standards for structural measures is specified in the stormwater management rules and are incorporated into the Borough of Lakehurst's ordinance. These measures meet the soil erosion, infiltration and runoff quantity standards for included in the Borough's stormwater ordinance. The design standards for the specific structural stormwater management measures included in the New Jersey Stormwater Best Management Practices Manual. Other designs or practices may be used if they are approved by the Soil Conservation District. The design and construction of such facilities complies with the Soil Erosion and Sediment Control Standards as well as any other applicable state regulations, including the Freshwater Wetland Protection Act Rules, The Flood Hazard Control Rules, The Surface Water Quality Standards, the Coastal Area Facilities Review Act, Waterfront Development and Harbor Facilities Act.

The requirement to be consistent with all other applicable rules is included in the Borough's stormwater ordinance. Stormwater runoff quality controls for total suspended solids and nutrient load shall meet the design and performance standards as specified in the Stormwater Management Rules. The minimum design and performance standards for infiltration and groundwater recharge specified in the stormwater management rules are incorporated into the Borough's stormwater ordinance and must be met for all applicable development. Consistent with the Stormwater Management Rules, the ordinance allows for an exemption from this requirement where the applicant demonstrate that it is not practicable to meet the standards but has taken all possible steps to meet stormwater management measures.

During construction, Borough inspectors will observe the construction of the project to ensure that the stormwater management measures are constructed and function as designed. Adequate long term operation as well as preventative and corrective maintenance of the selected stormwater management measures will be ensured by requiring the design engineer to prepare a maintenance plan/report for its stormwater management facilities incorporated into the design of the major development. The maintenance plan shall have specific preventative maintenance tasks, schedules and cost estimates as well as the responsible party for corrective and preventative maintenance.

It should be noted that the NJDEP's Coastal Area Facility Regulation Act (CAFRA) regulations incorporate the NJ Stormwater Rule by reference. An applicant requiring a CAFRA permit for a project that may request

a Borough waiver of stormwater performance standards may be required to provide a mitigation plan for the proposed project by the NJDEP (even if not required by the Borough)

In addition to NJDEP requirements, Borough properties situated within the Pinelands will be subject to the stormwater requirements of the Pinelands Commission, as outlined in the Borough's Pinelands Stormwater Ordinance. Development within such areas will be consistent with the regulations of N.J.A.C. 7:50-6.84. As such projects regulated under Pinelands jurisdiction will also be subject to design and performance standards contained within the Borough's Pinelands Ordinance including:

- Section 25-15.3, Methodologies for the Calculation of Stormwater Runoff rate and Volume, Stormwater Runoff Quality, and Groundwater Recharge;
- Section 25-15.4, Stormwater Management Performance Standards for Major Development; and
- Section 25-15.5, Design, Construction and Safety Standards for Structural Stormwater Management Measures.

Finally, all regulated stormwater BMP facilities will be subject to operation and maintenance requirements stipulated in the NJ Stormwater Rule, including, but not limited to, the following:

- The design engineer shall prepare a maintenance plan/report for the stormwater management measures incorporated into the design of a major development.
- The maintenance plan shall contain specific preventative maintenance tasks and schedules; cost estimates, including estimated cost of sediment, debris, or trash removal; and the name, address, and telephone number of the person or persons responsible for preventative and corrective maintenance (including replacement).
- Preventative and corrective maintenance shall be performed to maintain the function of the stormwater management measure(s), including repairs or replacement to the structure; removal of sediment, debris, or trash; restoration of eroded areas; snow and ice removal' fence repair or replacement; restoration of vegetation; and repair or replacement of non-vegetated linings.
- The person responsible for maintenance shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders.
- The person responsible for maintenance shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan and the deed as needed.
- The person responsible for maintenance shall retain and make available, upon request by any public entity with administrative, health, environmental, or safety authority over the site, the maintenance plan and the documentation required by the Borough's stormwater ordinances.
- In the event that the stormwater management facility becomes a danger to public safety or public health, or if it is in need of maintenance or repair, the municipality shall so notify the responsible person in writing. If the responsible person fails or refuses to perform such maintenance and repair, the municipality or County may immediately proceed to do so and shall bill the cost thereof to the responsible person.
- During Construction, Borough inspectors will observe the construction of the project to ensure that the Stormwater Management measures are constructed and function as designed.

VI. PLAN CONSISTENCY

The Borough is not within a Regional Stormwater Management Planning Area. However, since the Ocean County Water Quality Management Plan was amended for the TMDL for Total Coliform, this plan will have to be amended if any future regulations or requirements result from this or other TMDLs, or if a Regional Stormwater Plan is developed in the future.

The Municipal Stormwater Management Plan is consistent with the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21. The municipality will utilize the most current update of the RSIS in the stormwater management review of residential areas. This Stormwater Management Plan will be updated to be consistent with any future updates to the RSIS.

Similarly, this plan has been reviewed by the Pinelands Commission, and is consistent with the requirements of the Pinelands Comprehensive Management Plan (CMP) as applicable. Future amendments to the CMP with respect to stormwater management, if any, will necessitate corresponding changes to the Borough's stormwater plan as applicable for Pinelands properties.

The Borough's Stormwater Management Ordinance will require all new development and redevelopment plans to comply with New Jersey's Soil Erosion and Sediment Control Standards. During construction, Borough inspectors will observe on-site soil erosion and sediment control measures and report any inconsistencies to the Ocean County Soil Conservation District.

In addition, as stated in this report, Borough properties under Pinelands jurisdiction (i.e., approximately 87% of the Borough's land area) are subject to the Pinelands design standards as outlined in the Borough's stormwater ordinance for Pinelands properties.

Finally, it should be noted that the NJDEP's Coastal Area Facility Regulation Act (CAFRA) regulations incorporate the NJ Stormwater Rule by reference. An applicant requiring a CAFRA permit for a project may request a Borough waiver of stormwater performance standards may be required to provide a mitigation plan for the proposed project by the NJDEP (even if not required by the Borough).

VII. NONSTRUCTURAL STORMWATER MANAGEMENT STRATEGIES

The Borough has revised the stormwater ordinances to incorporate guidelines for Major Development in accordance with the New Jersey Department of Environmental Protection Best Management Practices Manual and Model Stormwater Control Ordinance for Municipalities as required by the NJDEP.

Nonstructural stormwater strategies for design of new developments or redevelopment are outlined in these revised stormwater ordinances. Once the stormwater ordinance text is finalized it will be submitted approved by Resolution by the Borough and then submitted to Ocean County and NJDEP for approval.

VIII. LAND USE/BUILD OUT ANALYSIS

As stated previously, the Borough of Lakehurst encompasses less than one (1) square mile of vacant or developable lands, outside of environmentally constrained areas remaining in the Borough. Since the Borough, in its entirety, includes less than one (1) square maile of developable land, the Borough of Lakehurst is not required to complete a build-out analysis.

Figure C-6 illustrates the existing land use in the Borough and Figure C-7 illustrates land use that is not buildable due to Wetlands.

IX. MITIGATION PLANS

The Borough has opted to consider the mitigation projects as identified by future Developers on a case-by case basis, in accordance with the NJDEP's "Guidance for the Development of Municipal Mitigation Plans" document, dated February 2006 and in accordance with its Pinelands stormwater ordinance.

As identified in NJDEP's Mitigation Plan Guidance Document, municipalities may:

1) Identify a pool of specific mitigation projects that could be selected by an applicant to offset the effect of a requested waiver/exemption or to address an existing stormwater problem; or

2) Choose to provide a process through which an applicant has the flexibility and responsibility to identify an appropriate mitigation project and a location to implement the mitigation project to offset the deficit that would be created by the grant of a waiver/exemption or to address a stormwater based impairment.

Lakehurst Borough has opted to provide a mitigation plan using option #2 above (i.e., provision of a mitigation process. No specific projects have been identified for mitigation at this time.

It must be stressed that requested exceptions within Pinelands properties will be granted only at the discretion of the Borough, and also subject to Pinelands Commission approval. In addition, the issuance of a waiver(s) granted by NJDEP under a Land Use permit does not automatically waive the requirement for mitigation to be performed under a municipal review.

In order to select an appropriate mitigation project to respond to a requested waiver/exemption requires, an assessment of the impact that would result from the requested deviation from full compliance with the standard(s) in the drainage area affected by the proposed project is required. For example, a waiver for stormwater quantity requirements must focus on the impacts of increased runoff on flooding, considering both quantity and location . Stormwater quality mitigation must aim to prevent an increase in pollutant load to the water bodies that would be affected by the waiver/exemption. Ground water recharge mitigation must seek to maintain the baseflow and aquifer recharge in the area that would be affected by the waiver/exemption. For the purpose of this discussion, the term "sensitive receptor" is used to refer to a specific area or feature that would be sensitive to the impact assessed above.

Selection of an appropriate mitigation project for a requested waiver/exemption must adhere to the following requirements:

1. The project must be within the same area that would contribute to the receptor impacted by the project. Note that depending on the specific performance standard waived, the sensitive receptor and/or the contributory area to that receptor may be different. If there are no specific sensitive receptors that would be impacted as the result of the grant of the waiver/exemption , then the location of the mitigation project can be located anywhere within the municipality, and should be selected to provide the most benefit relative to an existing stormwater problem in the same category (quality, quantity or recharge).

2. Legal authorization must be obtained to construct the project at the location selected. This includes the maintenance and any access needs for the project in the future.

3. The project should be close to the location of the original project, and if possible, be located upstream at a similar distance from the identified sensitive receptor. This distance should not be based on actual location, but on a similar hydraulic distance to the sensitive receptor. For example, if the project for which a waiver is obtained discharges to a tributary, but the closest location discharges to the main branch, it may be more beneficial to identify a location discharging to the same tributary.

4. For ease of administration , if sensitive receptors are addressed, it is preferable to have one location that addresses any and all of the performance standards waived, rather than one location for each performance standard.

5. It must be demonstrated that implementation of the mitigation project will result in no adverse impacts to other properties.

6. Mitigation projects that address stormwater runoff quantity can provide storage for proposed increases in runoff volume, as opposed to a direct peak flow reduction.

All necessary information to support a specific waiver request(s) must be provided by the Developer(s) for consideration by the Borough, in accordance with applicable NJDEP, Pinelands Commission and/or Borough requirements, an as outlined in NJDEP's "Guidance for the Development of Municipal Mitigation Plans" document, dated February 2006.

At the Borough's discretion, a developer may be permitted to fund analyses to identify potential mitigation projects that could be used to address deficits in complying with each of the performance standards. However, the funding option shall only be allowed where the project requesting the waiver will have no measurable impact with respect to flooding, erosion, water quality degradation, etc. The funding option may also be appropriate in situations where the size of an individual project requesting a waiver/exemption is small, or the degree of deficit in complying with the design and performance standard(s) is small. Or, where the project requiring mitigation is for one individual single family home, given authority constraints, a financial contribution may be a preferred option.

In addition, the following information is required for waivers granted within the Pinelands:

The applicant demonstrates that mitigation in addition to the requirements of mitigation plan discussed in b above will be provided consistent with one of the following options

i. Mitigation may be provided off site but within the Pinelands Area and within the same drainage area as the development site and shall meet or exceed the equivalent recharge quality or quantity performance standard which is lacking on the development site due to the exception or

ii. In lieu of the required mitigation a monetary in lieu contribution may be provided by the applicant to the Borough in accordance with the following:

   a. The amount of the in lieu contribution shall be determined by the Borough but the maximum in lieu contribution required shall be equivalent to the cost of implementing and maintaining the stormwater management measures for which the exception is granted .

   b. The in lieu contribution shall be used to fund an offsite stormwater control mitigation project(s) located within the Pinelands Area within the same drainage area as the development site and shall meet or exceed the equivalent recharge quality or quantity performance standards which is lacking on the development site Such mitigation project shall be identified by the Borough in the Borough's adopted municipal stormwater management plan.

      The stormwater control project to which the monetary contribution will be applied shall be identified by the Borough at the time the exception is granted The applicant shall amend the project description and site plan required in Section ILC 3'to incorporate a description of both the standards for which an on site exception is being granted and of the selected off site mitigation project

   c. The Borough shall expend the in lieu contribution to implement the selected off site mitigation project within five 5 years from the date that payment is received Should Lakehurst Borough fail to expend the in lieu contribution within the required timeframe the mitigation option provided shall be void and the Borough shall be prohibited from collecting in lieu contribution.

Finally, the following information will be obtained and provided by the Developer of an approved waiver for the Borough to comply with its annual NJDEP MS4 permitting requirements:

i. Impact from noncompliance. Provide a table quantifying what would be required for the project to achieve the standards, the extent to which this value will be achieved on site and the extent to which the value must be mitigated off site.

ii. Narrative and supporting information regarding the need for the waiver including:

- The waiver cannot be due to a condition created by the applicant. If the applicant can comply with the Stormwater Management rules trough a reduction in the scope of the project, the applicant has created the condition and a waiver cannot be issued. Demonstrate that the need for a waiver is not created by the applicant.

- Provide a discussion and supporting documentation of the site conditions peculiar to the subject property that prevent the construction of a stormwater management facility that would achieve full compliance with the design and performance standards. Site conditions may include soil type, the presence of karst geology, acid soils, a high groundwater table, unique conditions that would create an unsafe design, as well as conditions that may provide a detrimental impact to public health, welfare, and safety.

- Demonstration that the grant of the requested waiver/exemption would not result in an adverse impact that would not be compensated for by offsite mitigation.

iii. Identify the sensitive receptor(s) related to the performance standard from which a waiver is sought. Demonstrate that the mitigation site contributes to the same sensitive receptor.

iv. Provide the design details of the mitigation project. This includes, but is not limited to, drawings, calculations, and other information needed to evaluate the mitigation project.

v. List the party or parties responsible for the construction and the maintenance of the mitigation project. Documentation must be provided to demonstrate that the responsible party is aware of, has authority to, and accepts the responsibility for construction and maintenance. Under no circumstance shall the responsible party be an individual single-family homeowner. Selection of a project location that is under municipal authority avoids the need to obtain authority from a third party for the construction and future maintenance of the project.

vi. Include a maintenance plan that addresses the maintenance criteria at N.J.A.C. 7:8-5.8. In addition, if the maintenance responsibility is being transferred to the municipality or another entity, the entity responsible for the cost of the maintenance must be identified. The municipality may provide the option for the applicant to convey the mitigation project to the municipality, if the applicant provides for the cost of maintenance in perpetuity.

vii. Obtain any and all necessary local, State or other applicable permits for the mitigation measure or project must be obtained prior to the municipal approval of the project for which mitigation is being provided.

viii. Demonstrate that the construction of the mitigation project coincides with the construction of the proposed project. A certificate of occupancy or final approval by the municipality for the project requiring mitigation cannot be issued until the mitigation project or measure receives final approval. Any mitigation projects proposed by the municipality to offset the stormwater impacts

of that municipality's own projects must be completed within 6 months of the completion of the municipal project, in order to remain in compliance with their NJPDES General Permit.

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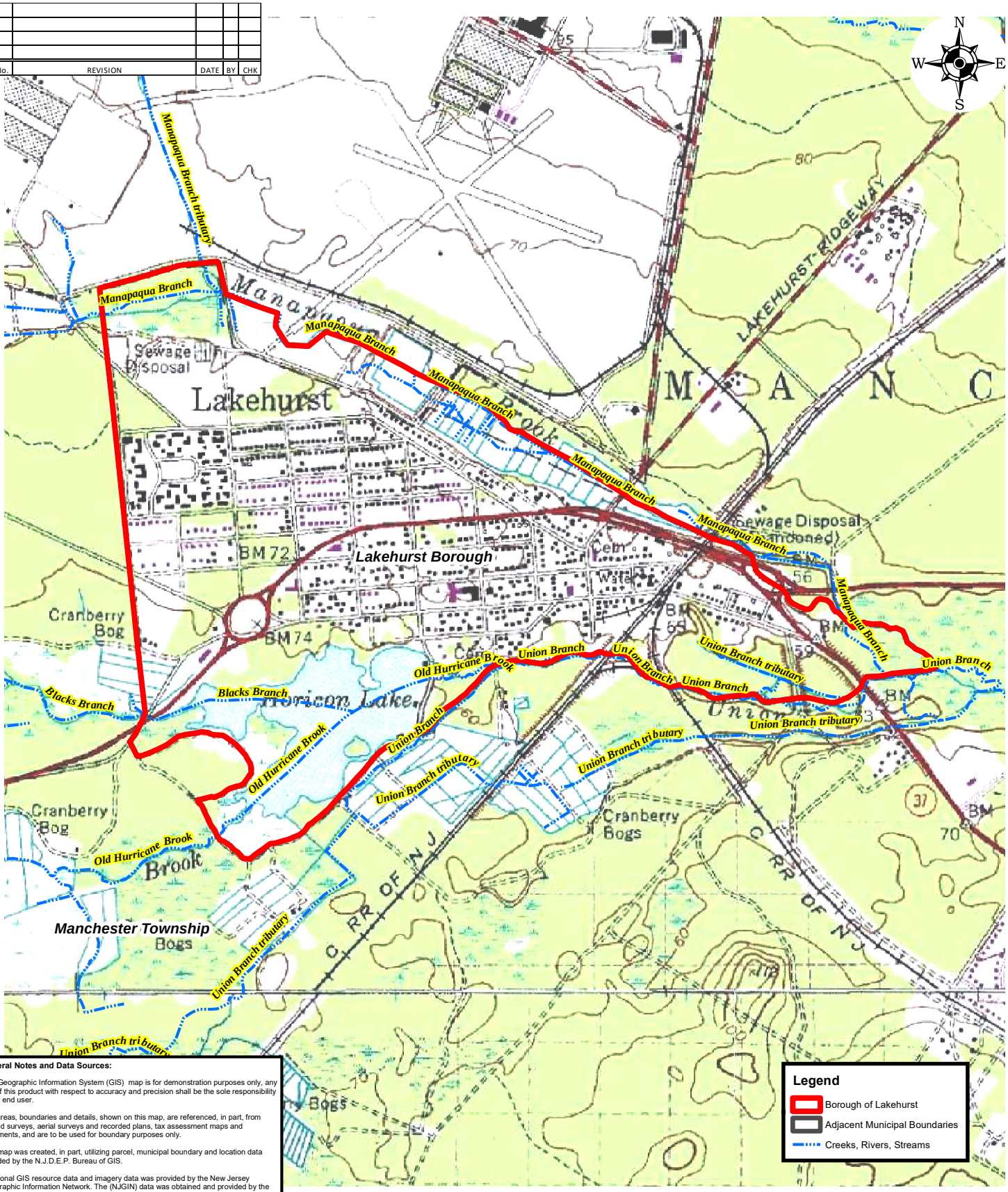

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Legend

- Borough of Lakehurst
- Adjacent Municipal Boundaries
- Creeks, Rivers, Streams

Figure C-2

0 375 750 1,500 2,250 3,000 Feet

1 inch = 1,500 feet

Map of Waterways

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

November, 2020 — SCALE: 1" = 1,500'

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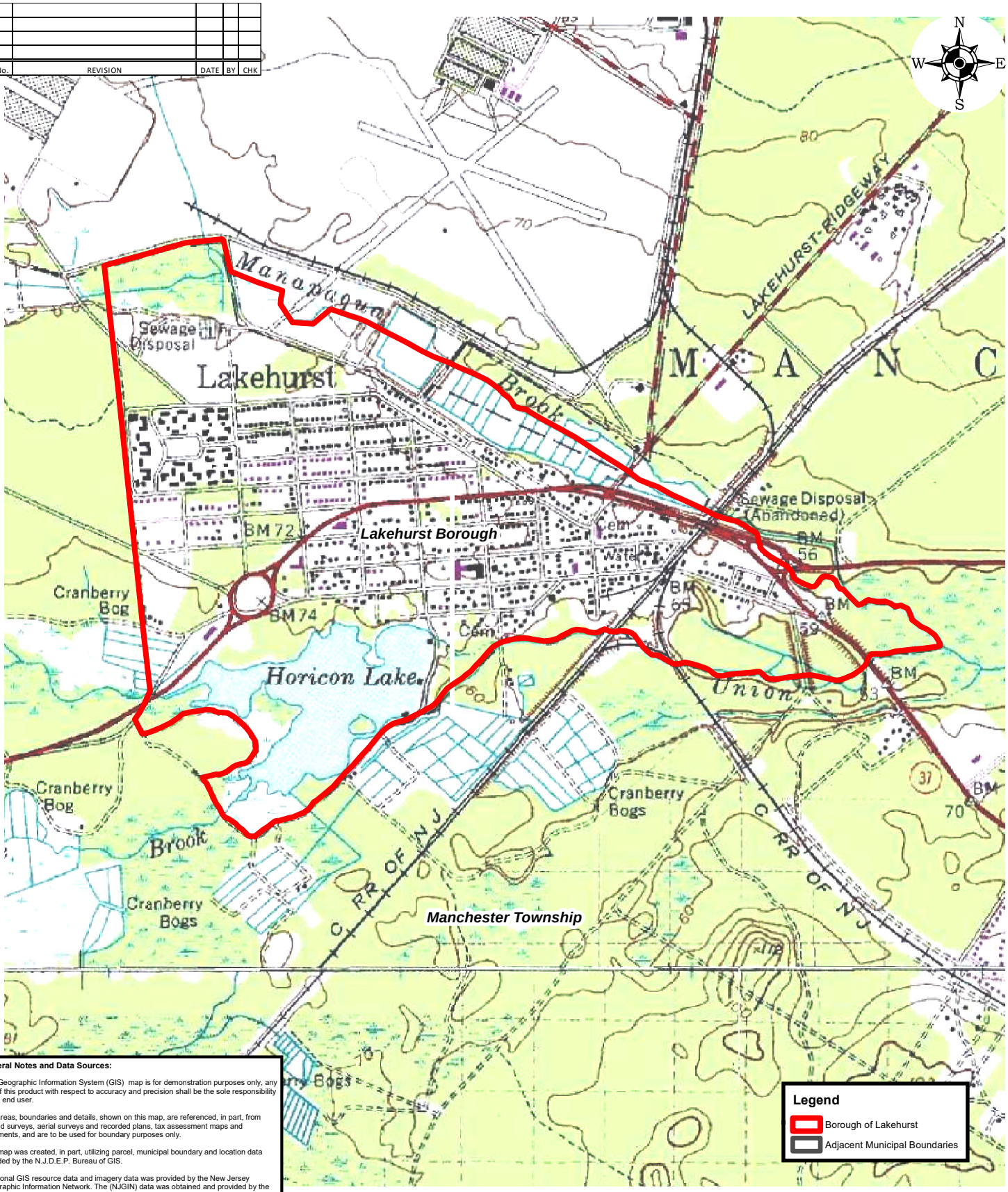

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Figure C-3

0 375 750 1,500 2,250 3,000 Feet

1 inch = 1,500 feet

USGS Quadrangles and Municipal Boundaries

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

November, 2020 — SCALE: 1" = 1,500'

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Figure C-4

0 375 750 1,500 2,250 3,000 Feet

1 inch = 1,500 feet

Map of Ground Water Recharge Areas

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

November, 2020 — SCALE: 1" = 1,500'

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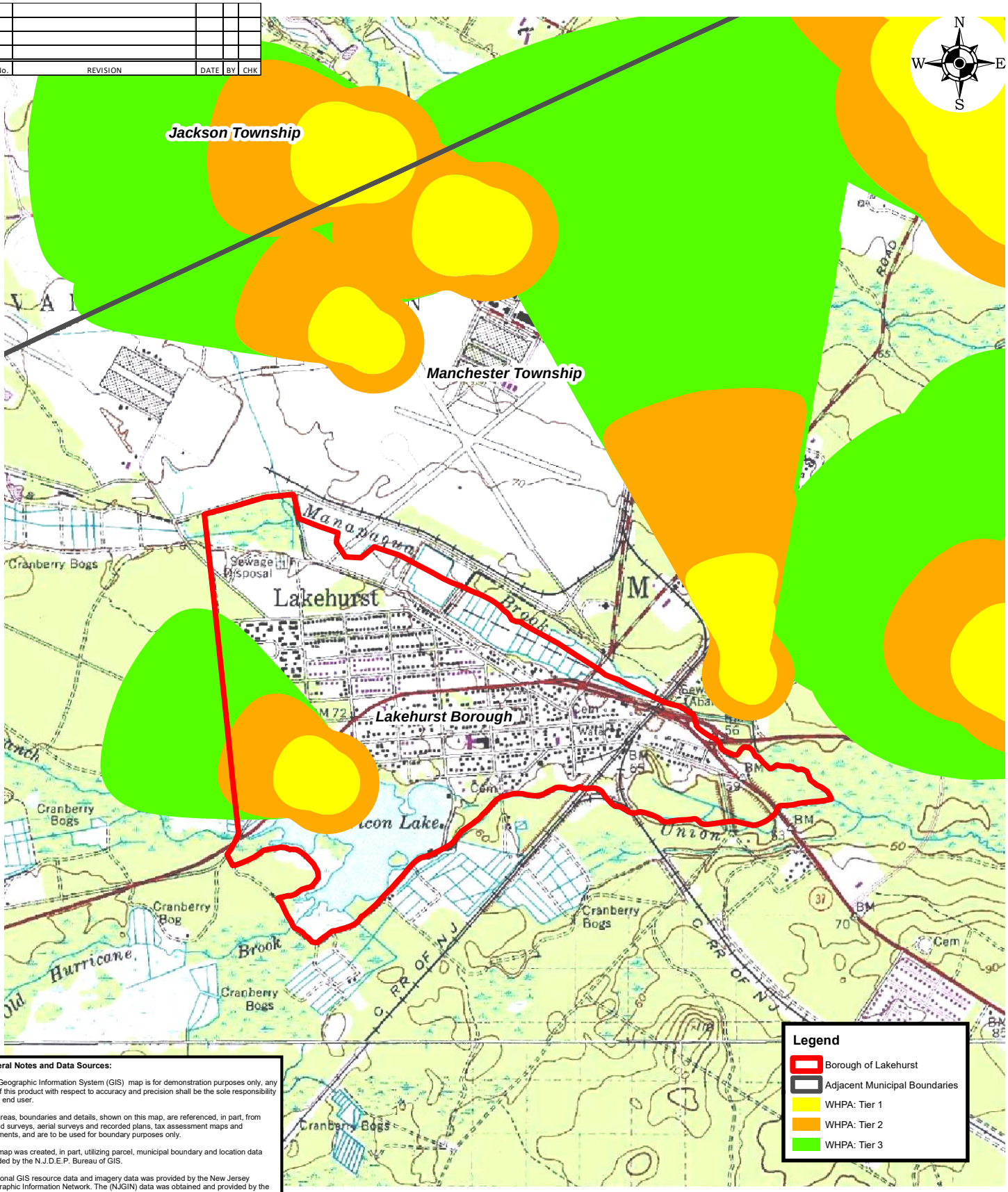

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Figure C-5

0 500 1,000 2,000 3,000 4,000 Feet

1 inch = 2,000 feet

Map of Well Head Protection Areas

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

November, 2020 — SCALE: 1" = 2,000'

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Printed on: November 18, 2020

Document Path: N:\DRAW\Lakehurst\Storm Water Management\SWMP - Well Head Protection Areas.mxd

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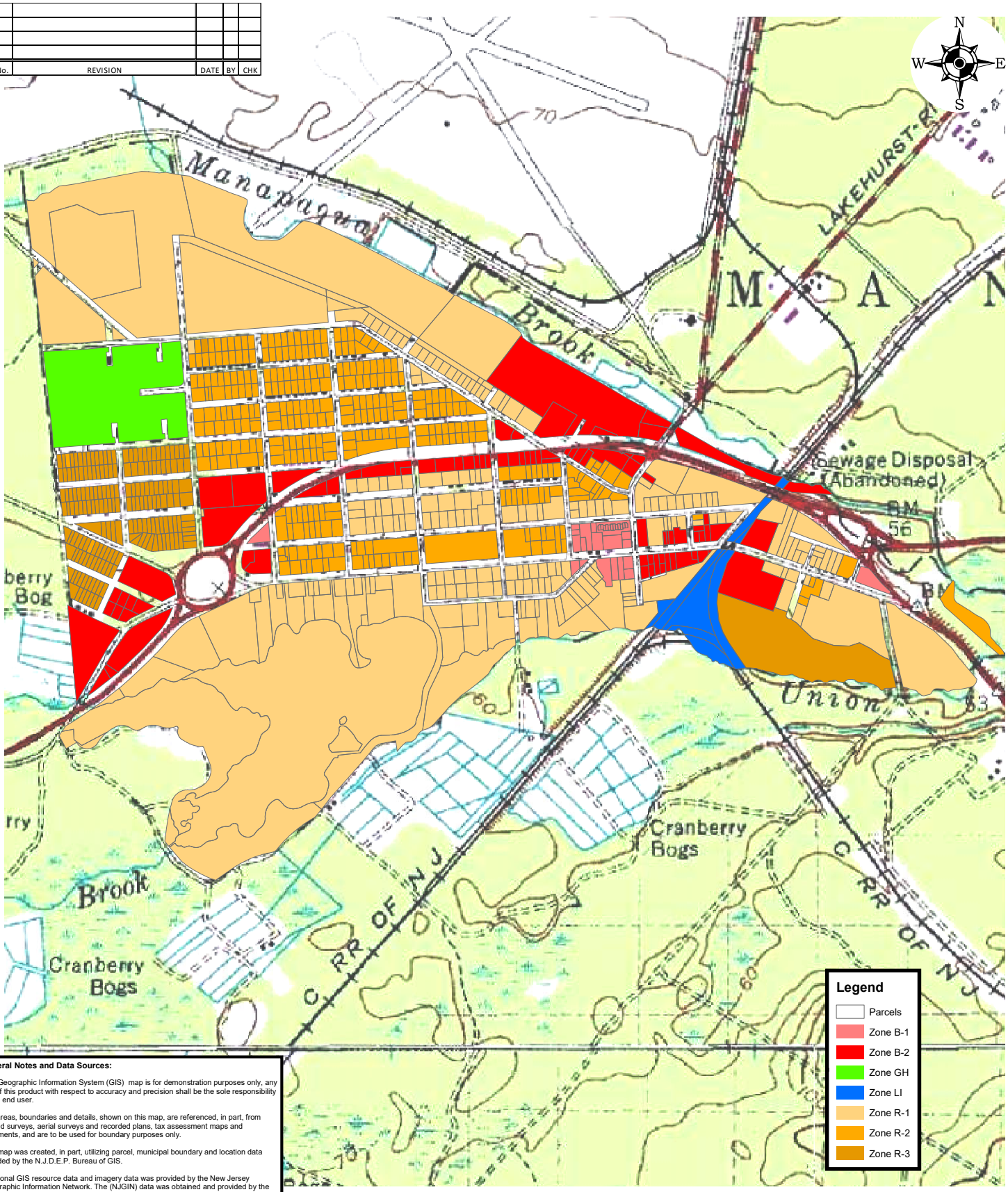

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Figure C-6

0 300 600 1,200 1,800 2,400 Feet

1 inch = 1,200 feet

Map of Zoning Areas

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

November, 2020 — SCALE: 1" = 1,200'

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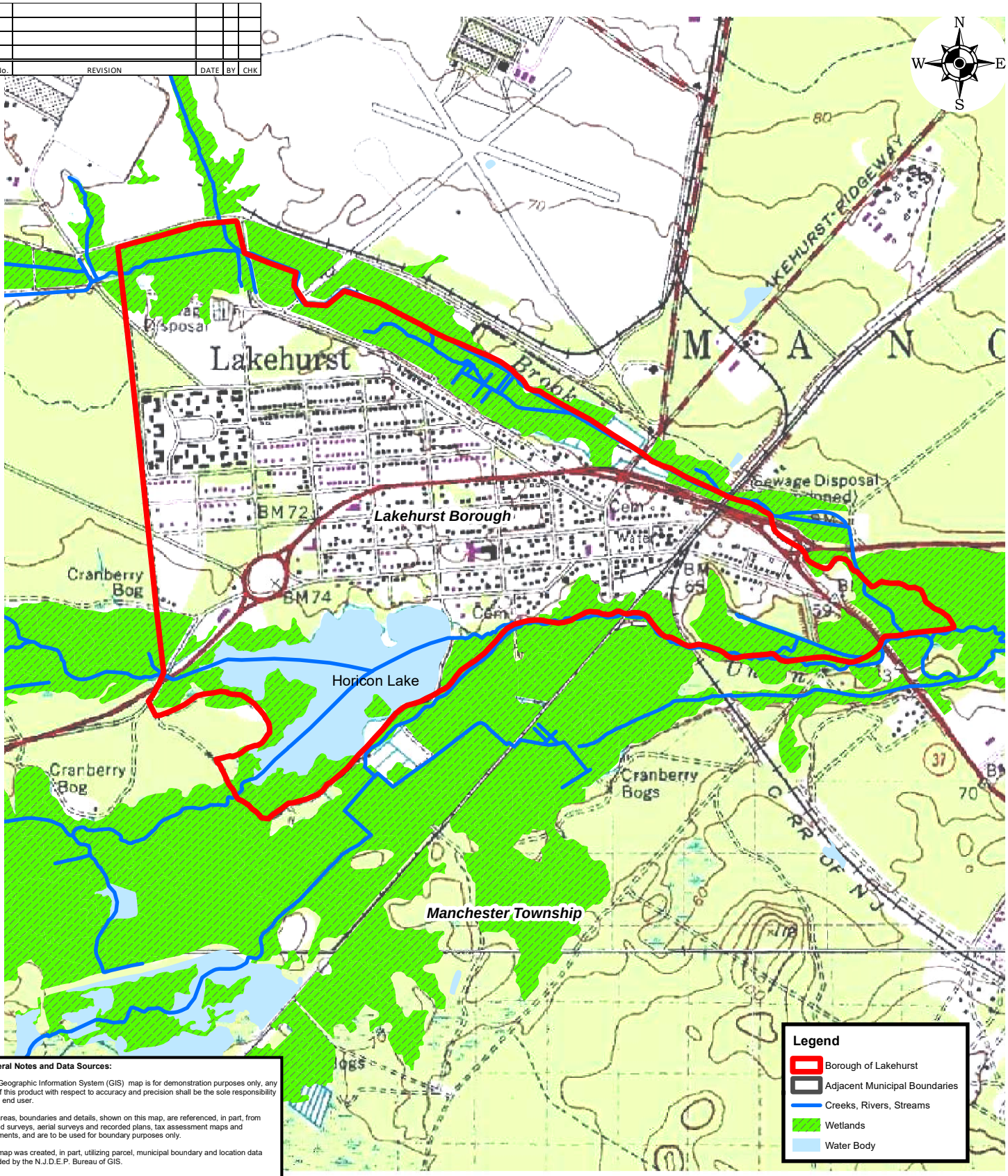

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Figure C-7

0 375 750 1,500 2,250 3,000 Feet

1 inch = 1,500 feet

Map of Wetlands and Water Land Uses

BOROUGH OF LAKEHURST

OCEAN COUNTY — NEW JERSEY

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