# STORM WATER POLLUTION PREVENTION PLAN

# SEWAGE TREATMENT PLANT No. 2

Prepared by

CITY OF WICHITA

**September 2009**

## Management Commitment of Resources

The City of Wichita is committed to the implementation of the procedures outlined in this SWPPP and the prevention of pollutants to navigable waters of the United States. This Plan has the full approval of management at a level of authority to commit the resources necessary to implement the SWPP Plan. A copy of this SWPP Plan shall be maintained at the facility at all times and will be made available to the EPA or State of Kansas for on-site review during normal working hours.

Authorized Management Representative Name: _____

Signature: _____

Title: _____

Date: _____

| Worksheet #7 | Facility: | Sewag Treatment Plant 2 |
|---|---|---|
| | Completed By: | Jim Hardesty |
| *Pollutant Source Identification* | Title: | Storm Water Specialst |
| | Date: | 8/26/09 |

Instructions: List all identified stormwater pollutant sources and describe existing management practices that address those sources. In the third column, list Best Management Practice (BMP) options that can be incorporated into the plan to address remaining sources of pollutants.

| Storm Water Pollutant Sources | Existing Management Practices | Description of New BMP Options |
|---|---|---|
| *1* Gasoline and Diesel Fuel from fueling stations | Absorbent material used for cleanup | None required |
| *2* Roadwork materials (sand, gravel, soil) | None | Silt fencing, grass buffer strips, curbing, and/or enclosure |
| *3* Salt | Covered storage | None required |
| *4* | | |
| *5* | | |

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TABLE OF CONTENTS

1 INTRODUCTION ..... 4
1.1 SWPPP Pollution Prevention Team ..... 4

2 FACILITY DESCRIPTION AND STORM WATER DRAINAGE ..... 6
2.1 Facility Drainage ..... 6
2.2 Inventory of Exposed Materials ..... 6
2.3 Significant Spills and Leaks ..... 7

3 OUTFALL INVENTORY ..... 8
3.1 Non-Storm Water Discharges ..... 9
3.2 Description of Potential Pollution Sources ..... 9
3.2.1 Tank Farm and Fueling Area ..... 10
3.2.2 Waste Oil Storage Area ..... 10
3.3 Existing Storm Water Sampling Data ..... 11

4 POLLUTION PREVENTION MEASURES AND CONTROLS (BMPs) ..... 12
4.1 Good Housekeeping ..... 12
4.2 Spill Prevention and Response Procedures ..... 12
4.3 Inspections ..... 12
4.4 Employee Training ..... 13
4.5 Erosion Control Measures ..... 13
4.6 Record Keeping and Internal Reporting Procedures ..... 13

5 MONITORING, REPORTING, AND RECORD KEEPING REQUIREMENTS .. 14
5.1 Sampling Requirements ..... 14
5.2 Comprehensive Site Compliance Evaluation and Report ..... 14

6 REFERENCES ..... 16

APPENDIX A. SWPPP Development Worksheets
APPENDIX B. Monthly Site Inspections
APPENDIX C. Comprehensive Site Compliance Evaluation Reports
APPENDIX D. Employee Training
APPENDIX E. Significant Spills and Leaks
APPENDIX F. KDHE Storm Water Pollution Prevention Plan Requirements and Guidelines
APPENDIX G. Extra SWPPP Worksheets

LIST OF TABLES

Table 1-1 Requirements of the SWPPP ..... 5

LIST OF FIGURES

Figure 3-1. Outfall 1 ..... 8
Figure 3-2. Tank Farm and Fueling Area ..... 10
Figure 3-3. Waste Oil Storage Area ..... 11

# 1 INTRODUCTION

The purpose of this Storm Water Pollution Prevention Plan (SWPPP or SWP3) is to prevent contamination of storm water runoff as a result of industrial activities conducted at the Sewage Treatment Plant No. 2. The City of Wichita owns and operates this facility at 2305 East 57th Street South in Wichita, Kansas. The goals of this SWPPP are as follows:

1. Identify potential sources of pollution that may be reasonably expected to contribute to the contamination of storm water runoff.
2. Establish Best Management Practices (BMP) that eliminate or effectively reduce the routes for contamination to enter the storm water runoff.

The United States Environmental Protection Agency (USEPA) has developed regulations to reduce the introduction of pollutants into storm water from industrial sites. These regulations have been delegated to the Kansas Department of Health and Environment (KDHE) to administer. Currently, KDHE considers an industrial facility to be in compliance if the owner has submitted a Notice of Intent (NOI) for Storm Water Discharges Associated with Industrial Activity under the General Permit and has developed a SWPPP. This SWP3 was prepared according to the requirements stated within the USEPA and the KDHE guidance documents (Appendix F).

## *1.1 SWPPP Pollution Prevention Team*

The members of the Sewage Treatment Plant No. 2 Pollution Prevention Team (Appendix A, Worksheet #1) are responsible for the day-to-day tasks related to storm water runoff pollution prevention. The members of the SWP3 Pollution Prevention Team will conduct employee training programs, ensure implementation of BMPs, complete all site inspections, and supervise the day-to-day operations at the site which negatively affect storm water quality. Collectively, the SWP3 Pollution Prevention Team is responsible for the following tasks:

- Performing scheduled inspections.
- Training facility personnel.
- Ensuring that the BMPs in the plan are being implemented.
- Maintaining records.
- Revising the SWPPP to reflect changes to the BMPs employed and to the applicable regulations.
- Preparing the Comprehensive Site Compliance Evaluation for insertion into Appendix C of this document once each year.

The following individuals are designated as the primary members of the SWP3 Pollution Prevention Team at the Sewage Treatment Plant No. 2:

Individual: Jade Dundas
Title: Superintendant
Phone: (316) 303-8702

Individual: Mike Hess
Title: Maintenance Supervisor
Phone: (316) 303-8783

These individuals (or persons in their positions) must maintain and update this SWPPP. The Pollution Prevention Team must also coordinate between "front line" employees and management concerning pollution prevention issues. The Pollution Prevention Team is responsible for carrying out the requirements of the SWPPP as summarized in the following table.

**Table 1-1 Requirements of the SWPPP**

| Activity | Frequency |
|---|---|
| **1. Site Inspections** | Monthly, records in Appendix B, recordkeeping requirement of 3 years |
| **2. Comprehensive Site Compliance Evaluation** | Annually |
| **Comprehensive Site Compliance Evaluation Report** | Completed within 2 weeks following Evaluation and inserted in Appendix C |
| **Comprehensive Site Compliance Evaluation Report Implementation** | Performed within 12 weeks of the Evaluation Report |
| **3. Visual Inspection of Storm Water** | Periodically during wet weather events. Results included in Comprehensive Site Compliance Evaluation Report |
| **4. Employee Training** | Annually, keep record of training in Appendix D, Employee Training |
| **5. Spill Reporting** | If spill occurs, documented in Appendix E, Significant Spills and Leaks |
| **6. SWPPP recertification** | Once every five years by a Kansas P.E., Appendix F |

# 2 FACILITY DESCRIPTION AND STORM WATER DRAINAGE

## 2.1 Facility Description

The Sewage Treatment Plant No. 2 is located at 2305 East 57th Street South in Sedgwick County, Wichita, Kansas. The main function of this site is to provide advanced secondary wastewater treatment for the majority of metropolitan Wichita. The Standard Industrial Classification (SIC) for this facility is 4952. This plan covers activities where contaminants could possibly be introduced into the storm water runoff such as refueling and maintenance of vehicles, and storage of materials. Contaminants of concern used in these activities include diesel, gasoline, motor oil, and a variety of petroleum products for the maintenance and operation of equipment. A site map is presented following Worksheet #2 in Appendix A. The important features identified on the site map include the locations of the potential stormwater pollution activities and the stormwater outfall.

## 2.2 Facility Drainage

The site consists of approximately 95 acres, and is primarily sheet flow through open channels to the southeast corner of the site, where the only outfall discharges to the Arkansas River. The SWPPP site map will be updated by the SWPPP Pollution Prevention Team whenever changes are made that would affect storm water runoff.

## 2.3 Inventory of Exposed Materials

Materials which could potentially come into contact with precipitation and contaminate storm water runoff have been summarized in the Material Inventory worksheet presented in Appendix A, Worksheet #3. Currently, there are not any significant quantities of materials exposed to storm water. Materials currently stored at this facility that could possibly come in contact with storm water include diesel, gasoline, motor oil, and a variety of petroleum products for the maintenance and operation of equipment however, all of these materials are unlikely to come into contact with storm water as described in Worksheet #3.

If during the Comprehensive Site Compliance Evaluation (Section 5.2), it is determined that a material has been added or removed from the Sewage Treatment Plant No. 2, the Materials Inventory worksheet should be updated. New worksheets should be added to the SWPPP when a new material is introduced to the site. If the use of a material is discontinued, it should be crossed out on the worksheet, and the date its use was discontinued should be noted. The changes should be initialed by the appropriate member of the SWPPP Pollution Prevention Team.

## *2.4 Significant Spills and Leaks*

According to facility personnel there have been no spills or leaks of toxic or hazardous pollutants in reportable quantities for the previous three years (Appendix A, Worksheet #4). In Appendix G, a blank Worksheet #4 should be completed and included in Appendix E if any spills occur in the future.

# 3 OUTFALL INVENTORY

One storm water outfall conveys drainage from the site at the Sewage Treatment Plant No. 2. Outfall 1 is located in the southeast corner of the site, and discharges to the Arkansas River. Runoff from the area reaches Outfall 1 by overland flow across paved and grassed-surfaces before leaving the site.

**Figure 3-1. Outfall 1**

## 3.1 Non-Storm Water Discharges

The Sewage Treatment Plant No. 2 site was inspected for the presence of non-storm water discharges (Appendix A, Worksheets #5 & #6). A visual inspection of the site's storm water outfall revealed no non-storm water discharges; however, the facility should be inspected periodically to verify this conclusion is valid throughout the year. It is most convenient to conduct these inspections concurrently with the routine monthly inspections of the facilities.

The inspector should walk the site and trace the sources of any flows leaving the site that occur during dry weather. Non-storm water flows may result from illicit connections to the sanitary sewer system or from overland flow of process water.

## 3.2 Description of Potential Pollution Sources

There are two locations of activities where potential contaminants could come in contact with storm water. These locations are identified on the site map. They are (1) the Tank Farm, (2) and the Waste Oil Storage, (Appendix A, Worksheet #7).

### 3.2.1 Tank Farm

This area is located immediately south of the Operations and Maintenance Building. The fuel pumps in this area are used to supply diesel, and gasoline from three 1,000 gallon aboveground storage tanks (AST's). The pumps and AST's are covered and any residual fuel spilled from the pump should be immediately cleaned up. The AST's are located within concrete secondary containment. At this time, the Sewage Treatment Plant No. 2 has absorbent material onsite that is used if there are visible oil marks on the concrete or if gasoline is spilled from the fuel pumps. After use, the absorbing material is removed and disposed. If in the future additional BMPs are required, available options will be evaluated. Below is a photograph of the fuel pumps.

**Figure 3-2. Fueling Area**

### 3.2.2 Waste Oil Storage

This area is located south of the Sludge Dewatering Facility and consists of two 550-gallon AST's. These tanks are located within concrete secondary containment that will contain the contents of one tank plus appropriate freeboard. The secondary containment relief valve is locked and an oil spill kit is easily accessible. Accumulated precipitation is allowed to evaporate. Detailed instructions for operation and maintenance of the Waste Oil Storage area are contained in the Plants SPCC Plan. Below is a picture of the area.

**Figure 3-3. Waste Oil Storage Area**

## *3.3 Existing Storm Water Sampling Data*

Sewage Treatment Plant 2 was sampled during two rain events in 1991. The results of that sampling is contained the City's original Permit application dated September 1992. It is not anticipated that KDHE will require monitoring of storm water at this site in the future.

# 4 POLLUTION PREVENTION MEASURES AND CONTROLS (BMPs)

The following section identifies BMPs that will be implemented as part of this SWPPP (Appendix A, Worksheet #8).

## *4.1 Good Housekeeping*

The most elementary, yet one of the most effective, of all BMPs is the practice of good housekeeping. For the Sewage Treatment Plant No. 2, this consists of the following:

(1) Debris exposed to stormwater should be collected and removed from the site.
(2) Work area cleanup should follow any task, no matter how small.

Currently, the lead site maintenance worker conducts weekly site inspections to ensure good housekeeping at the site. Good housekeeping will be stressed to the employees during their annual employee training. Particular attention should be paid to the areas around fuel dispensing stations and the waste oil storage area.

## *4.2 Spill Prevention and Response Procedures*

Spills of diesel fuel, motor oil, or any of the other material could contribute pollutants to storm water discharges. If such an event occurs, having proper procedures in place can prevent a spill from becoming a potentially large environmental problem. Currently, the Sewage Treatment Plant No. 2 does have a Spill Prevention Control and Countermeasure Plan in place. There has not been a spill of any significant amount of material in the past three years. Despite this excellent performance, employees should know proper spill prevention and response procedures should an event occur in the future. Worksheet #4 in Appendix F can be used to record the date and time of any future spills.

## *4.3 Inspections*

Inspections involve visually checking the potential sites of pollution on a periodic basis to confirm that good housekeeping procedures on being followed. The inspection currently occurs weekly by the lead site maintenance worker; however, it is not currently documented. To comply with KDHE Storm water Pollution Prevention Plan guidelines, a monthly record of the inspections should be kept for a period of three years in Appendix B, and a set of follow-up procedures should be in place so that corrective actions can occur if needed (A blank inspection form is included at the end of Appendix G).

## 4.4 Employee Training

All Sewage Treatment Plant No. 2 employees that are responsible for storm water pollution prevention at the facility will receive training, and this training will be thoroughly documented. Training will address the following subjects:

(1) Familiarization with all BMPs in place and ensuring that employees understand the requirements and contents of the SWPPP.
(2) Proper handling of all materials used or commonly encountered at the facility.

Employee training will be conducted initially when the SWPPP is presented to the facility. Annual refresher and new hire training will be conducted by the SWPPP Pollution Prevention Team. Worksheet #10 included in Appendix D can be used to document training.

## 4.5 Erosion Control Measures

For sites that are largely unpaved without adequate ground cover, soil erosion can transport large quantities of suspended sediment into the downstream waterways. However, during the site visit, it was not apparent that soil erosion is a significant problem at the Sewage Treatment Plant No. 2. The relatively small unpaved areas and the mild slopes keep erosion from becoming a significant problem. However, future Comprehensive Site Compliance Evaluations by the Pollution Prevention Team should include looking for signs of erosion and assess the need for implementation of erosion-control BMPs.

## 4.6 Record Keeping and Internal Reporting Procedures

Accurate and thorough records of all activities are essential to maintaining the SWPPP and storm water quality. Records of the monthly inspections (Appendix B), the Comprehensive Site Compliance Evaluation Reports (Appendix C), employee training records (Appendix D), and any future spills or leaks that occur (Appendix E) will be kept on site with the SWPPP. These records will be readily available for review by regulatory agencies.

# 5 MONITORING, REPORTING, AND RECORD KEEPING REQUIREMENTS

## 5.1 Sampling Requirements

At this time, KDHE is not requiring that quantative chemical analysis be conducted on the storm water leaving the site; however, periodically during wet weather events, storm water should be visually inspected for the presence of pollutants. It is recommended that the visual inspection of the storm water be conducted periodically during the spring when wet weather events are typically frequent. The outfall identified in Section 3 should be observed. The inspection should indicate whether an oil sheen, foam, suspended solids, or floating solids are present and the color and clarity of the storm water. The results of the visual inspection of the storm water will be included in the Comprehensive Site Compliance Evaluation Report (Appendix C).

## 5.2 Comprehensive Site Compliance Evaluation and Report

A Comprehensive Site Compliance Evaluation inspection should be conducted on an annual basis to determine whether site conditions have changed, whether the SWPPP needs to be revised, and whether the SWPPP procedures are effective. The SWPPP should be modified if any deficiencies are identified based on the evaluation or additional BMPs could be implemented. If a BMP is identified that will be implemented, Worksheet #9 (a blank form is included in Appendix G) should be utilized and included with the Comprehensive Site Compliance Evaluation Report. Examples of changes that would result in a revision are re-grading of the existing site, any additional material added to the site that could contribute to storm water pollution, or a request for chemical analysis of storm water by KDHE.

The inspection should target the storm water outfall and the areas that could potentially contribute to storm water pollution; the fueling area, and the waste oil storage area. (identified on the Site Map, Appendix A). In addition, the inspection should look for signs of erosion around the site.

It is recommended that the Sewage Treatment Plant No. 2 develop a report format for this inspection or utilize Worksheet #11 in Appendix C. The report should contain the following information: the cleanliness of the areas, a visual inspection of the storm water outfall, confirming that non-storm water discharges are not present, the documented visual analysis of the storm water runoff from the outfall, and if there were any changes to site map. These changes should be identified and the site map updated. The report

must be included in Appendix C within two weeks of the Comprehensive Site Compliance Evaluation inspection. If the report identifies additional measures that should be taken to reduce storm water pollution, the measures must be implemented within 12 weeks, and the update recorded on Worksheet #12 (a blank form is included in Appendix G). The updated worksheet should be included with the Comprehensive Site Compliance Evaluation Report.

# 6 REFERENCES

USEPA, Storm Water Management for Industrial Activities – Developing Pollution Prevention Plans and Best Management Practices, 1992.

KDHE, Storm Water Pollution Prevention Plan Requirements and Guidelines, Attachment A, no date.

| Worksheet #1<br>POLLUTION PREVENTION TEAM<br>MEMBER ROSTER | Facility name: Sewage Treatment Plant 2<br>Completed by: Jim Hardesty<br>Title: Storm Water Specialist<br>Date: 08/26/09 |
|---|---|

Leader: Jade Dundas

Title: Superintendent

Office Phone: 316-303-8702

Responsibilities:

1) Signatory authourity; 2) Coordinate employee training program; 3) Ensure that all SWPPP requirements are performed

Members:

(1) Mike Hess

Title: Maintenance Supervisor

Office Phone: 316-303-8783

Responsibilities:

1) Conduct annual site evaluations; 2) Perform employee training; 3) Conduct weekly site inspections

(2) _____

Title: _____

Office Phone: _____

Responsibilities:

(3) _____

Title: _____

Office Phone: _____

Responsibilities:

(4) _____

Title: _____

Office Phone: _____

Responsibilities:

| Worksheet #2<br><br>DEVELOPING A SITE MAP | Facility name: Sewage Treatment Plant #2<br>Completed by: Jim Hardesty<br>Title:<br>Date: 8/26/09 |
|---|---|

Instructions: Draw a map of your site including a footprint of all buildings, structures, paved areas, and parking lots. The information below describes additional elements required by EPA's General Permit.

EPA's General Permit requires the following features on the site map:

- All outfalls and storm water discharges
- Drainage areas of each storm water outfall
- Structural storm water pollution control measures, such as:
  - Flow diversion structures
  - Retention/detention ponds
  - Vegetative swales
  - Sediment traps
- Name of receiving waters (or if through a Municipal Separate Storm Sewer System)
- Locations of exposed significant materials
- Locations of past spills and leaks
- Locations of high-risk, waste-generating areas and activities common on industrial sites such as:
  - Fueling stations
  - Vehicle/equipment washing and maintenance areas
  - Area for unloading/loading materials
  - Above-ground tanks for liquid storage
  - Industrial waste management areas (landfills, waste piles, treatment plants, disposal areas)
  - Outside storage areas for raw materials, by-products, and finished products
  - Outside manufacturing areas
  - Other areas of concern (specify: _____ )

| Worksheet #3<br>MATERIAL INVENTORY | Facility name: Sewage Treatment Plant 2<br>Completed by: Jim Hardesty<br>Title: Storm Water Specialist<br>Date: 8/26/09 |
|---|---|

Instructions: List all materials used, stored, or produced onsite. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff. Also complete Worksheet 3A if the material has been exposed during the last 3 years.

| Material | Purpose/Location | Quantity (gallons) | | | Quantity Exposed in Last 3 Years | Likelihood of contact with storm water. If yes, describe reason. | Past Significant Spill or Leak | |
|---|---|---|---|---|---|---|---|---|
| | | Used | Produced | Stored | | | Yes | No |
| Unleaded Gasoline | Fuel/ Tank Farm | varies | | 2,000 | None | Not likely, material covered by shelter | | No |
| Diesel | Fuel/ Tank Farm | varies | | 1000 | None | Not likely, material covered by shelter | | No |
| Waste Oil | Oil from vehicles / Waste Oil AST's | varies | | 1100 | None | Not likely, oil is stored within secondary containment. | | No |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Worksheet #4

**LIST OF SIGNIFICANT SPILLS AND LEAKS**

Facility name: Sewage Treatment Plant #2
Completed by: Jim Hardesty
Title:
Date: 8/26/09

Directions: Record below all significant spills and significant leaks of toxic or hazardous pollutants that have occurred at the facility in the three years prior to the effective date of the permit.

Definitions: Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

1st Year Prior

| Date (month/day/year) | Spill | Leak | Location (as indicated on site map) | Description | | | | Response Procedure | | Preventive Measures Taken |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of Material | Quantity | Source, If Known | Reason | Amount of Material Recovered | Material No Longer Exposed to Storm Water (True/False) | |
| None | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

2nd Year Prior

| Date (month/day/year) | Spill | Leak | Location (as indicated on site map) | Description | | | | Response Procedure | | Preventive Measures Taken |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of Material | Quantity | Source, If Known | Reason | Amount of Material Recovered | Material No Longer Exposed to Storm Water (True/False) | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

3rd Year Prior

| Date (month/day/year) | Spill | Leak | Location (as indicated on site map) | Description | | | | Response Procedure | | Preventive Measures Taken |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of Material | Quantity | Source, If Known | Reason | Amount of Material Recovered | Material No Longer Exposed to Storm Water (True/False) | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Worksheet #5<br>NON-STORM WATER DISCHARGE<br>ASSESSMENT AND CERTIFICATION | Facility name: Sewage Treatment Plant #2<br>Completed by: Jim Hardesty<br>Title:<br>Date: 8/26/09 |
|---|---|

| Date of Test or Evaluation | Outfall Directly Observed During the Test (identify as indicated on the site map) | Method Used to Test or Evaluate Discharge | Describe Results from Test for the Presence of Non-Storm Water Discharge | Identify Potential Significant Sources | Name of Person Who Conducted the Test or Evaluation |
|---|---|---|---|---|---|
| 08/12/09 | Outfall 1 | Visual | No discharge observed | Fuel and waste oil. | Jim Hardesty |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**CERTIFICATION**

I, (responsible corporate official), certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

| A. Name & Official Title (type or print) | B. Area Code and Telephone No. |
|---|---|
| C. Signature | D. Date Signed |

| Worksheet #6<br>NON-STORM WATER DISCHARGE ASSESSMENT AND FAILURE TO CERTIFY NOTIFICATION | Facility name: Sewage Treatment Plant #2<br>Completed by: Jim Hardesty<br>Title:<br>Date: 8/26/09 |
|---|---|

Directions: If you cannot feasibly test or evaluate an outfall, fill in the table below with the appropriate information and sign this form to certify the accuracy of the included information.

List all outfalls not tested or evaluated, describe any potential sources of non-storm water pollution from listed outfalls, and state the reason(s) why certification is not possible. Use the key from your site map to identify each outfall.

**Important Notice: A copy of this notification must be signed and submitted to the Director within 180 days of the effective date of this permit.**

| Identify Outfall Not Tested/Evaluated | Description of Why Certification Is Infeasible | Description of Potential Sources of Non-Storm Water Pollution |
|---|---|---|
| Outfall evaluated | | |
| | | |
| | | |
| | | |

**CERTIFICATION**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations, and that such notification has been made to the Director within 180 days of _____ (date permit was issued), the effective date of this permit.

| A. Name & Official Title (type or print) | B. Area Code and Telephone No. |
|---|---|
| C. Signature | D. Date Signed |

| Worksheet #8 | Facility: Sewage Treatment Plant #2 |
|---|---|
| | Completed By: Jim Hardesty |
| ***BMP Identification*** | Title: |
| | Date: 8/26/09 (page 1) |

**Instructions:** Describe the Best Management Practices (BMP's) that have been selected to be included in the plan. For each of the baseline BMP's, describe actions that will be incorporated into facility operations. Also describe any additional BMP's (activity-specific and site-specific BMP's) that have been selected. Attach additional sheets if necessary.

| BMP's | Brief Description of Activities |
|---|---|
| Good Housekeeping | 1) Debris should be collected and removed from the site<br>2) Work area cleanup should follow any task, no matter how small |
| Inspections | 1) Monthly visual inspection of Potential Pollution sources and Stormwater Outfall |
| Employee Training | 1) Familiarization with all BMPs in place and ensuring that employees understan the requirements and contents of the SWPPP<br>2) Proper handling of all materials used or commonly encountered at the facility.<br>3) Must be conducted annually |

| Worksheet #8 | Facility: Sewage Treatment Plant #2 |
|---|---|
| | Completed By: Jim Hardesty |
| ***BMP Identification*** | Title: |
| | Date: 8/26/09 (page 2) |

**Instructions:** Describe the Best Management Practices (BMP's) that have been selected to be included in the plan. For each of the baseline BMP's, describe actions that will be incorporated into facility operations. Also describe any additional BMP's (activity-specific and site-specific BMP's) that have been selected. Attach additional sheets if necessary.

| BMP's | Brief Description of Activities |
|---|---|
| Record Keeping and Internal Reporting Procedures | 1) Keep records of revisions to the SWPPP, inspection reports, employee training records, and any spills or leaks that occur onsite. |
| Covered Storage | Plant 2 has already done an excellent job of covering potential stormwater pollution contributors by covering the fueling area. The waste oil storage area could be covered at a later date or drip pans installed to further eliminate potential stormwater pollution. |
| | |

| Worksheet #9<br>BMP Implementation | Facility: Treatment Plant 2<br>Completed By: Jim Hardesty | | |
|---|---|---|---|
| **BMP** | **Action Required for Implementation** | **Completion Date:** | **Person Responsible:** |
| Spill kit for fueling station | Place spill kit at fueling pumps | 4/1/2010 | Mike Hess |
| Indoor storage of small mower batteries | Dispose of, or move indoors mower batteries | 4/1/2010 | Mike Hess |
| | | | |
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| | | | |

UNLEAD
GAS
SELF SERVE

UNLEADED
GAS
UNLEADED
SELF
SERVE
SHUT OFF
ENGINE
BEFORE
REFUELING
NO
SMOKING
DIESEL
DIESEL
DANGER
NO SMOKING
TURN OFF IGNITION

## Hardesty, James

**From:** Mounts, Jessica <jessica.mounts@ksoutdoors.com>
**Sent:** Tuesday, November 10, 2015 12:33 PM
**To:** Hardesty, James; Adams (Topeka) Steve
**Cc:** Hall, Mark; Sabrina Cantrell; Sean Lynott
**Subject:** Re: Fish Kill?
**Attachments:** GypsumCreek11.10.15.pdf

Report from Gypsum Creek Fish Kill attached. If you have questions, let me know.

Jessica Mounts
Kansas Department of Wildlife, Parks and Tourism
District Fisheries Biologist
316.215-2283 (Cell)
620.459.6922 (Office)

On Tue, Nov 10, 2015 at 8:28 AM, Mounts, Jessica <jessica.mounts@ksoutdoors.com> wrote:

> I spoke with Don Nichols last night, who lives at this address. He stated that he had observed the water changing to a deep green or bluish green color in the last 2 to 3 weeks, and that the water remains this color. He reported two carp and one bullhead catfish as dead. He also reported that in that particular area of the creek, some sort of sewage or water line forms a dam which traps the water behind it at that location.
>
> While three dead fish is likely not significant, combined with the change in color of the water, a similar report on gypsum Creek last week, and that gypsum Creek is a lotic system, I am going to go to that location this morning and take a look upstream and downstream to make sure that a more significant kill is not present.
>
> I should arrive on site at approximately 9:30 a.m. and will report back with photographs and observations.
>
> Jessica
>
> On Nov 9, 2015 3:04 PM, "Hardesty, James" <JHardesty@wichita.gov> wrote:
>
>> Jessica,
>>
>> We have an unconfirmed fish kill on Gypsum Creek, from Don 2256 S. McAdam.
>>
>> Sorry that there are not more details.
>>
>> Jim

## Hardesty, James

**From:** Mellies, Shawn
**Sent:** Wednesday, April 01, 2015 2:25 PM
**To:** Hickle, Joseph; Hardesty, James
**Cc:** Gunzelman, Paul; Greif, Rebecca
**Subject:** RE: Storm Water Request Snouts
**Attachments:** SNOUTS added to street inlets Hillside Ave and Tyler Road.pdf

Sounds good.

Thanks

Shawn

---

**From:** Hickle, Joseph
**Sent:** Wednesday, April 01, 2015 2:20 PM
**To:** Mellies, Shawn; Hardesty, James
**Subject:** RE: Storm Water Request Snouts

How about adding SNOUTs on two inlets on Tyler and one on Hillside? The two inlets on Tyler discharge directly into an open ditch.

Inlet bottom to be at 3 feet below outflow pipe invert.

Joe

---

**From:** Mellies, Shawn
**Sent:** Wednesday, April 01, 2015 1:33 PM
**To:** Hardesty, James; Hickle, Joseph
**Subject:** RE: Storm Water Request Snouts

Attached are the plans for 37th & Hillside intersection and Tyler from 29th to 37 projects. Please take a look at the proposed storm sewer structures and make recommendations on locations of the snouts and depth of the inlet that are needed.

Thanks

Shawn

---

**From:** Hardesty, James
**Sent:** Wednesday, April 01, 2015 10:48 AM
**To:** Hickle, Joseph; Mellies, Shawn
**Subject:** RE: Storm Water Request Snouts

Shawn,

What can Stormwater do to help these proceed?

Jim

---

**From:** Hickle, Joseph
**Sent:** Wednesday, April 01, 2015 10:40 AM
**To:** Hardesty, James
**Subject:** FW: Storm Water Request Snouts

I think the next action would be to look at these yellow projects and find a downstream inlet/manhole at which the structure could be modified to incorporate a SNOUT.

joe

---

**From:** Mellies, Shawn
**Sent:** Tuesday, March 31, 2015 3:33 PM
**To:** Hardesty, James; Hickle, Joseph
**Cc:** Davidson, Tim
**Subject:** Storm Water Request Snouts

I think the projects in yellow we can look at added some snouts to help with water quality. Tyler Road and 37th & Hillside should be fine budget wise but all other projects will need to evaluated as we get further along in the design. The projects in red text are already bid or are covered by the Meridian structure. Let me know if you want to discuss any of the projects.

Thanks

Shawn

# DON'T FORGET!

Never pour your household chemicals, cleaners or solvents into the storm drain. It's toxic to aquatic life like me and is also illegal. Please make sure to properly dispose of hazardous substances such as the ones listed below:

- Pesticides, herbicides and garden chemicals
- Paint, aerosols, batteries
- Household cleaners, fluorescent bulbs and propane

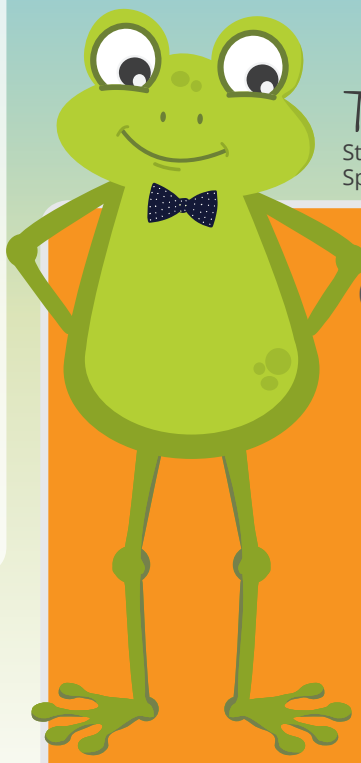
These substances may be taken to:

Sedgwick County Household Hazardous Waste Facility
801 Stillwell St. Wichita | (316) 660-7458
sedgwickcounty.org

## SO WHERE DO YOU DISPOSE OF AUTOMOTIVE HAZARDOUS WASTE?

Most automotive service centers and automotive parts stores offer free recycling of used automotive fluids, such as oil, antifreeze, solvents and brake fluid. Check to see if your local store offers this free service. Also, free recycling of automotive fluids is available at the Sedgwick County Household Hazardous Waste Facility; see details above!

**For additional information on how to keep Wichita waterways clean please visit TadsWater.com**



Tad
Stormwater
Spokesfrog

## CONTACT US

Questions about Stormwater Utility Charges
**265-1300**

Report Illegal Discharges
**268-4498**

Storm Sewer Issues
**268-4090**

Recycling Questions
**660-7200**

Sedgwick County Household Hazardous Waste Facility
**660-7458**

Stormwater Management
City of Wichita
Public Works & Utilities Department
455 N. Main, 8th Floor
Wichita, KS 67202
(316) 268 - 4498
**www.wichita.gov**

**Residential Hazardous Waste**

# Don't Let Your House Become Hazardous to Mine

Storm drains don't have filters like in-home plumbing systems! Please don't let your mess become my family's problem.

CITY OF WICHITA
WWW.WICHITA.GOV

# WHAT IS HOUSEHOLD STORMWATER POLLUTION?

**Many products found in homes contain chemicals that can be harmful to the environment. When rain washes those contaminants down surfaces such as driveways, parking lots and roads, they often flow into storm drains and into our local waterways. Please make sure to dispose of these chemicals properly.**

## KEEP AN EYE OUT!

Some contaminants include:

- Dish soap (washing vehicles)
- Auto grime
- Pet waste
- Cigarette butts

# CLEAN UP YOUR MESS!

**Many of us choose to perform maintenance on our vehicles at home rather than visit an auto repair service center. While the actual maintenance work is not a problem, the byproducts can send significant amounts of pollutants into storm sewer systems.**

## DID YOU KNOW?

- Your car alone contains one highly volatile, two corrosive, and six flammable hazardous products, all of which are TOXIC!
- 47% of U.S. waters surveyed are unfit for uses like swimming, fishing or drinking.*
- Stormwater is the leading cause of water pollution, NOT industrial dumping.
- Stormwater is not treated; only sanitary sewer water from toilets, showers and sinks is treated.

*National EPA Study

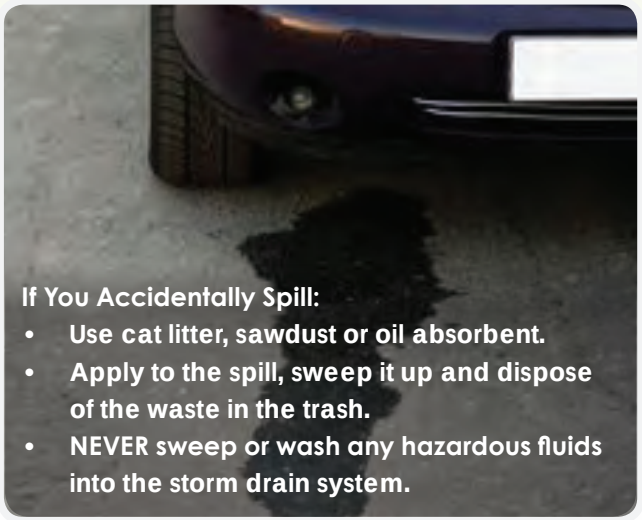
# IT'S OK IF YOU SPILL. ACCIDENTS HAPPEN!

**Let me show you the proper way to clean up. Here are tips for changing your oil and other fluids:**

- **FUNNELS**
  Use funnels or pumps when handling liquid products or waste to avoid spills.

- **DRIP PAN**
  Capture vehicle fluids in separate drip pan or container.

- **OIL FILTERS**
  Drain and recycle used oil filters. Poke holes in your filter and let it drain into your oil pan for several hours before recycling.



**If You Accidentally Spill:**

- **Use cat litter, sawdust or oil absorbent.**
- **Apply to the spill, sweep it up and dispose of the waste in the trash.**
- **NEVER sweep or wash any hazardous fluids into the storm drain system.**

# DON'T FEED THE GEESE

Goose droppings are unsightly and are full of nutrients that increase algae growth when washed into our ponds. Geese also prefer to eat the grass around pond edges, causing bank erosion. Feeding them will quickly attract more to your site, increasing both problems.

For additional information on how to keep Wichita waterways clean please visit TadsWater.com

Tad
Stormwater
Spokesfrog

## CONTACT US

Questions about Stormwater Utility Charges
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**268-4090**

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Sedgwick County Household Hazardous Waste Facility
**660-7458**


Stormwater Management
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Public Works & Utilities Department
455 N. Main, 8th Floor
Wichita, KS 67202
(316) 268 - 4498
**www.wichita.gov**


**Homeowner's Association Pond Mainenance**

# Let's Keep Our Neighborhood Pond Clean

Many HOA neighborhoods have detention ponds for stormwater runoff. Proper maintenance of these ponds is necessary to preserve the natural vegetation and wildlife in our community.

CITY OF WICHITA
WWW. WICHITA.GOV

# WHAT ARE DETENTION PONDS?

Detention ponds capture stormwater and slowly release it into nearby streams, creeks, and rivers, while preventing sediment and pollution from entering.

## TWO TYPES OF DETENTION PONDS

**DRY**

- Permanent stormwater management basin
- Typically holds water for 2-6 days

**WET**

- Designed to have a permanent pool of water all year

**No matter which pond is in your neighborhood, both require maintenance.**

DRY POND

WET POND

# MAINTENANCE IS ESSENTIAL!

### HELP PRESERVE OUR HABITAT!

Wildlife habitat destruction, flooding, and erosion have irreversible issues that may occur due to a lack of detention pond maintenance.

# WHO MAINTAINS THE POND IN MY NEIGHBORHOOD?

In the majority of cases, the HOA or commercial property owner are solely responsible for the maintenance. As a landowner and member of your HOA, helping maintain these ponds not only helps you, but the whole community.

# FOUR THINGS I CAN DO FOR MY NEIGHBORHOOD POND

**APPLY FERTILIZER PER DIRECTIONS**

- Excess fertilizer causes algae growth which leads to fish kills
- Sweep up any fertilizer that lands on the sidewalk, driveway or street.

**SWEEP GRASS CLIPPINGS**

- Clippings that reach the pond add excess nutrients, increasing the potential for harmful algae. Please sweep and bag your clippings.

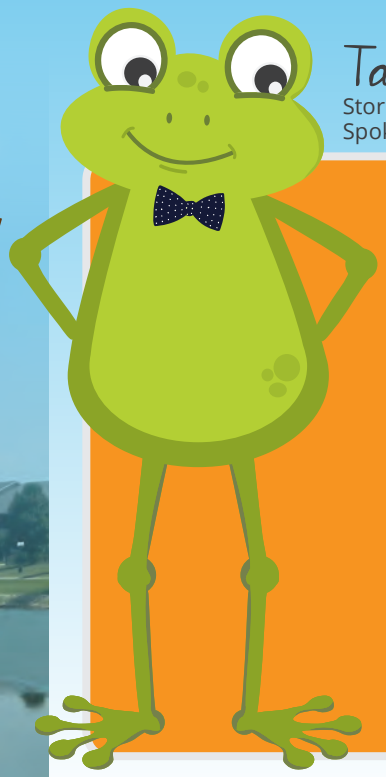
**SCOOP THE POOP**

- Pet waste contains phosphorus and harmful bacteria that is toxic to wildlife.

**REMOVE TRASH AND DEBRIS**

- Pick up any trash causing obstructions at the inlet, outlet, orifice or trash rack.

For additional information on how to keep Wichita waterways clean please visit TadsWater.com



Tad
Stormwater Spokesfrog

## CONTACT US

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Public Works &
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(316) 268 - 4498
**www.wichita.gov**

**Residential Lawn Pollutants**

# Clean Water Begins at Home.

Many pollutants around our homes are washed down the storm drains directly into our waterways. The same waterways our children swim in and explore.

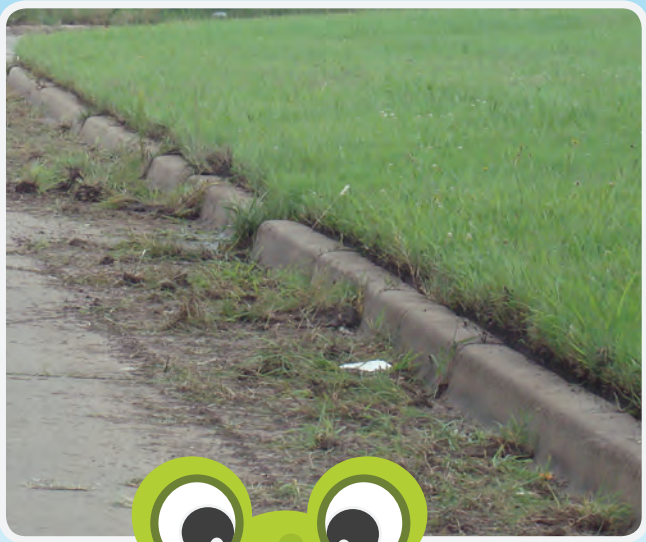
CITY OF WICHITA
WWW.WICHITA.GOV

# TAKING CARE OF YOUR LAWN, HELPS TAKE CARE OF MINE.

**Here are a few things you can do to make sure both our homes stay clean and tidy.**

- Turn your yard waste into compost or mulch for your garden.
- Use proper dosage when treating your lawn and avoid overwatering to prevent runoff.
- Mow grass without a lawnmower bag and leave clippings to naturally decompose. Don't worry, this will not produce thatch.
- Dispose of used fluids properly when working on your lawn mower.
- Plant in bare spots in your yard, it looks better and helps prevent runoff and erosion.
- Pick up pet waste and dispose of it properly through your garbage service. If you've got a garden shovel and plastic baggie, you've already got what it takes to take care of the lawn bombs hiding in the grass.

# HOW BAD CAN IT BE? LET ME TELL YOU!



# DID YOU KNOW?

- Many household products can poison fish and other water animals. Debris such as plastics, bottles, and cigarette butts can injure and sometimes kill fish and other wildlife...like me! Please dispose of them properly.
- Pet waste is a major contributor to harmful bacteria that makes activities like swimming, boating and fishing unsafe. It can also cause diseases in humans and other animals.
- Fertilizer and lawn clippings can create unsightly algae that are harmful to water animals.
- Sediment destroys living habitats making it difficult for plants to grow, while also creating more problems with cloudy water and erosion.

# WHERE SHOULD MY SUMP PUMP WATER GO?

## HERE ARE A FEW HELPFUL TIPS

### DRAIN AWAY FROM HOME AND ONTO GRASS

- Run your sump pump drainage away from your home.
- Do not let it flow onto driveways, sidewalks or other paved surfaces.
- Sump pump discharge must not flow onto your neigbors' property. It is unfriendly and illegal!

### SUMP PUMP DISCHARGE MUST BE CLEAN

- Discharge must be clear, clean water such as ground water or residential air conditioner condensate.
- Discharge cannot contain water from any other items that utilize household plumbing such as washing machine, a sink or a tub.

### SUMP DISCHARGE MUST NOT BE:

- Within 7.5' of a public sidewalk
- Within 10' of a street curb
- Within 2' of a side property line
- Within 5' of a rear property line

For detailed information please call 268-4341

### INSTALL A RAIN GARDEN

- Rain gardens slow stormwater as it travels downhill, giving stormwater more time to infiltrate and less opportunity to gain momentum and cause erosion.

**For additional information on how to keep Wichita waterways clean please visit TadsWater.com**

Tad
Stormwater Spokesfrog

## CONTACT US

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Stormwater Management
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**Residential Sump Pump Discharge**

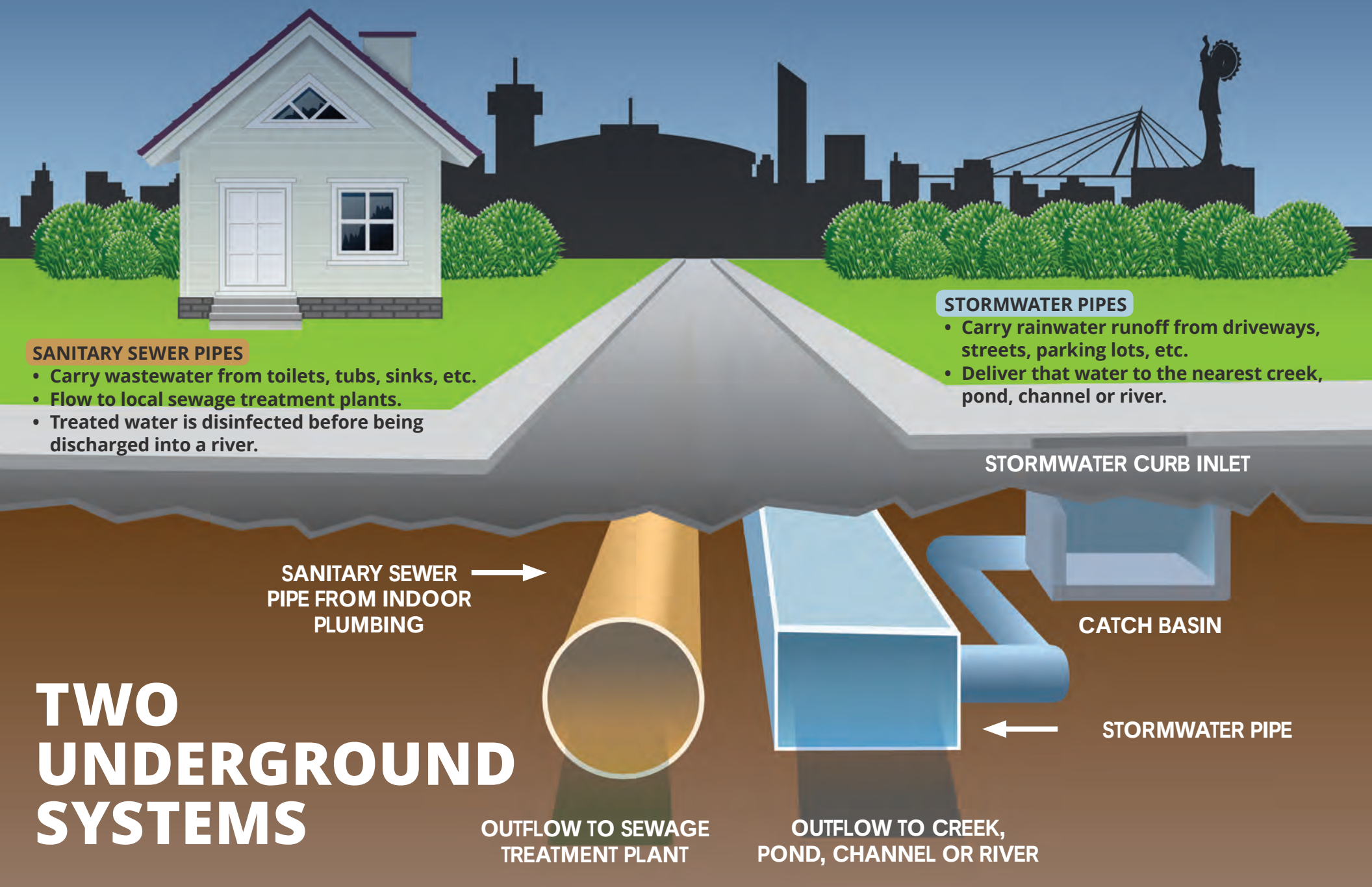
# Down the Storm Drain. Out of Your Life? Think Again.

Make sure your sump pump discharge leads to the proper location. And no, it's not the storm drain or your neighbor's yard.

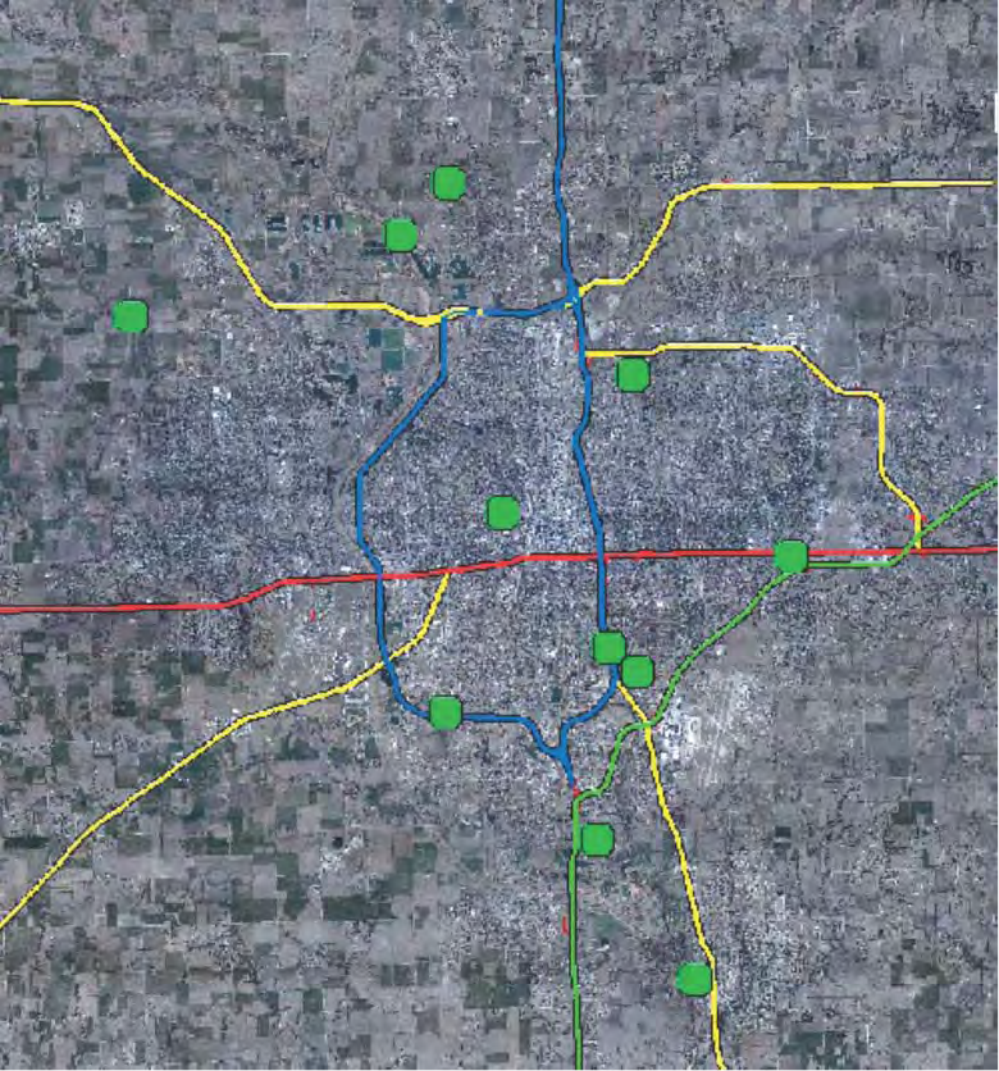
CITY OF WICHITA
WWW.WICHITA.GOV

# WHERE DOES STORMWATER RUNOFF GO?

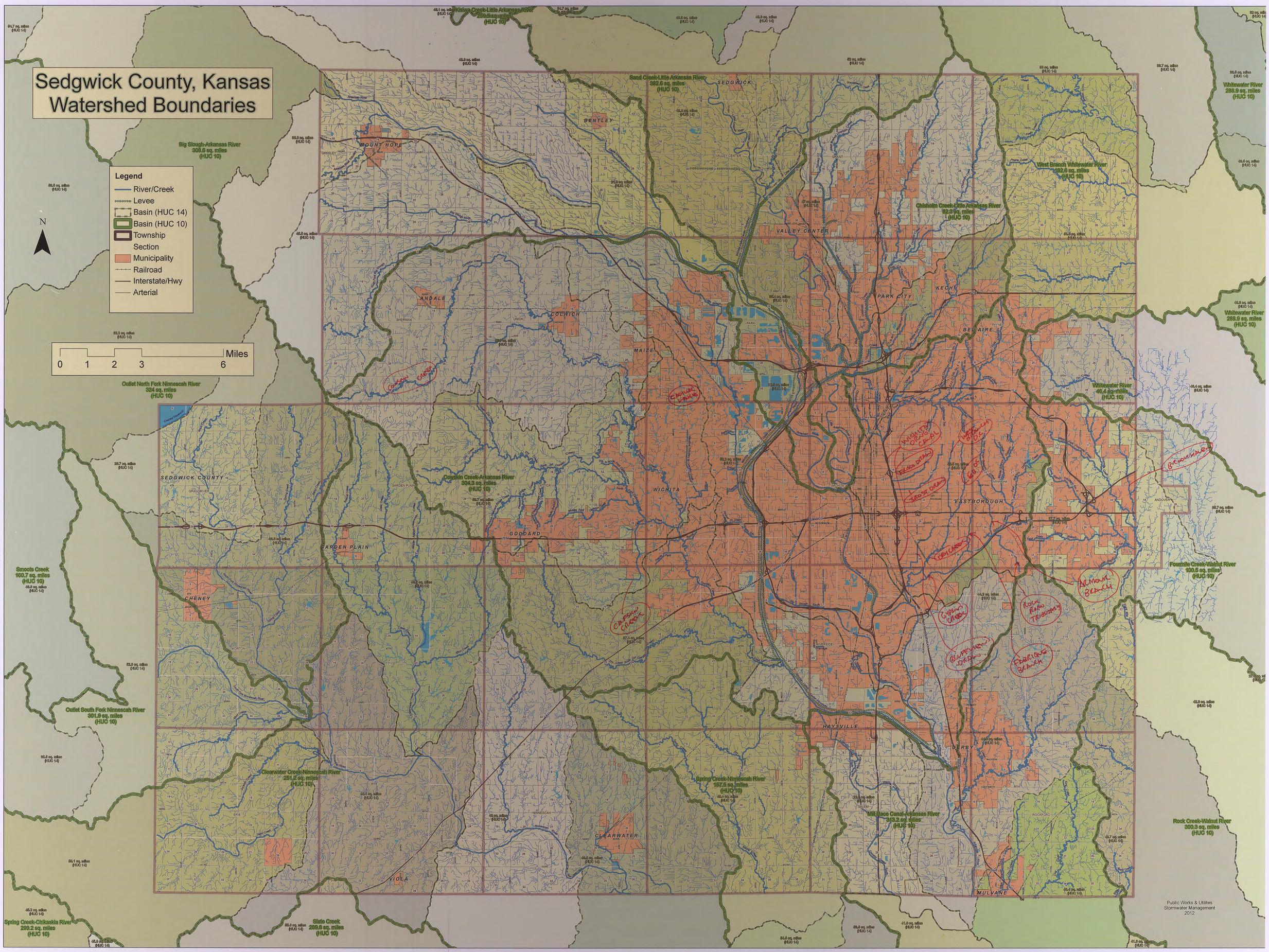
There are two different sets of pipes in the ground.




## TWO UNDERGROUND SYSTEMS



# Sedgwick County, Kansas Watershed Boundaries




Public Works & Utilities
Stormwater Management
2012

## Hardesty, James

**From:** Lewis, Rebecca
**Sent:** Tuesday, April 21, 2015 8:06 AM
**To:** King, Alan; Pajor, Joseph; Henry, Don; Nelson, Ben
**Cc:** Koontz, Larry; Perkins, Bill; Hardesty, James
**Subject:** Sewage Release at Driftwood & Meridian

Yesterday, April 20th, at 4:30 pm, Sewer Maintenance staff received a call that there was sewage in the street near the south entrance of the Harbor Isle housing division at Driftwood and N. Meridian. Sewer Maintenance crews arrived and placed berms in the street gutter to prevent the sewage entering the storm drain, preventing sewage from entering the recreational lake in the housing division. It was found the sewage release was due to a failed air relief valve on the force main that serves the N. Meridian Pump Station. Sewage Treatment staff turned off the pumps at the N Meridian Sewer pump station. Using a vactor truck, sewage was removed from the vault and the valve was repaired. Sewage then was removed from the landscaping area adjacent to the vault and on the street. Sewer Maintenance crews flushed the street with water and collected the material in the catchment basin. It was estimated that approximately 500 gallons of sewage was spilled, but recovered by crews. KDHE was notified last night and I will file an incident report with KDHE. The incident was cleaned by 8 PM. Crews remained onsite until about 9:45 to assure the pump and air relief valve was operating properly.

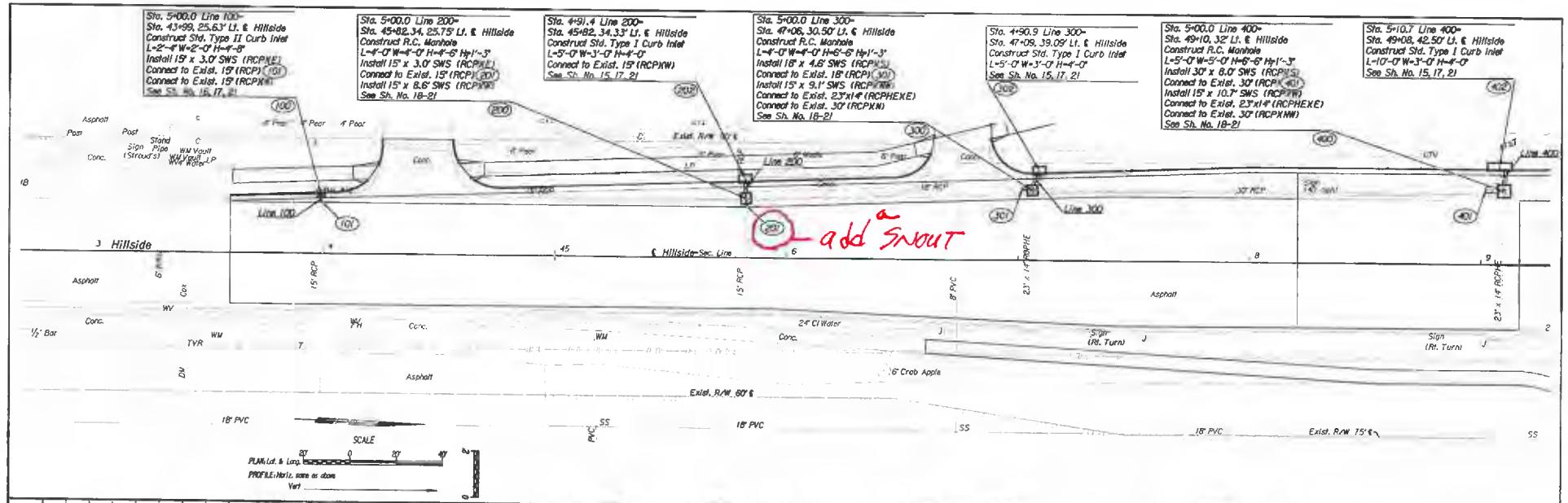
Rebecca Lewis
Public Works & Utilities
Sewage Treatment Superintendent
316-303-8702

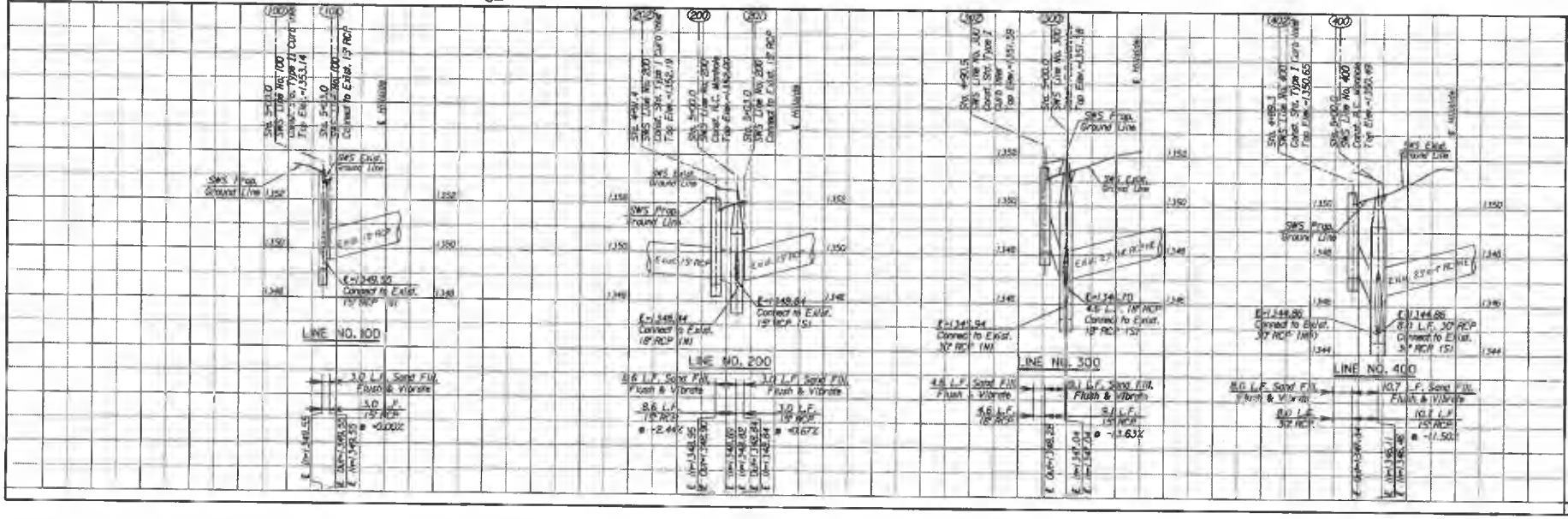
| FACILITY NAME | ADDRESS |
|---|---|
| 3P Processing | 1702 S Knight |
| Air Products Mfg Corp | 6601 S Ridge Rd |
| AMETEK Advance Industries | 4550 Southeast Blvd |
| Andale Ready Mix | 3170 N Ohio |
| Atlas Aerospace | 4425 W May |
| Barton Solvents Inc | 201 S Cedar |
| BG Products Inc | 701 S Wichita |
| Boeing Defense, Space, & Security | 4615 S Oliver M/C K29-05 |
| Brittain Machine Inc | 2520 South Sheridan St |
| Cargill Inc | 1425 N Mosely |
| Carlson Products | 4601 N Tyler Rd |
| Center Industries Corp | 2505 S Custer |
| Century Mfg Inc | 9750 E 50th St North |
| Cessna Aircraft - Pawnee Facility | 5800 E Pawnee |
| Cessna Aircraft - Mid Continent Facility | 6330 Southwest Blvd |
| Chrome Plus International Inc | 3939 W 29th St South |
| CNH America LLC | 3301 S Hoover Rd |
| Coleman Company Inc | 3600 N Hydraulic |
| Custom Cupboards | 3738 S Norman St |
| Exacta Aerospace Inc | 4200 W Harry St |
| Globe Engineering Co | 1539 S Saint Paul |
| Green Energy Products LLC | 250 E Industrial Dr |
| ICM Inc | 310 N First St |
| ISF (dba Infinitech Surface Finishing) | 4420 W 29th Circle South |
| Johnson Controls Inc | 801 E 37th St North |
| Kice Industries Inc | 5500 Mill Heights Dr |
| Koch-Glitsch LP | 4111 E 37th St North Bldg E |
| Land O'Lakes Purina Feed LLC | 1836 N Topeka |
| Learjet Inc | 1 Learjet Way |
| Lubrication Engineers Inc | 1919 E Tulsa St |
| Marble Products Co | 2080 S Edwards |
| Metal Finishing Co Inc | 1423 S McLean Blvd |
| Metal Pros LLC | 4323 W Bounous St |
| National Plastics Color Inc | 100 Industrial St |
| Occidental Chemical Corp | 6200 S Ridge Rd |
| Paragon Services Inc | 1015 S West St |
| Phillips 66 Co - Wichita Terminal | 2400 E 37th St North |
| PolyOne DSS | 1444 S Tyler Rd |
| Recreation Vehicle Products Inc | 3050 N Saint Francis |
| Spirit Aerosystems Inc | 3801 S Oliver |
| Techmer PM LLC | 7015 W Pueblo |
| Triumph Structures | 3258 S Hoover Rd |
| Universal Lubricants LLC | 2824 N Ohio |
| Universal Products Inc | 521 Industrial St |
| US DoD McConnell AFB | 57830 Pittsburg Suite 120 |
| Wilko Paint Inc | 2727 Ohio St |

Worthington Cylinders Kansas LLc 5605 N 119th St West

| CITY | ZIP | # OF CHEMICALS |
|---|---|---|
| Wichita | 67213 | 5 |
| Haysville | 67060 | 9 |
| Wichita | 67210 | 1 |
| Wichita | 67219 | 1 |
| Wichita | 67209 | 3 |
| Valley Center | 67147 | 1 |
| Wichita | 67213 | 6 |
| Wichita | 67210 | 1 |
| Wichita | 67217 | 1 |
| Wichita | 67214 | 1 |
| Maize | 67101 | 8 |
| Wichita | 67217 | 2 |
| Bel Aire | 67226 | 1 |
| Wichita | 67218 | 4 |
| Wichita | 67215 | 2 |
| Wichita | 67217 | 2 |
| Wichita | 67215 | 2 |
| Wichita | 67219 | 3 |
| Wichita | 67215 | 3 |
| Wichita | 67209 | 2 |
| Wichita | 67213 | 1 |
| Sedgwick | 67135 | 2 |
| Colwich | 67030 | 4 |
| Wichita | 67215 | 1 |
| Wichita | 67219 | 4 |
| Wichita | 67219 | 5 |
| Wichita | 67220 | 3 |
| Wichita | 67214 | 3 |
| Wichita | 67277 | 2 |
| Wichita | 67216 | 2 |
| Wichita | 67213 | 1 |
| Wichita | 67213 | 2 |
| Wichita | 67209 | 1 |
| Valley Center | 67147 | 4 |
| Wichita | 67215 | 18 |
| Wichita | 67213 | 1 |
| Wichita | 67219 | 12 |
| Wichita | 67209 | 1 |
| Wichita | 67219 | 1 |
| Wichita | 67210 | 16 |
| Wichita | 67209 | 3 |
| Wichita | 67215 | 2 |
| Wichita | 67219 | 2 |
| Goddard | 67052 | 1 |
| McConnell AFB | 67221 | 1 |
| Wichita | 67219 | 3 |

| | | |
|---|---|---|
| Maize | 67101 | 1 |




HILLSIDE

# STORM SEWER PLAN

LINE NO. 100, 200, 300, & 400

C.O.B. PWA. NO. 472-00103

PEC

Sheet 8 of 10

DSNR: ____ OPER: ____ SCALE: ____
I:/2006/00000/PROFILE/00000-PR-SWS000-0.DGN 00-00-2006 14:00:04 LAST REV: 00-00-2006 BY: ____

Add a SNOWT

BENCHMARK:

BM #4 – "T" Post Set at Fence Line Next to Brace Post South Side of Entrance to 3320 Tyler Rd Sta. 26+00, 50' Rt. Elev. = 1361.08 (NGVD 29)

CAUTION!
Existing 0/H Elec 16" Water Crossings

Sta. 00+20.00, Begin SWS Line 3 = B.L. Sta. 31+00.00, 80.00' Lt. Install 1–15" RCP End Section* and 4.7 S.Y. Light Stone Rip Rap with 6" Filter Course and Toe Wall per City Specs.

Excavate 18 L.F. 4' Wide Drainage Channel to Existing Channel. See Detail, Next Sheet. Cost to be INCIDENTAL to the Lump Sum Bid Item 'Ditch Grading'.

Sta. 0+77.33, SWS Line 3 = Sta. 1+01.15, SWS Line 3a = B.L. Sta. 31+00.00, 22.67' Lt. Construct Inlet, Curb (Type 1a) (L=10', W=3') Top Elev. = 1359.27

Sta. 1+22.67, End SWS Line 3 = B.L. Sta. 31+00.00, 22.67' Rt. Construct Inlet, Curb (Type 1a) (L=10', W=3') Top Elev. = 1359.27

TYLER ROAD

SWS Line 3a

SWS Line 3

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Rip Rap Detail for 15" RCP

*The Contractor Shall Anchor the Precast End Section to the Adjacent Reinforced Concrete Pipe. See Detail, Sheet 36. The Cost Shall be SUBSIDIARY to the Installation of the Reinforced Concrete Pipe.

BENCHMARK:

BM #4 – "T" Post Set at Fence Line Next to Brace Post South Side of Entrance to 3320 Tyler Rd Sta. 26+00, 50' Rt. Elev. = 1361.08 (NGVD 29)

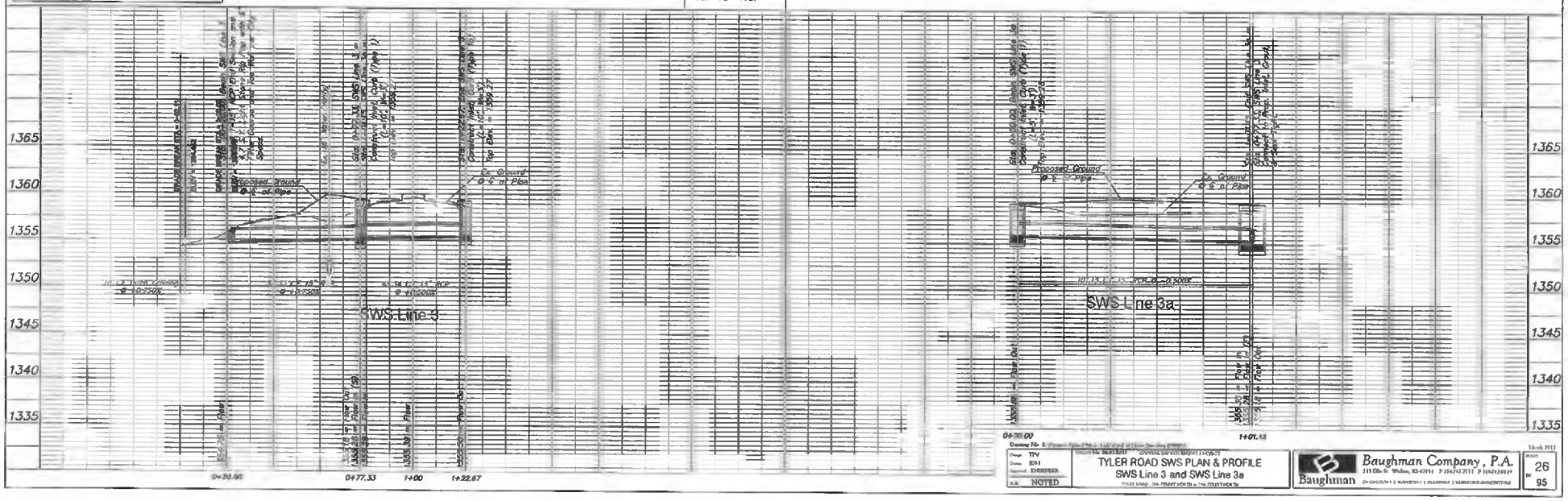
Sta. 0+00.00, Begin SWS Line 3a = B.L. Sta. 29+99.27, 31.50' Lt. Construct Inlet, Curb (Type 1) (L=5', W=3') Top Elev. = 1359.28

Sta. 1+01.15, End SWS Line 3a = Sta. 0+77.33, SWS Line 3 = B.L. Sta. 31+00.00, 22.67' Lt. Connect to Prop. Inlet, Grout, & Seal Joint.

TYLER ROAD

SWS Line 3

SCALE:
1" = 20' Horizontal
1" = 5' Vertical




Drawing File:
Proj. TTV
Date: 8/01
Approved ENGINEER
N.S. NOTED

TYLER ROAD SWS PLAN & PROFILE
SWS Line 3 and SWS Line 3a

Baughman Company, P.A.

Sheet 26 of 95

add a SNOUT

BENCHMARK:

BM #5 – "cr" Chiseled on Top of Curb at West End of Median at Brookview Entrance
Sta. 36+66, 62' Rt.
Elev. = 1352.54 (NGVD 29)

Sta. 0+40.00, Begin SWS Line 4 = B.L. Sta. 35+23.54, 60.00' Lt. Install 1-15" RCP End Section* and 4.7 S.Y. Light Stone Rip Rap with 6" Filter Course and Toe Wall per City Specs.

CAUTION!
Existing 16" Water Crossing

SCALE:
1" = 20' Horizontal
1" = 5' Vertical

Existing Ground

Install Erosion Control Blanket (Curlex 1, or Approved Equal) Cost to be INCIDENTAL to the Lump Sum Bid Item "Ditch Grading".

4' DRAINAGE DITCH DETAIL

Excavate 95 L.F. 4' Wide Drainage Channel to Existing Channel. See Detail, This Sheet. Cost to be INCIDENTAL to the Lump Sum Bid Item "Ditch Grading".

CENTRAL MAGNET SCHOOL ADDITION

TYLER ROAD

Sta. 0+77.33, SWS Line 4 = B.L. Sta. 35+23.54, 22.67' Lt. Construct Inlet, Curb (Type 1a, (L=10', W=3') Top Elev. = 1352.98

Sta. 1+33.66, End SWS Line 4 = B.L. Sta. 35+23.54, 33.67' Rt. Construct Inlet, Curb (Type 1a) (L=10', W=3') Top Elev. = 1352.63

*The Contractor Shall Anchor the Precast End Section to the Adjacent Reinforced Concrete Pipe. See Detail, Sheet 36. The Cost Shall be SUBSIDIARY to the Installation of the Reinforced Concrete Pipe.

SWS Line 4

Note:
Trees/Shrubs to be removed are marked thus:

Rip Rap Detail for 15" RCP

1360
1355
1350
1345
1340
1335
1330

Proposed Ground @ ℄ of Pipe

SWS Line 4

0+40.00 0+77.33 1+00 1+33.66

Drawing File: 8 | Project No. 0000.0000 | CAPITAL IMPROVEMENT PROJECT

Prep. TTV
Date 2011
Approved ENGINEER
Scale NOTED

TYLER ROAD SWS PLAN & PROFILE
SWS Line 4

Baughman Company, P.A.

March 2015
SHEET 27 OF 95

# SOS Metals Midwest, Inc.

Class: Youtube Storm Water Video

Date: 6/4 Start Time: 2:30 End Time:

Topics: Storm Water Pollution Prevention: A Drop in the Bucket / Good house Keeping

## MEETING/TRAINING ATTENDANCE RECORD

| No. | Print Name | Signature | |
|---|---|---|---|
| 1 | Bobby Potter | | 6-4 |
| 2 | Scott Miller | | 6/4 |
| 3 | Jim Wilson | | 6/4/15 |
| 4 | Jason Elledge | | 6-4-15 |
| 5 | Grant Sharell | | 6-4-15 |
| 6 | Jesse Dennis | | 6-4-15 |
| 7 | Paul Evans | | 6-4-15 |
| 8 | Charles Limore | | 6-4-5 |
| 9 | David Munoz | | 6-4-15 |
| 10 | Amy Heitman | | 6-4-15 |
| 11 | Tyler Davis | | |
| 12 | Shawn Diaz | | 6-4-15 |
| 13 | Jason McDonell | | |
| 14 | Shannon Dixon | | 6-4-15 |
| 15 | Dustin Knight | | 6-4-2015 |
| 16 | Karl A Shuttle Jr | | 6/4/15 |
| 17 | Jason Henry | | 6-4-15 |
| 18 | David Swan | | 6/4/15 |
| 19 | Justin Tankersley | | 6-4-15 |
| 20 | | | |

Instructor: Jim Wilson Date: 6/4/15

Signature: S.S. #:

Comments: 1 of 12

QF14/111008

CITY OF WICHITA

**Stormwater Management Division**

Wastewater Spill into Wichita Drainage Canal

Self-Reporting letter

Kansas Department of Health & Environment

1000 SW Jackson St

Suite 420

Topeka, KS 66612-1367

Re: Wastewater spill into drainage canal

Dear Rance Walker,

The following is a description of the actions taken by the City of Wichita Stormwater Management Division as a result of the Wastewater Incident Report at the Wichita Drainage Canal (attached).

The City of Wichita observed wastewater flowing from one of its storm drain lines into the Wichita Drainage Canal on Friday August 28, 2015 at approximately 12:45 p.m.

Power was restored to the sanitary lift station, and the wastewater discharge to the Drainage Canal stopped. Approximately 50,000 gallons of untreated wastewater is estimated to have been released. Recovery operations began by deploying a sample crew upstream and downstream on the Arkansas River to collect samples and make observations .

Emergency meetings were held Monday, August 31st to develop a repair plan. Also on Monday, Jim Hardesty, Interim Stormwater Division Manager called KDHE and spoke with both Mr. Rance Walker in Topeka and Mr. John Paul Goetz in the Southcentral Office about the spill occurrence.

On the afternoon of the occurrence, the City televised the discharging storm conduit back to a conflict manhole structure with a 78" sanitary sewer. Passing through that manhole are two 30" stormwater conduits. Televising showed holes in the top of one of those stormwater conduits. Wastewater was able to enter the holes in the stormwater conduit and flow to its outfall in the canal.

Adjacent to the 78" conflict manhole, there is a second conflict manhole for a 60" sanitary line. That second manhole has the same two 30" stormwater conduits passing through. Neither storm conduit in the 2nd sanitary manhole is damaged.

To summarize, 2 sanitary conflict manholes, each with the same pair of storm conduits passing through. One of the 4 storm conduits is damaged. As a safegaurd, all 4 storm conduits will be replaced.

The City has begun replacing all storm conduits that pass through the conflict manholes, with C-905 high pressure 30" PVC piping. The City is proceeding under Public Exigency emergency procurement procedures to hire a contractor to install the new storm conduits. To accelerate the project, the City has directly ordered the necessary piping. Emergency Bids are expected to be received from the contractors by the close of business on Wednesday, September 2, 2015. Contractor mobilization is expected by Friday, September 4, 2015, with onsite work commencing on Saturday, September 5, 2015. The replacement pipe is expected to be delivered to the site on Sunday, September 6, 2015.

As a precaution, the City has placed plugs upstream in both stormwater conduits. And, the City has put 2 plugs in each of the stormwater conduits downstream of the conflict manholes. Double plugging each line ensures redundancy to protect the outfall.

In case of rainfall, the City stands ready to emergency bypass pump stormwater from an upstream stormwater manhole around these plugs and into the Drainage Canal.

The location of this event is at North Latitude 37.65 degrees and West Longitude 97.31 degrees. The structure inventory number of the storm manhole at this location is 5644-0086.

The City will follow up on this matter upon the completion of the final repairs to the stormwater system.

Please contact me with any questions,

Jim Hardesty
Interim Division Manager
City of Wichita
455 N. Main 8th Floor
Wichita, KS. 672002
316-268-8317
Jhardesty@wichita.gov

cc: Mike Tate

Rod Geisler

Allison Herring

John Goetz

Alan King

Joe Pajor

Don Henry

Bill Perkins

Site 1 :Spill entered creek via storm drain here
Site 2: Confluence Chisholm creek & Ark River
Site 3: Hydraulic St Bridge – Upstream site
Site 4 MacArthur Bridge site Downstream site
Arkansas River
Arkansas River
Chapin Park
Lamp Lighter Mobile Home Park
Google
135

## Hardesty, James

**Subject:** FW: Plant 1 _ Influent Bypass into Canal Route
**Attachments:** Plant%201%20bypas(1).xlsx; Plant One Bypass sampling map.pptx

-----Original Message-----
From: Lewis, Rebecca
Sent: Saturday, August 29, 2015 4:14 PM
To: Henry, Don; a_k_king@msn.com; King, Alan; Pajor, Joseph; Belden, Jamie; Koontz, Larry; Nelson, Ben
Cc: Hardesty, James; Perkins, Bill
Subject: RE: Plant 1 _ Influent Bypass into Canal Route

Attached are analytical results and a location map of the sites. While bacti results were elevated and most likely impacted by the bypass as well as recent rain events, ammonia and dissolved oxygen results, which have the most impact to stream inhabitants were within acceptable ranges. Please let us know if you would like to see additional samples on Monday.

---

From: Lewis, Rebecca
Sent: Saturday, August 29, 2015 12:38 PM
To: Henry, Don; a_k_king@msn.com; King, Alan; Pajor, Joseph; Belden, Jamie; Koontz, Larry; Nelson, Ben
Cc: Hardesty, James; Perkins, Bill
Subject: RE: Plant 1 _ Influent Bypass into Canal Route

On site observation of the chisholm creek and Arkansas River at 9:30 am on Saturday morning, August 29th, reveled active biota in the stream with good clarity. The same conditions existed downstream in the Arkansas River at Macarthur and 47th streets bridge crossings. Bacti results for samples collected yesterday will be done incubating by 3:30 this afternoon. Samples were not collected this morning.

# Plant 1 Bypass

| | Location | Time | Temp | pH | Do | E. Coli | NH-3 mg/L | BOD | TSS |
|---|---|---|---|---|---|---|---|---|---|
| Site 3 | Big Ark @ Hydraulic | 2:25P | 29.4°C | 7.64 | 7.97 | 110.25 | 0.025 | | |
| Site 1 | Plant 1 Bypass | 1:35P | 27.3°C | 6.29 | No samp | >2419.2 | 4.41 | | |
| Site 2 | Chisholm/ Ark Confluence | 1:50P | 32.2°C | 6.85 | 3.55 | >2419.2 | 4.08 | Data not available yet | |
| Site 4 | Big Ark @ MacArthur | 2:15P | 29.4°C | 7.66 | 8.17 | >2419.2 | 0.19 | | |

Observations: All locations had higher than normal flows

Public Works & Utilities Department
Stormwater Management Division

# Stormwater Advisory Board (SWAB)

January 9, 2015

8:00am – 10:00am

**W.A.T.E.R Center**

## Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Review Minutes from November 2014** |
| **8:02 am** | **Public Comment Period** |
| **8:10 am** | **K State Preliminary Report Review & Discussion – Trisha Moore** |
| **9:10 am** | **On Going Discussion on Finance & Goals for 2015** |
| **9:45 am** | **Other Business/Review 2015 Meeting Dates** |
| **10:00 am** | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

Public Works & Utilities Department
Stormwater Management Division

# Stormwater Advisory Board (SWAB)

March13, 2015

8:00am – 10:00am

## W.A.T.E.R Center

Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Review Minutes from November 2014 & January 9th, 2015** |
| **8:02 am** | **Public Comment Period** |
| **8:10 am** | **K State Report Review & Discussion – Trisha Moore** |
| **9:00 am** | **Review of Cowskin & Local WRAPS Concerns - Ron Graber** |
| **9:45 am** | **Other Business** |
| **10:00 am** | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

Public Works & Utilities Department
Stormwater Management Division

# Stormwater Advisory Board (SWAB)

May 8, 2015

8:00am – 10:00am

**W.A.T.E.R Center**

## Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Review Minutes from February 13, 2015** |
| **8:02 am** | **Public Comment Period** |
| **8:10 am** | **K State Report Review & Discussion – Trisha Moore** |
| **9:45 am** | **Other Business** |
| **10:00 am** | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

Public Works & Utilities Department
Stormwater Management Division

# Stormwater Advisory Board (SWAB)

June 12, 2015

8:00am – 10:00am

**W.A.T.E.R Center**

## Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Review Minutes from March 13, 2015** |
| **8:02 am** | **Public Comment Period** |
| **8:10 am** | **Offsite BMP Program** |
| | ***ACTION:*** **Accept the KSU technical report as presented.** |
| | ***ACTION:*** **1 Accept the KDHE required 2/1 sediment ratio** |
| | **2 Accept the program as designed with the ability to replace 100% of all no-till fields, if necessary, every five years** |
| | **3 For the Director of Public Works & Utilities to determine an annual fee per acre to participate in the program** |
| | **4 For City staff to develop an implementation plan and formal policy statement for inclusion in the Stormwater Manual, for SWAB review, to move the program forward for City Council approval.** |
| **9:45 am** | **Other Business** |
| **10:00 am** | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

Public Works & Utilities Department
Stormwater Management Division

# Stormwater Advisory Board (SWAB)

September 11, 2015

8:00am – 10:00am

**W.A.T.E.R. Center**

## Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Review Minutes from May 8th & June 12th, 2015** |
| **8:02 am** | **Public Comment Period** |
| **8:10 am** | **Offsite BMP Program** |
| | ***ACTION 1:*** **Review final summary of BMP Program (See Attached)** |
| | ***ACTION 2:*** **Approve recommendation to send program to Alan King for his approval** |
| **9:15 am** | **Other Business** |
| **9:30 am** | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

Public Works & Utilities Department
Stormwater Management Division

Stormwater Advisory Board (SWAB)

**Special Meeting**

September 30, 2015

8:00am – 10:00am

**W.A.T.E.R. Center**

Agenda

| | |
|---|---|
| **8:00 am** | **Welcome and Call to Order – Chris Bohm – SWAB Chair** |
| **8:01 am** | **Swearing in of SWAB Members** |
| **8:10 am** | **Review/Approve Recommendations of Offsite BMP Program Framework, and vote to move the item forward to Alan King** |
| | **Adjournment** |

Please direct questions, comments, and/or suggestions related to improving this meeting to:
Alan King, Director of Public Works & Utilities at 316-268-4422 or by email at aking@wichita.gov

**SWAB Meeting** | **Friday,January 9, 2015** | **8:00am**

W.A.T.E.R. Center

| | PLEASE SIGN IN BESIDE YOUR NAME | TIME |
|---|---|---|
| **Board Members** | | |
| **1.** Greg Allison | | 8:10 |
| **2.** Richard Basore | | 8:15 |
| **3.** Chris Bohm | | 7:55 |
| **4.** Hoyt Hillman | | 7:55 |
| **5.** Don Kirkland | | |
| **6.** David Leyh | | 8:05 |
| **7.** Mitch Mitchell | | |
| **8.** Gary Oborny | | 7:45 AM |
| **9.** Joseph Pajor | | |
| **10.** Jim Weber | | |
| **City of Wichita Staff** | | |
| **11.** Dale Goter, CMO | | |
| **12.** Jim Hardesty, Stormwater | | 7:45 |
| **13.** Don Henry, PW&U Asst Director | | |
| **14.** Scott Lindebak, Stormwater | | |
| **15.** Mark Hall, Stormwater | | 7:45 |
| **16.** Joe Hickle, Stormwater | | 7:45 |

| ***GUESTS: Please PRINT your name below*** | *Sign in below* |
|---|---|
| **17.** Joshua Moore | |
| **18.** Josh Golka - PEC | |
| **19.** Rachel Evans - PEC | |
| **20.** Tom Stokes - KDHE | |
| **21.** Ron Carter - KSRE | |
| **22.** | |
| **23.** | |
| **24.** | |
| **25.** | |

**SWAB Meeting** | **Friday, March 13, 2015** | **8:00am**

W.A.T.E.R. Center

| | | *PLEASE SIGN IN BESIDE YOUR NAME* | *TIME* |
|---|---|---|---|
| | Board Members | | |
| **1.** | Greg Allison | | 8:00 |
| **2.** | Richard Basore | | 8:00 |
| **3.** | Chris Bohm | | 7:50 |
| **4.** | Hoyt Hillman | | |
| **5.** | Don Kirkland | | 8:00 |
| **6.** | David Leyh | | 8:10 |
| **7.** | Mitch Mitchell | | 9:00 |
| **8.** | Gary Oborny | | 7:55 |
| **9.** | Joseph Pajor | Present | |
| **10.** | Jim Weber | | 8:00 |
| | City of Wichita Staff | | |
| **11.** | Dale Goter, CMO | | |
| **12.** | Jim Hardesty, Stormwater | | |
| **13.** | Don Henry, PW&U Asst Director | | |
| **14.** | Scott Lindebak, Stormwater | | |
| **15.** | Mark Hall, Stormwater | | |
| **16.** | Joe Hickle, Stormwater | | |

| ***GUESTS: Please PRINT your name below*** | *Sign in below* |
|---|---|
| **17.** Trisha Moore | |
| **18.** Matt Unrah - KWO | |
| **19.** SCOTT LINDEBAK | |
| **20.** Karma Mason | |
| **21.** Gary Mason | |
| **22.** Sandy + John McDonald | |
| **23.** DANIEL Schrant | |
| **24.** Ron CRAMER | |
| **25.** Tom Stiles | |

Name May 8th

John Covey *
Ron Raiser *
Fy Oley
Hoyt Hillman
Don Kirkland
Chris Bolin
Joe Hickle
Jim Hardesty
Tom Stiles *
Mike Tate *
Trish Moore *
Katie Miller *
Mary Hall
Don Henry
Joseph T. Pajer
John & Sandy McDonald *
Daniel Schrant *
Josh Golka *
Jim Weber
[illegible]
Doug Leyh

**SWAB Meeting** | **Friday, June 12, 2015** | **8:00am**

W.A.T.E.R. Center

| | | *PLEASE SIGN IN BESIDE YOUR NAME* | *TIME* |
|---|---|---|---|
| | Board Members | | |
| **1.** | Greg Allison | | |
| **2.** | Richard Basore | | 8:05 |
| **3.** | Chris Bohm | | 8:00 |
| **4.** | Hoyt Hillman | | 7:55 |
| **5.** | Don Kirkland | | |
| **6.** | David Leyh | | |
| **7.** | Mitch Mitchell | | 8:00 |
| **8.** | Gary Oborny | | 8:00 |
| **9.** | Joseph Pajor | | 7:55 |
| **10.** | Jim Weber | | 7:56 |
| | City of Wichita Staff | | |
| **11.** | Don Henry, PW&U Asst Director | | |
| **12.** | Jim Hardesty, Stormwater | | |
| **13.** | Joe Hickle, Stormwater | | |
| **14.** | Mark Hall, Stormwater | | 7:59 |
| **15.** | | | |
| **16.** | | | |

| ***GUESTS: Please PRINT your name below*** | | *Sign in below* |
|---|---|---|
| **17.** | Ken Gerber | |
| **18.** | Daniel Schrant | |
| **19.** | John Covey | |
| **20.** | Tom Stiles | |
| **21.** | Mike Tate | |
| **22.** | Ted Francis | |
| **23.** | Scott Lindebak | |
| **24.** | | |
| **25.** | | |

**SWAB Meeting** | **Friday, September 11, 2015** | **8:00am**

W.A.T.E.R. Center

| | *PLEASE SIGN IN BESIDE YOUR NAME* | *TIME* |
|---|---|---|
| **Board Members** | | |
| **1.** Greg Allison | | |
| **2.** Richard Basore | | 8:09 |
| **3.** Chris Bohm | | |
| **4.** Hoyt Hillman | Hoyt Hillman | 7:50 AM |
| **5.** Don Kirkland | | |
| **6.** David Leyh | | 8:[illegible] |
| **7.** Mitch Mitchell | | |
| **8.** Gary Oborny | | 8:05 |
| **9.** Joseph Pajor | | 7:58 AM |
| **10.** Jim Weber | | |
| **City of Wichita Staff** | | |
| **11.** Don Henry, PW&U Asst Director | | |
| **12.** Jim Hardesty, Stormwater | | |
| **13.** Joe Hickle, Stormwater | Joe Hickle | 7:30 |
| **14.** Mark Hall, Stormwater | | 7:50 |
| **15.** | | |
| **16.** | | |

| ***GUESTS: Please PRINT your name below*** | *Sign in below* |
|---|---|
| **17.** Daniel Schrant | |
| **18.** Tom Parker | |
| **19.** John Covey | |
| **20.** | |
| **21.** | |
| **22.** | |
| **23.** | |
| **24.** | |
| **25.** | |

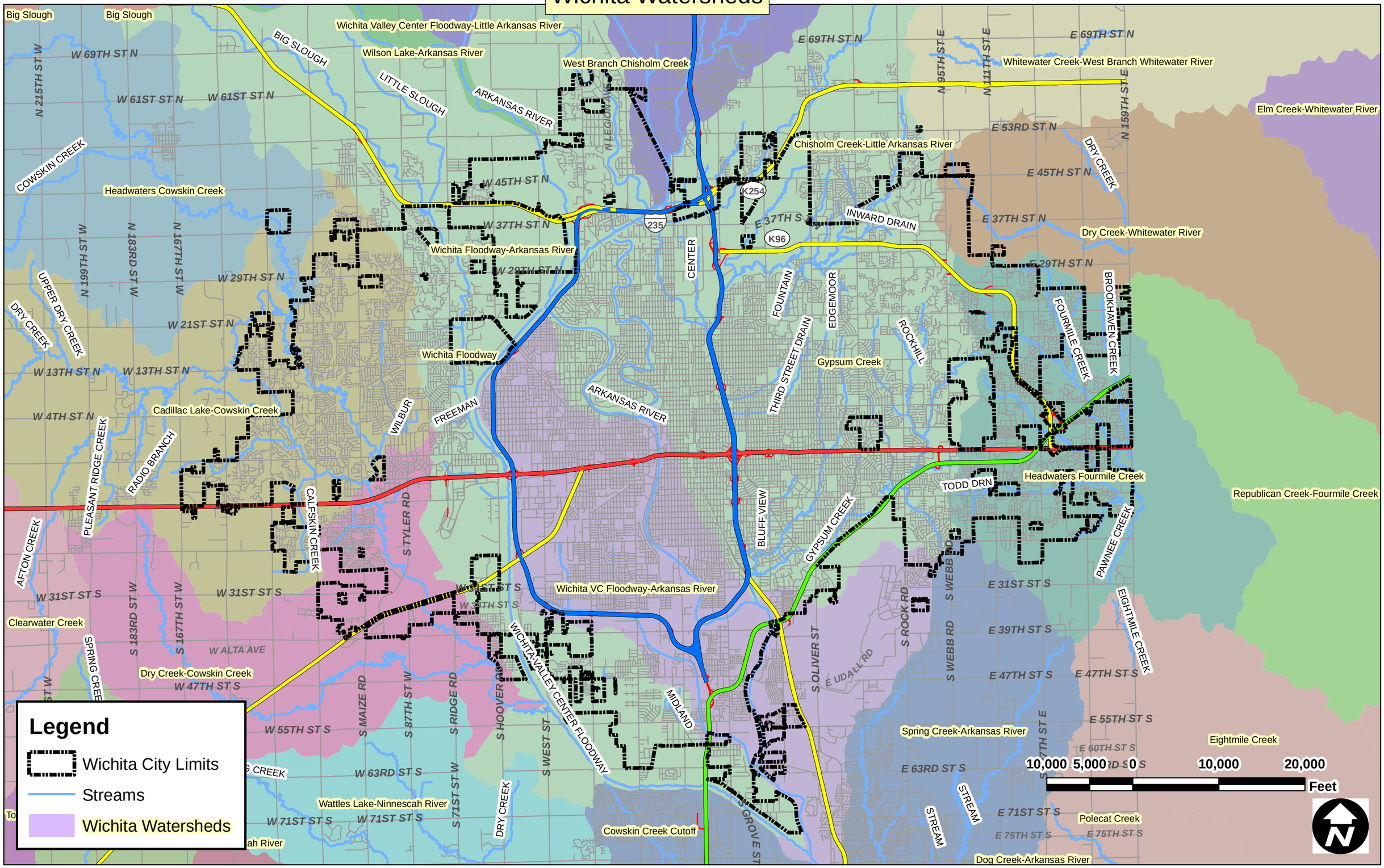
**SWAB Meeting** | **Wednesday, September 30, 2015** | **8:00am**

W.A.T.E.R. Center

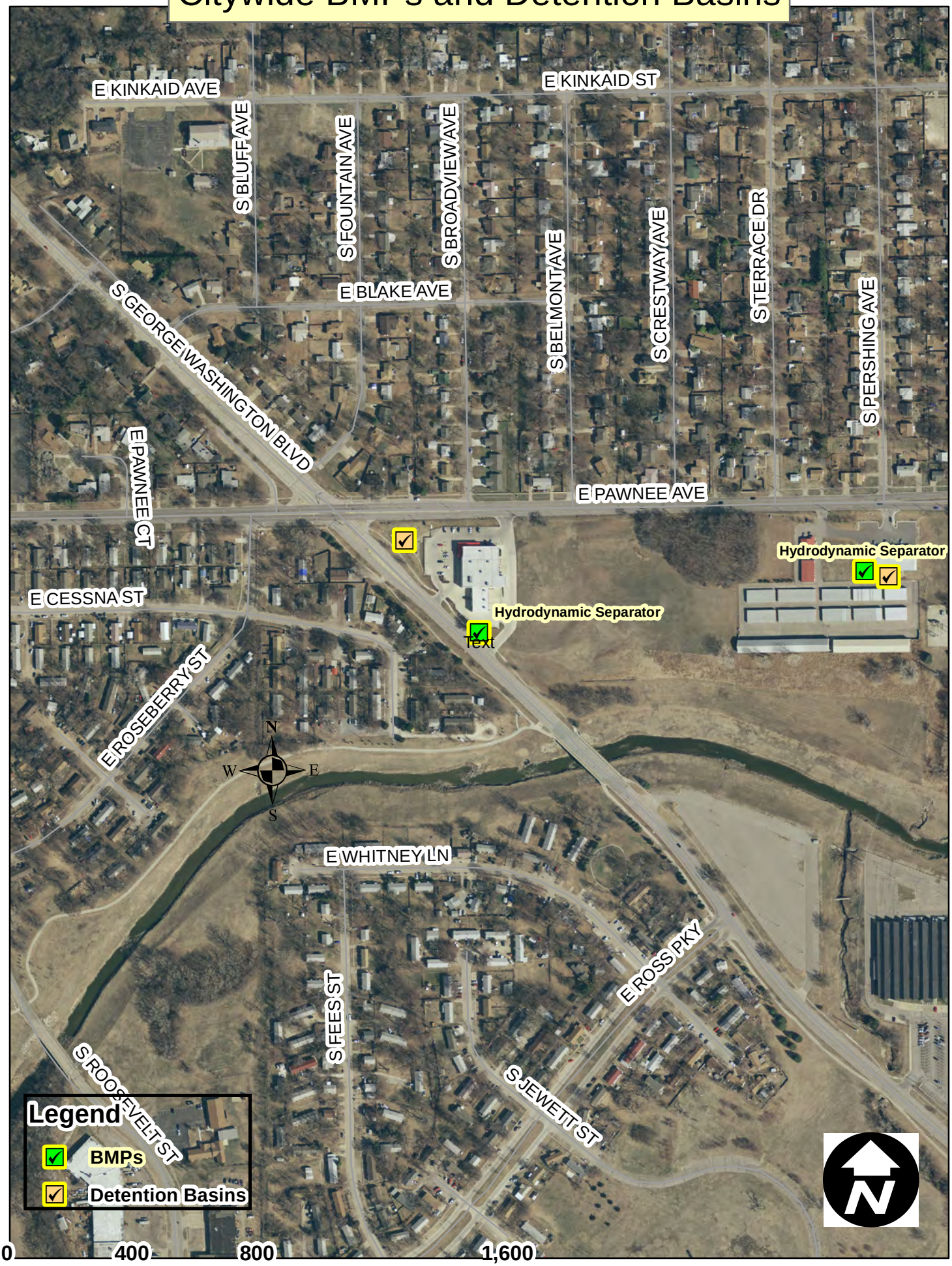
| | | PLEASE SIGN IN BESIDE YOUR NAME | TIME |
|---|---|---|---|
| | **Board Members** | | |
| 1. | Greg Allison | | 8:00 |
| 2. | Richard Basore | | 8:02 |
| 3. | Chris Bohm | | 7:55 |
| 4. | Hoyt Hillman | | |
| 5. | Don Kirkland | | 7:52 |
| 6. | David Leyh | | 8:09 |
| 7. | Mitch Mitchell | | |
| 8. | Gary Oborny | | 7.47 |
| 9. | Joseph Pajor | | 7:40 |
| 10. | Jim Weber | | 8:09 |
| | **City of Wichita Staff** | | |
| 11. | Don Henry, PW&U Asst Director | | |
| 12. | Jim Hardesty, Stormwater | | 7:50 |
| 13. | Joe Hickle, Stormwater | present | |
| 14. | Mark Hall, Stormwater | | 7:50 |
| 15. | | | |
| 16. | | | |

| ***GUESTS: Please PRINT your name below*** | *Sign in below* |
|---|---|
| 17. Ron GRABER | |
| 18. Tom Stich | |
| 19. | |
| 20. | |
| 21. | |
| 22. | |
| 23. | |
| 24. | |
| 25. | |

# Wichita Watersheds



# Citywide BMPs and Detention Basins



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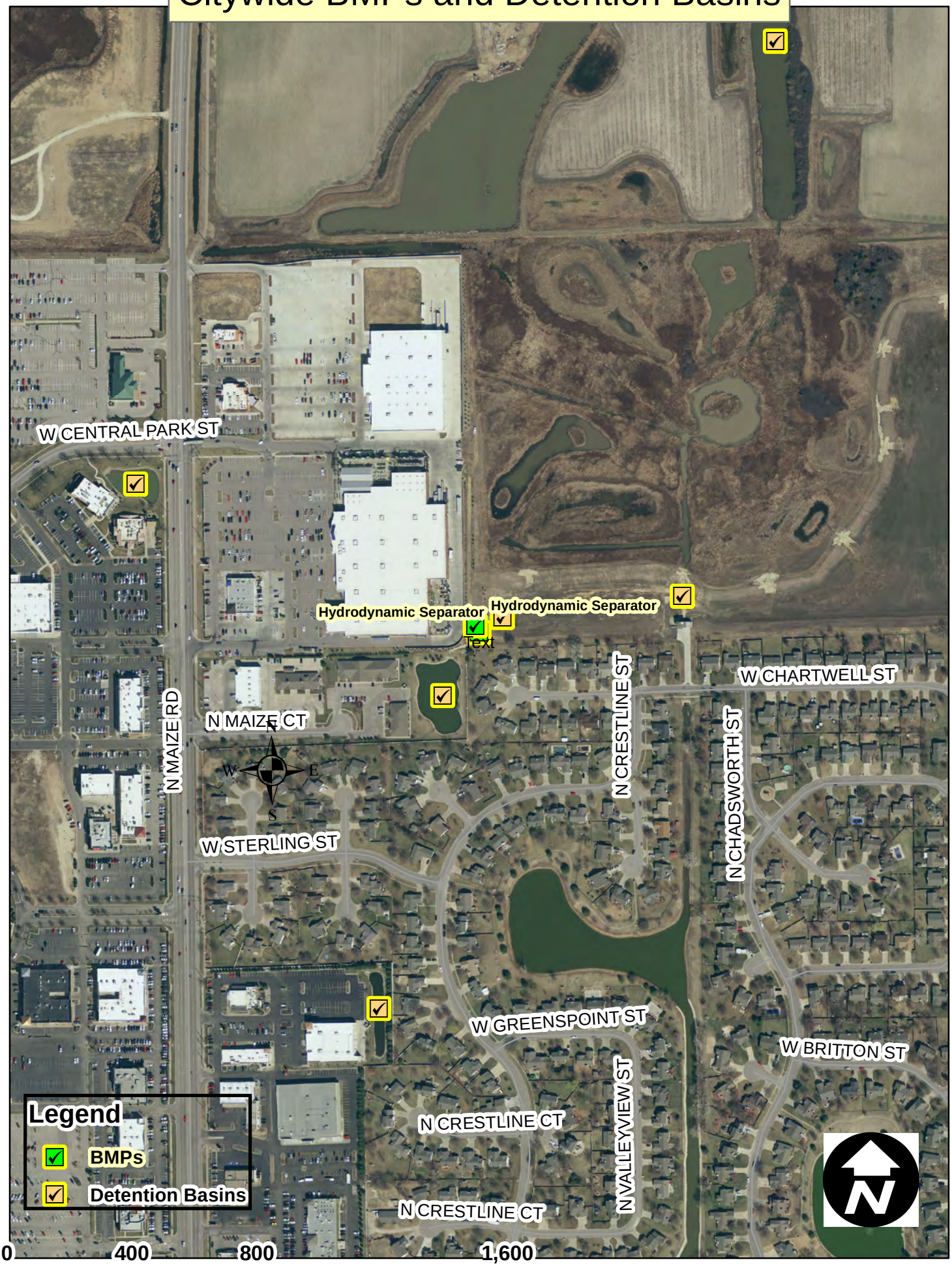

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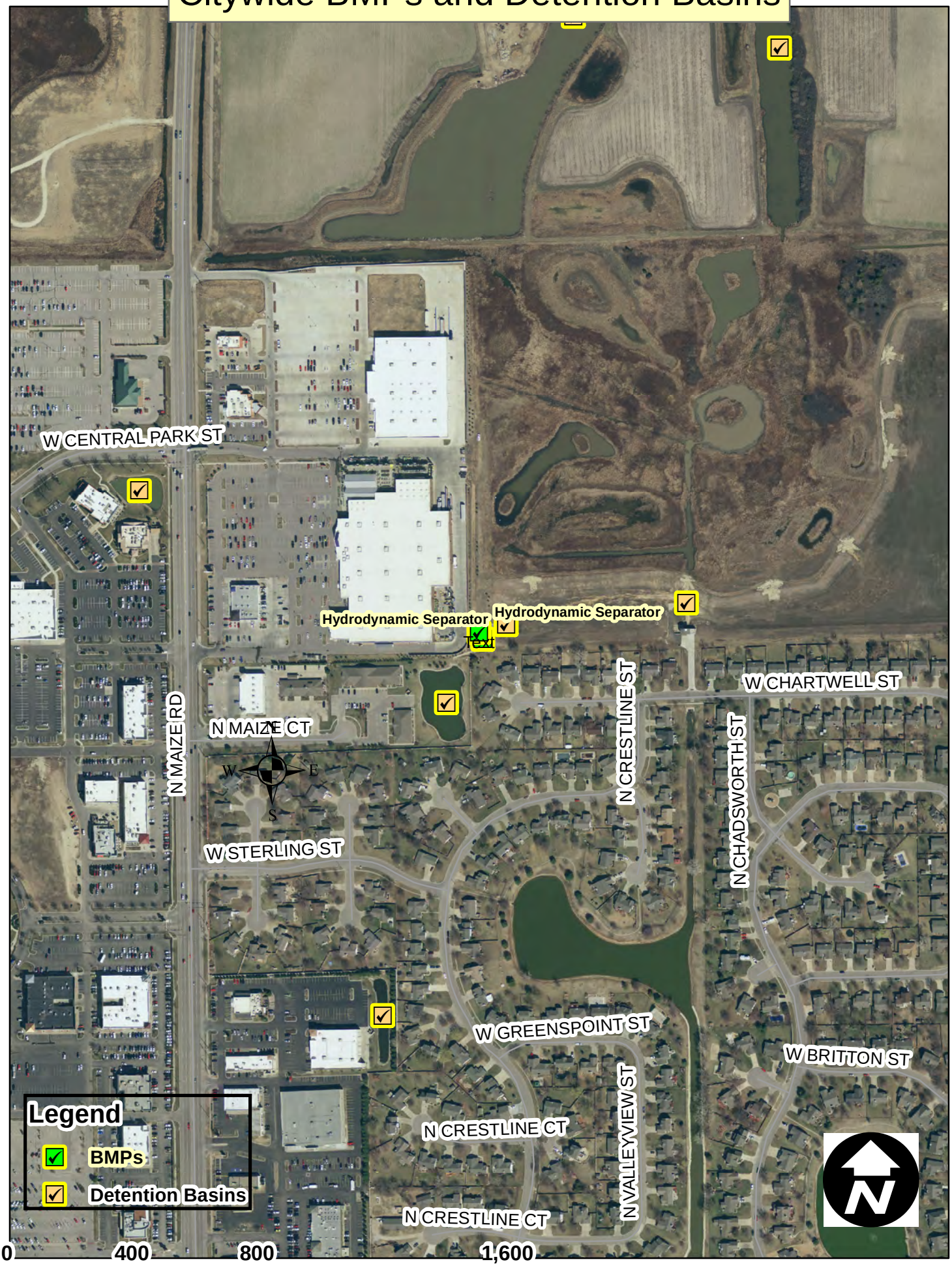

# Citywide BMPs and Detention Basins

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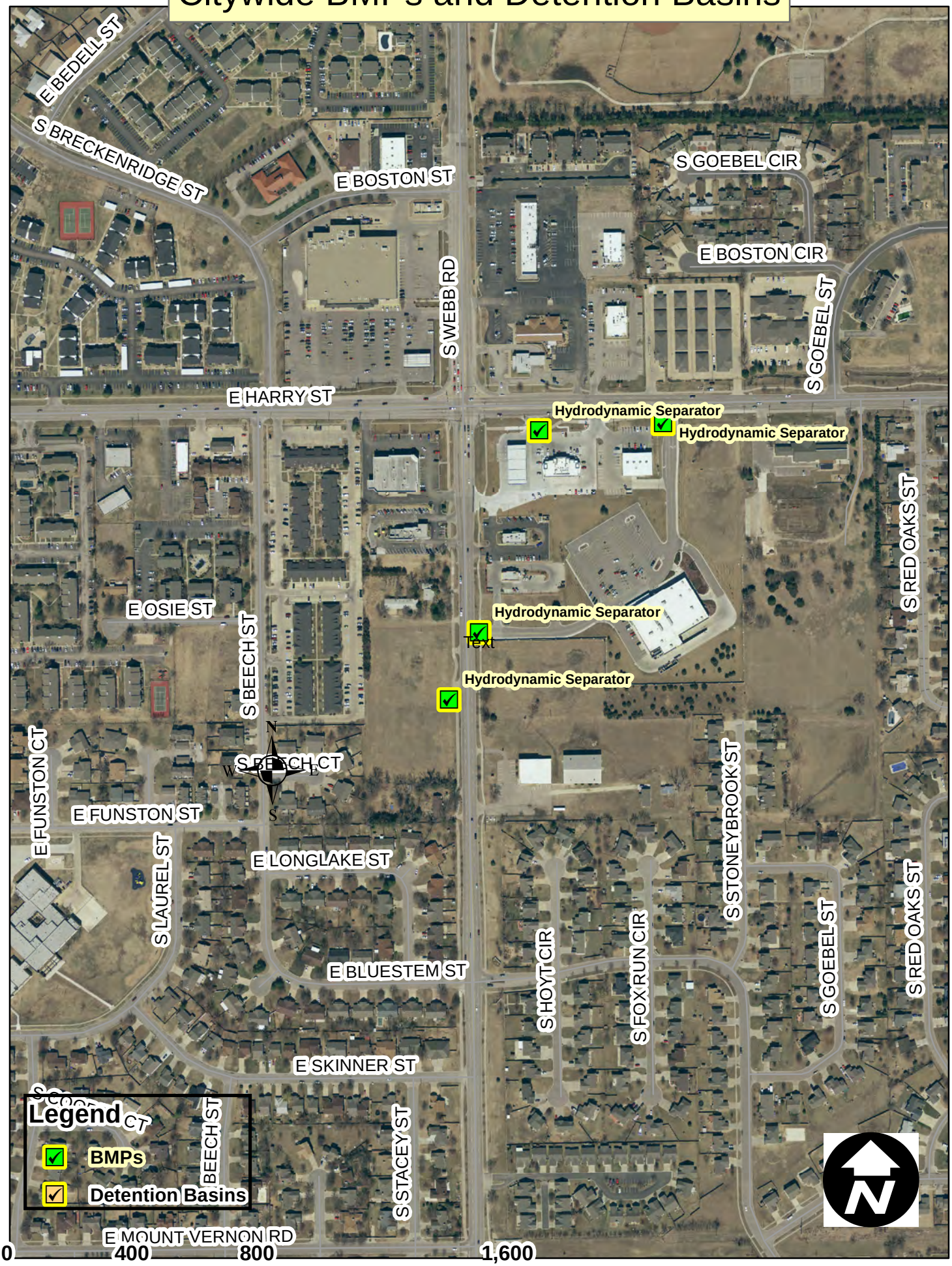

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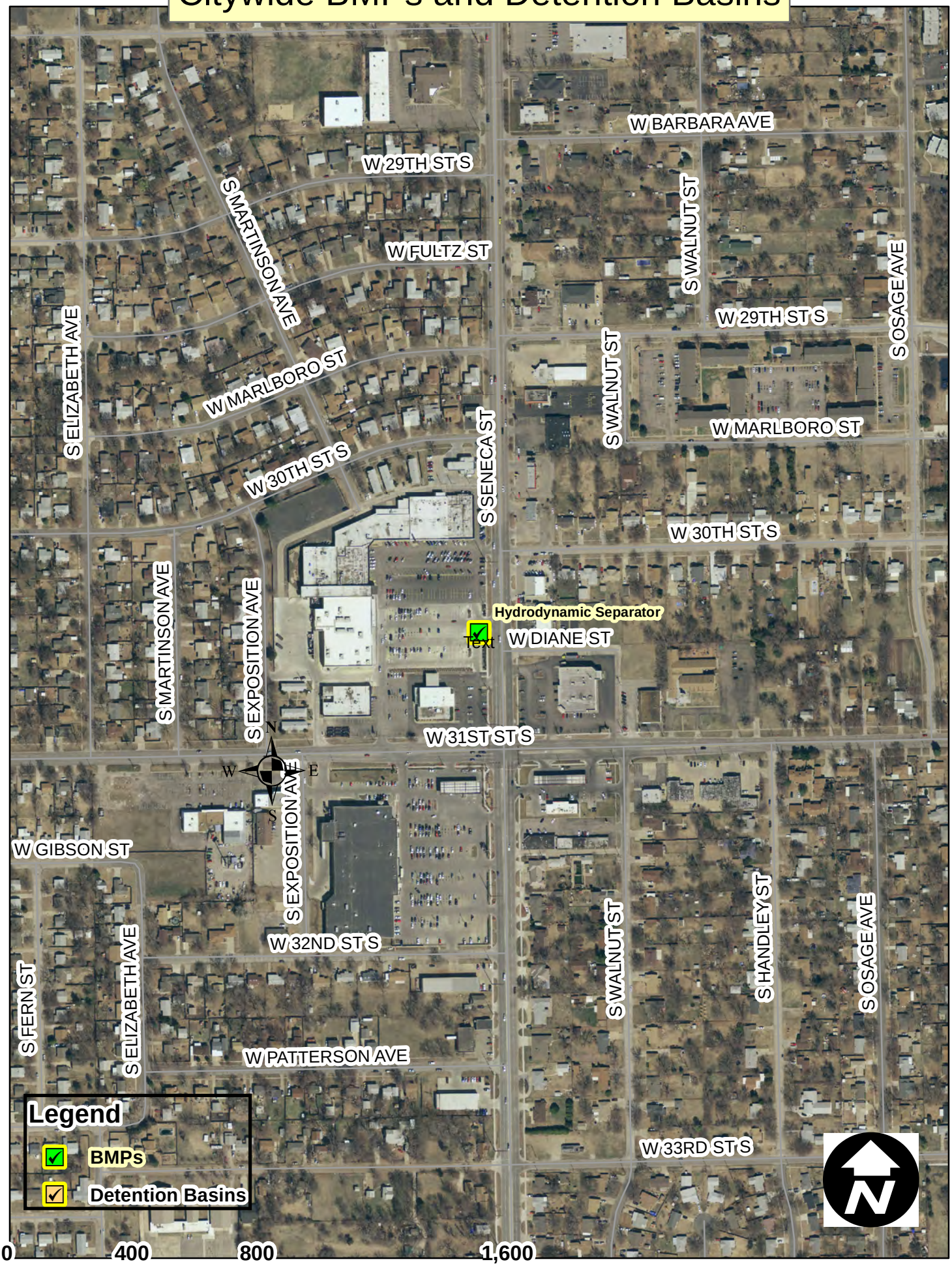

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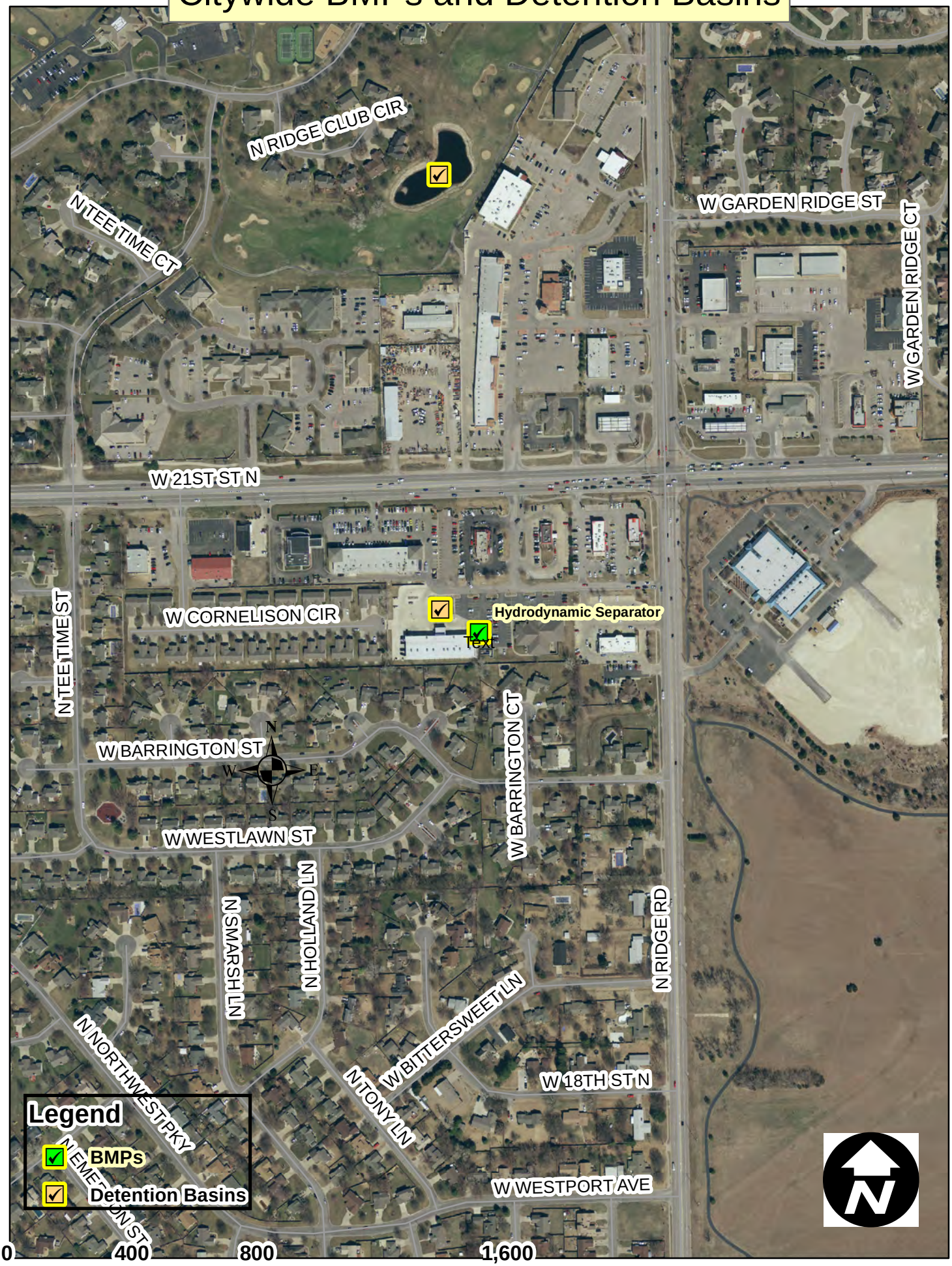

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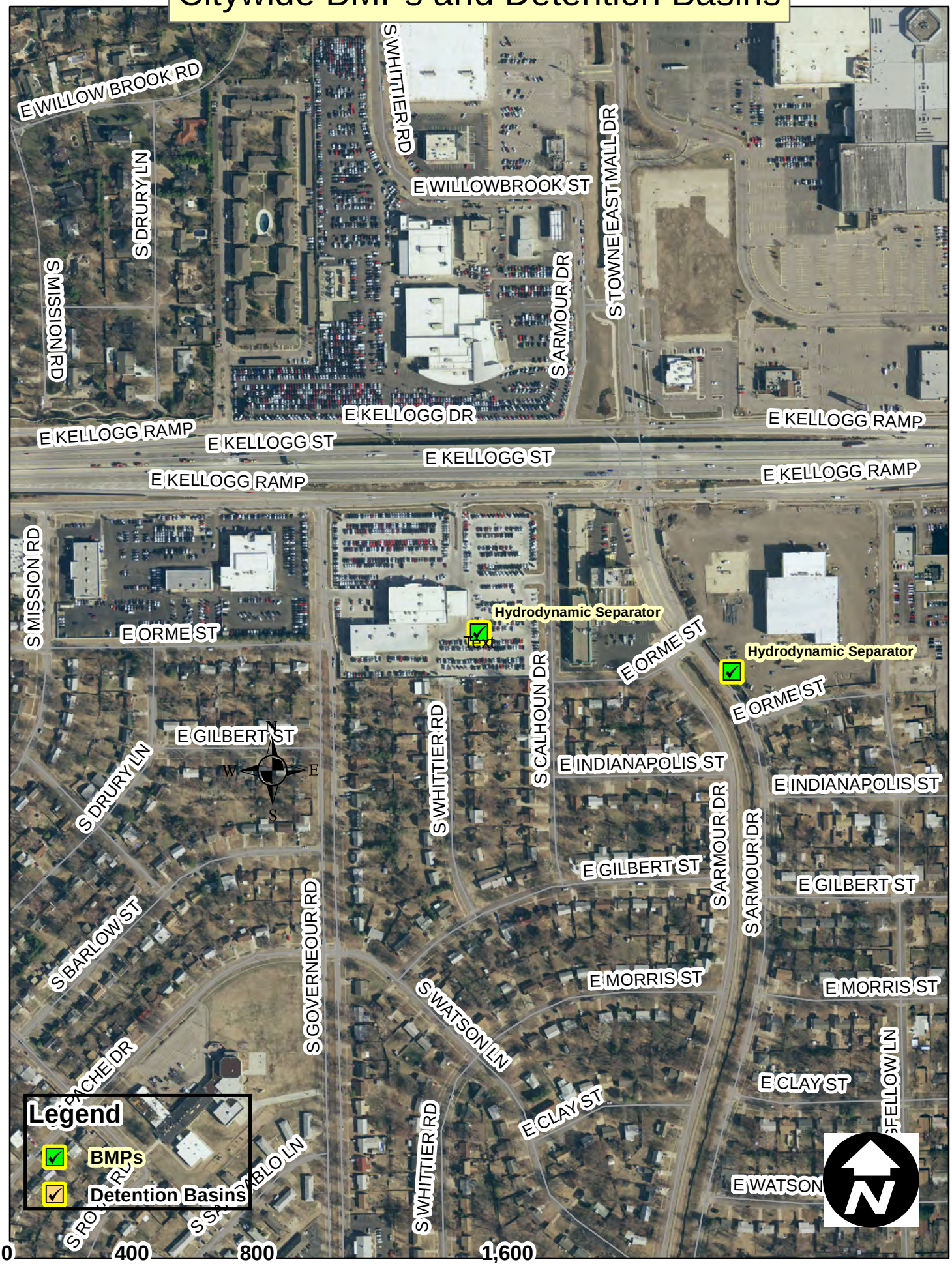

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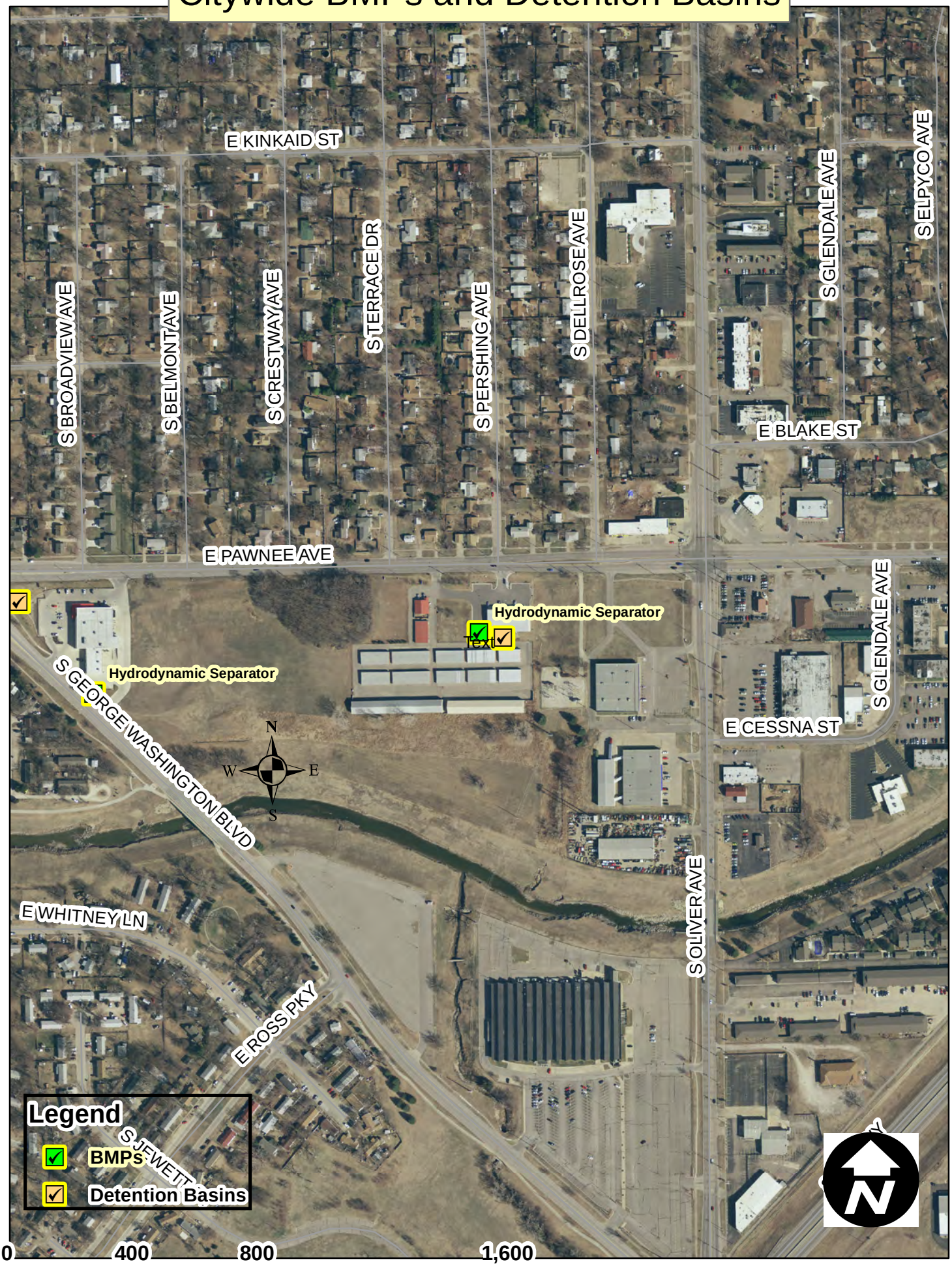

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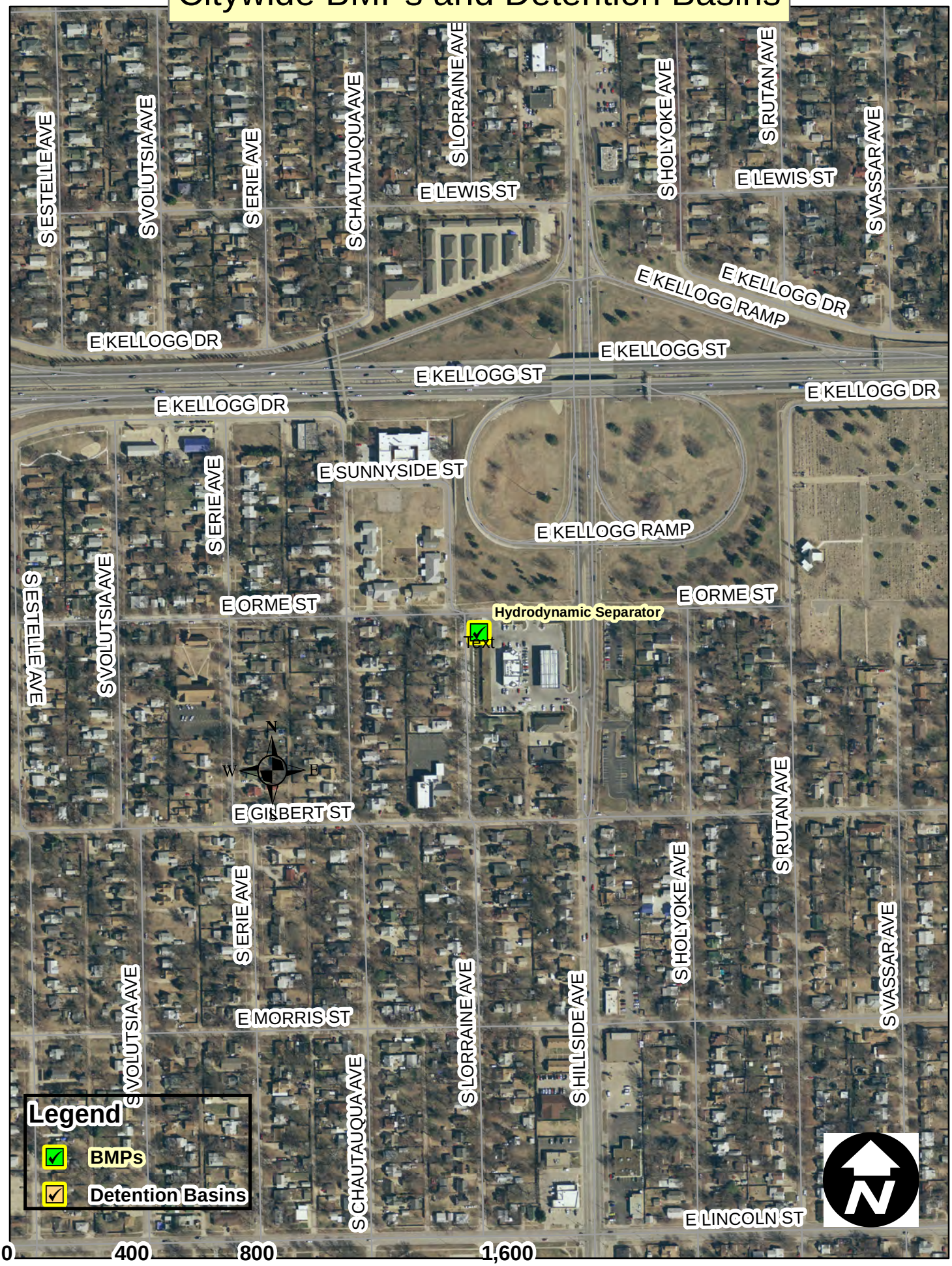

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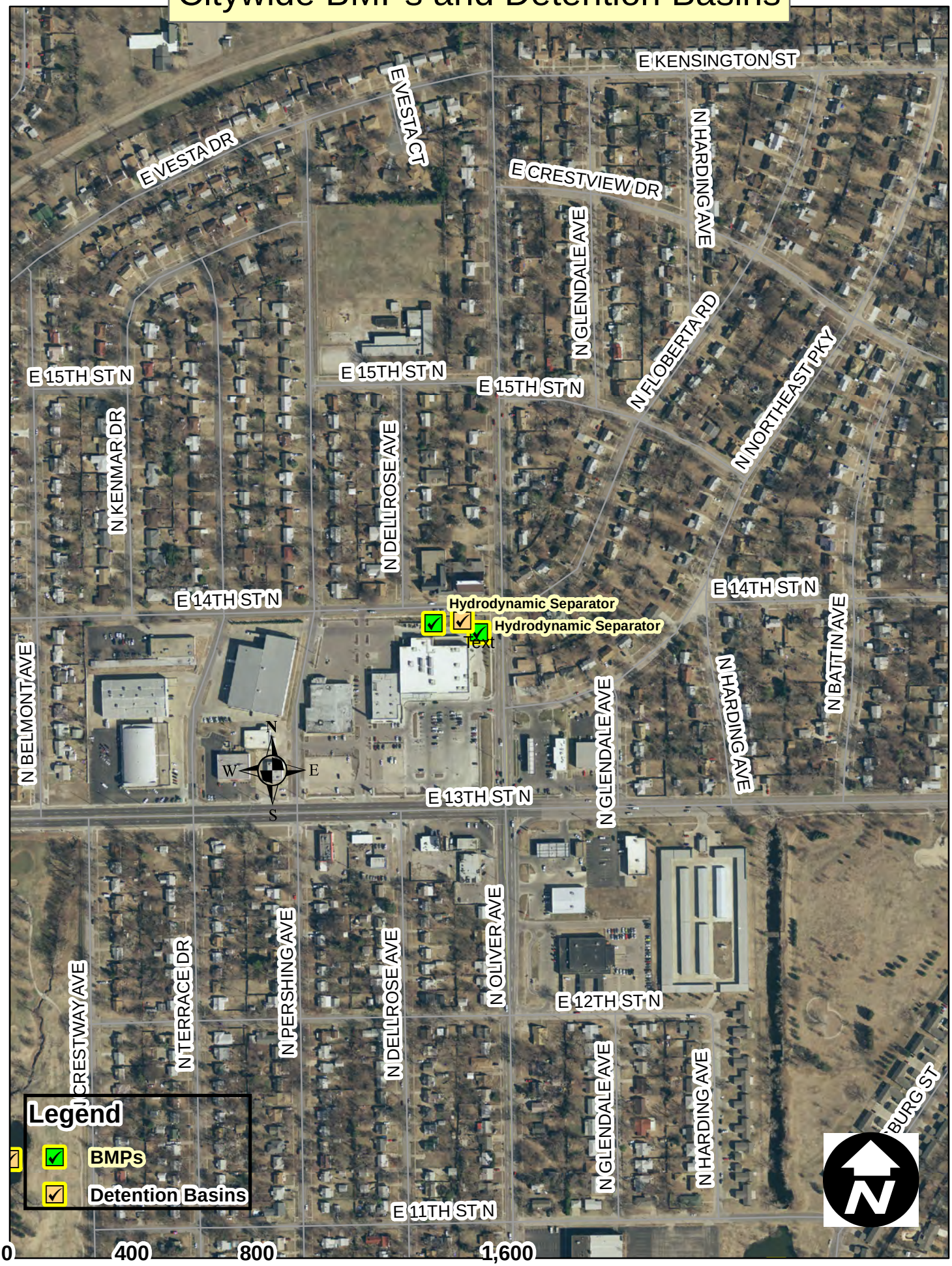

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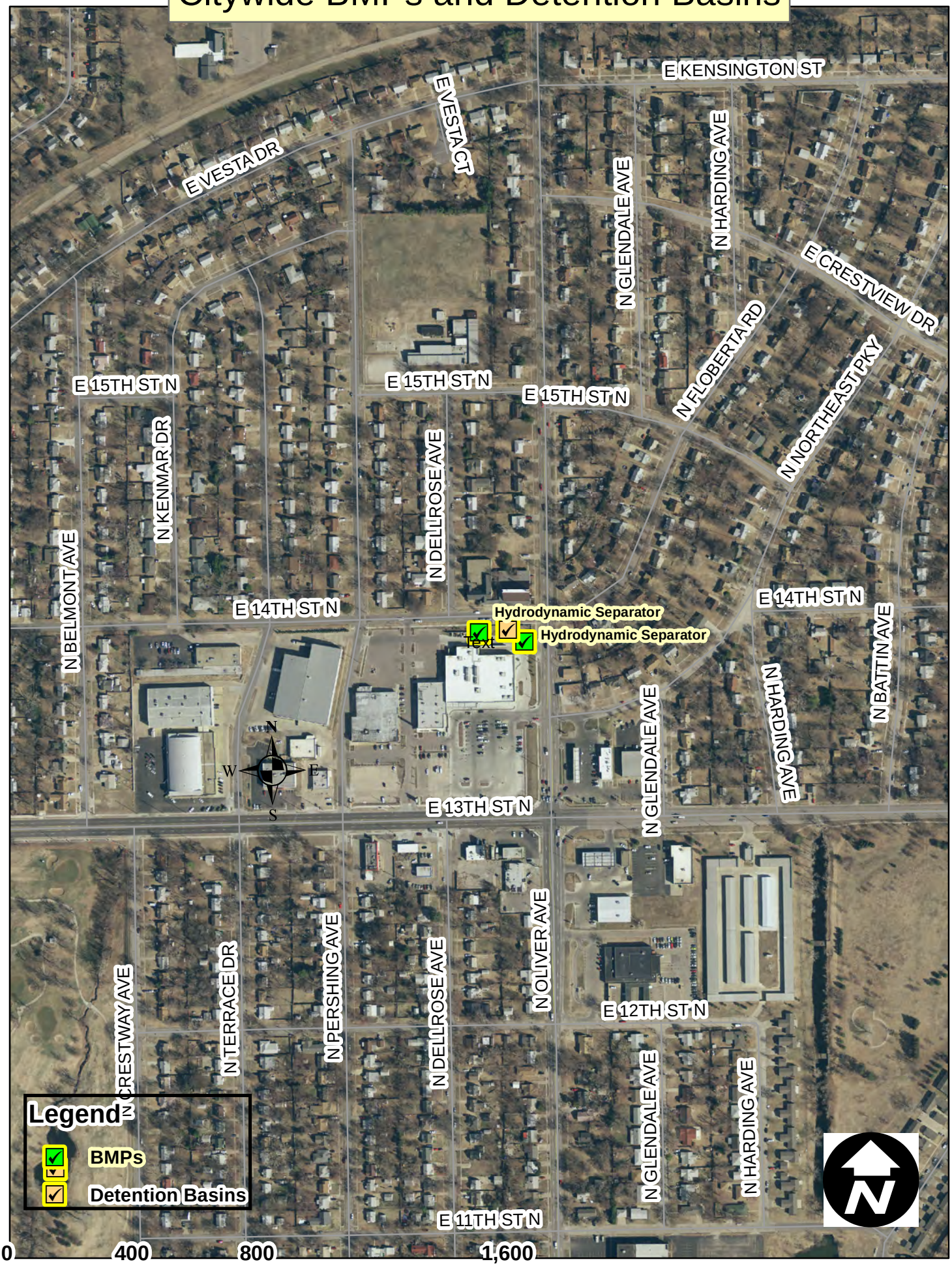

# Citywide BMPs and Detention Basins

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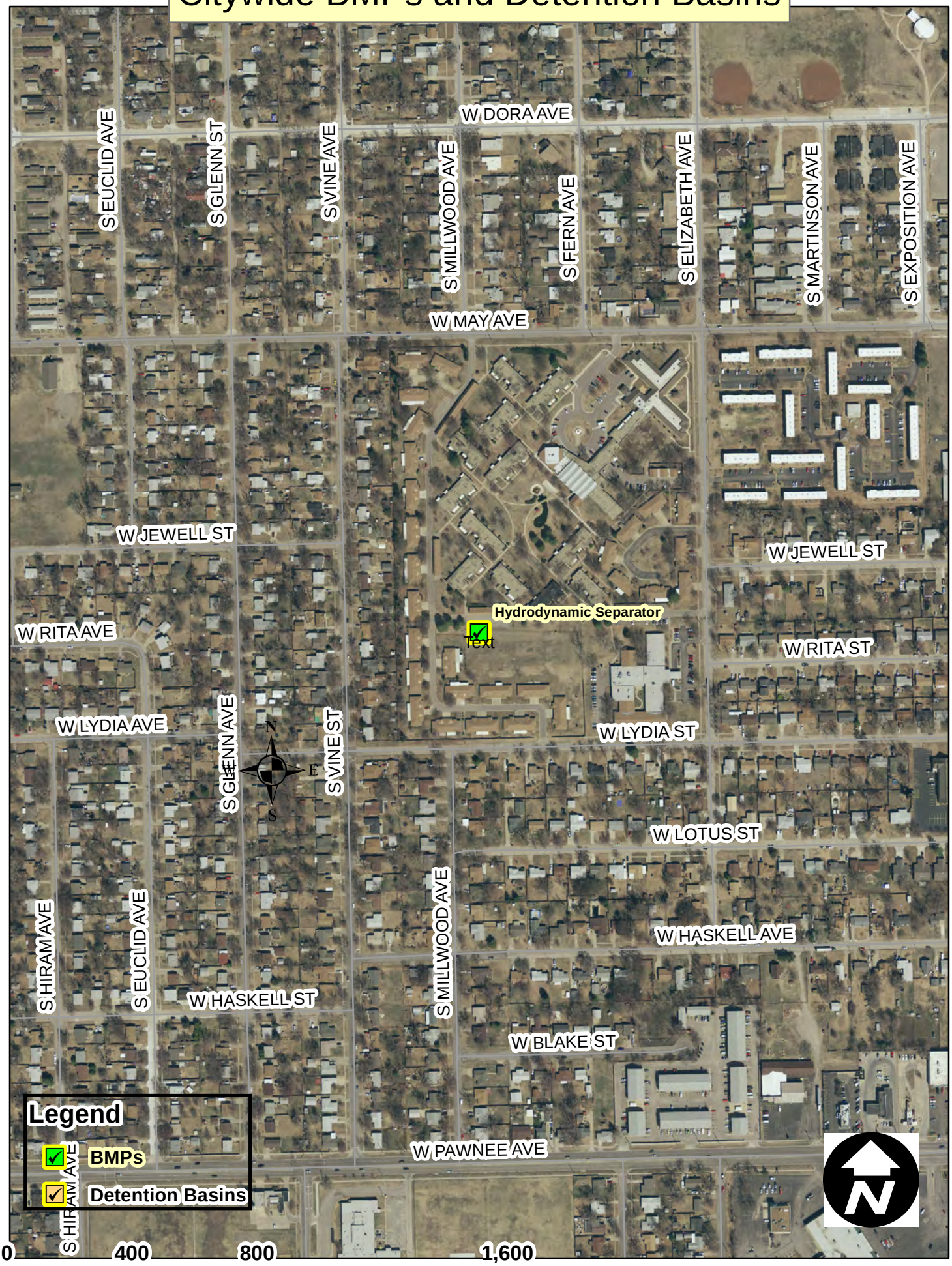

# Citywide BMPs and Detention Basins

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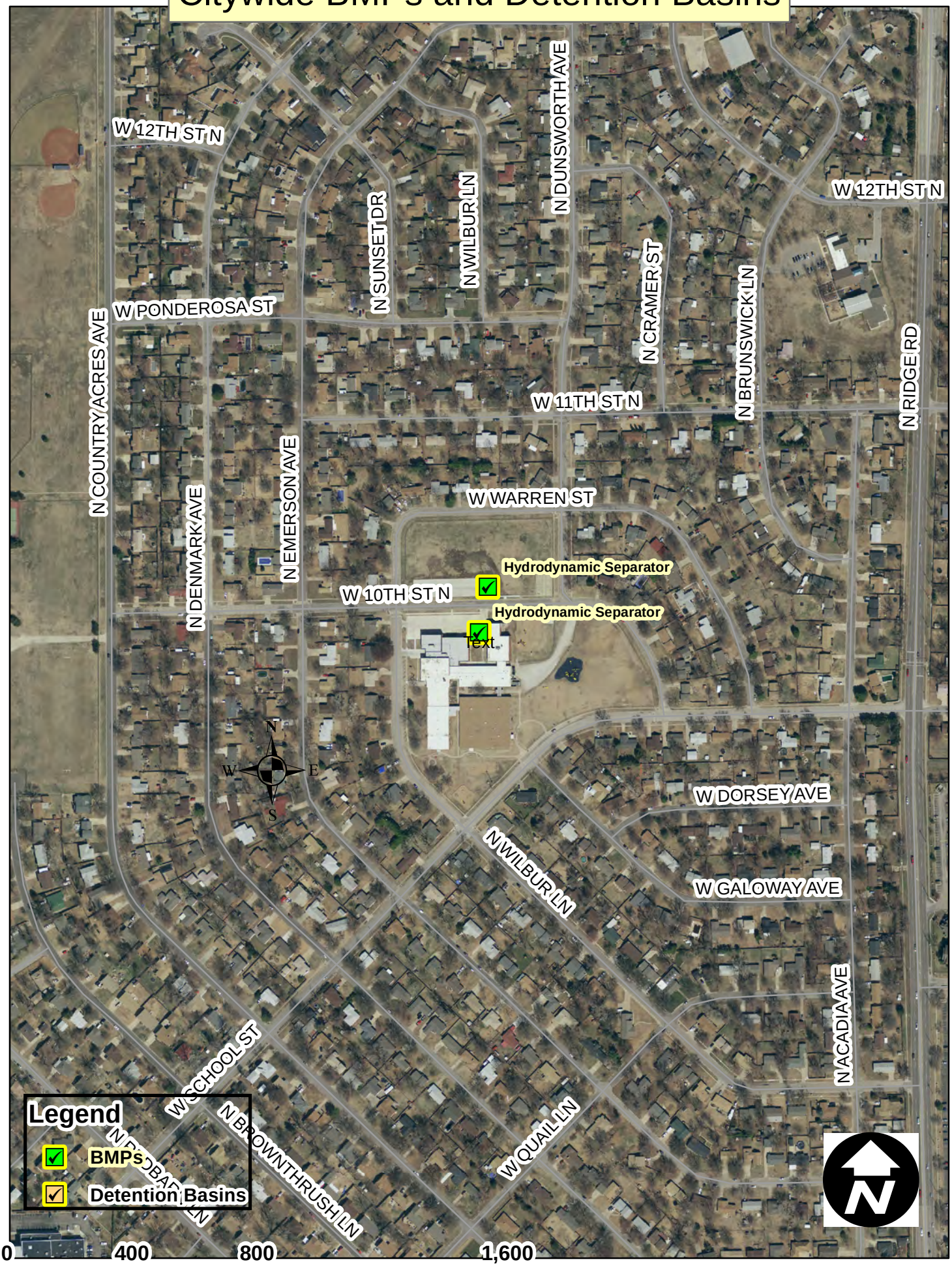

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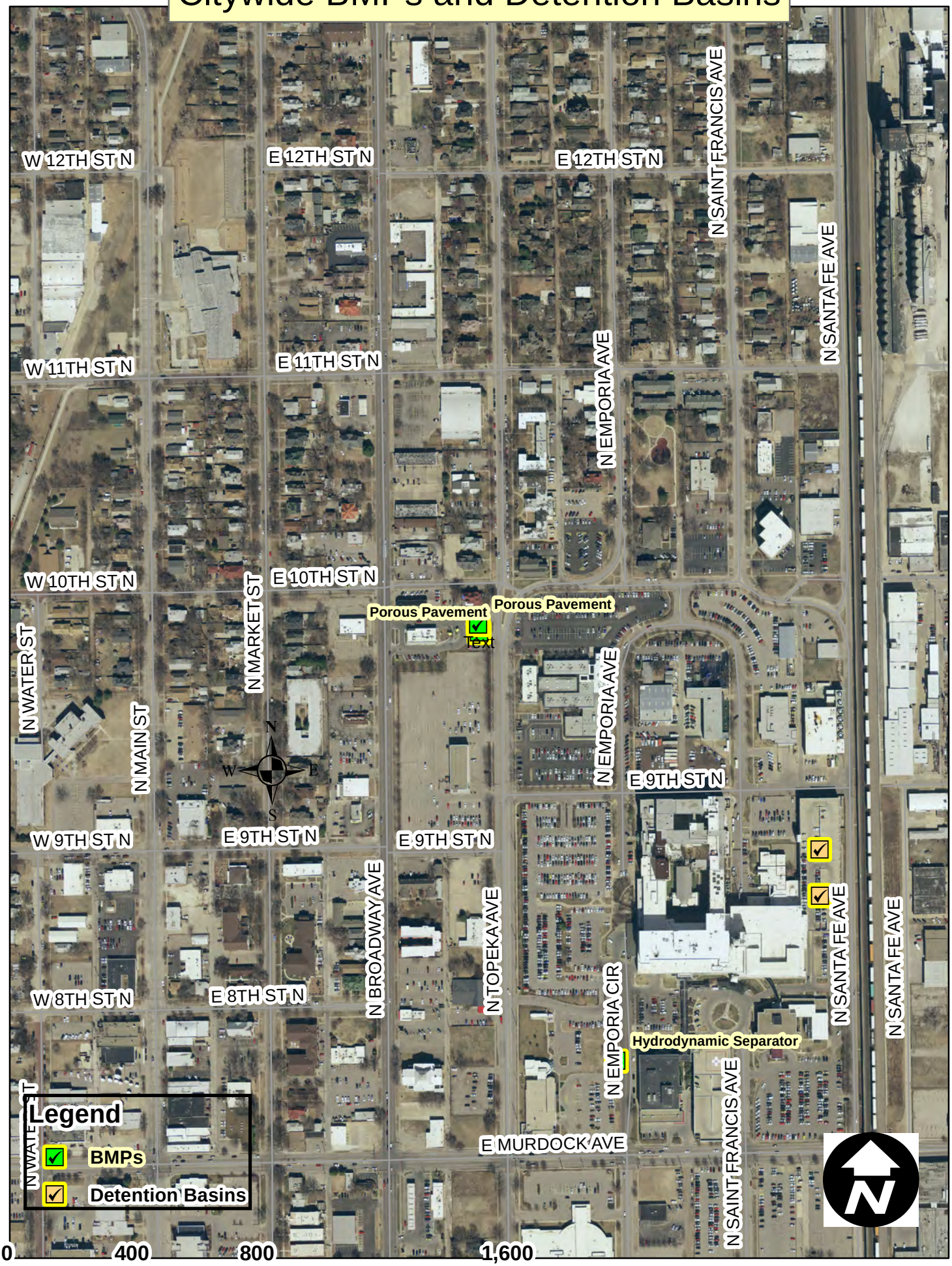

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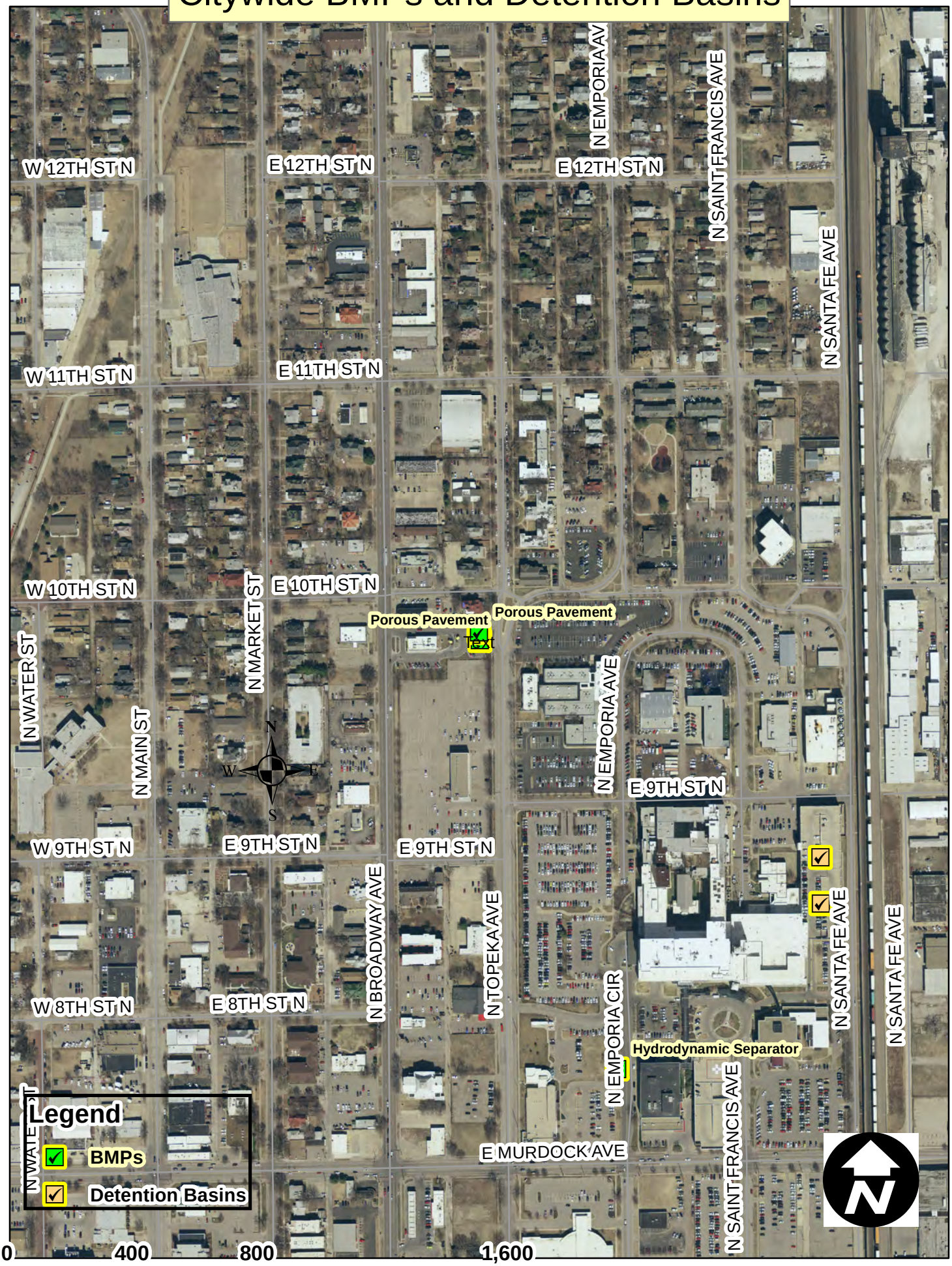

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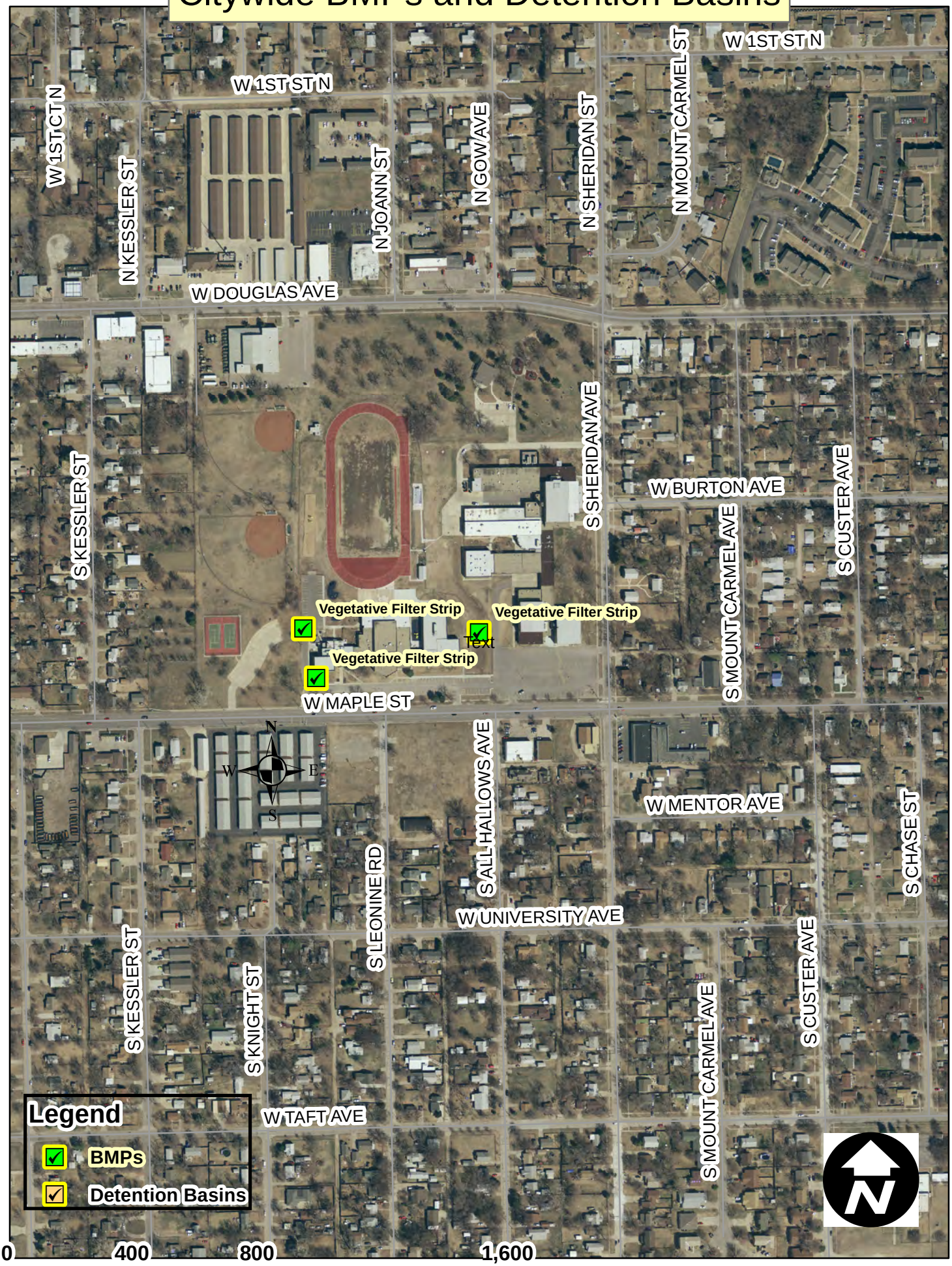

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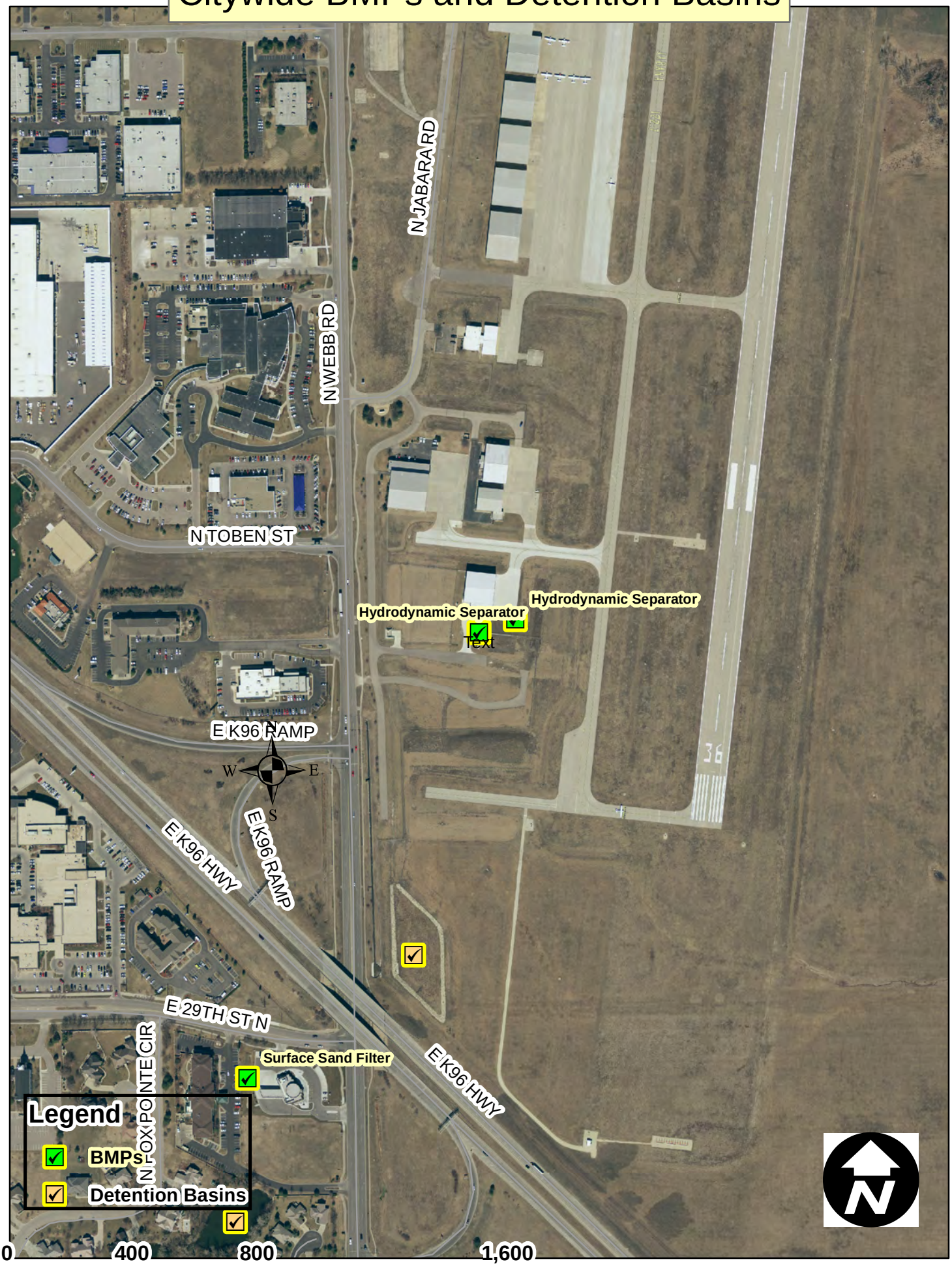

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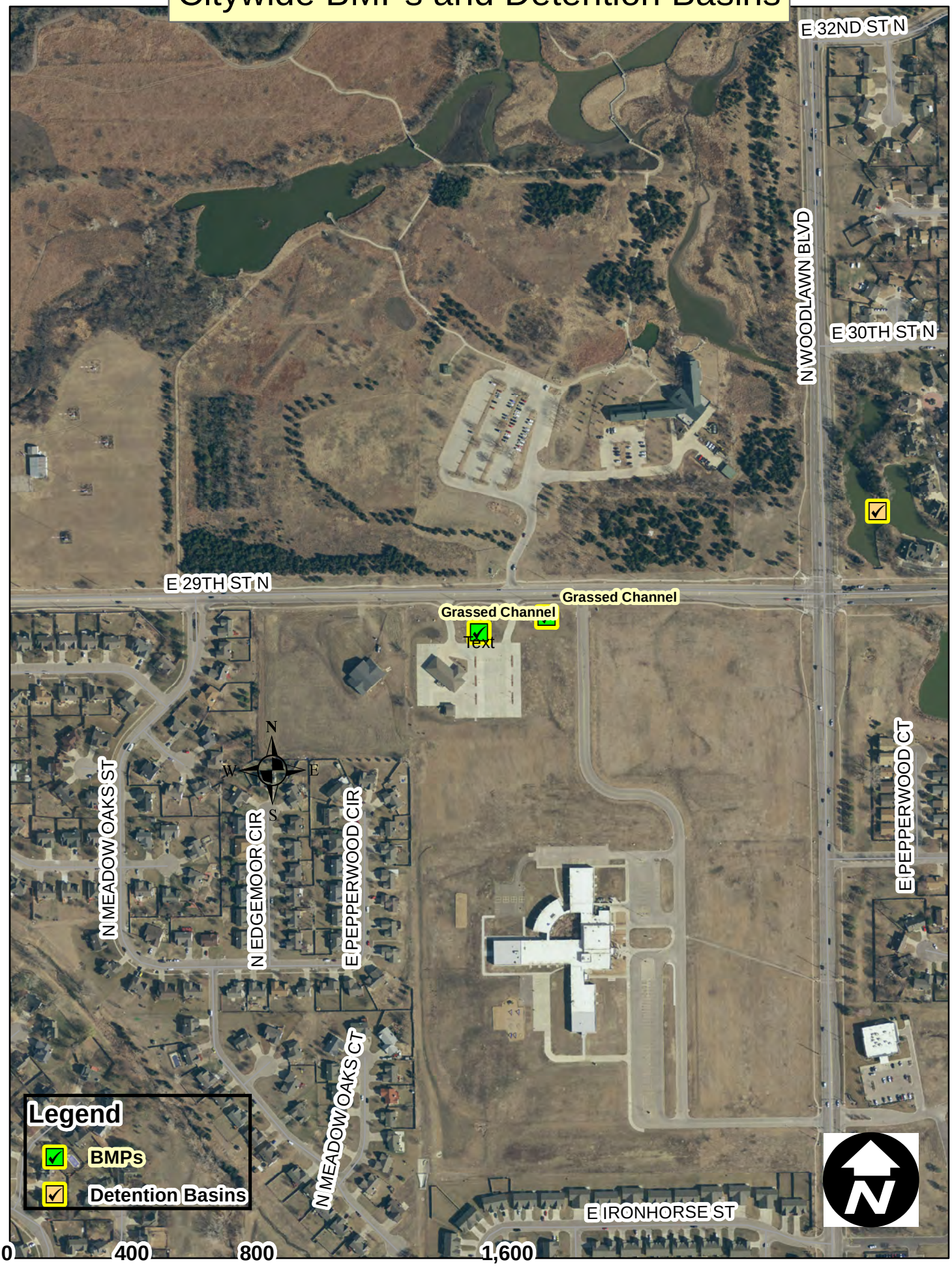

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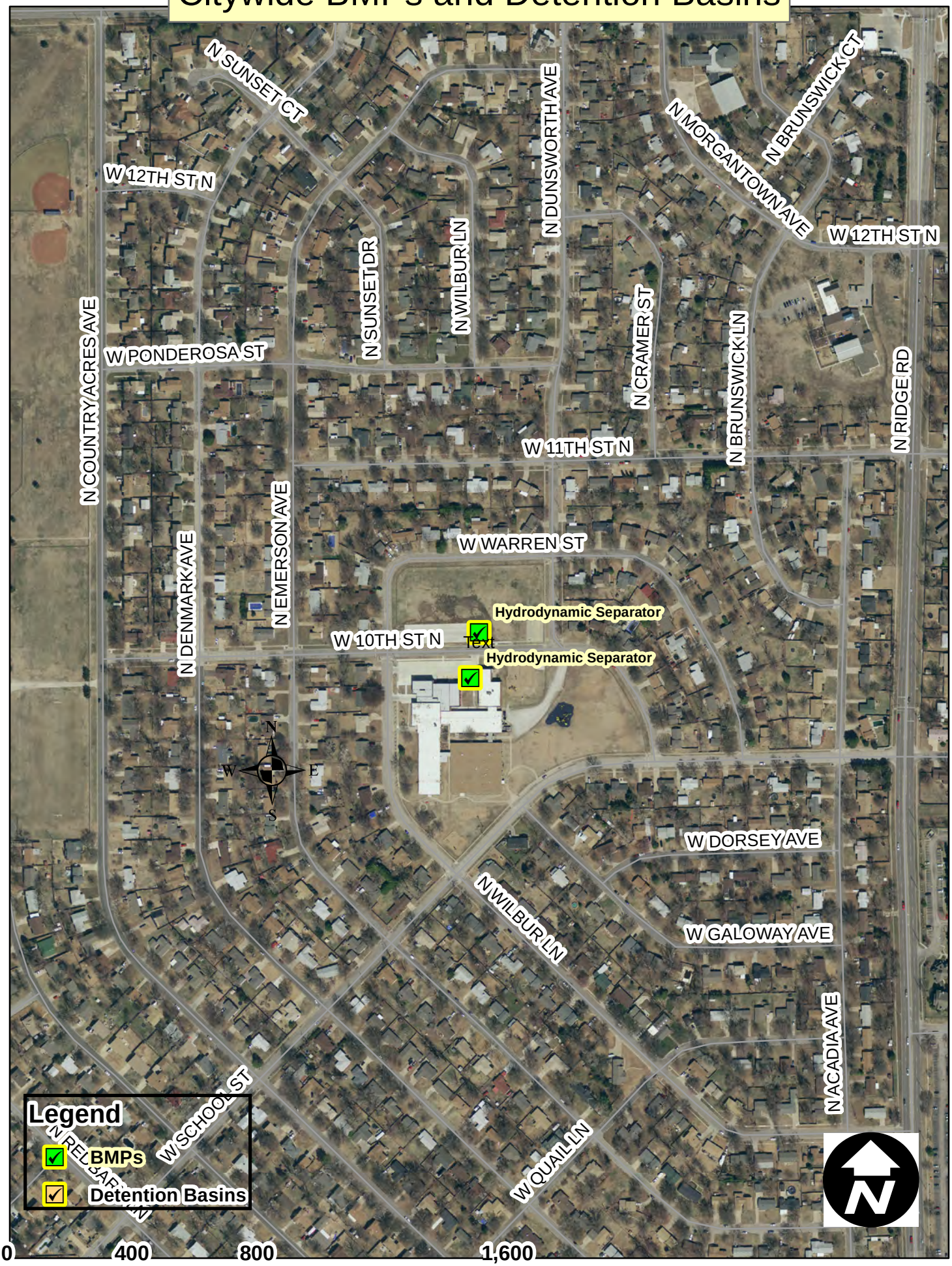

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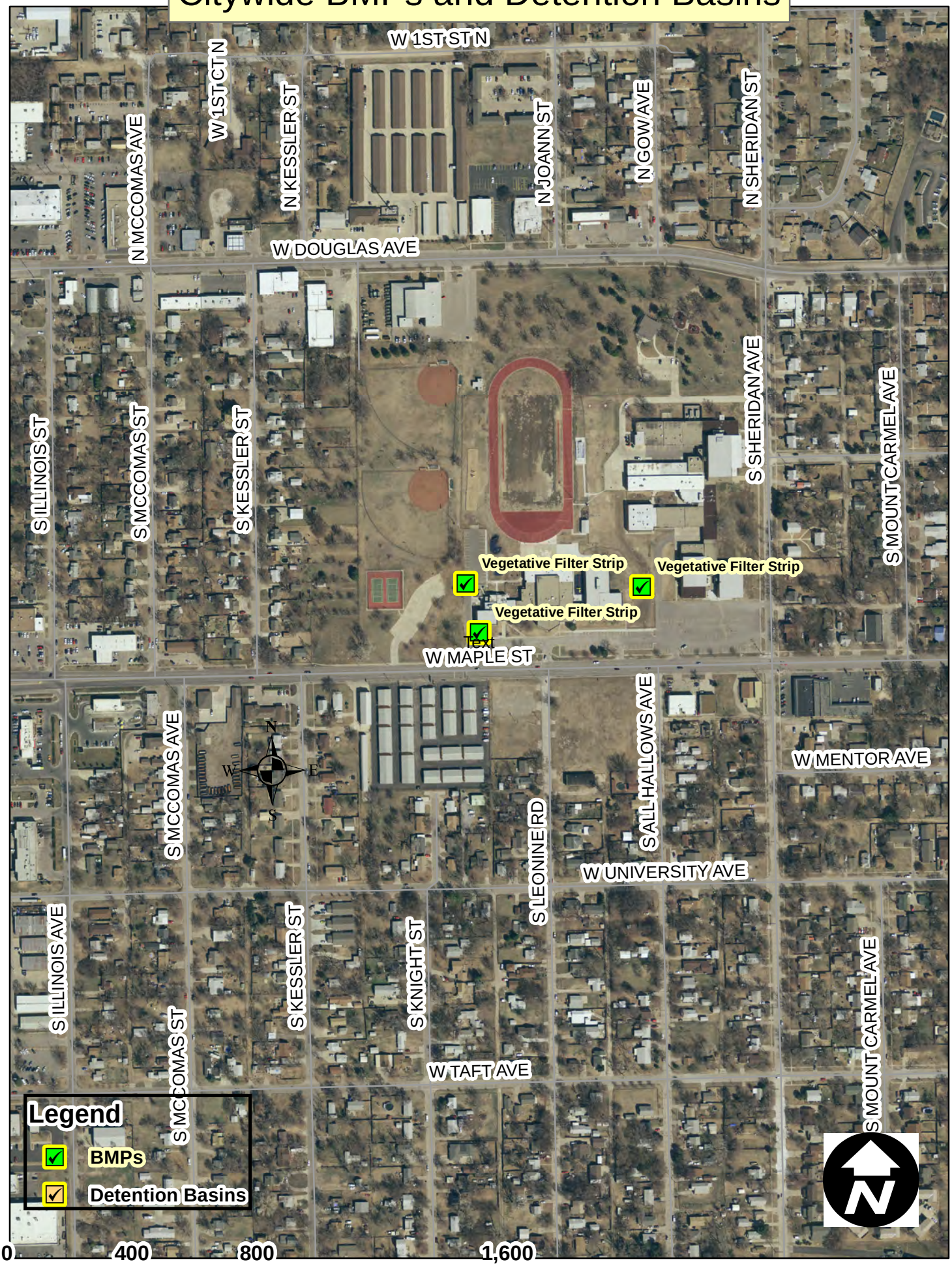

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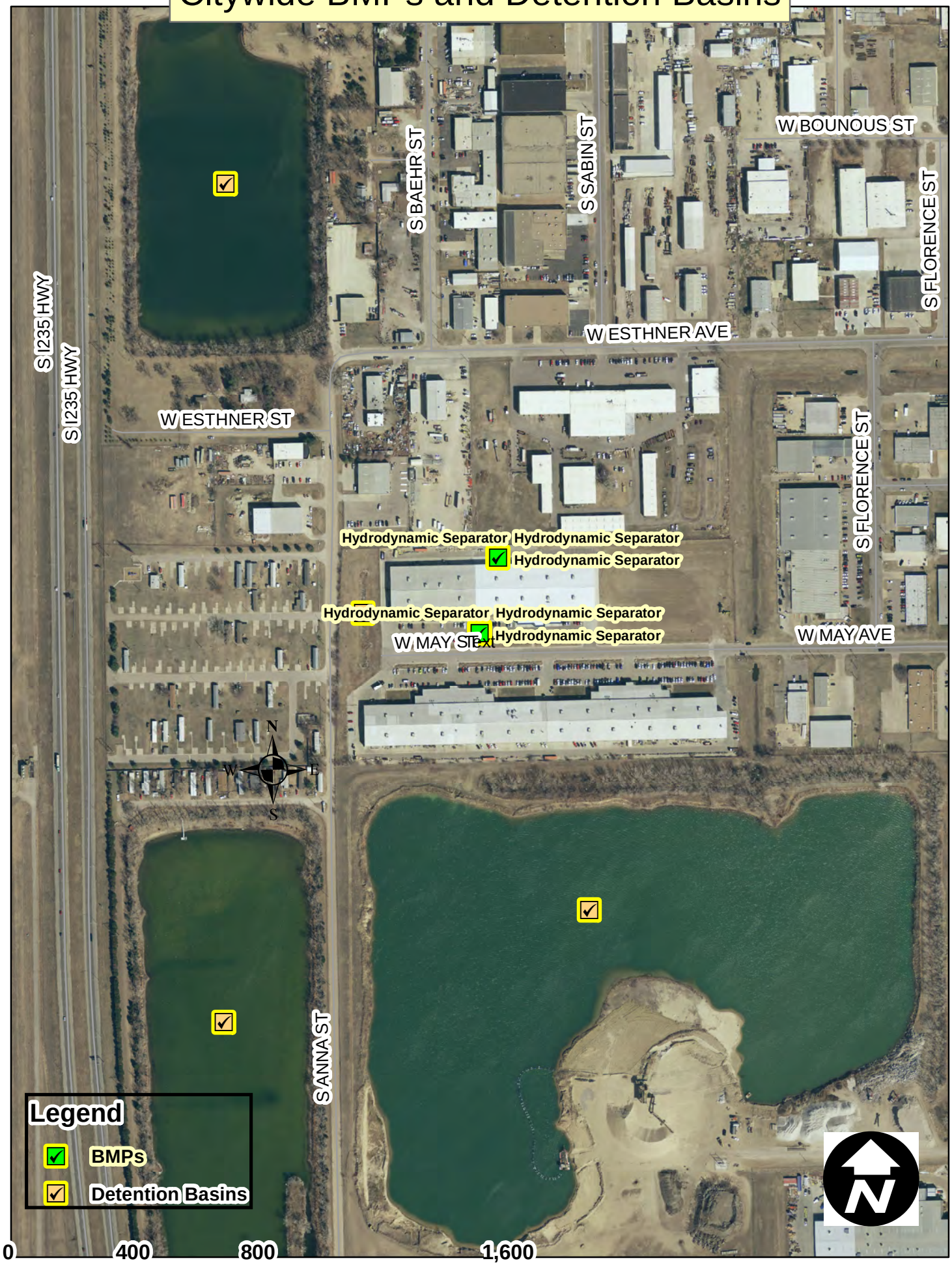

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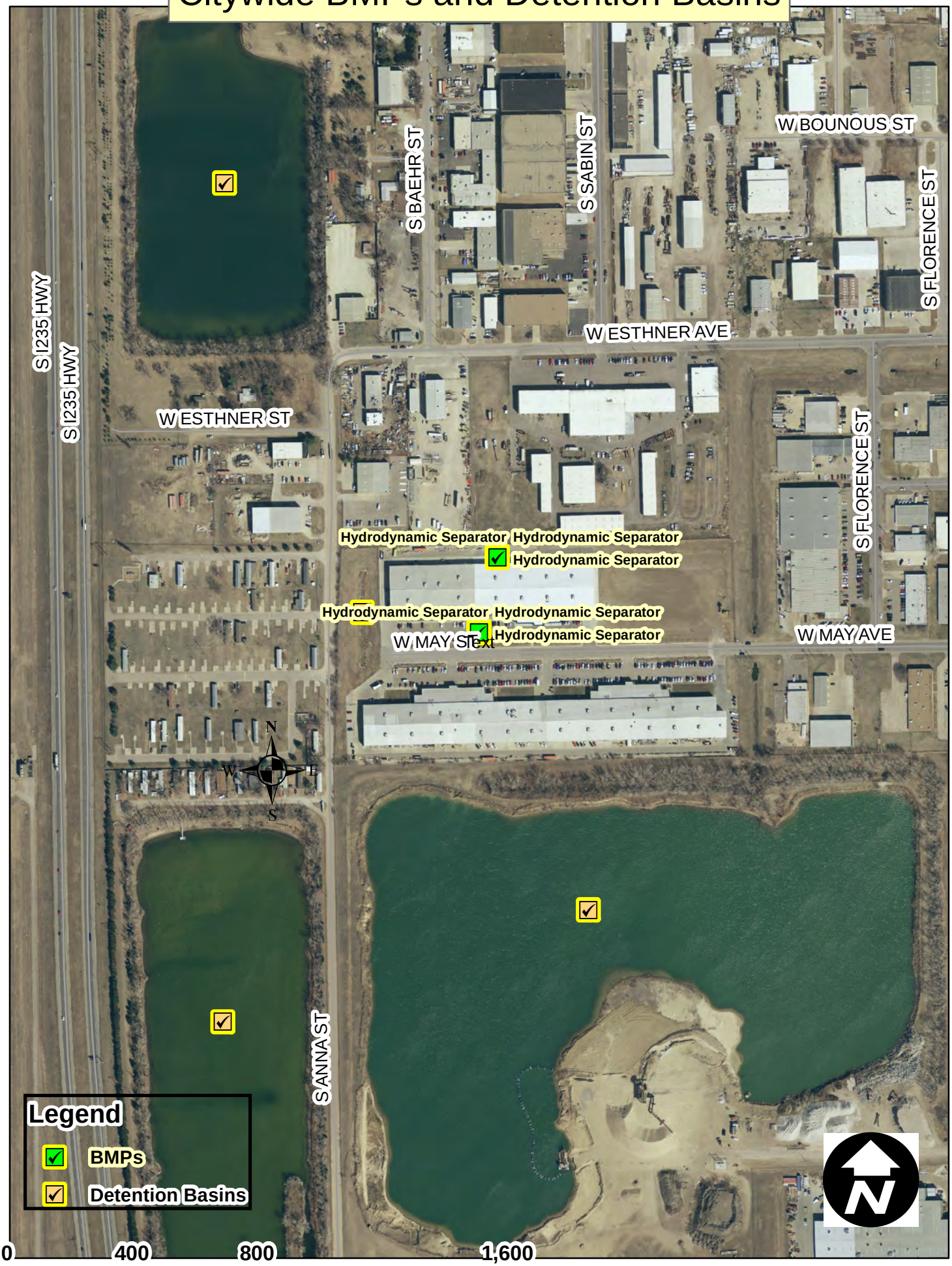

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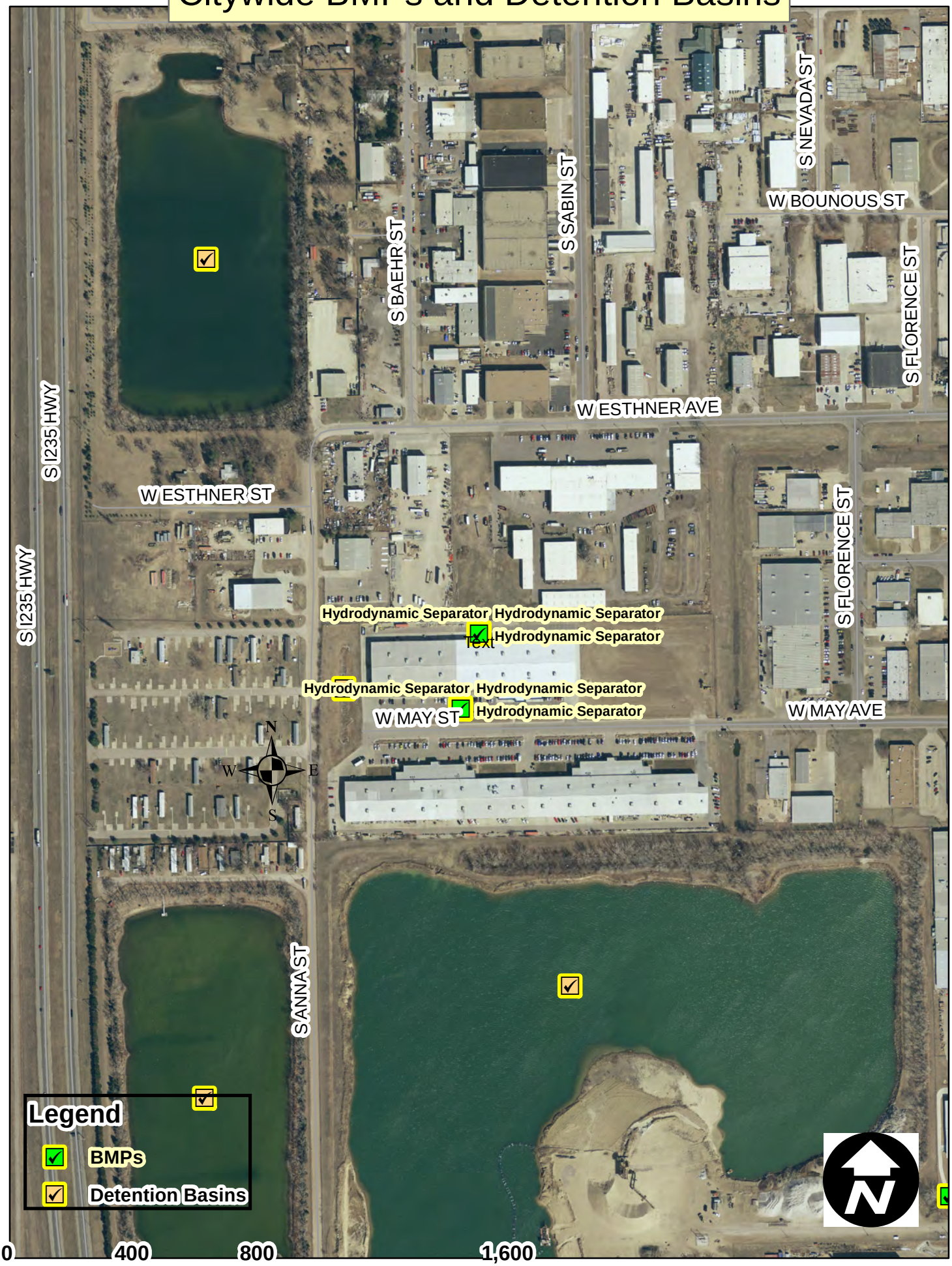

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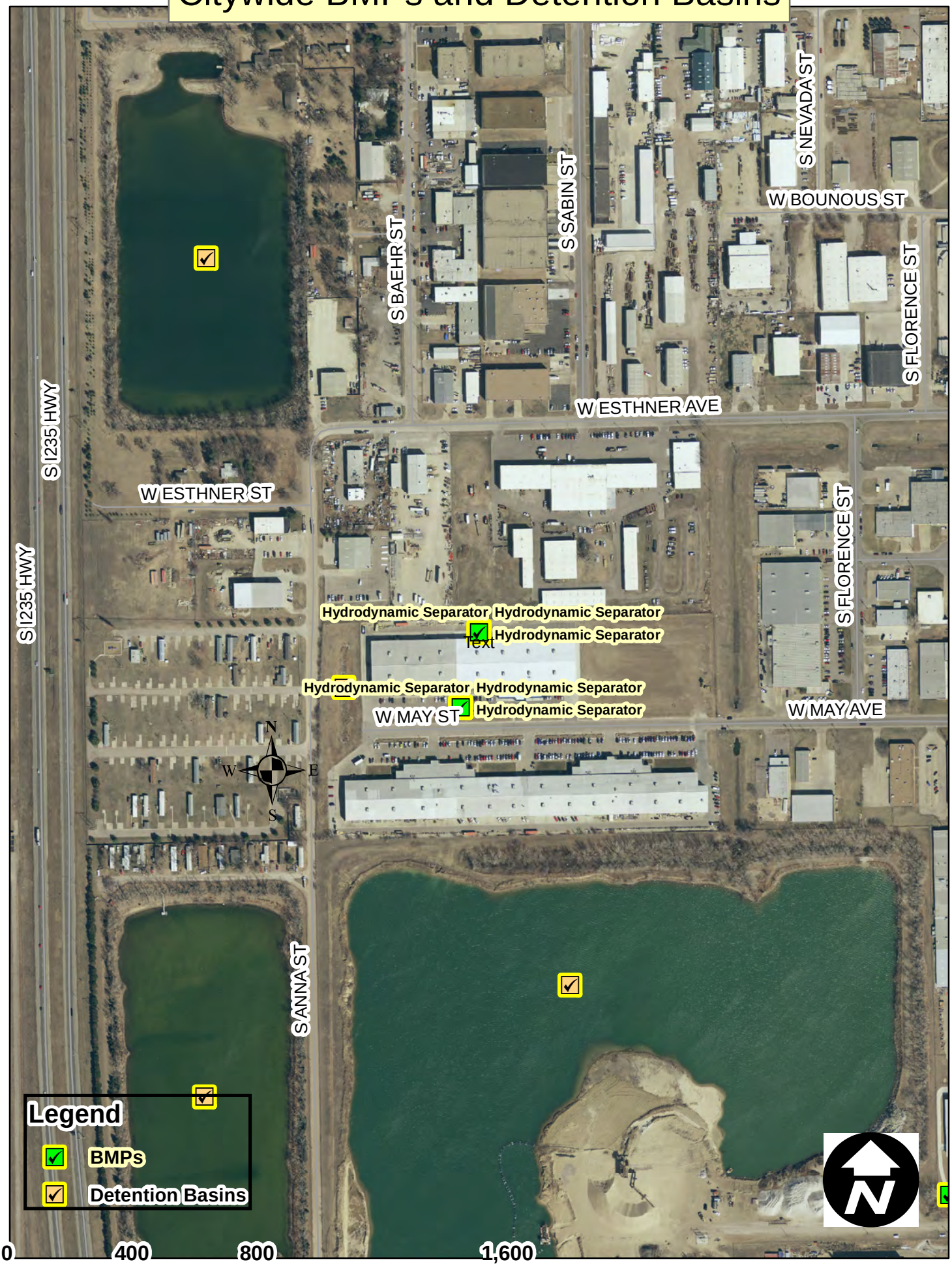


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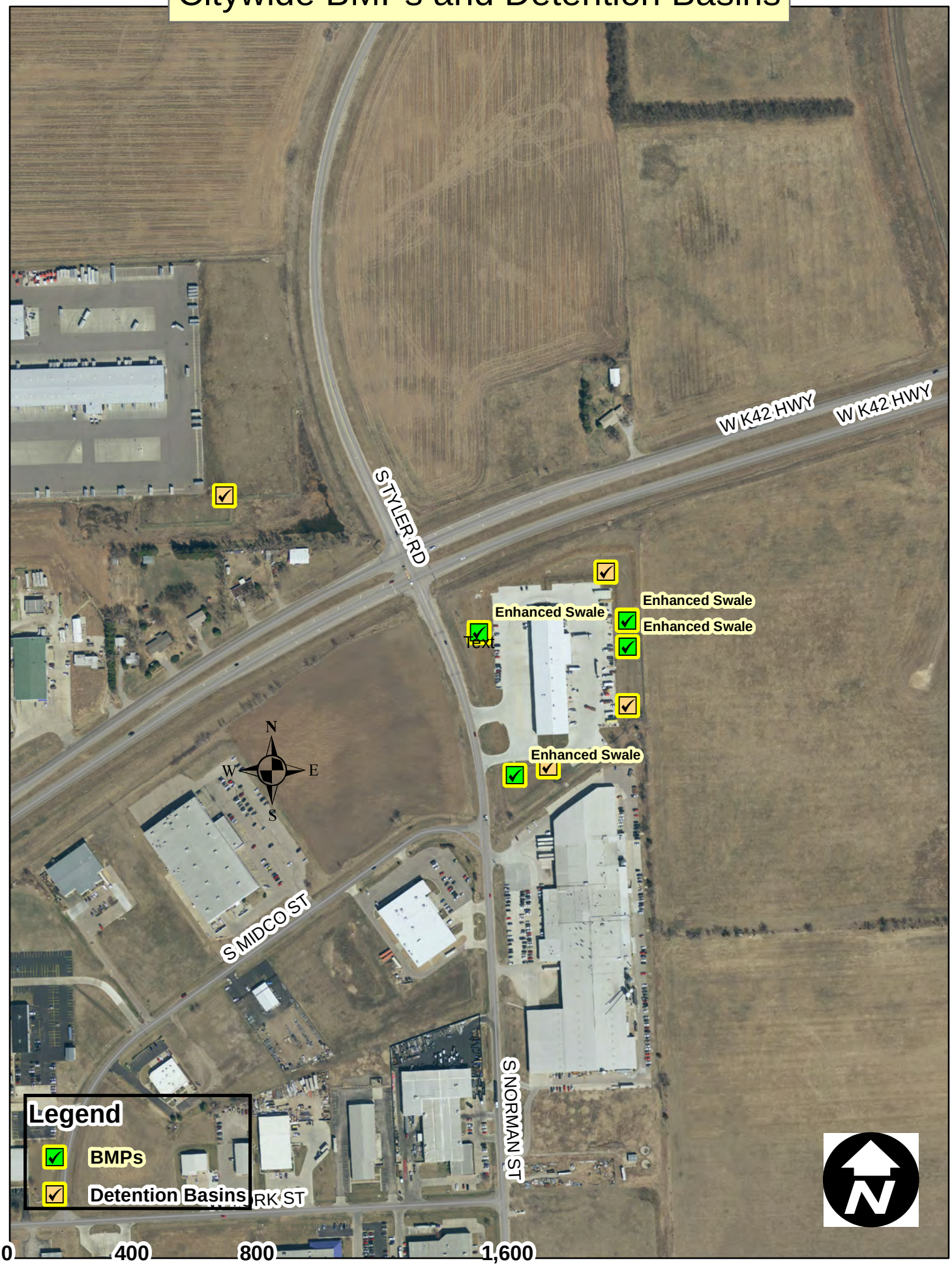

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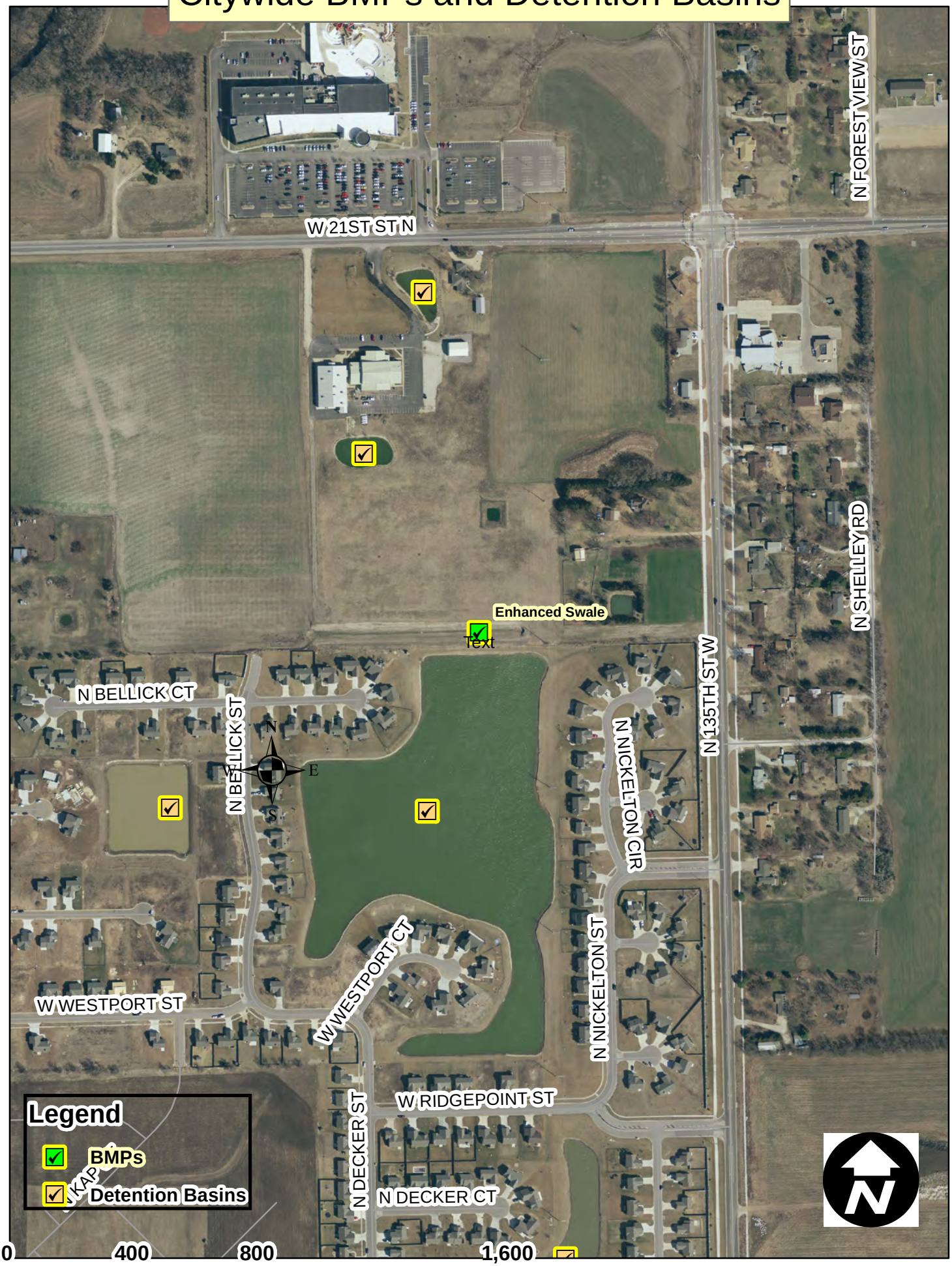

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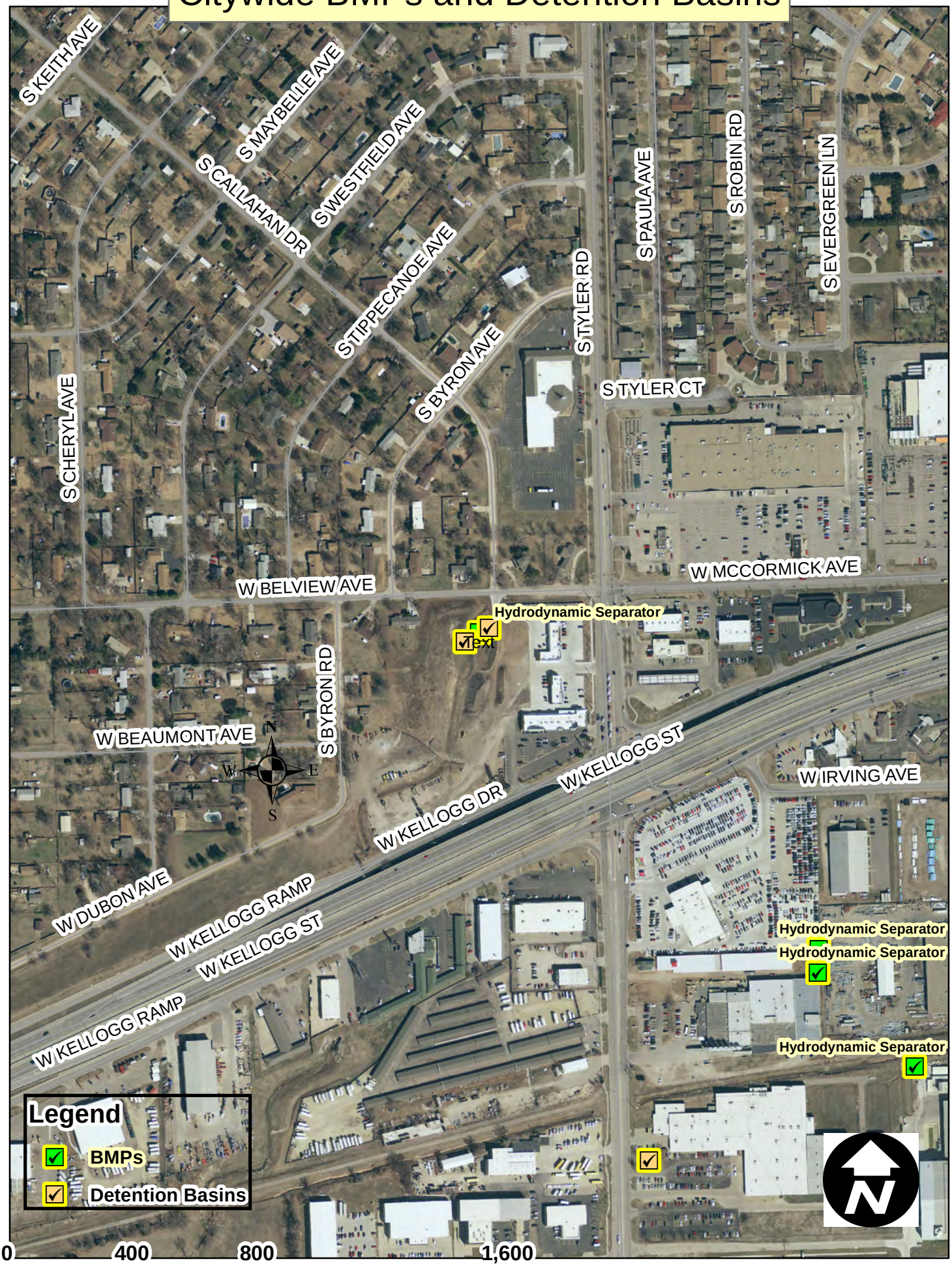

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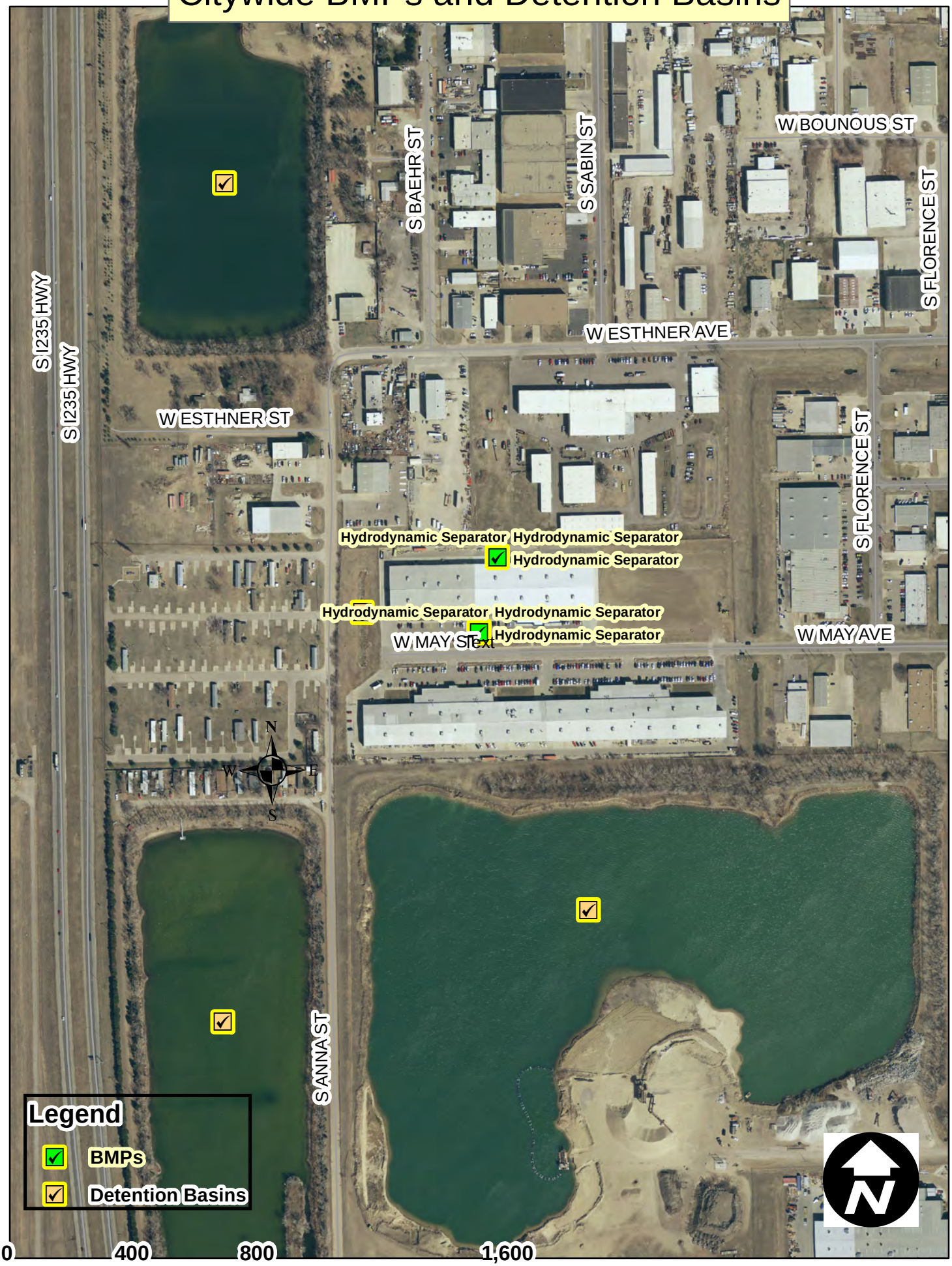

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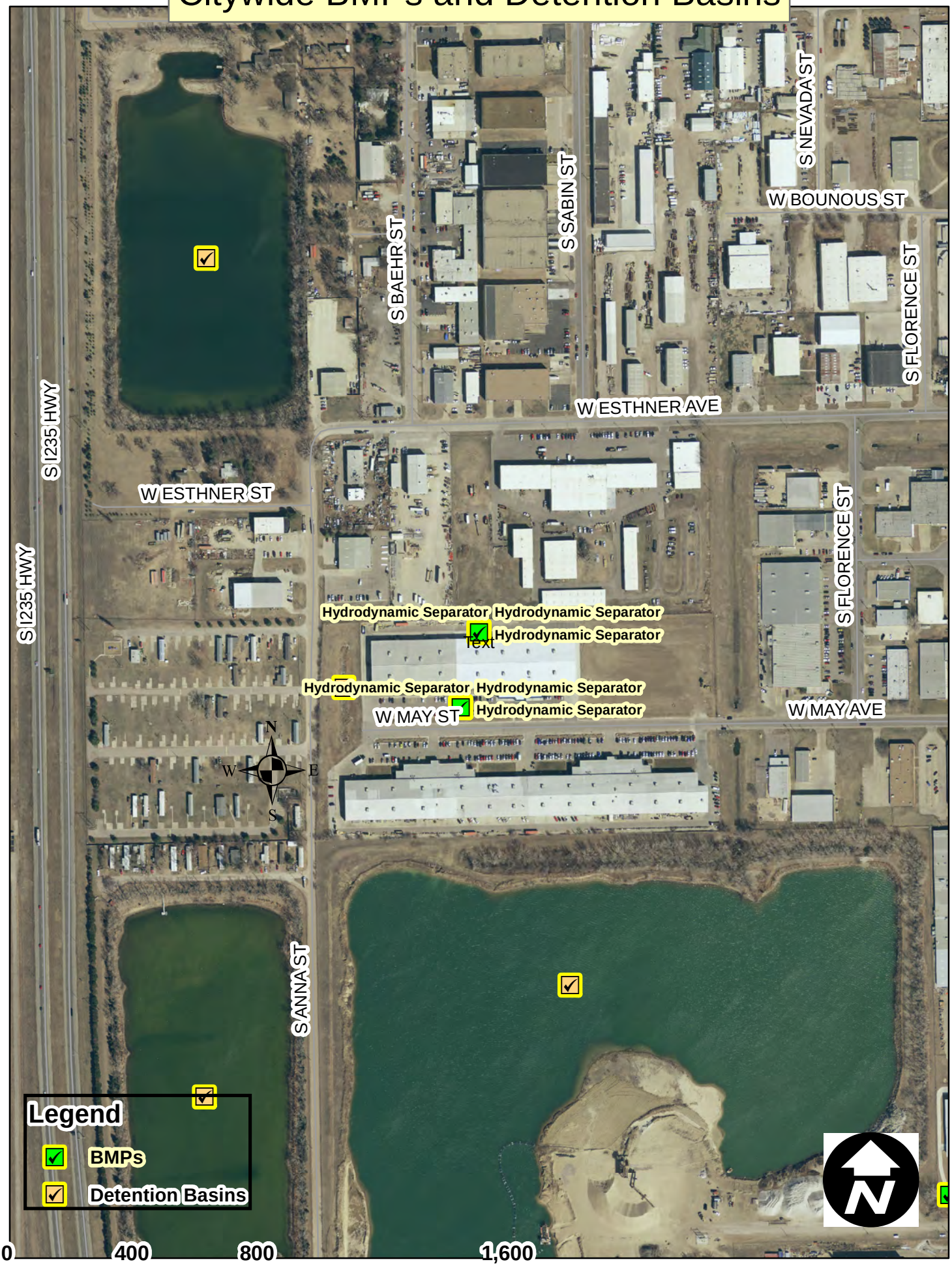


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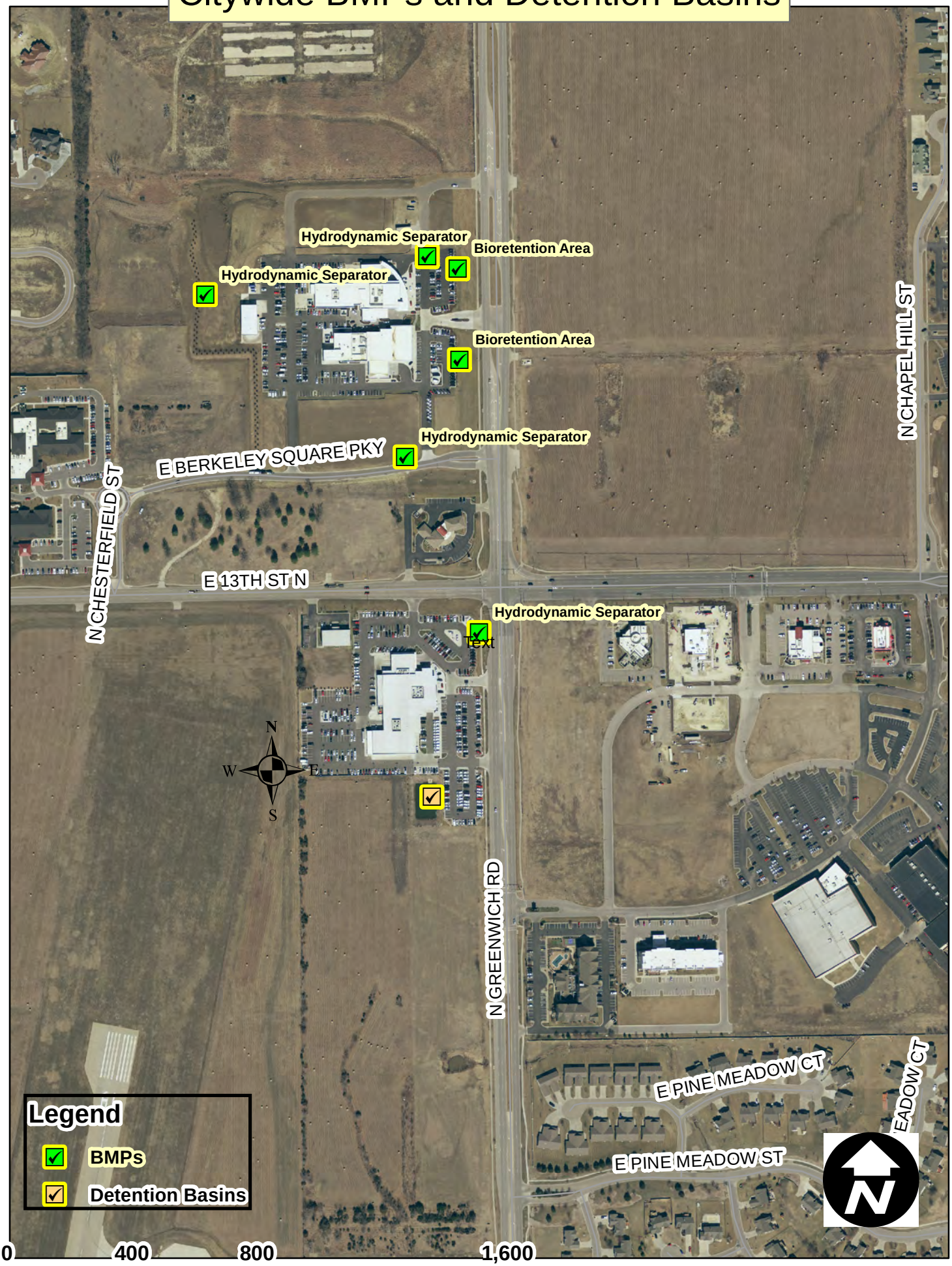

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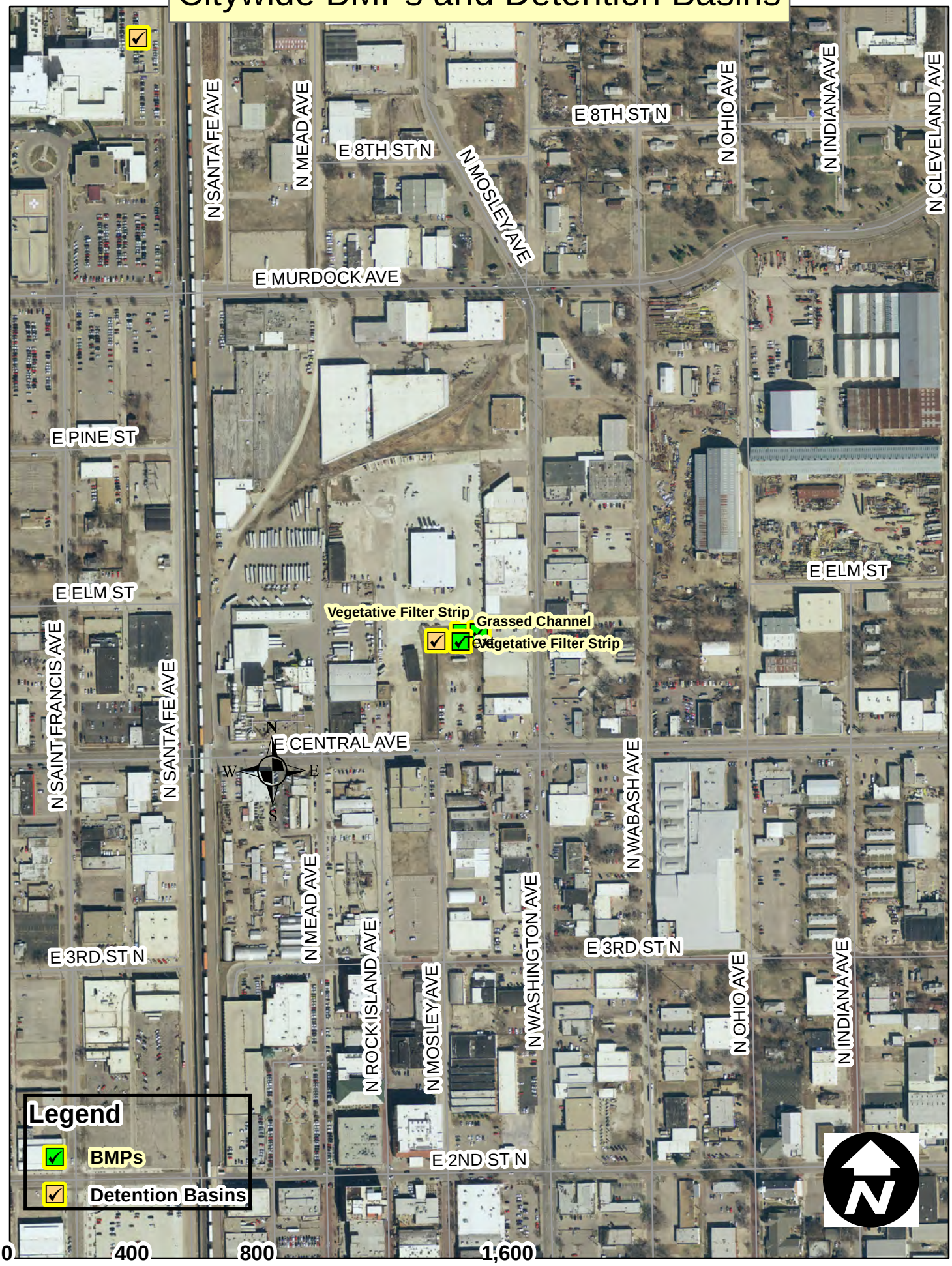

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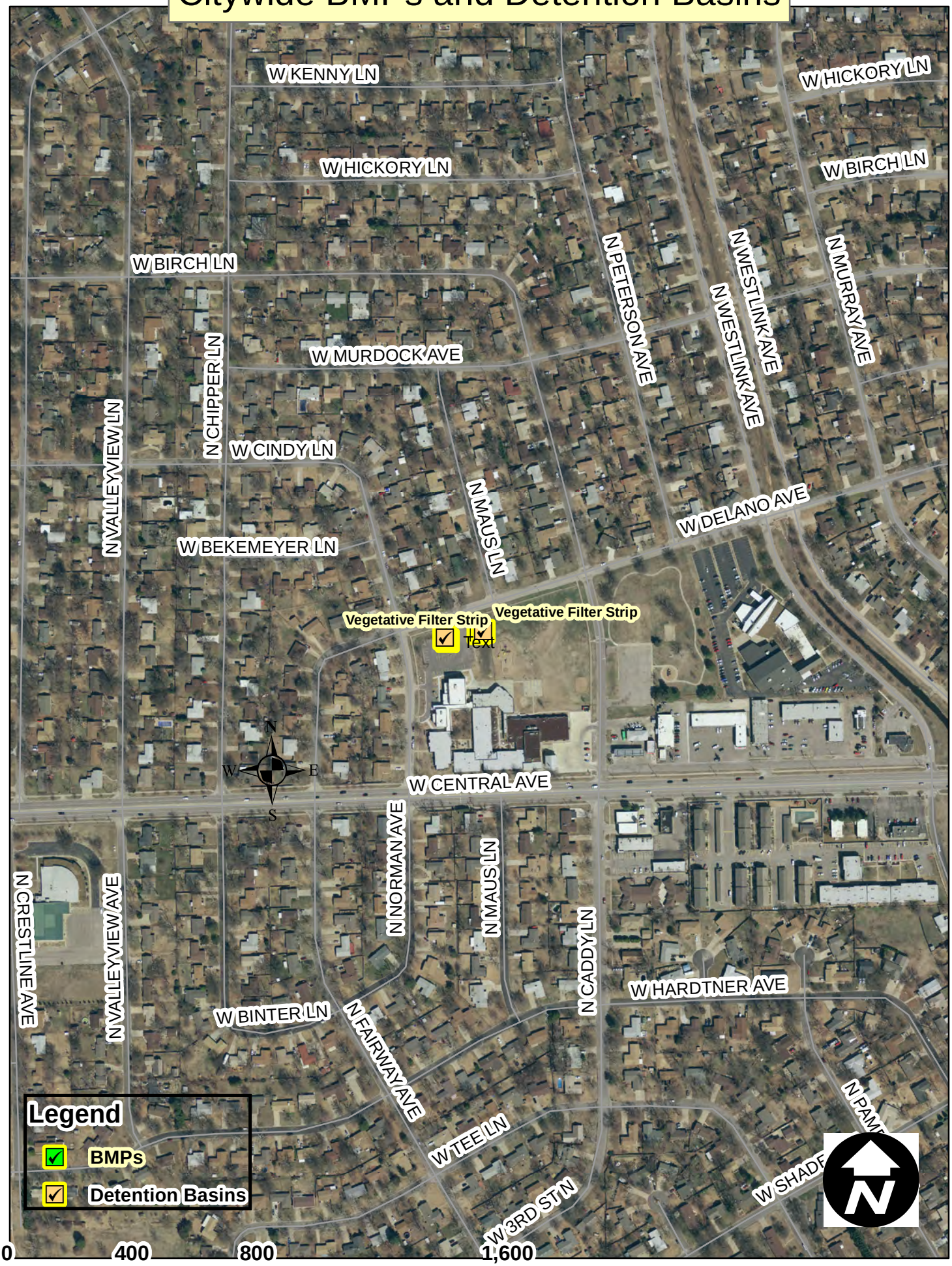

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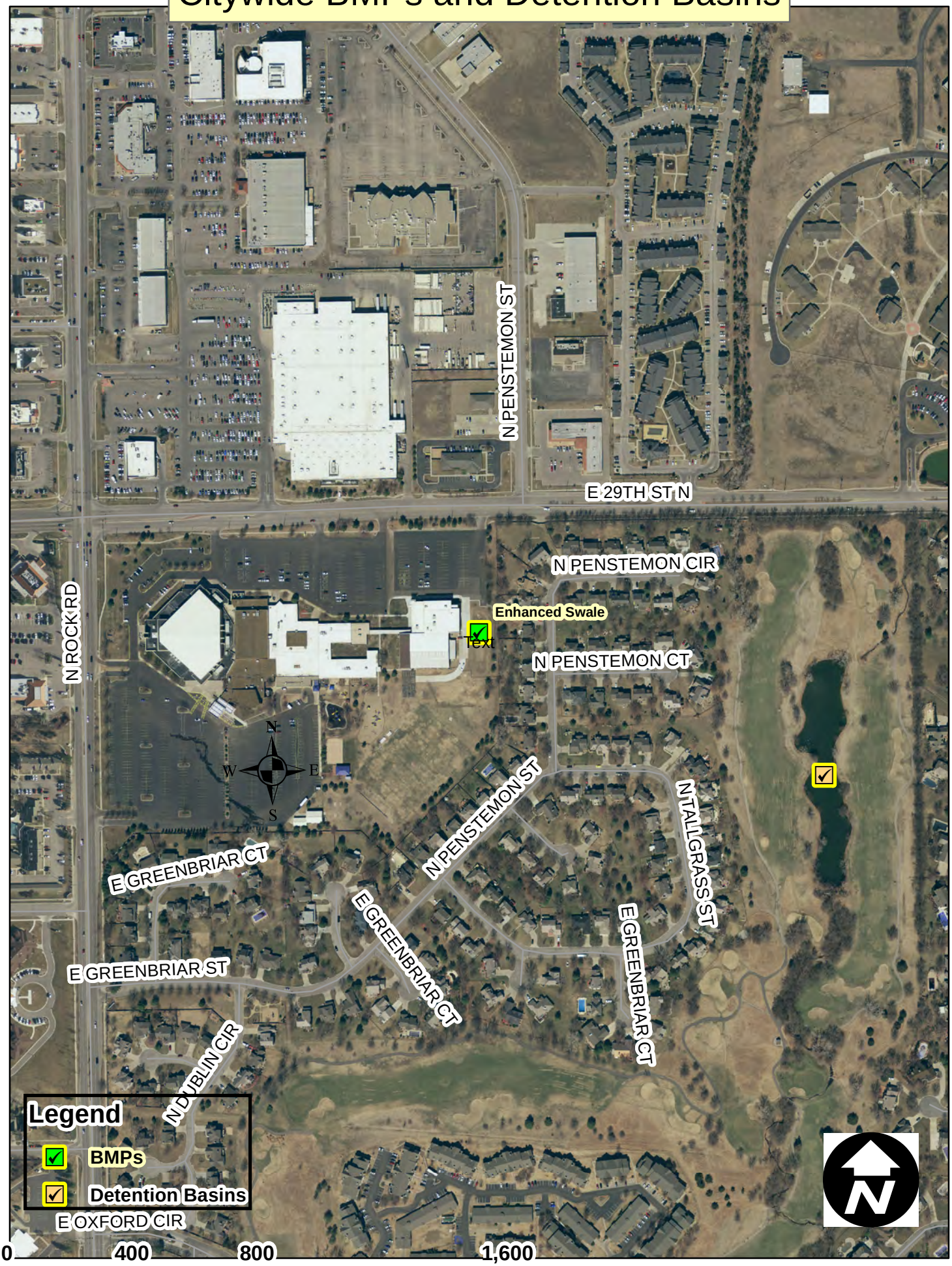

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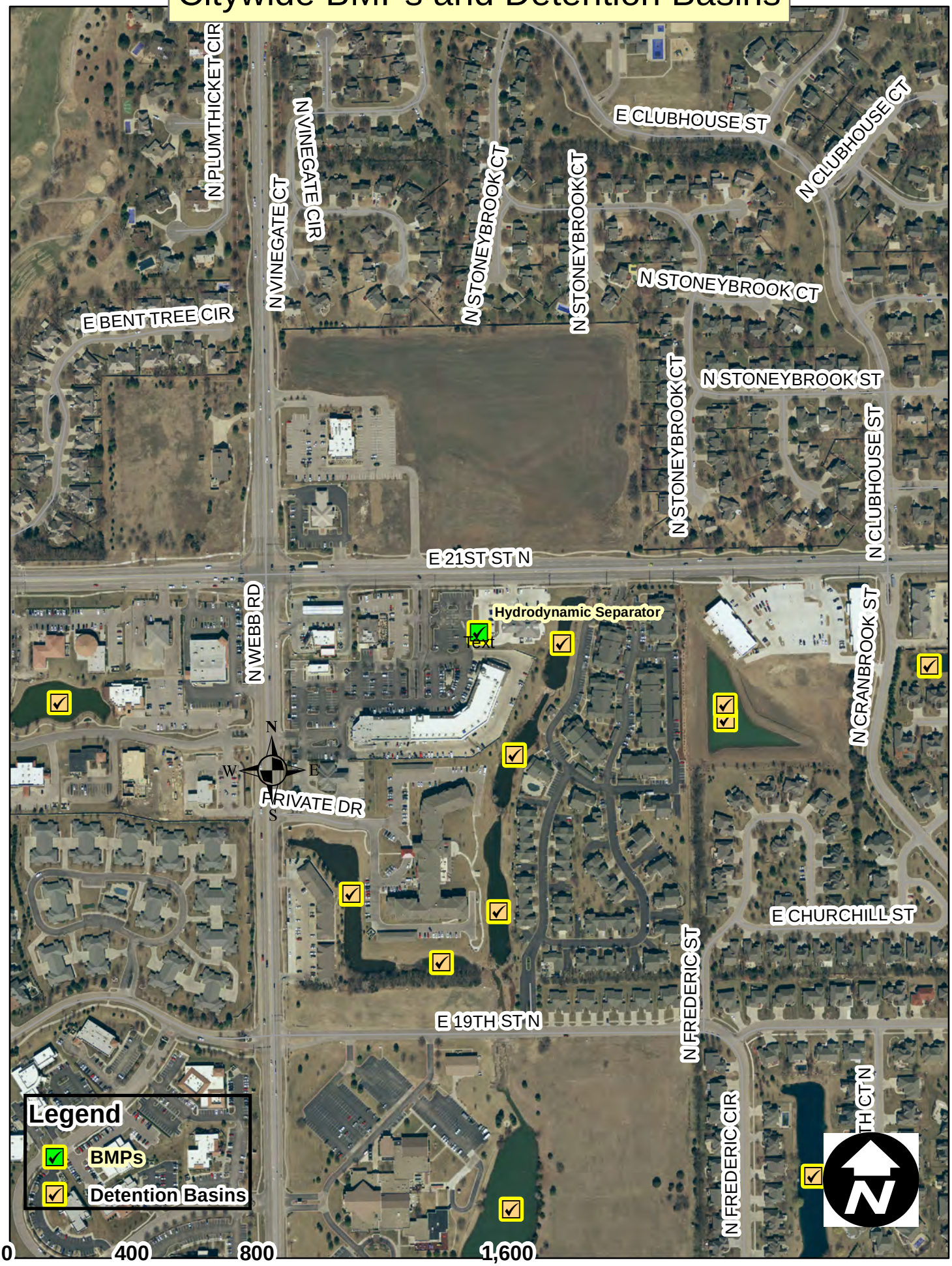

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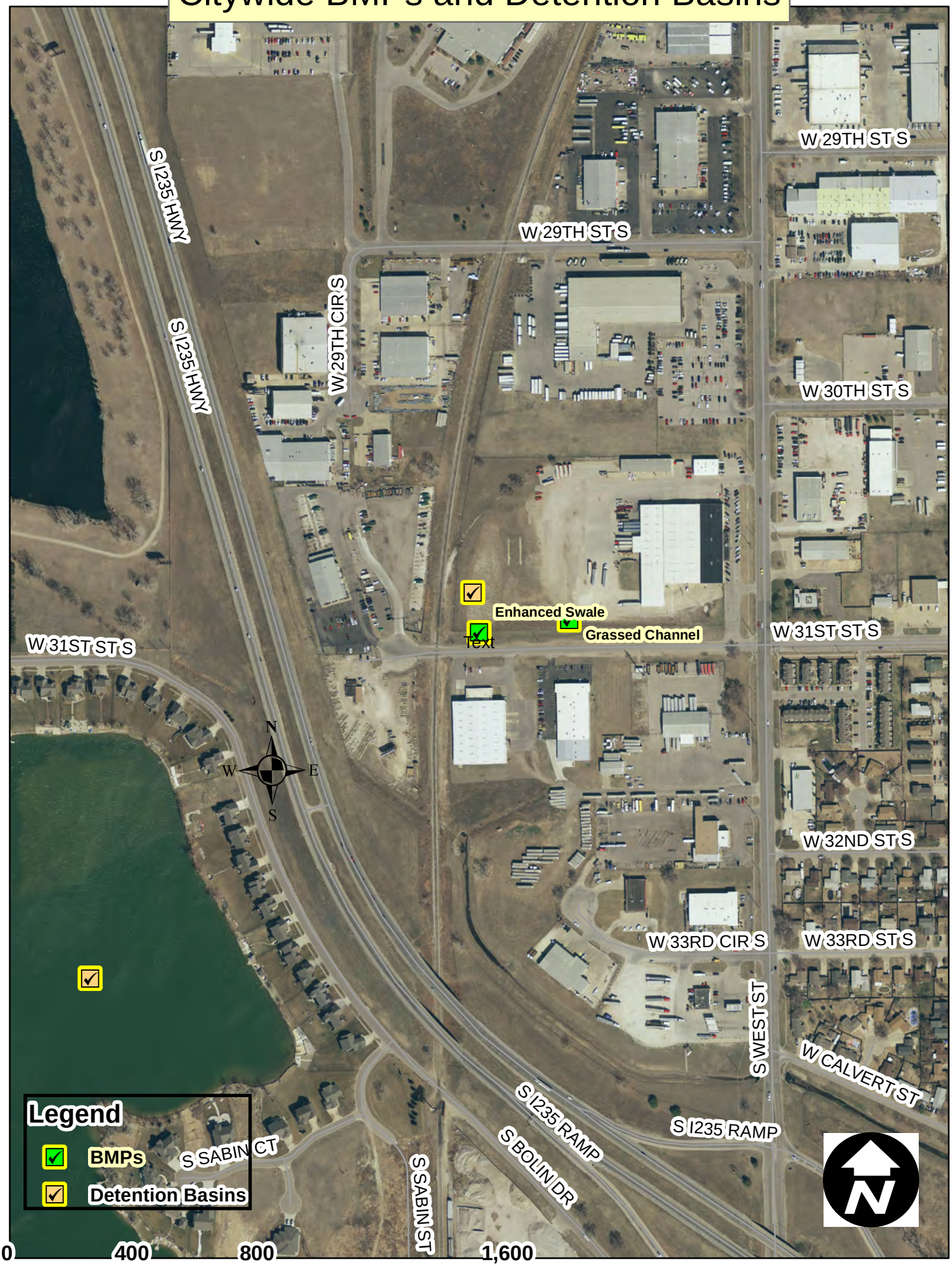

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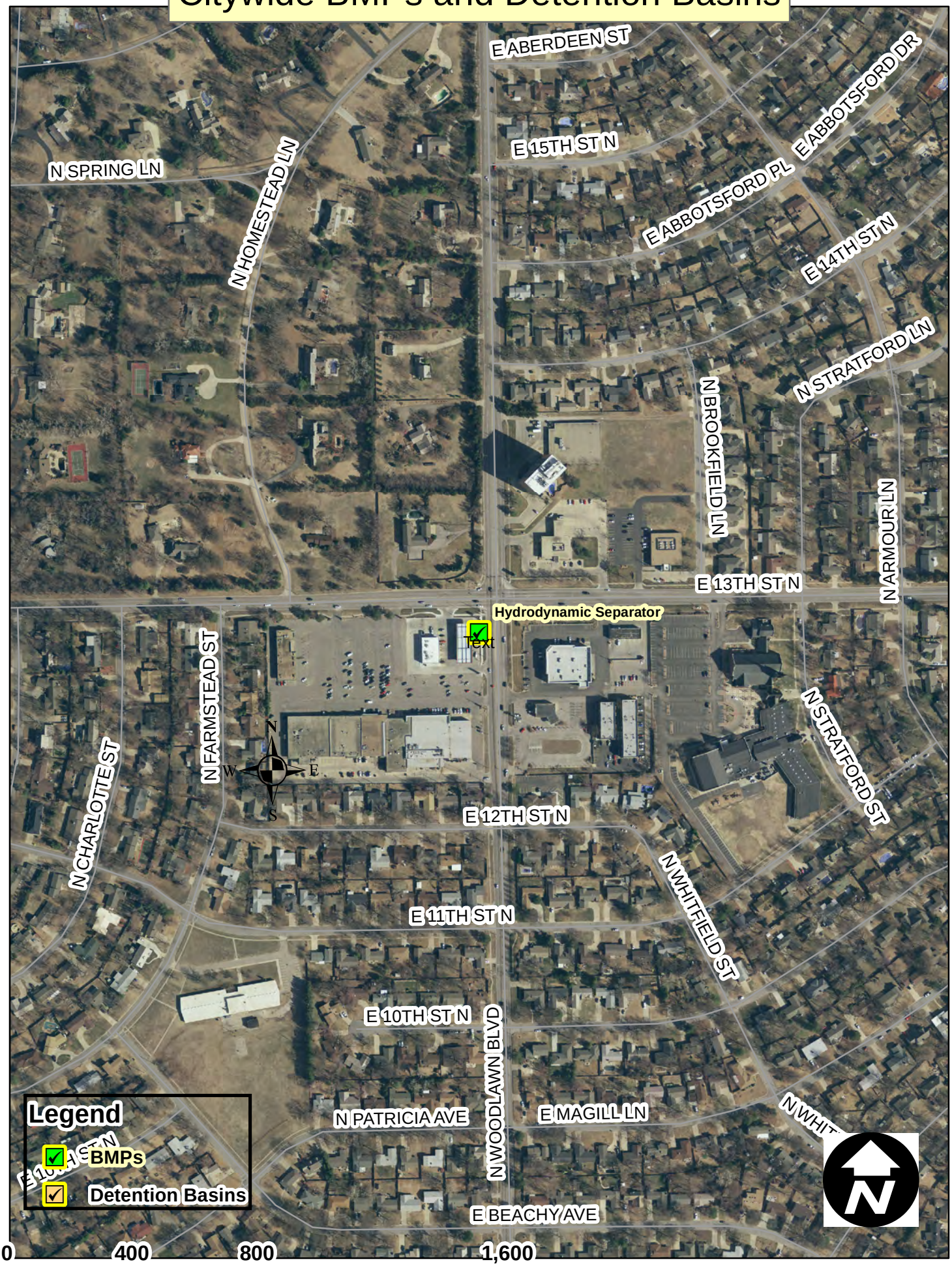

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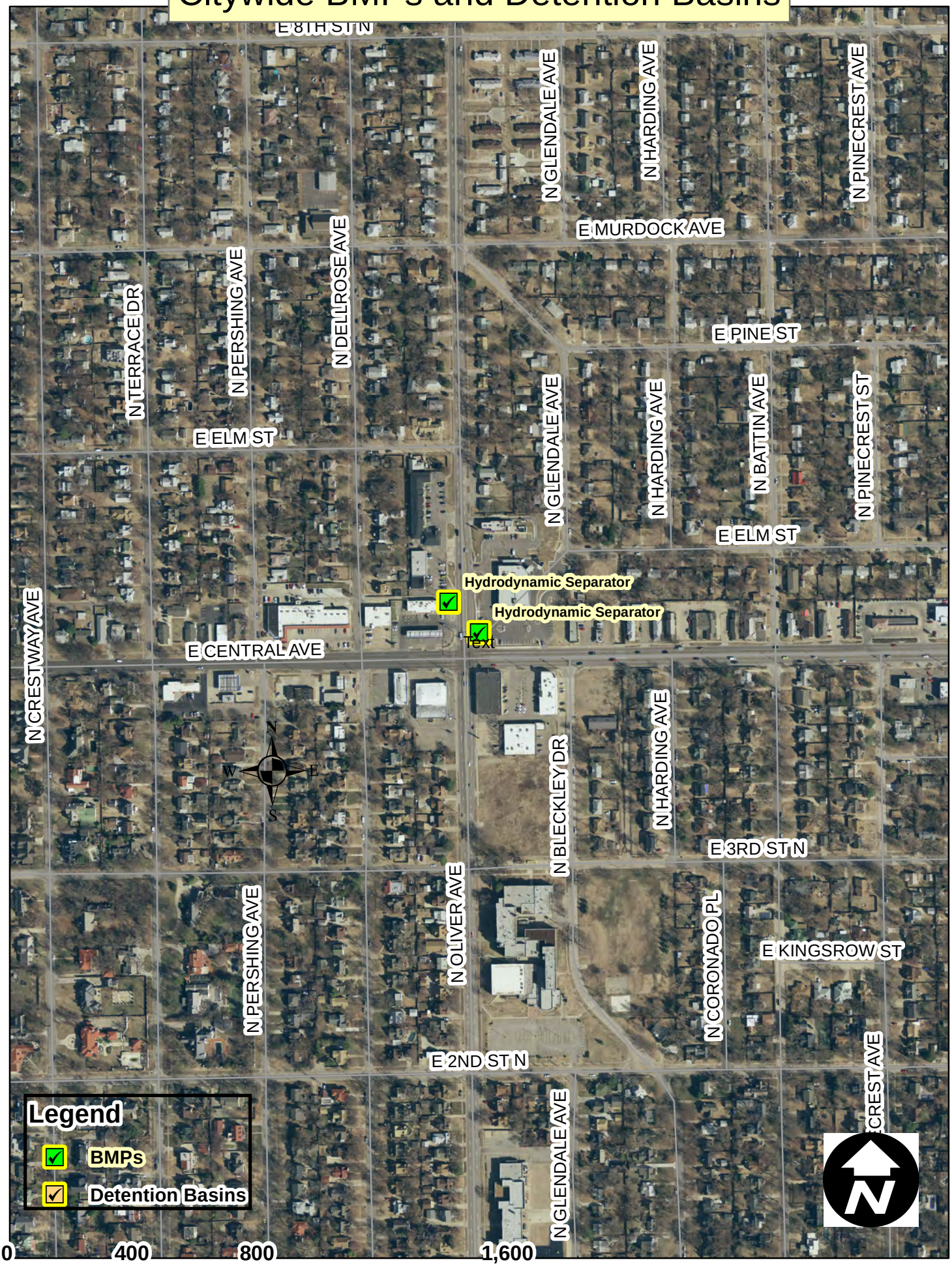

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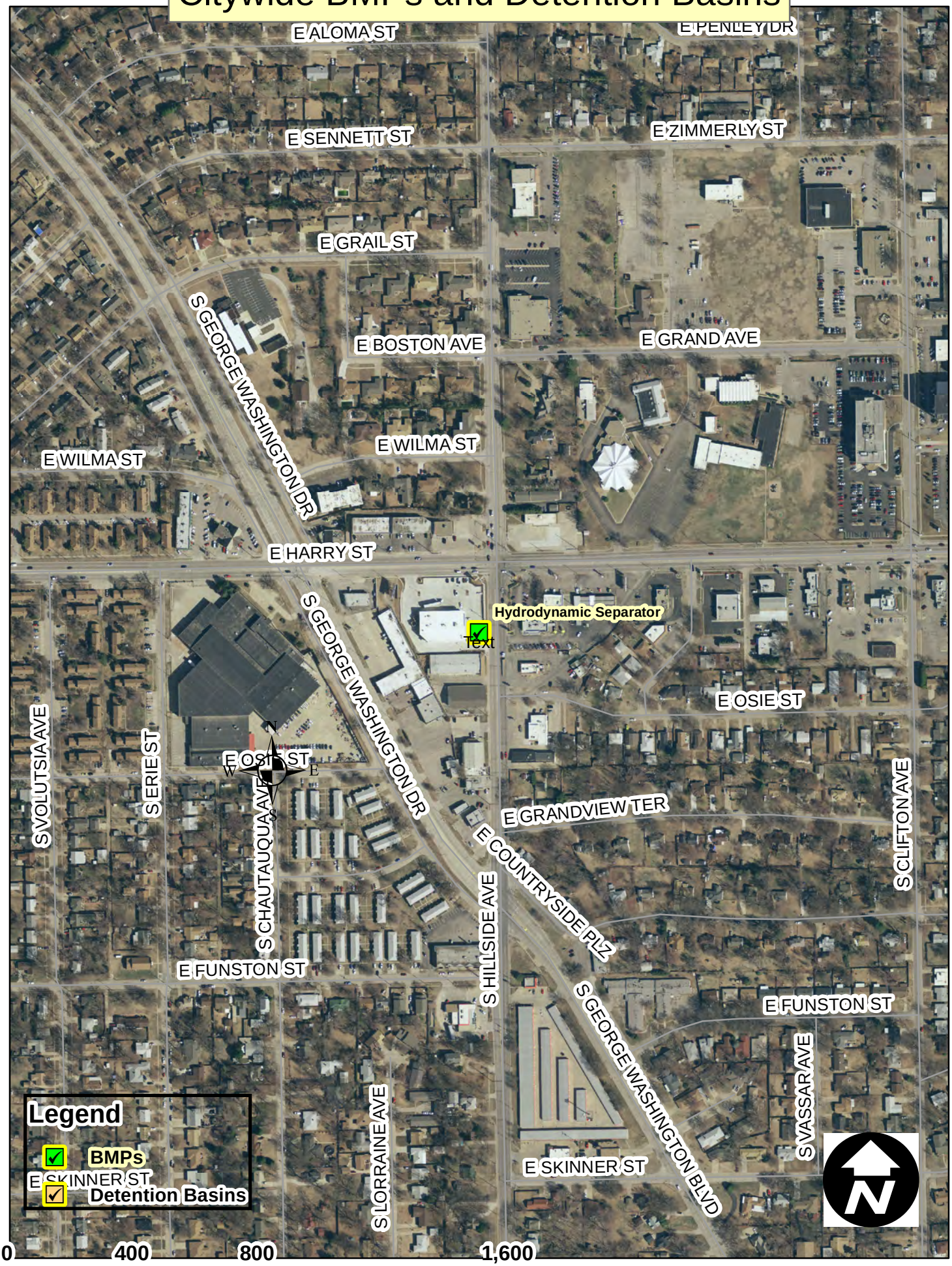

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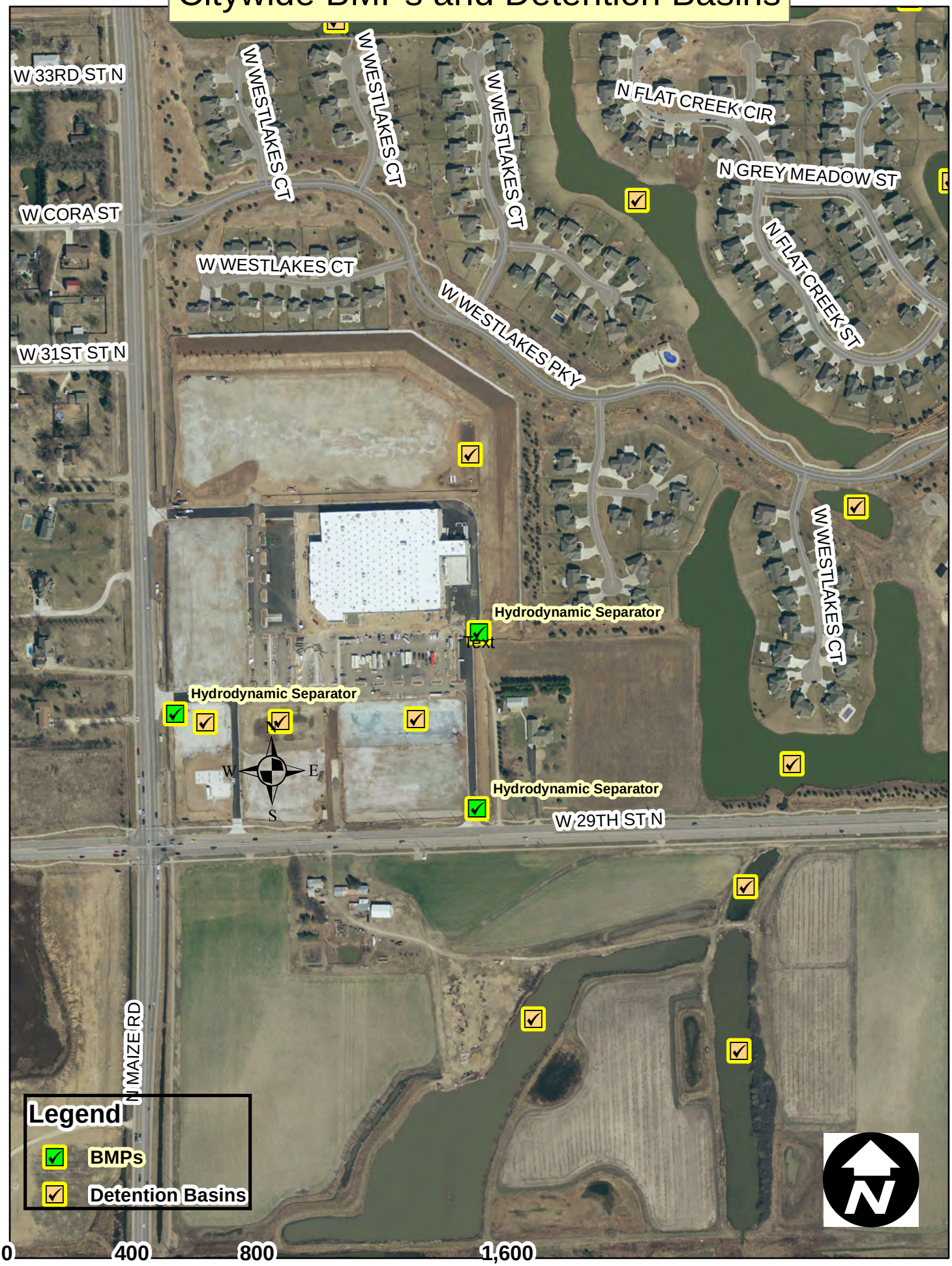

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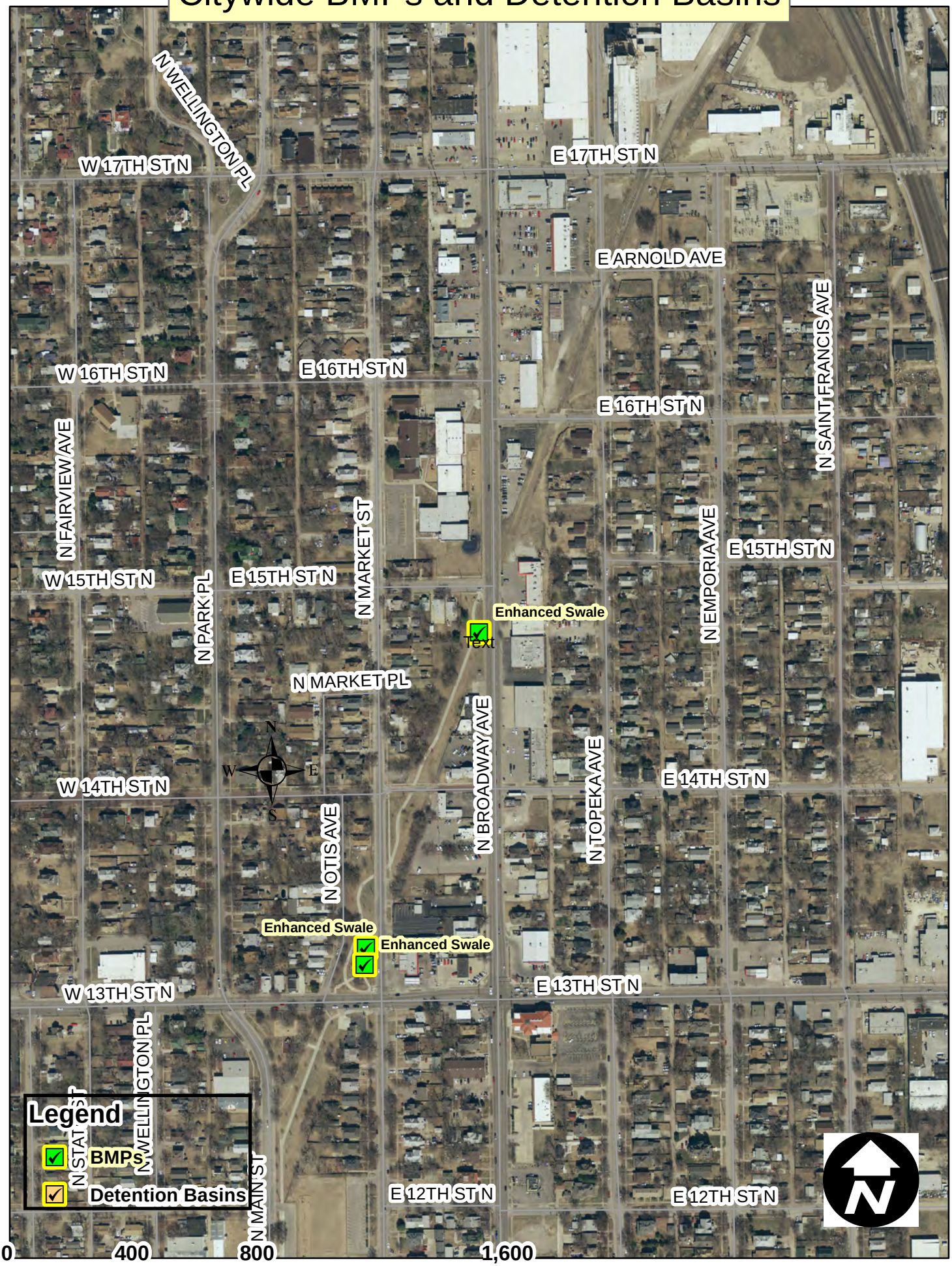

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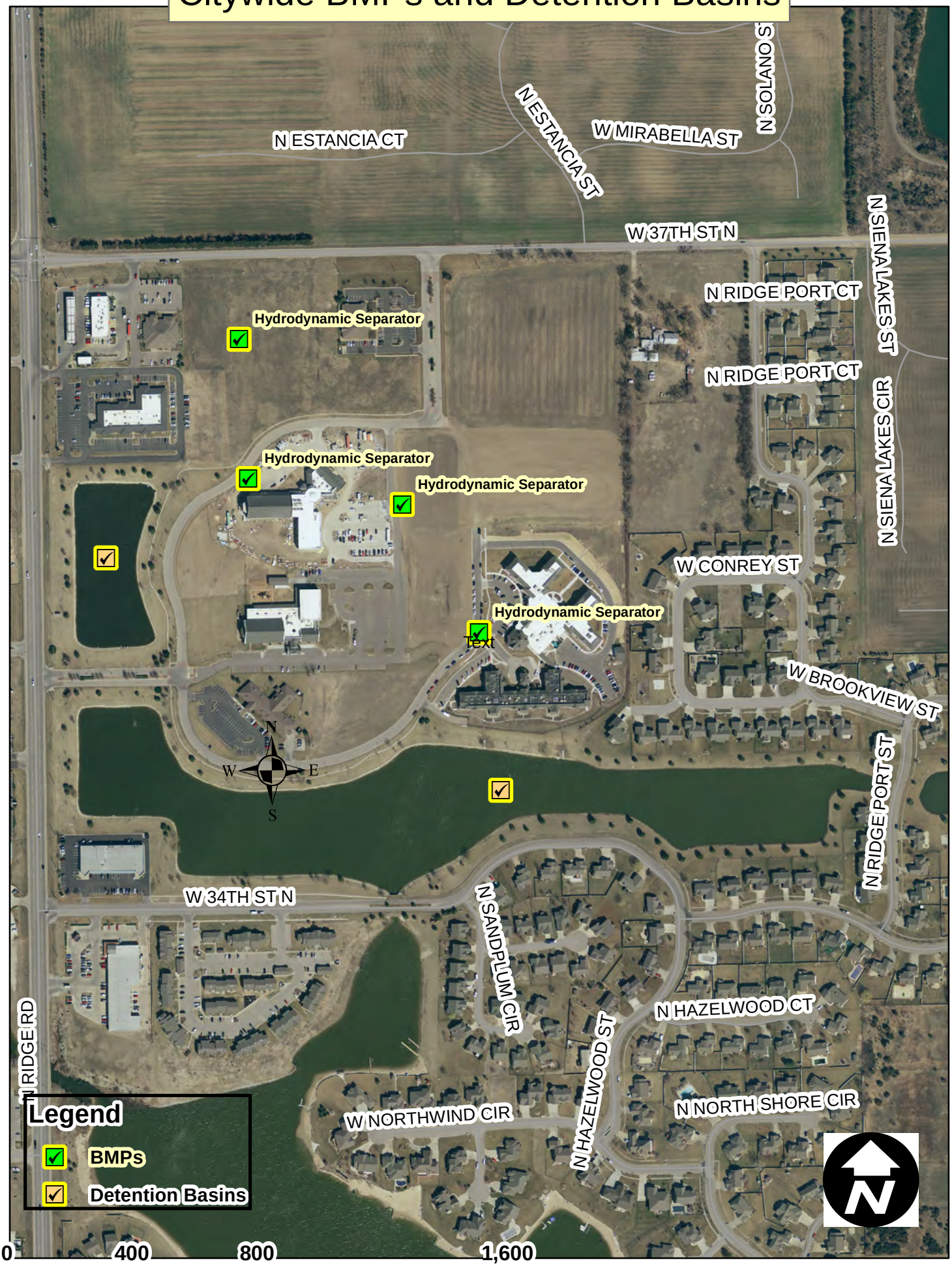

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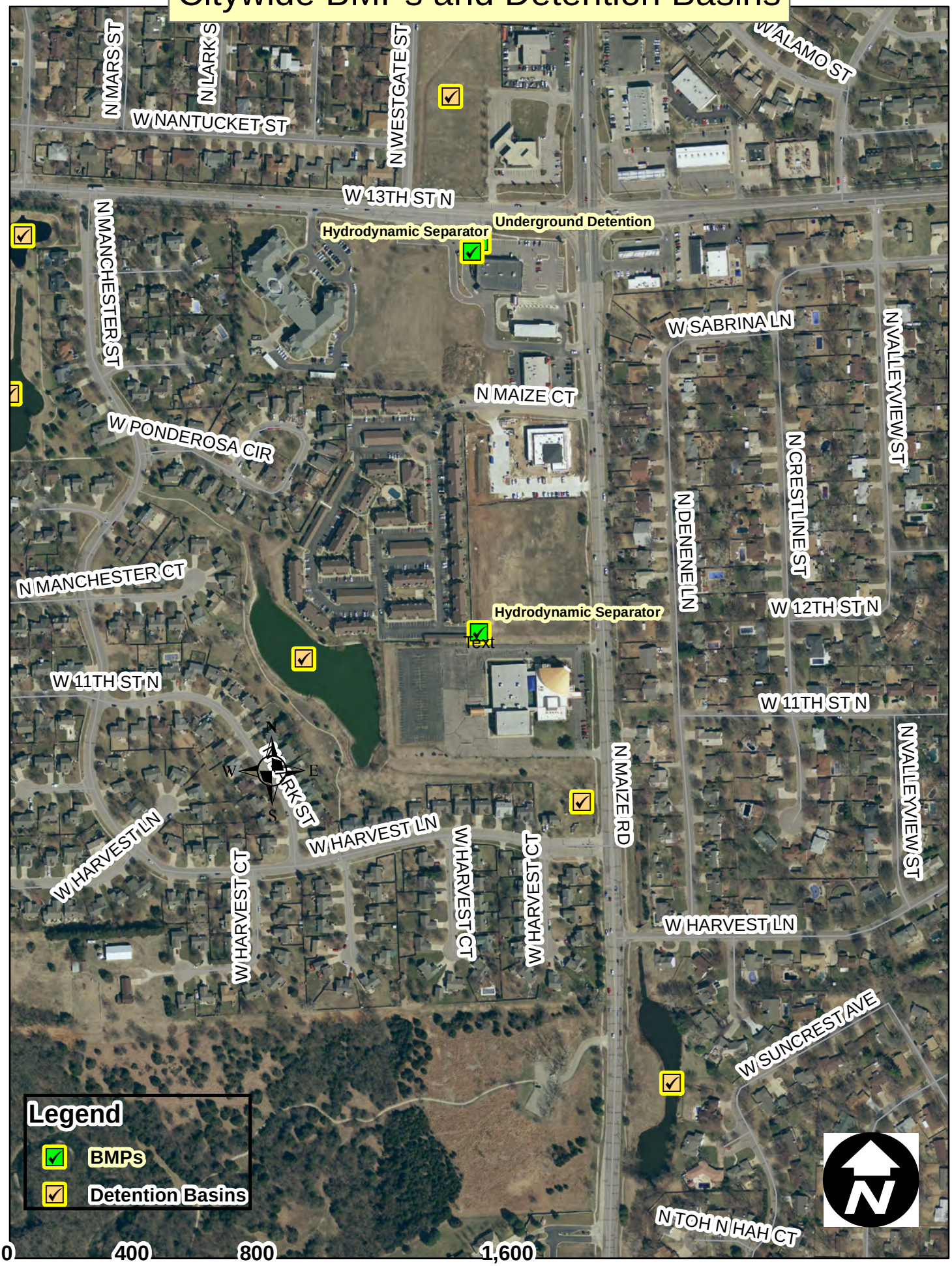

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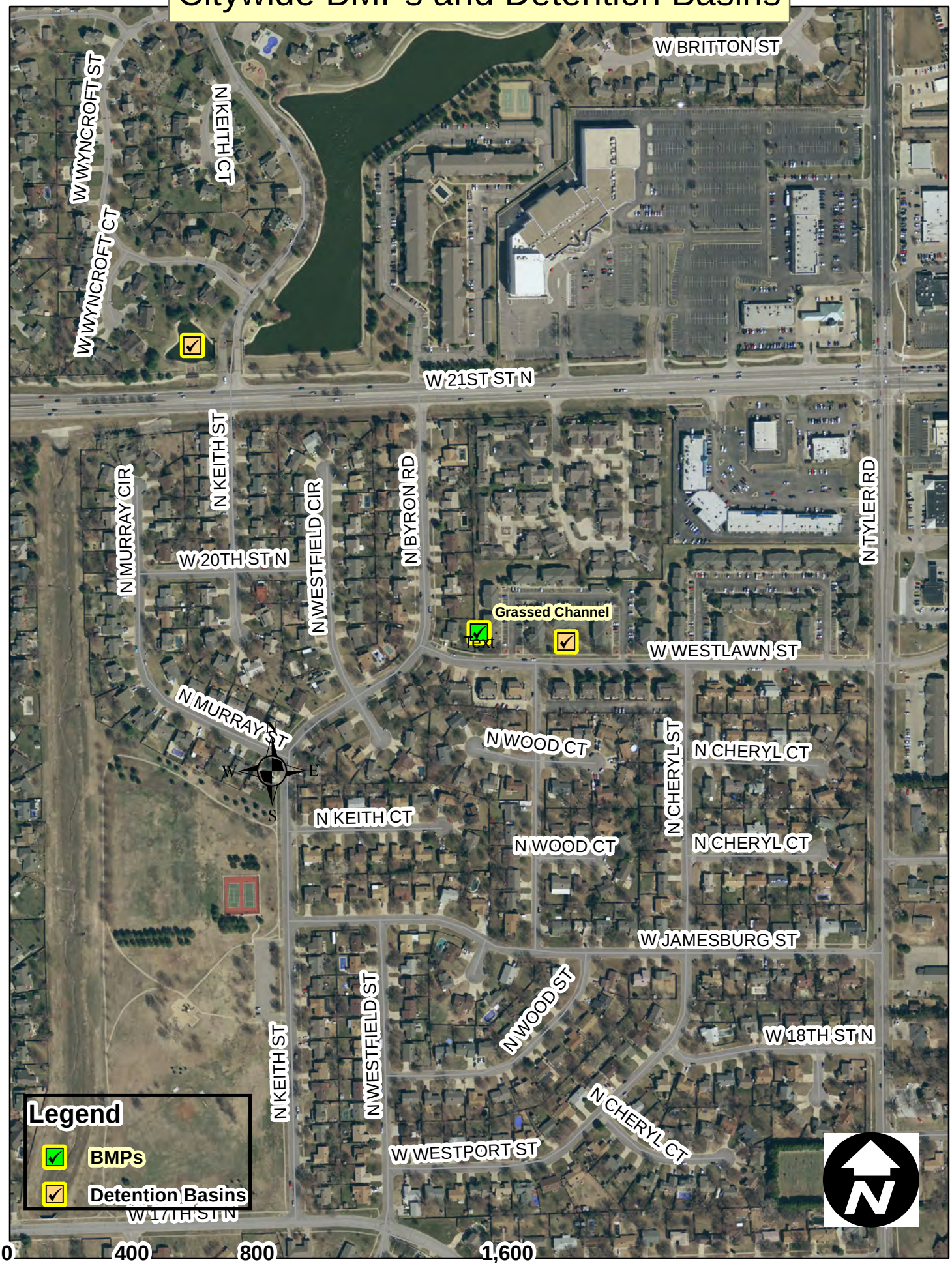

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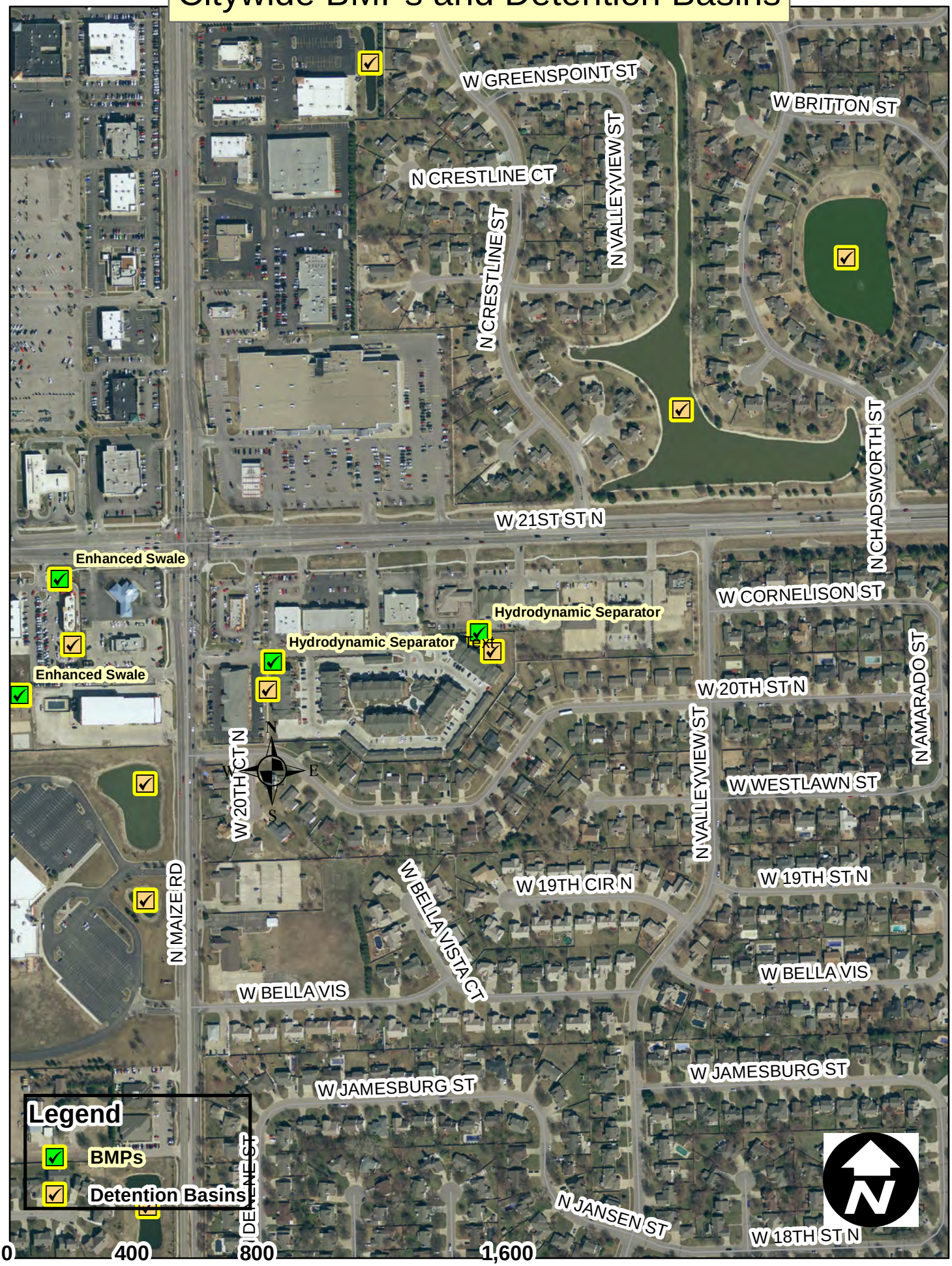

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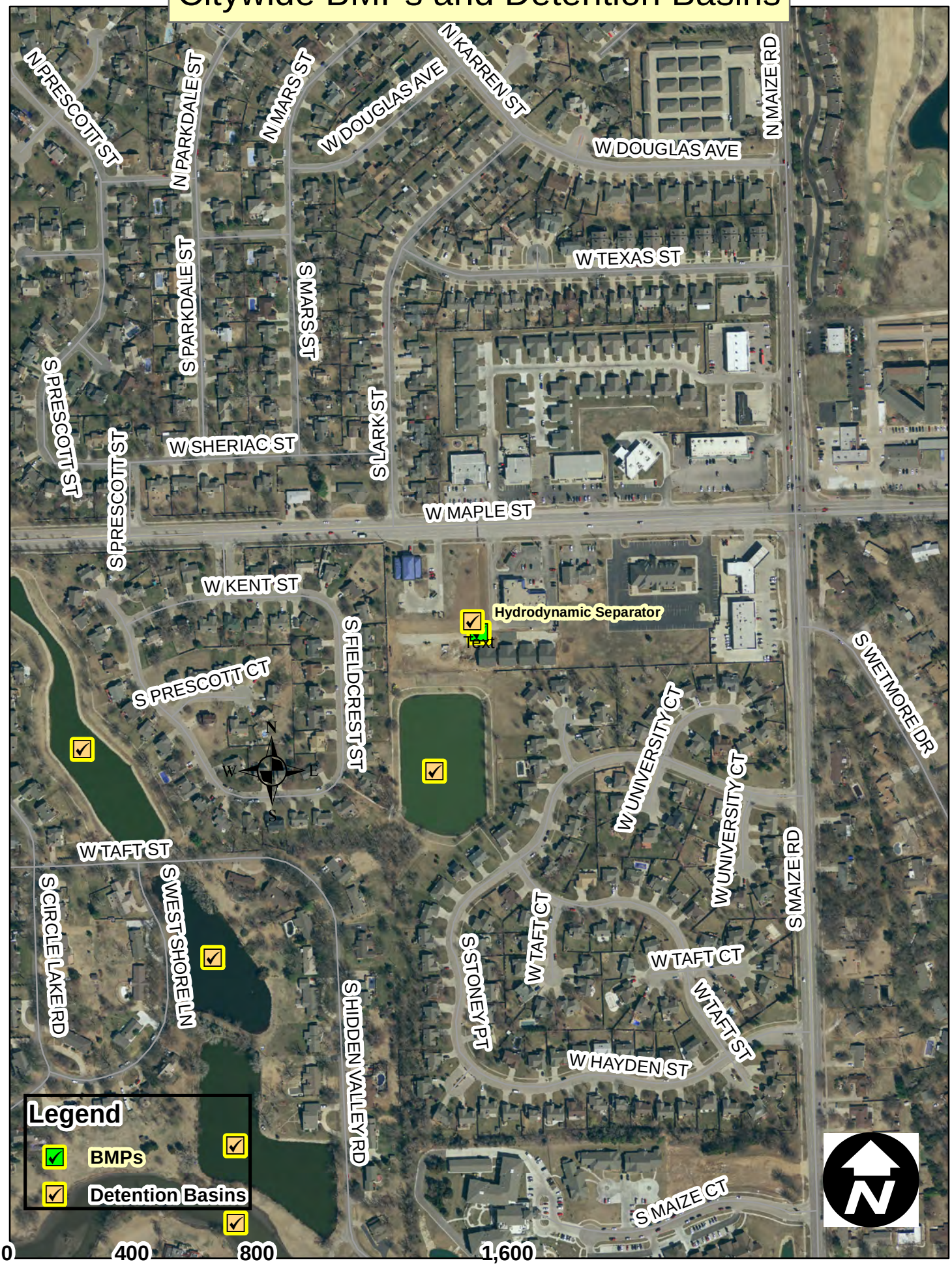

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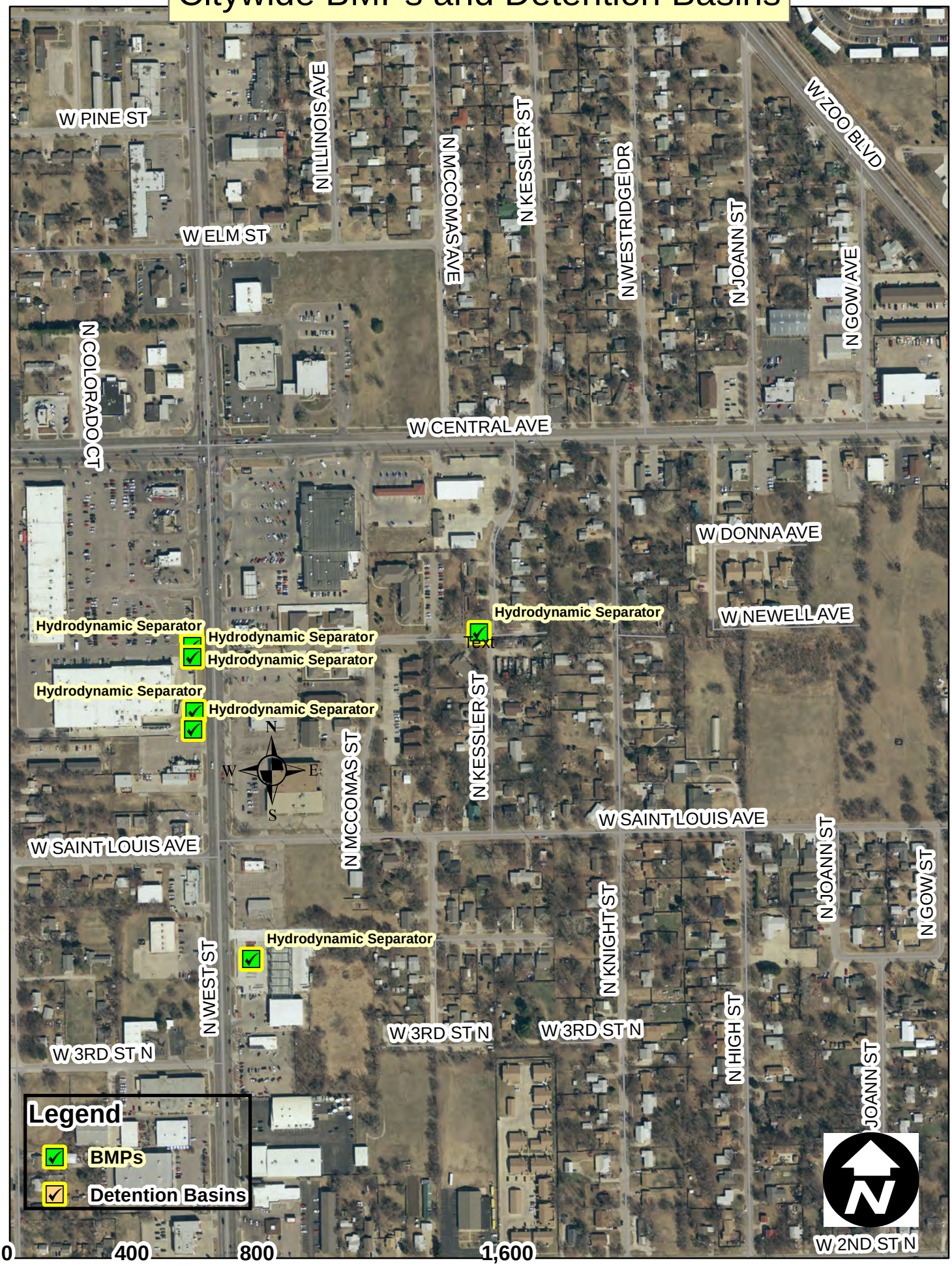

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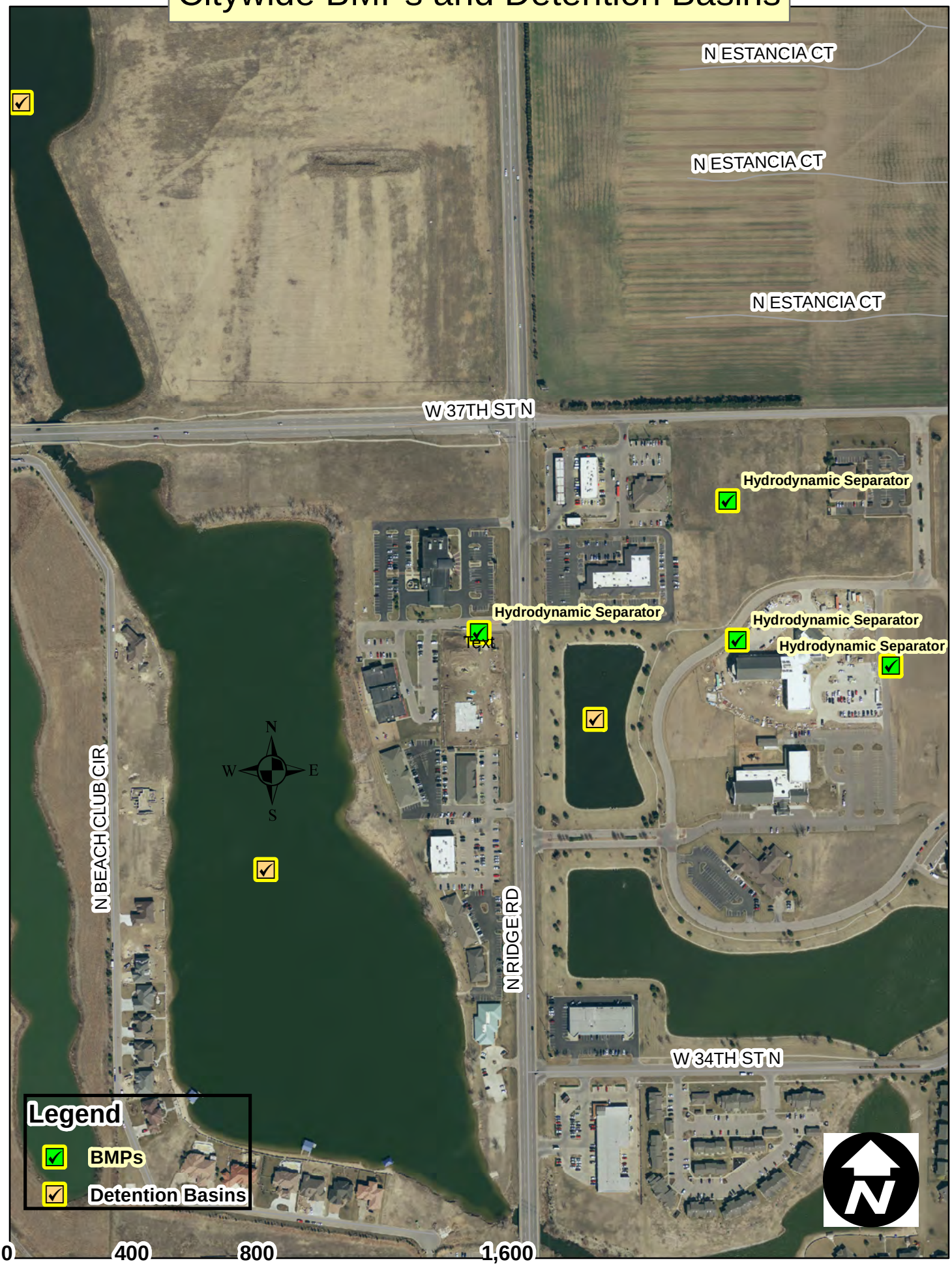

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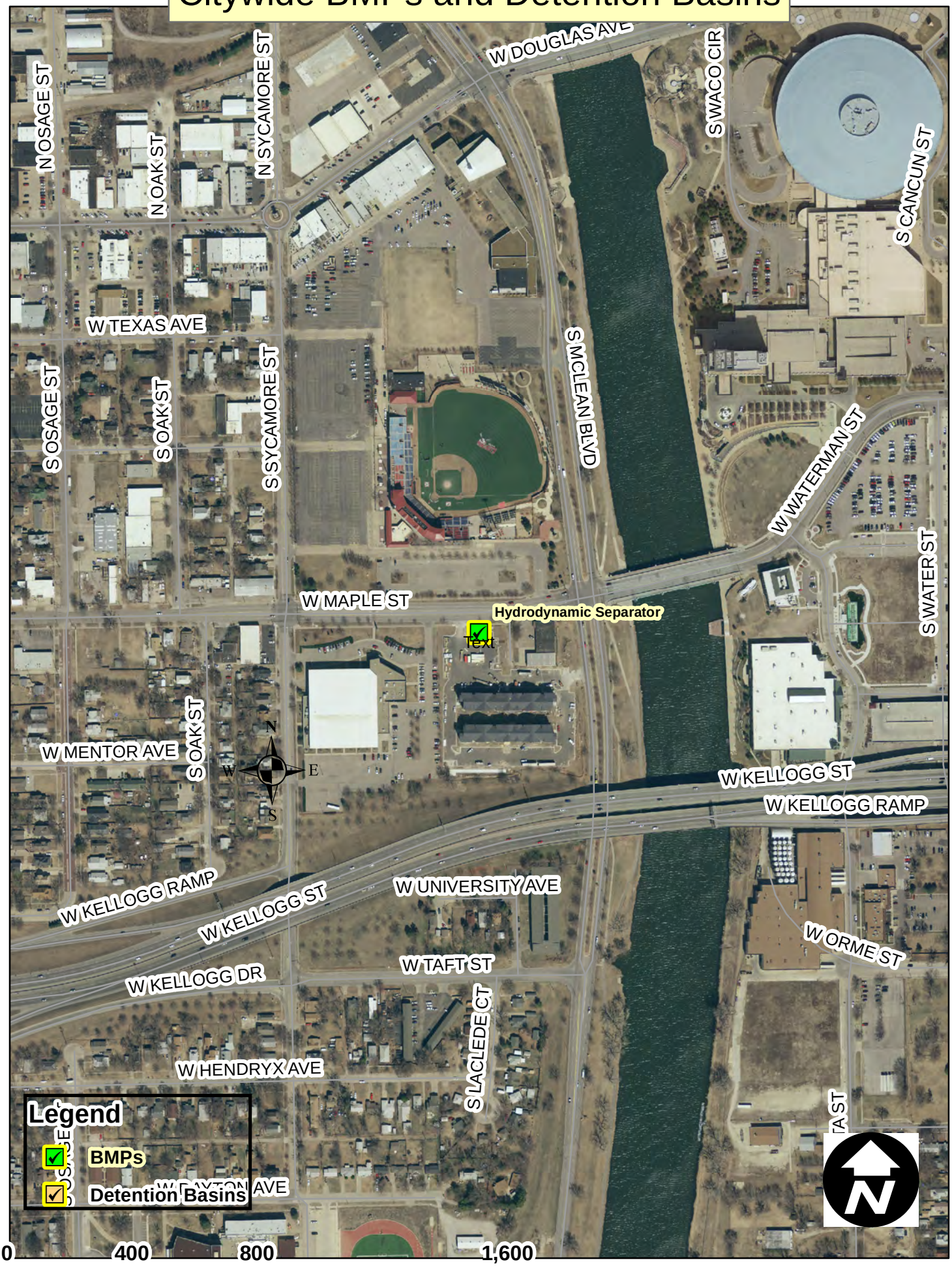

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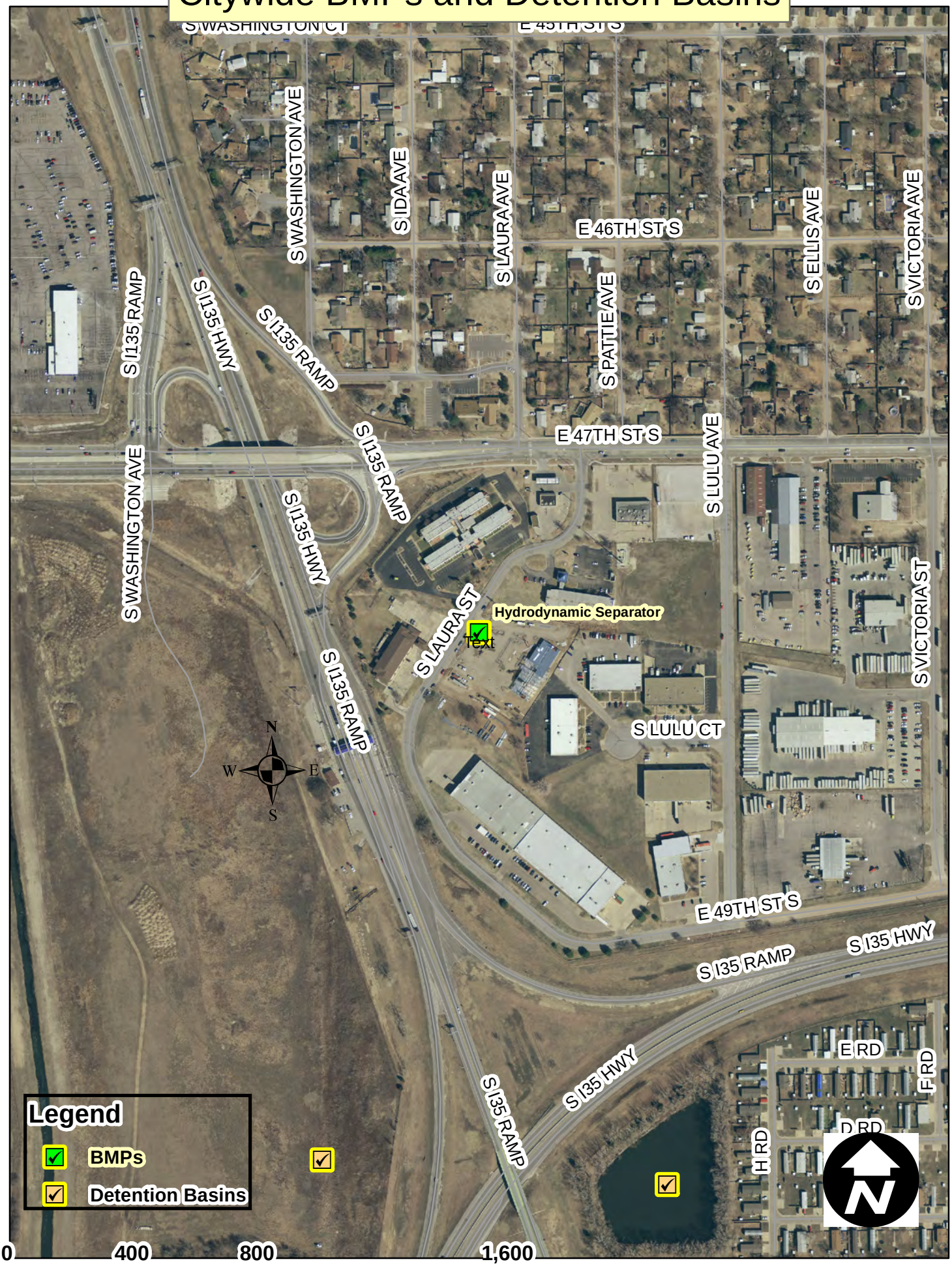

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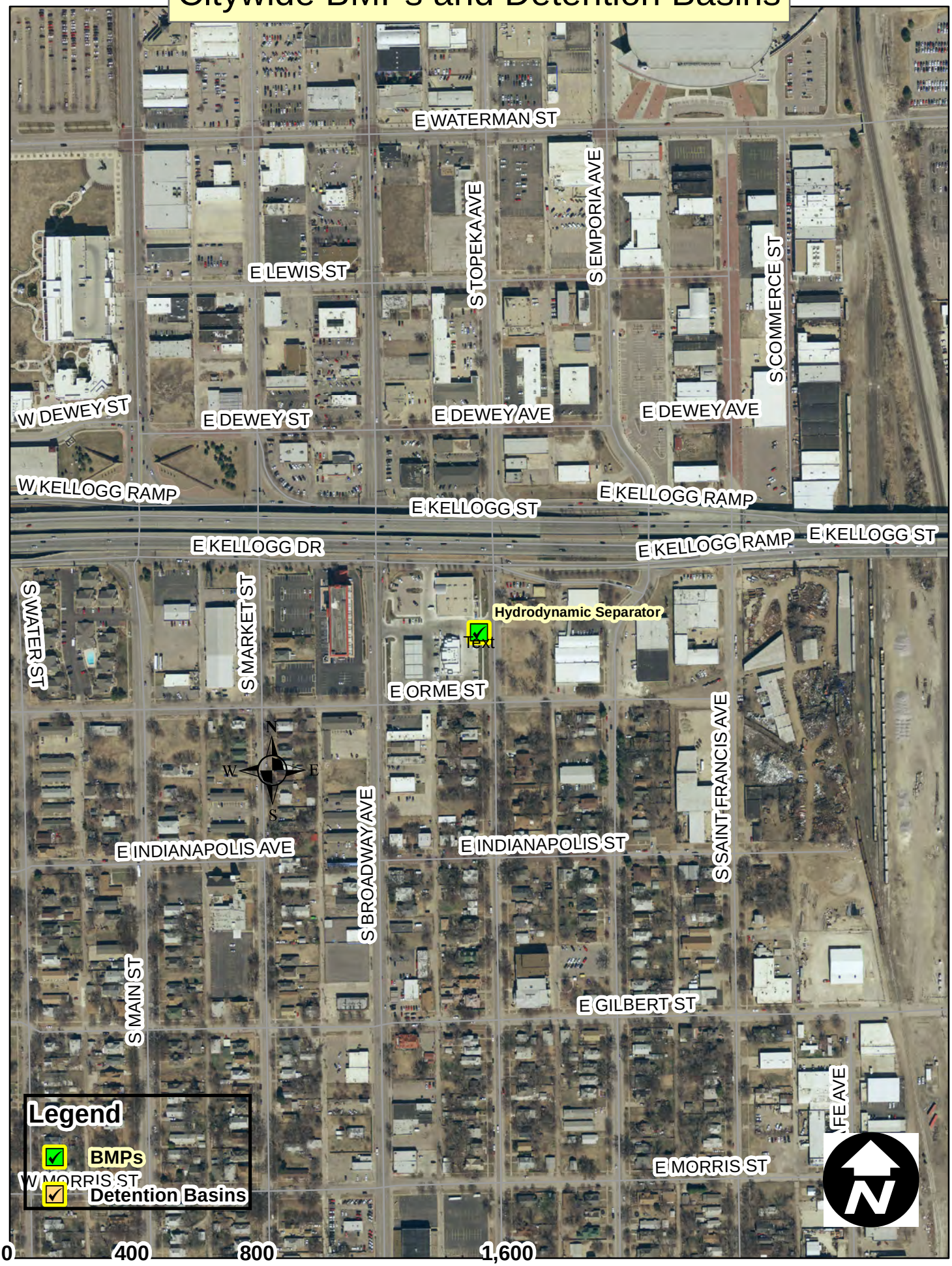

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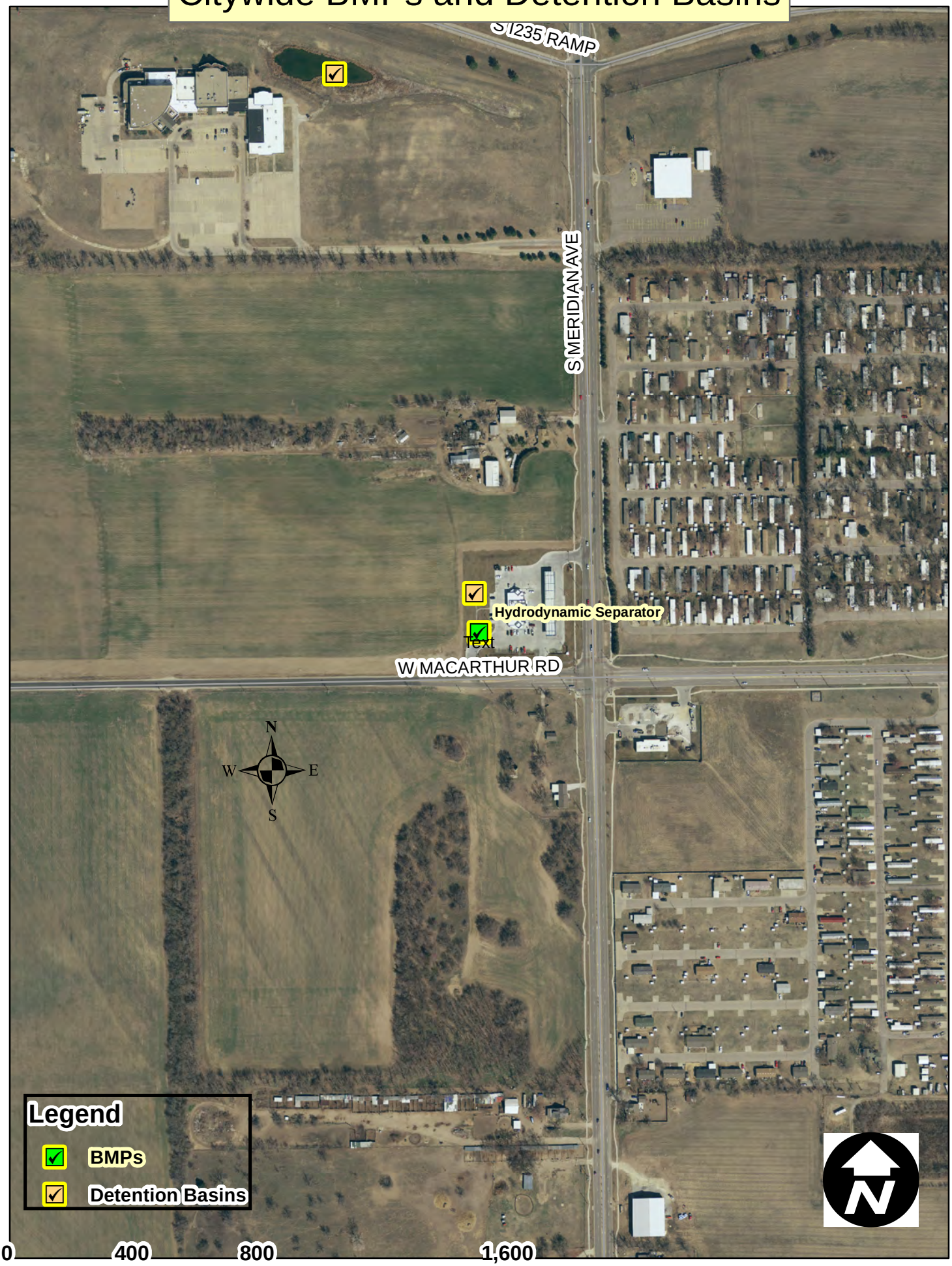


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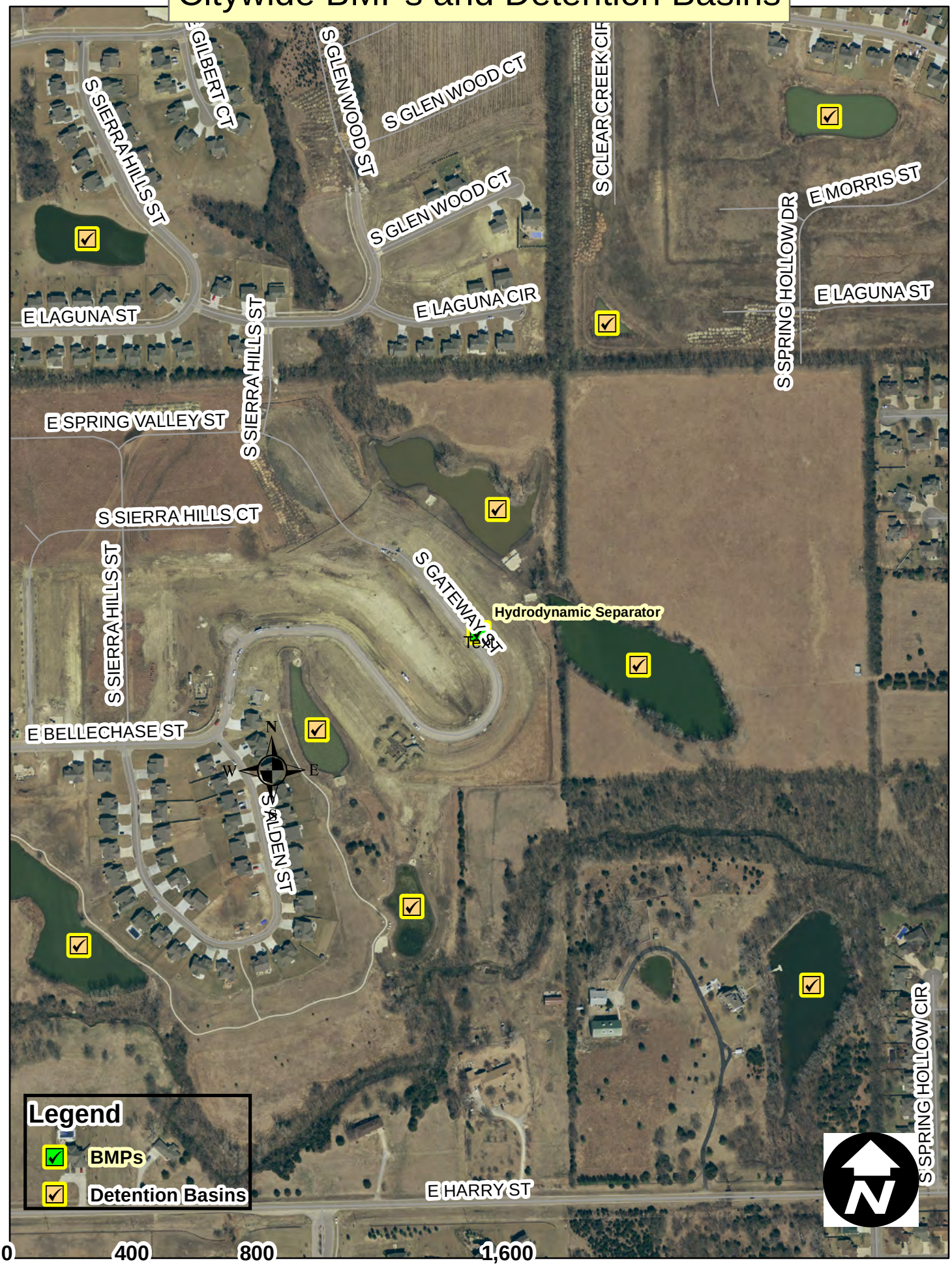

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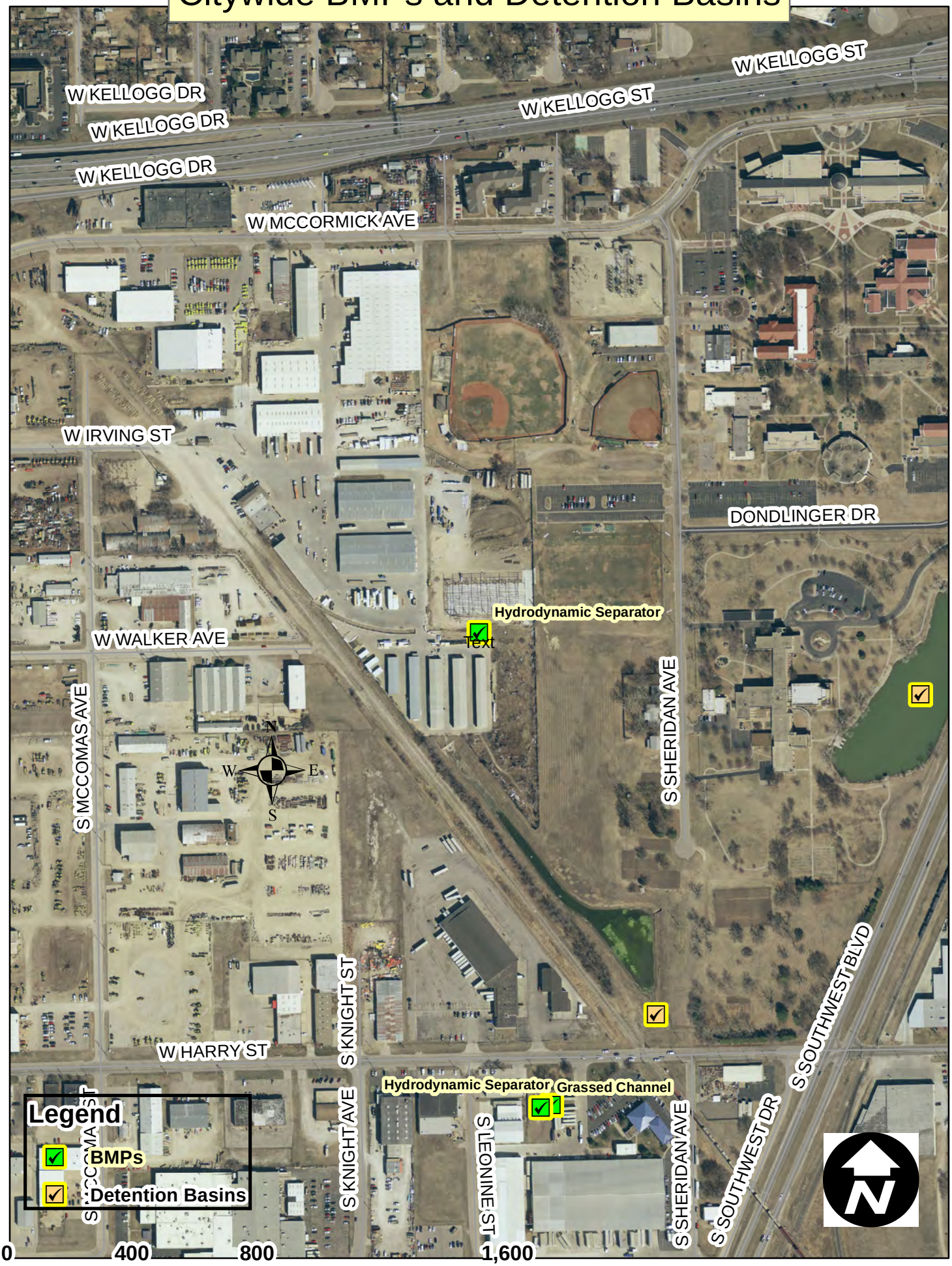

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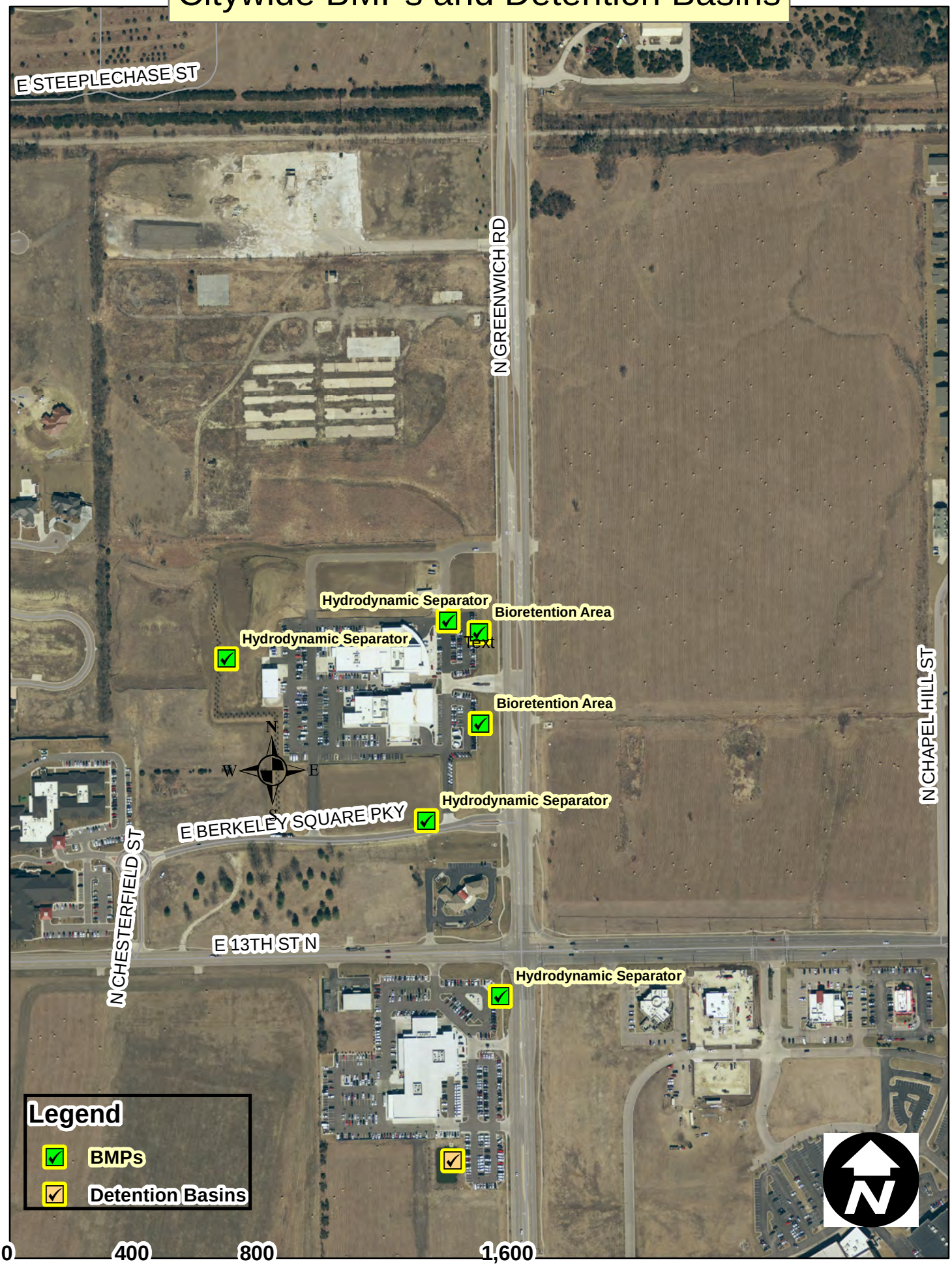

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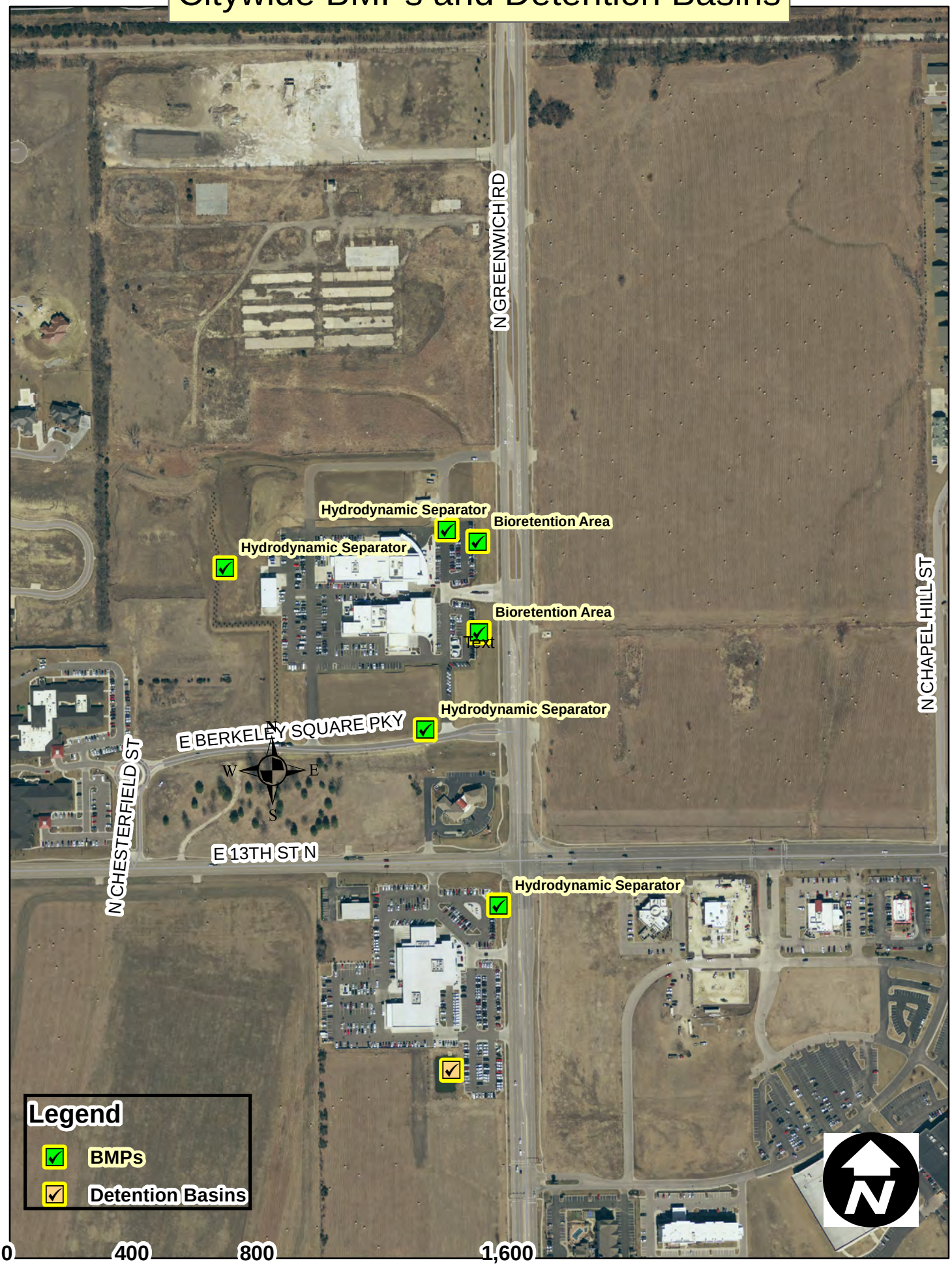

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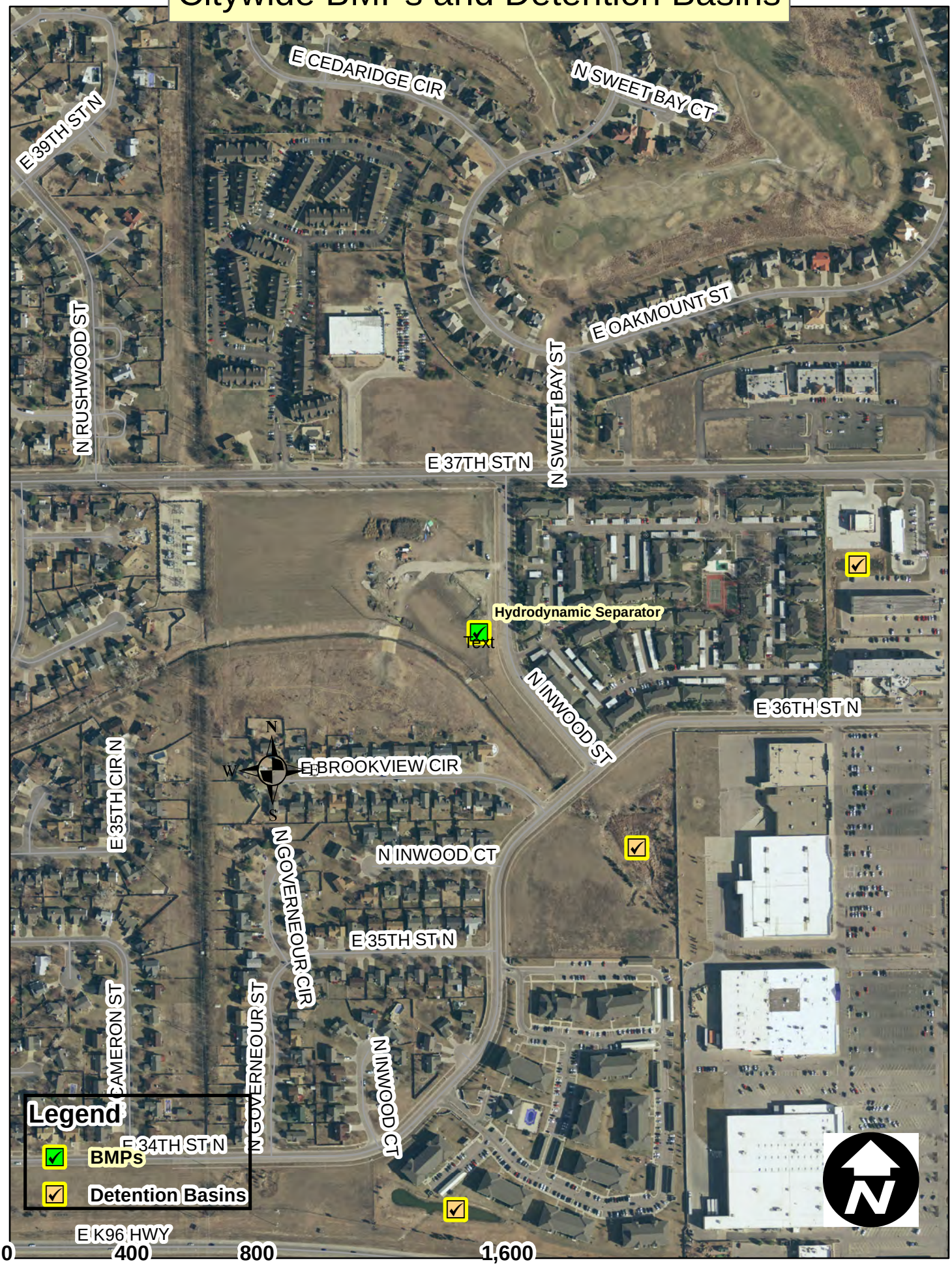

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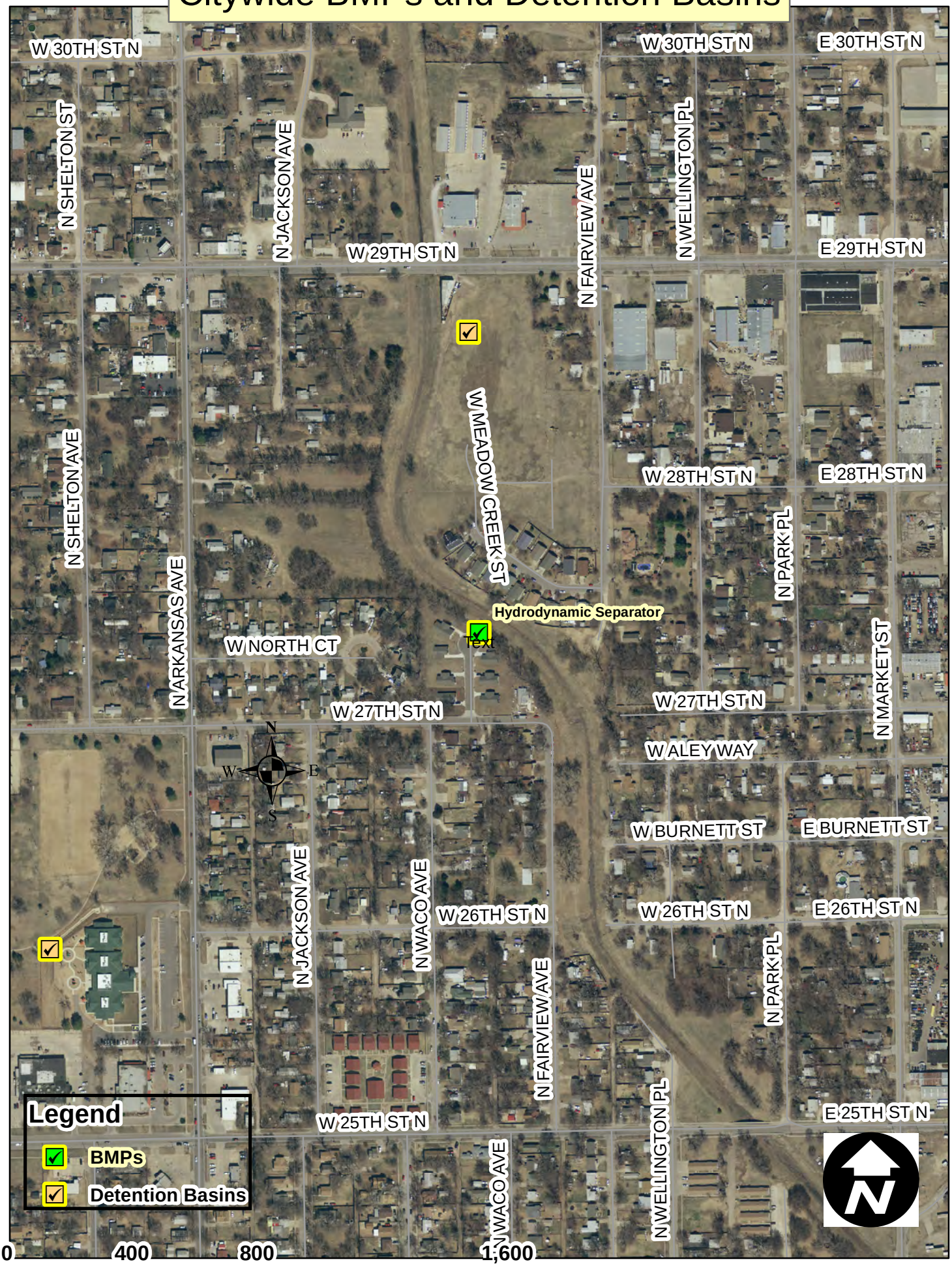

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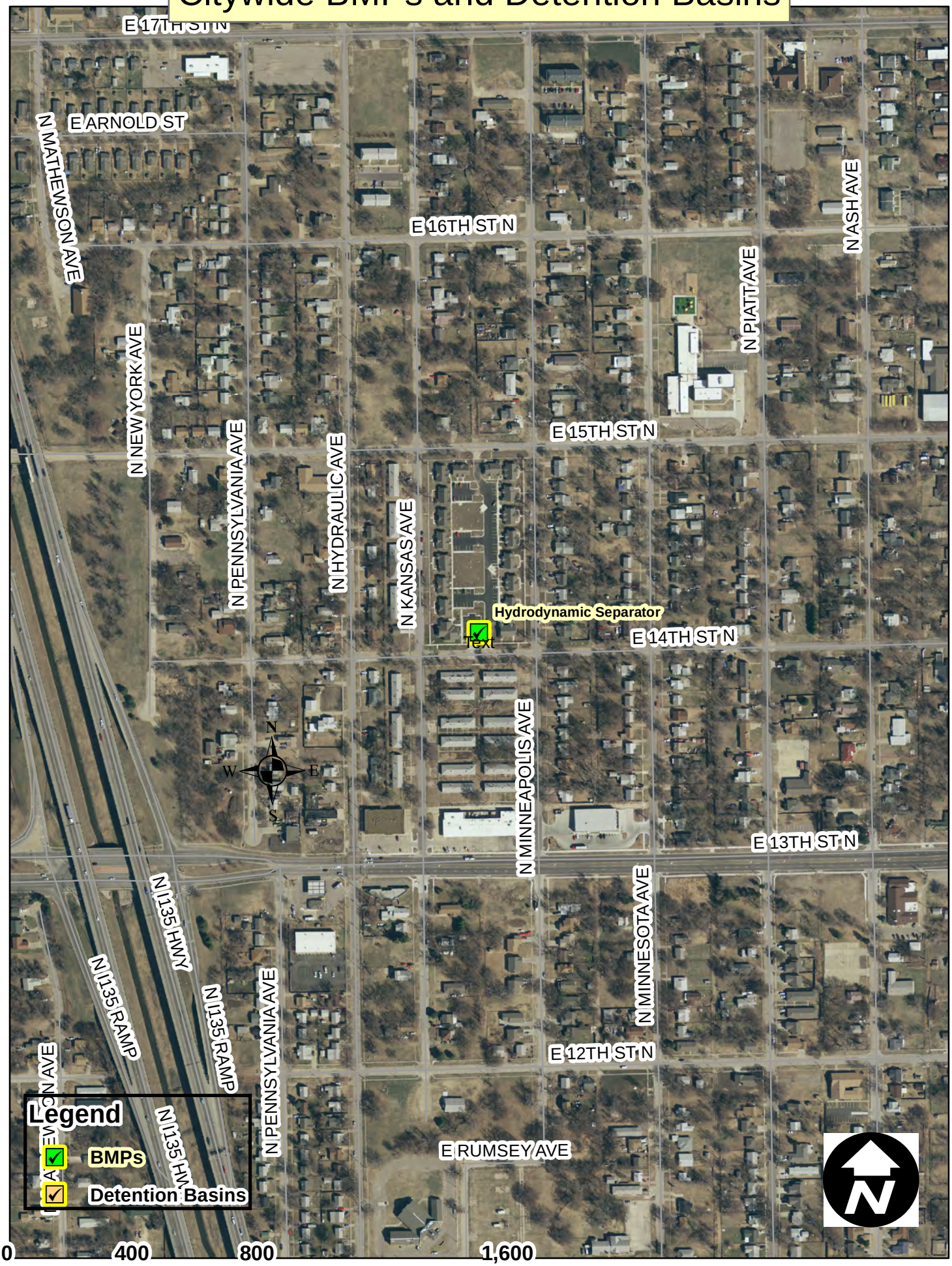

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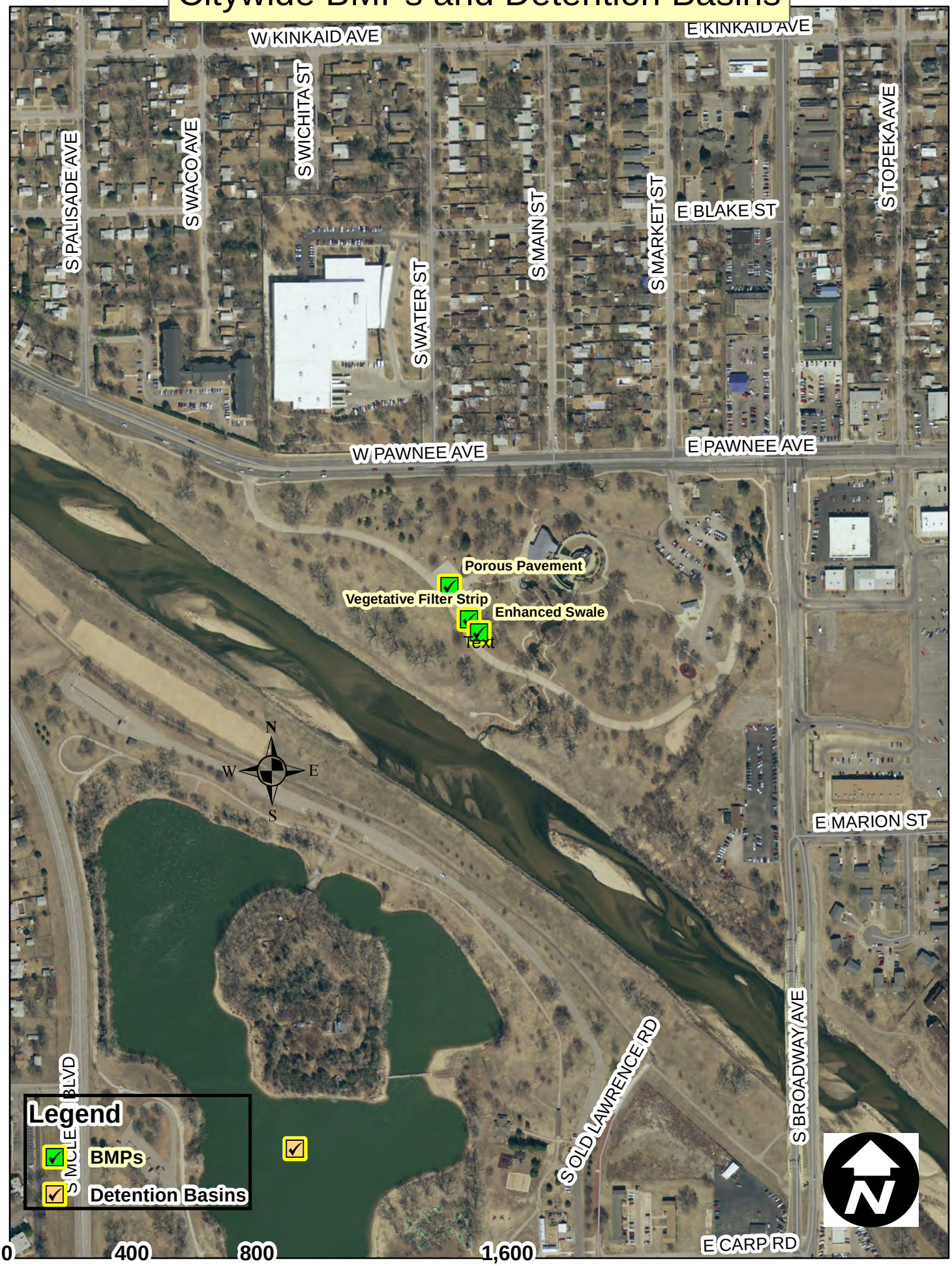

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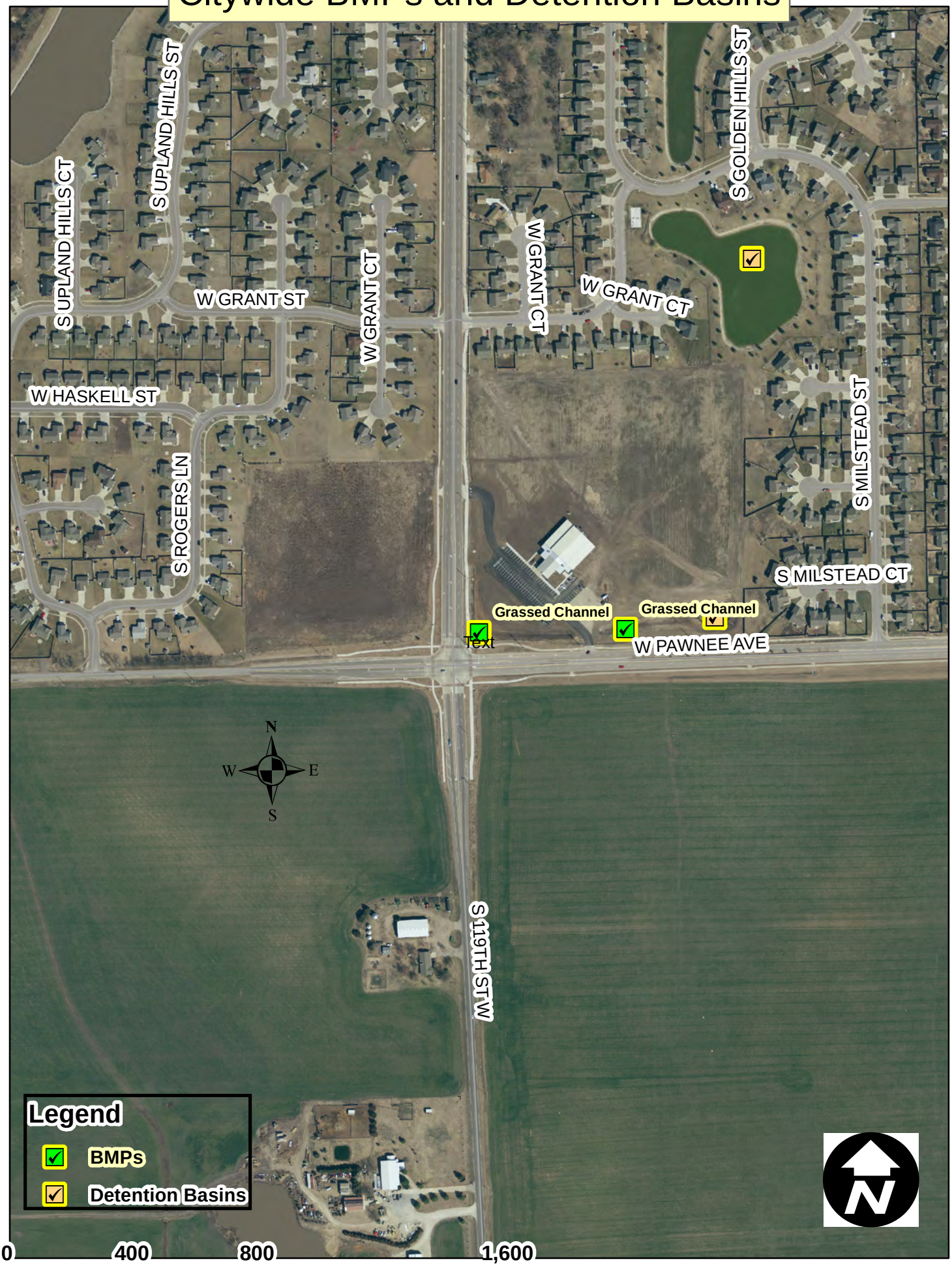

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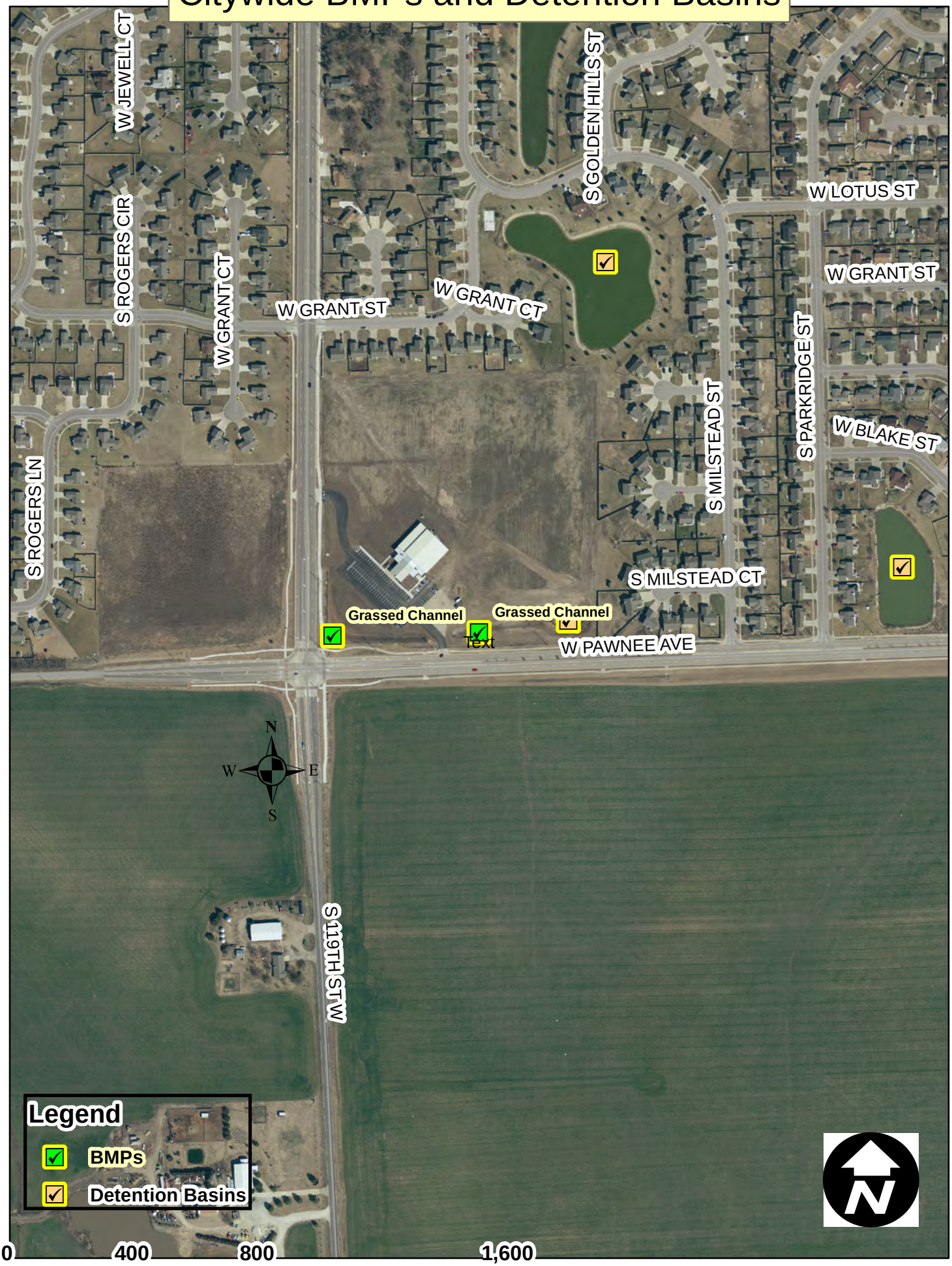

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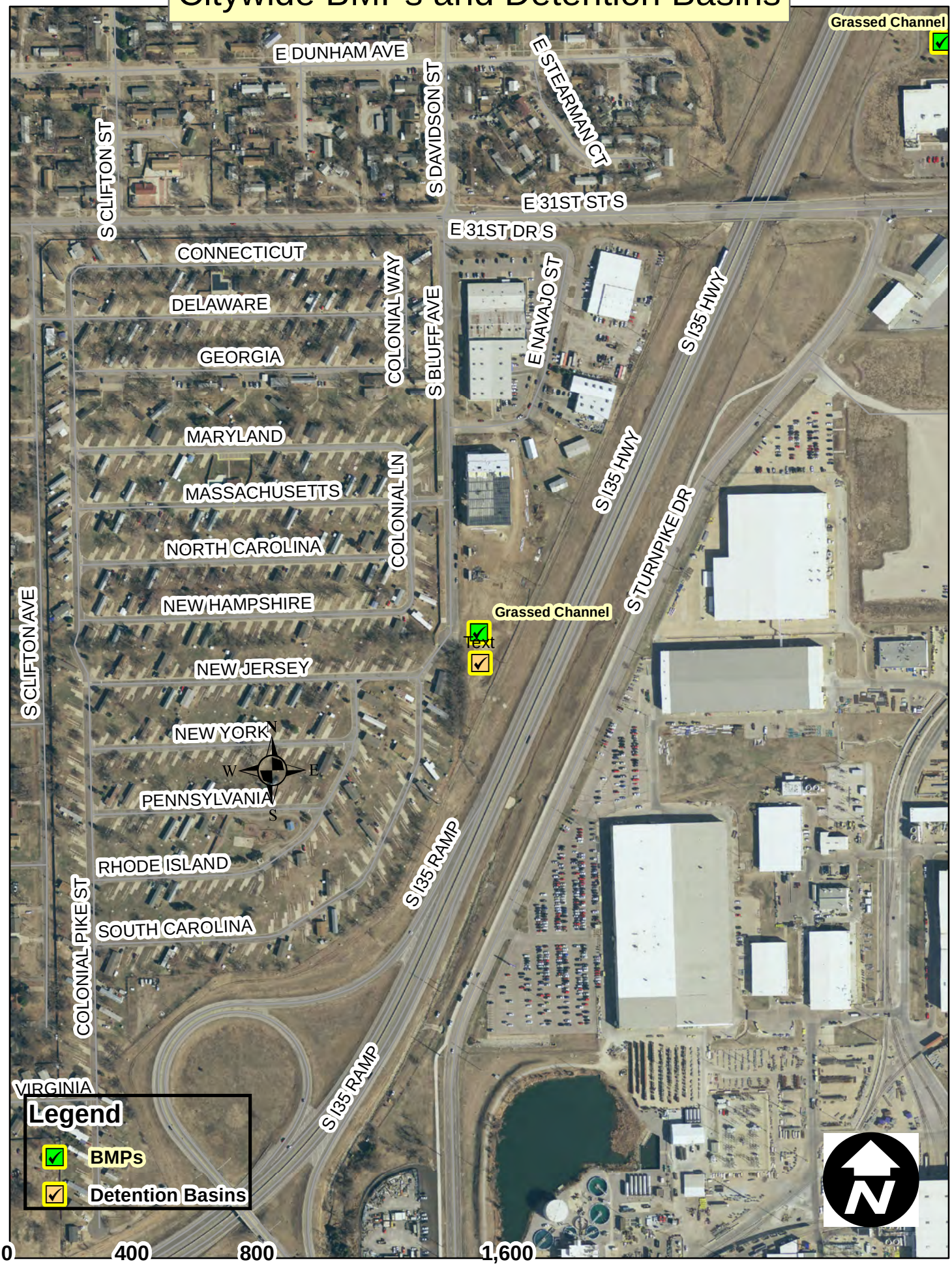

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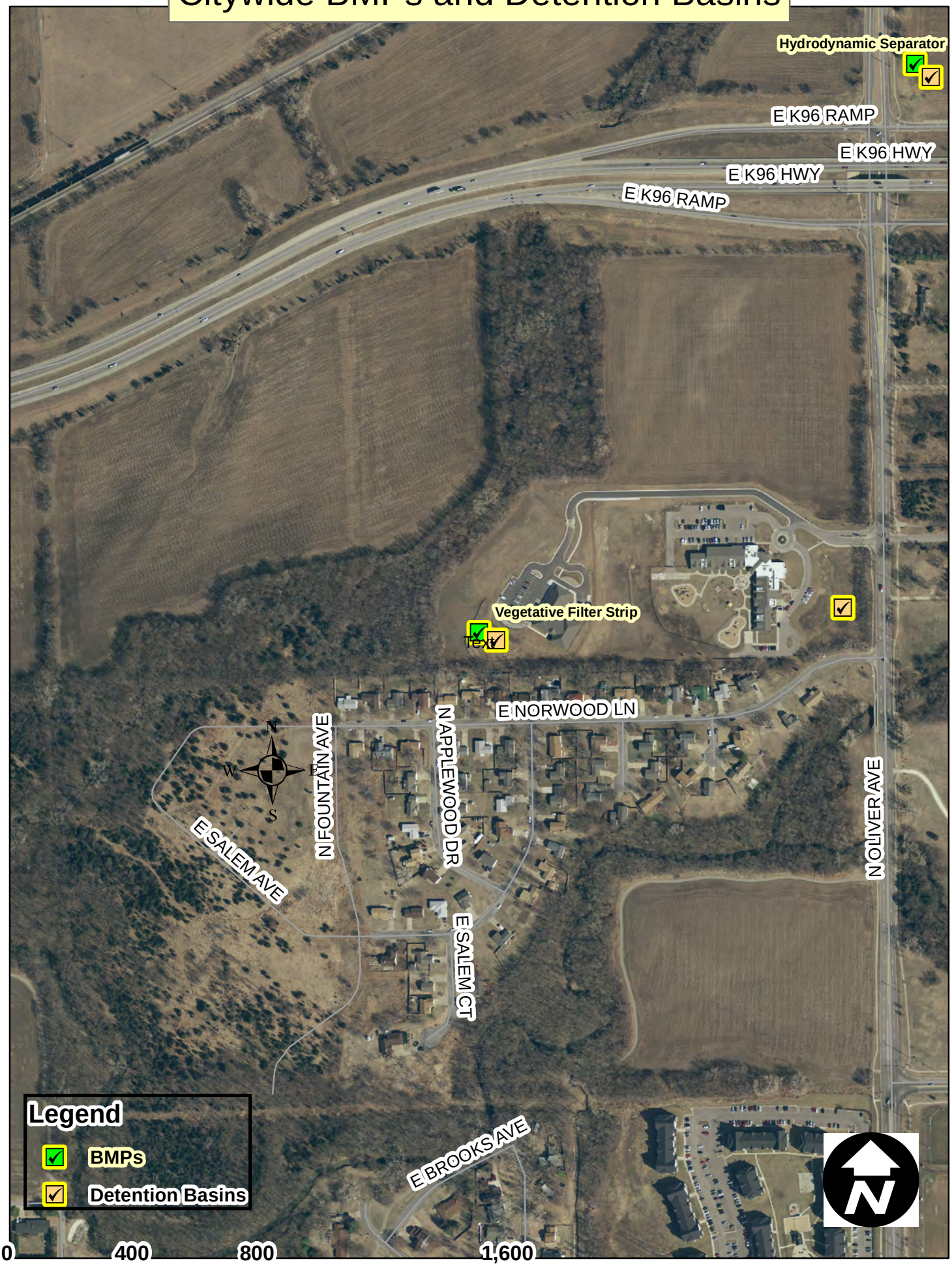

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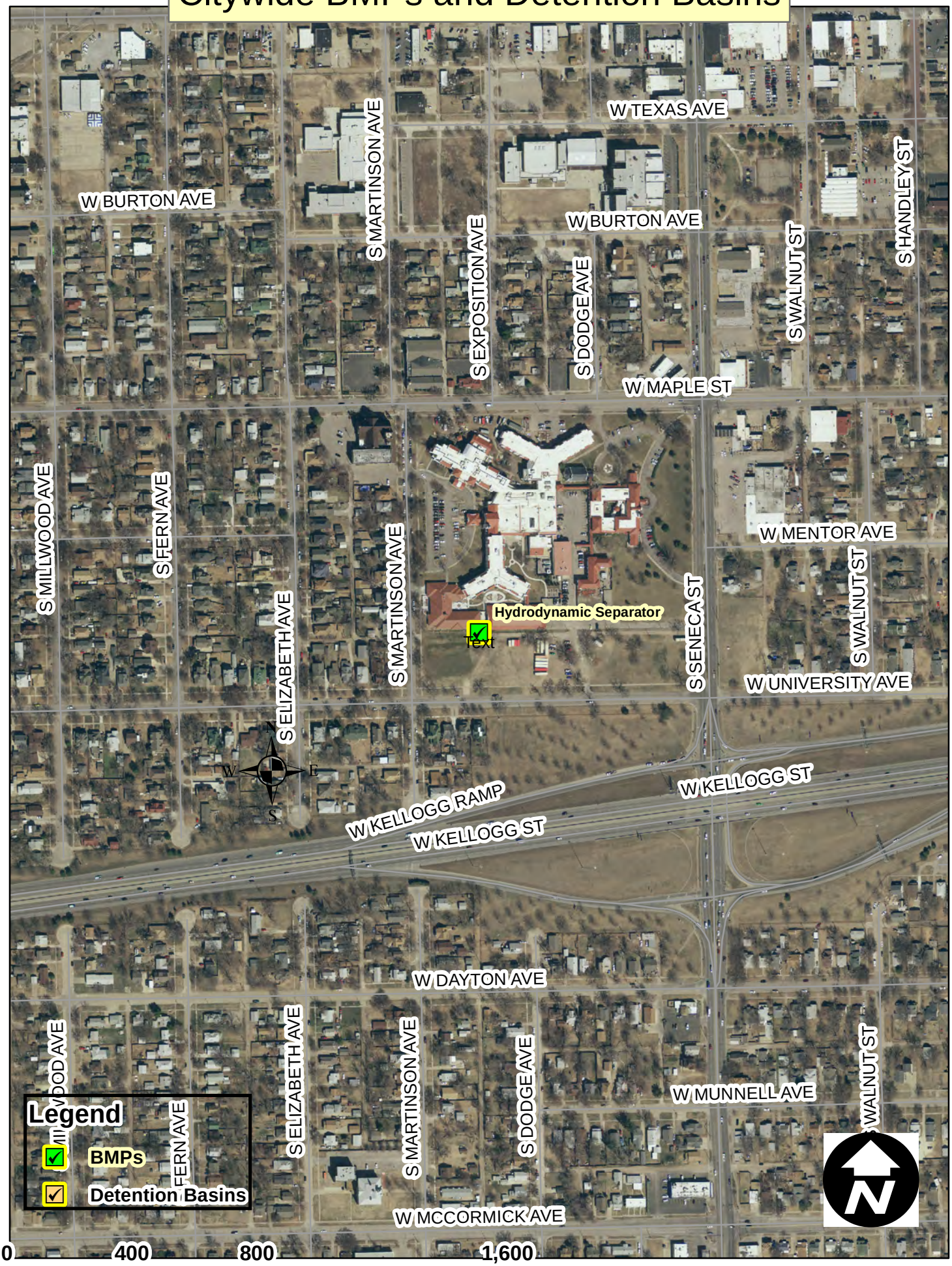

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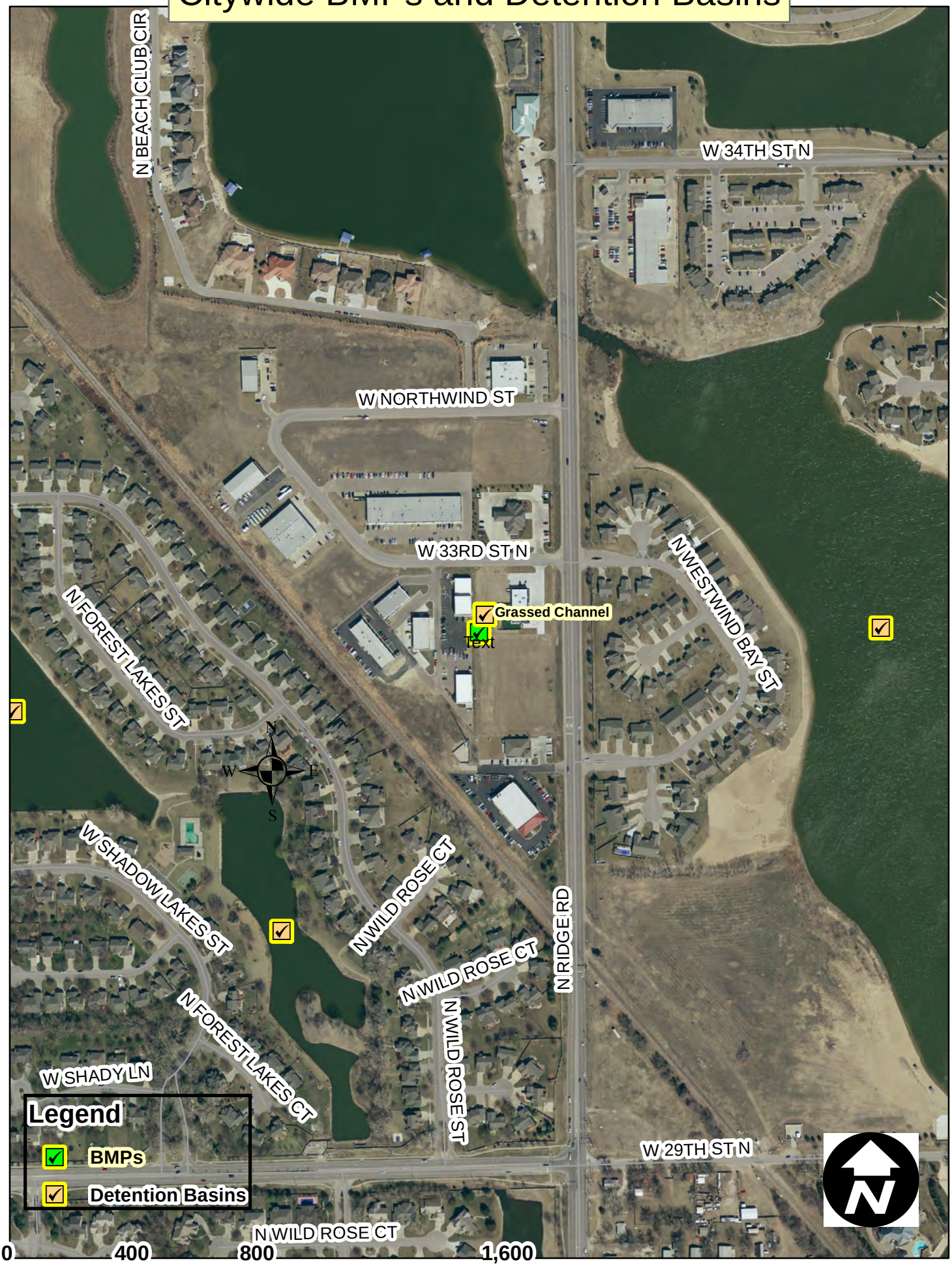


0 400 800 1,600 Feet

# Citywide BMPs and Detention Basins

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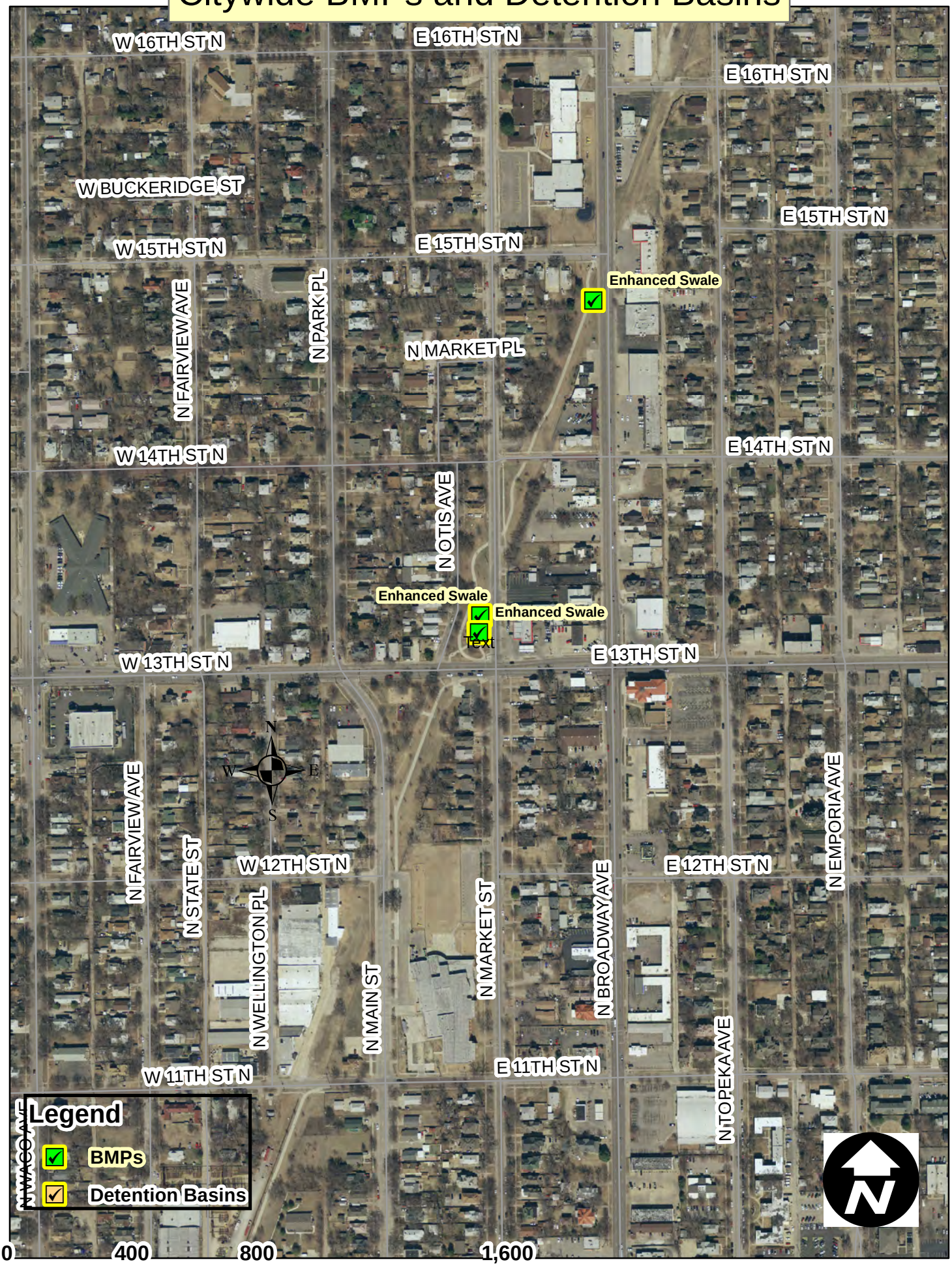

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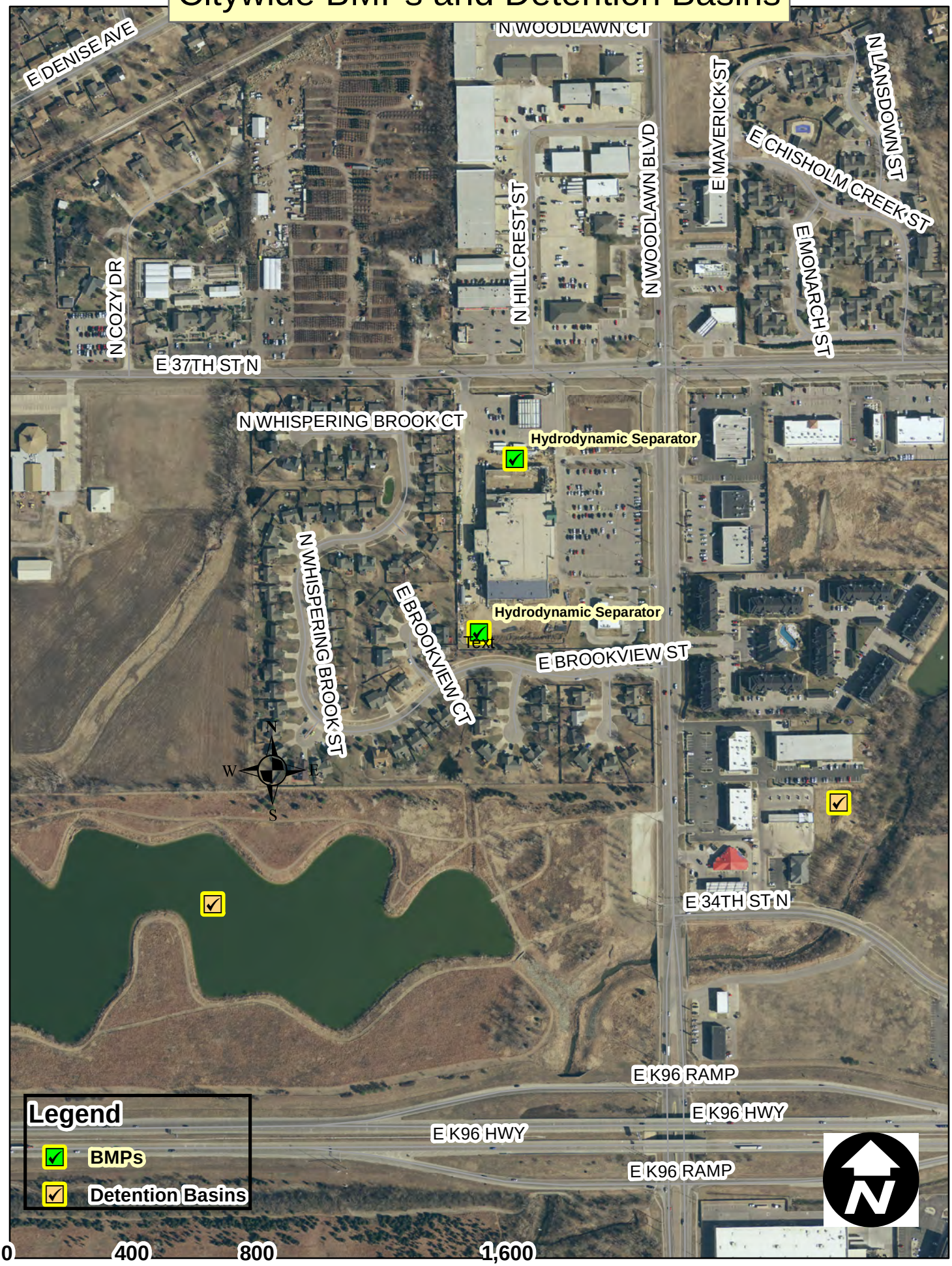

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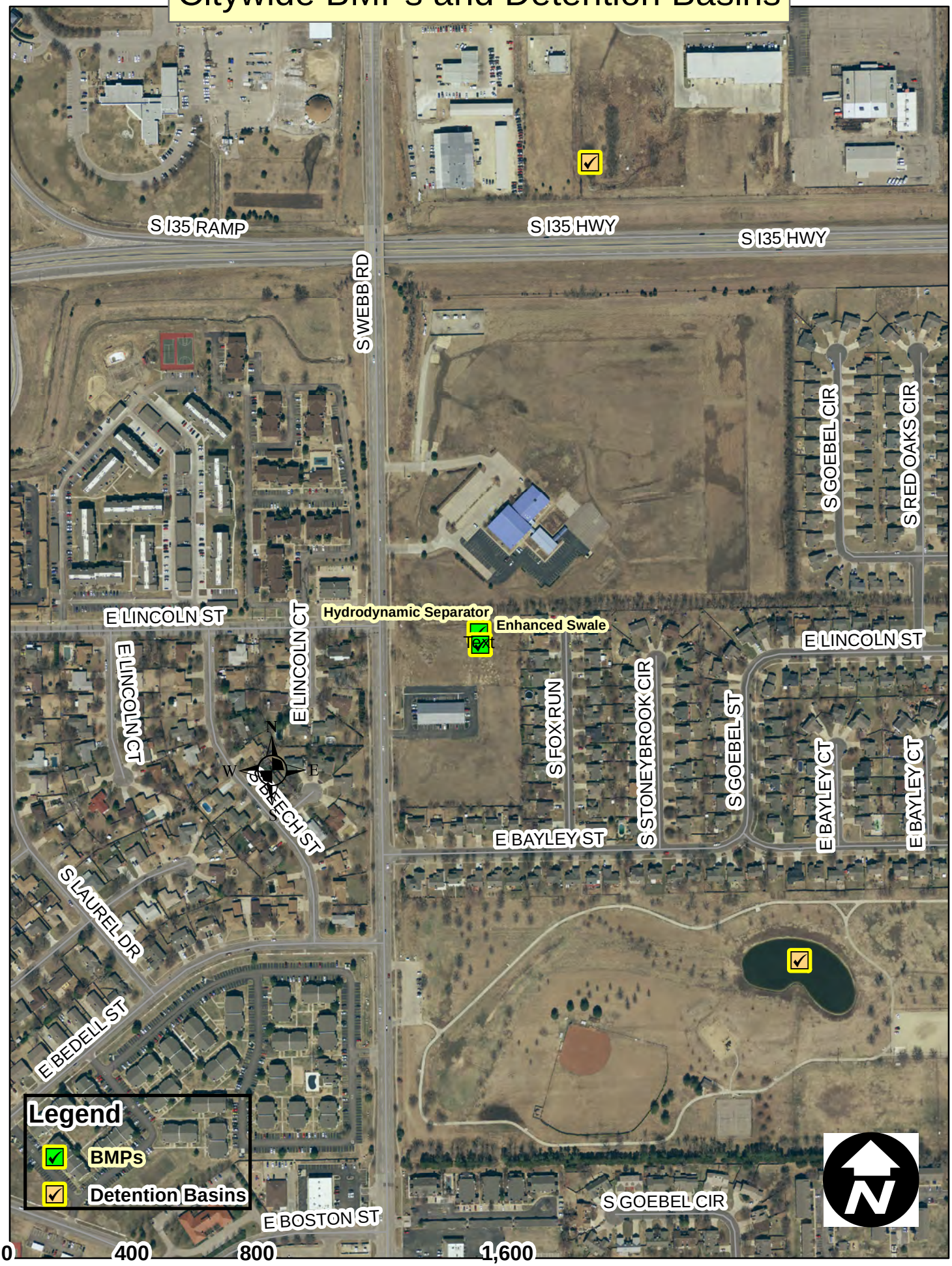

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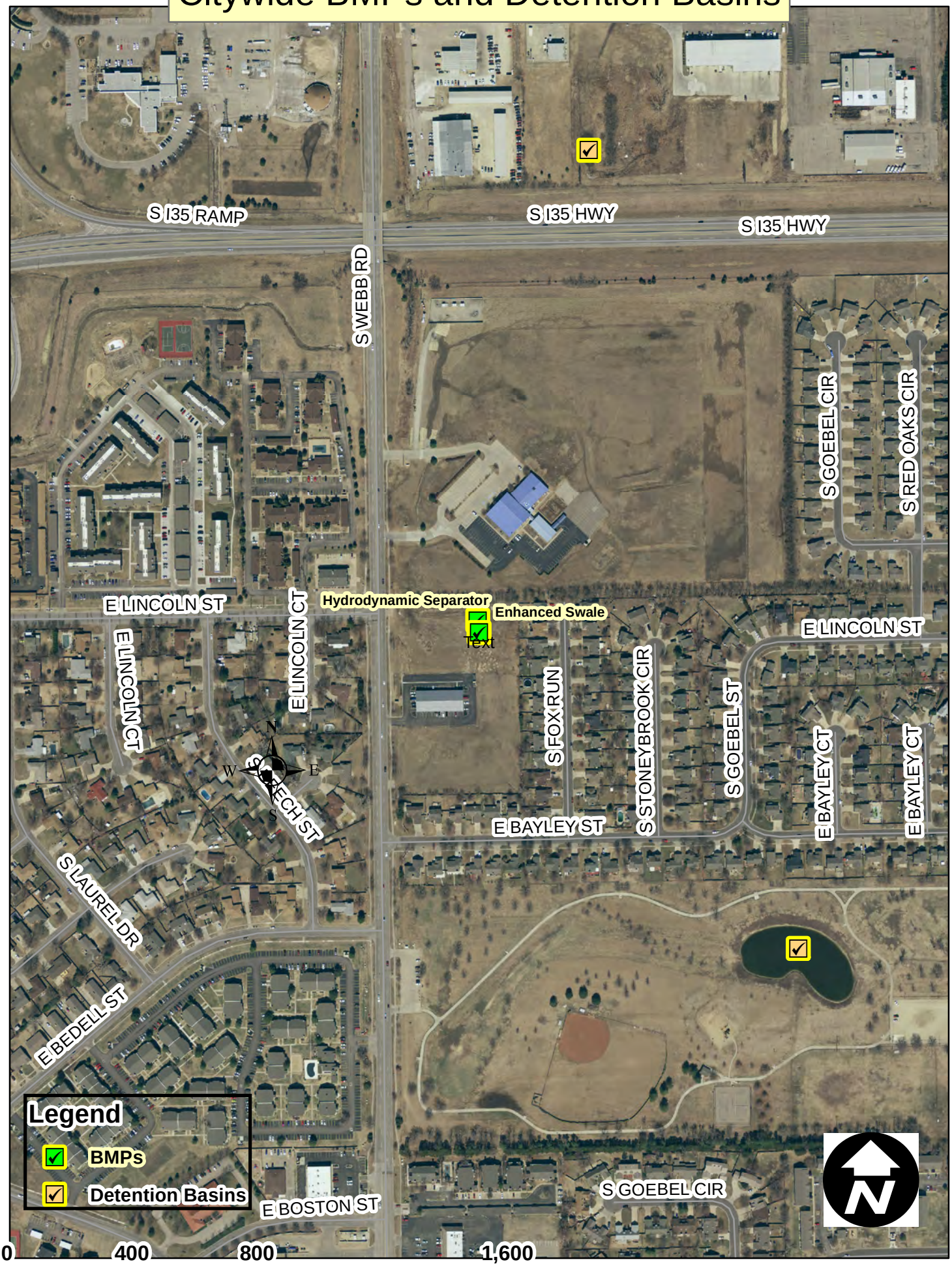

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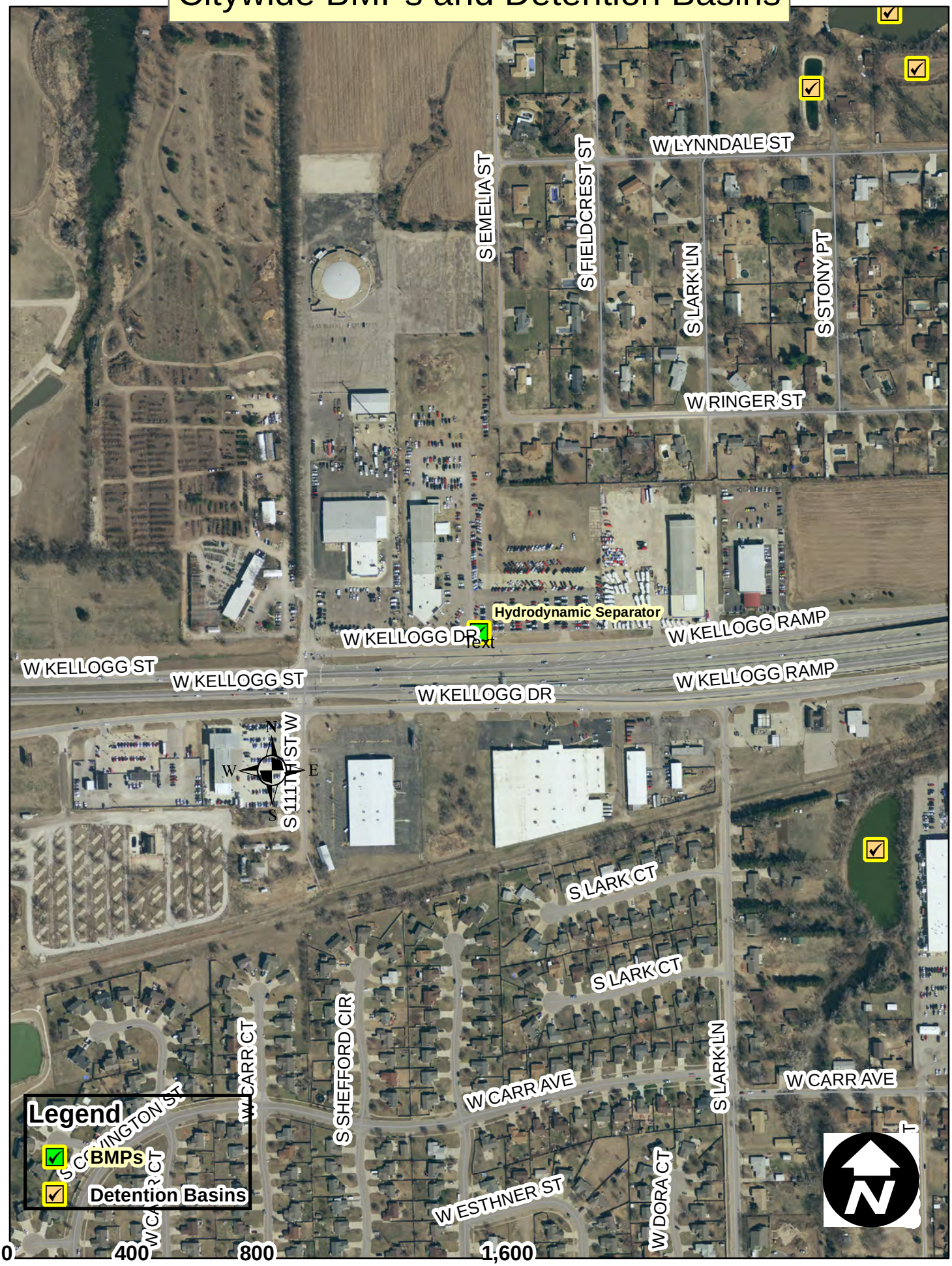

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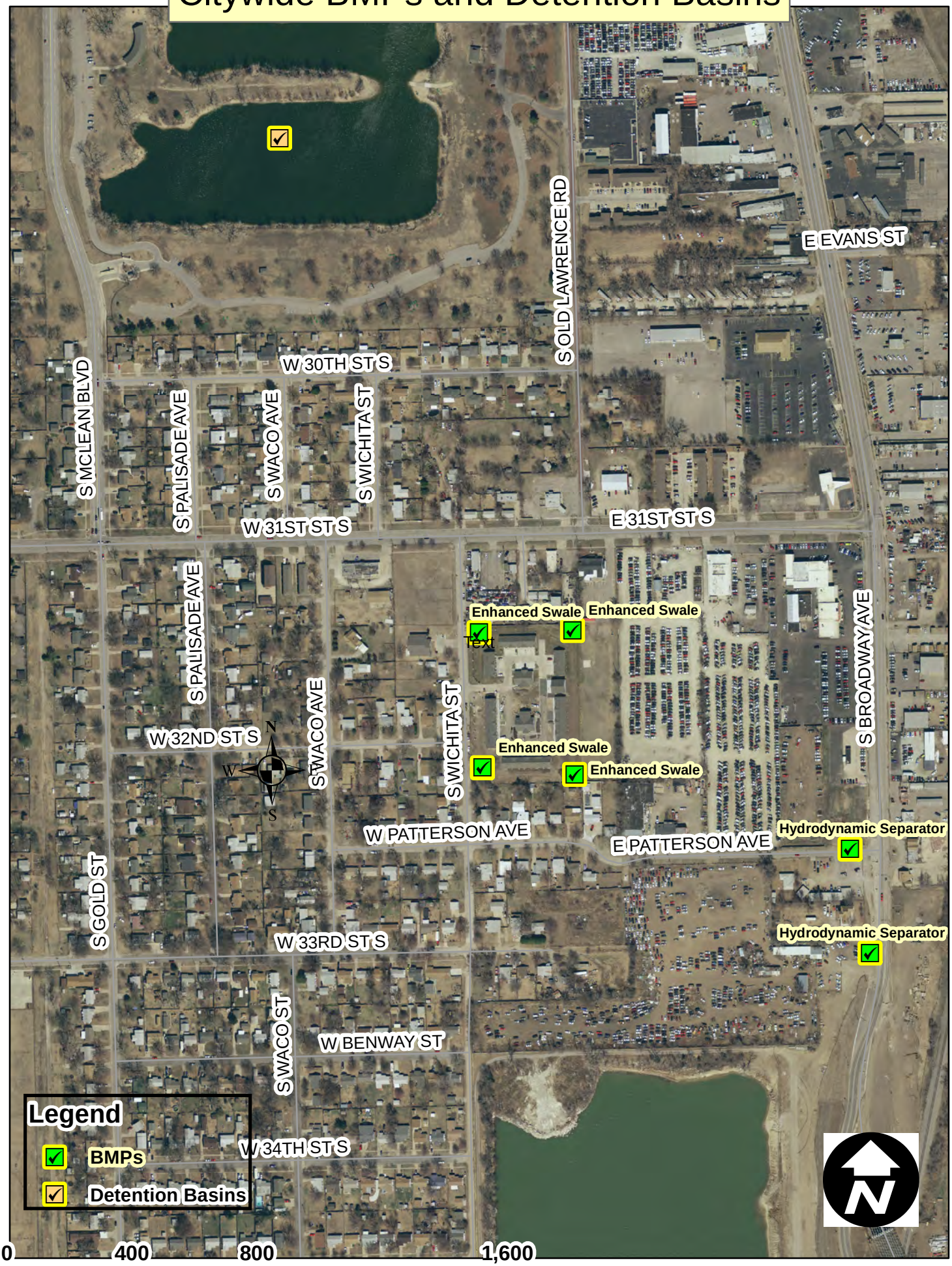

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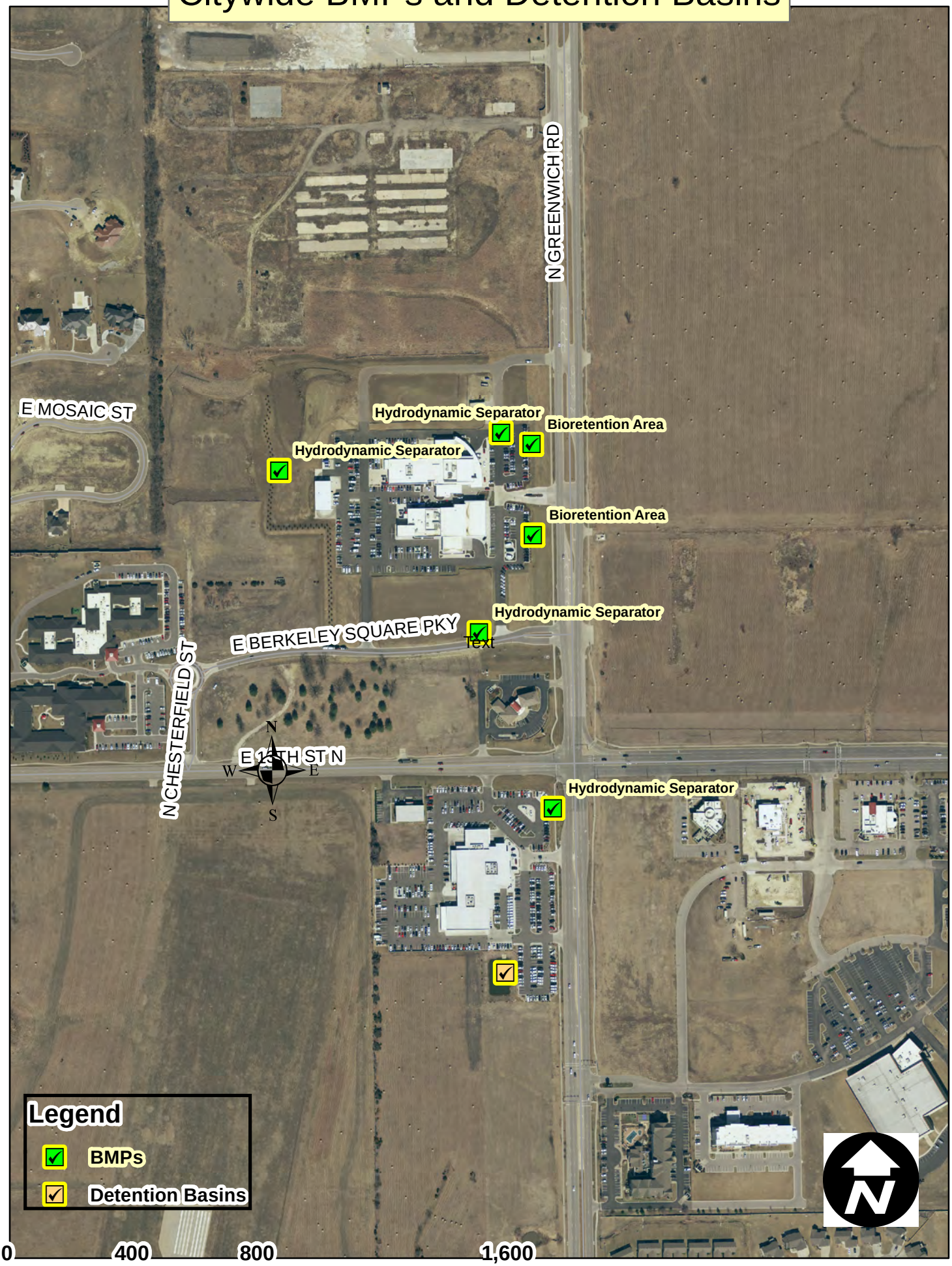

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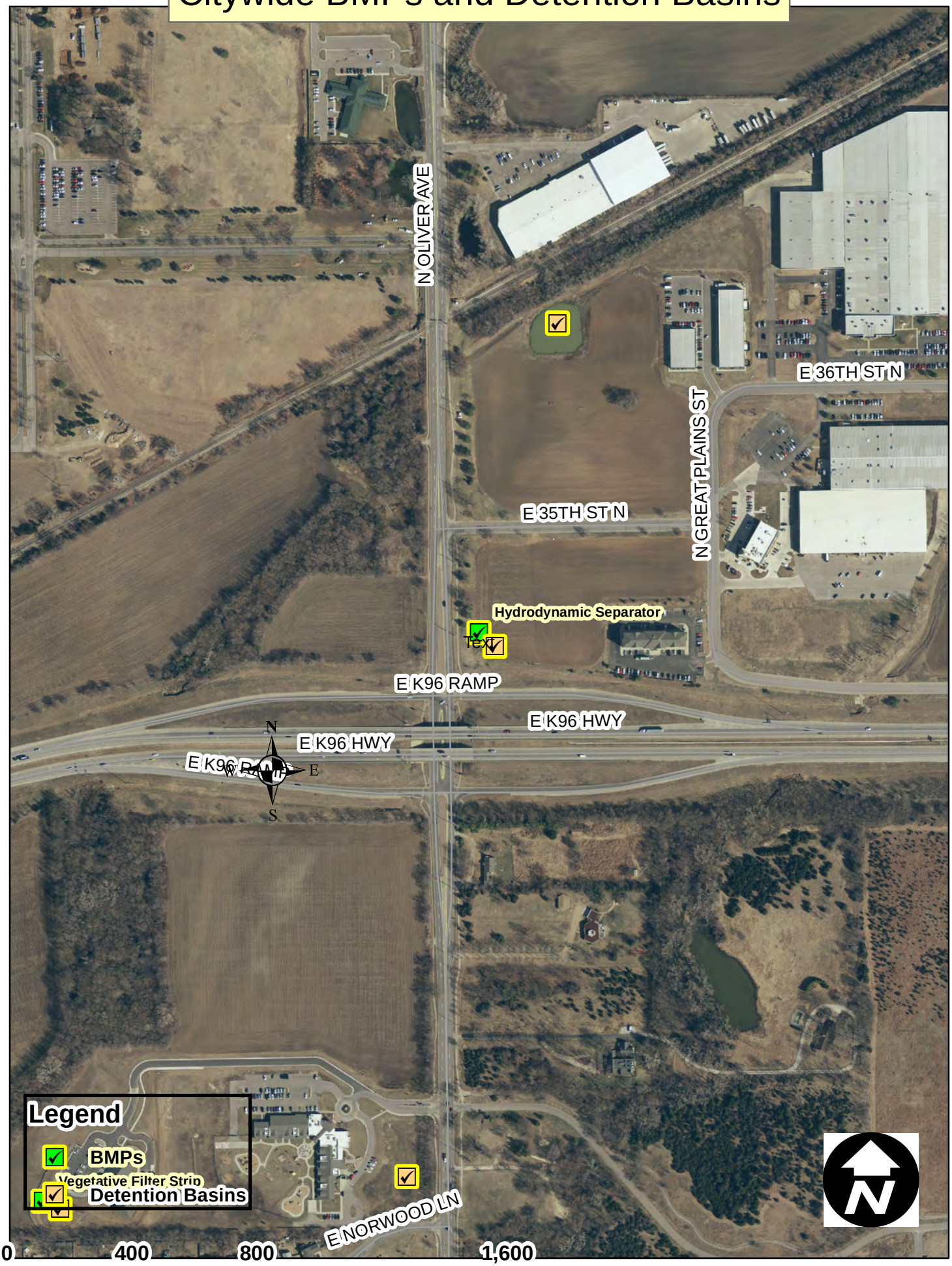

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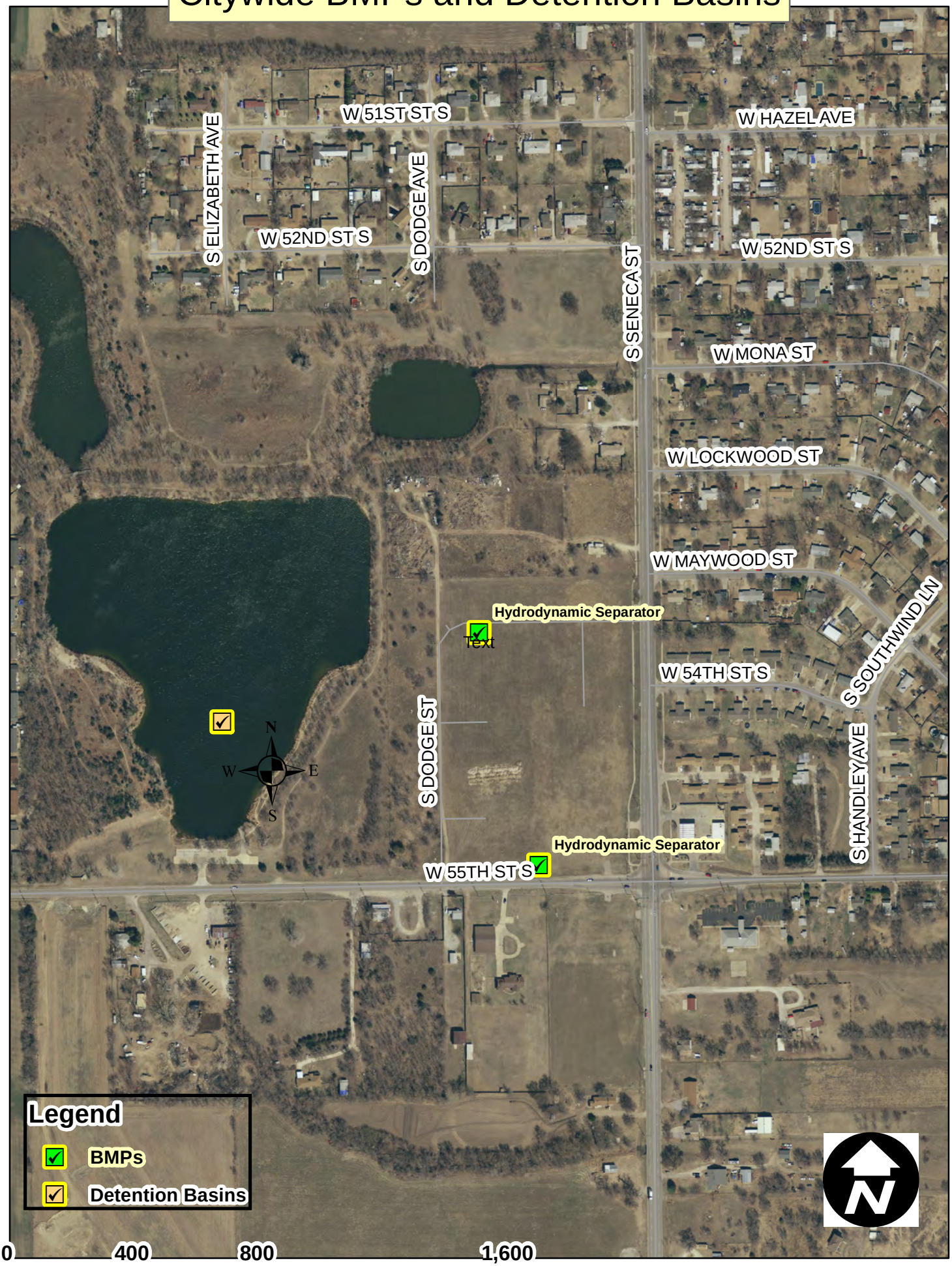

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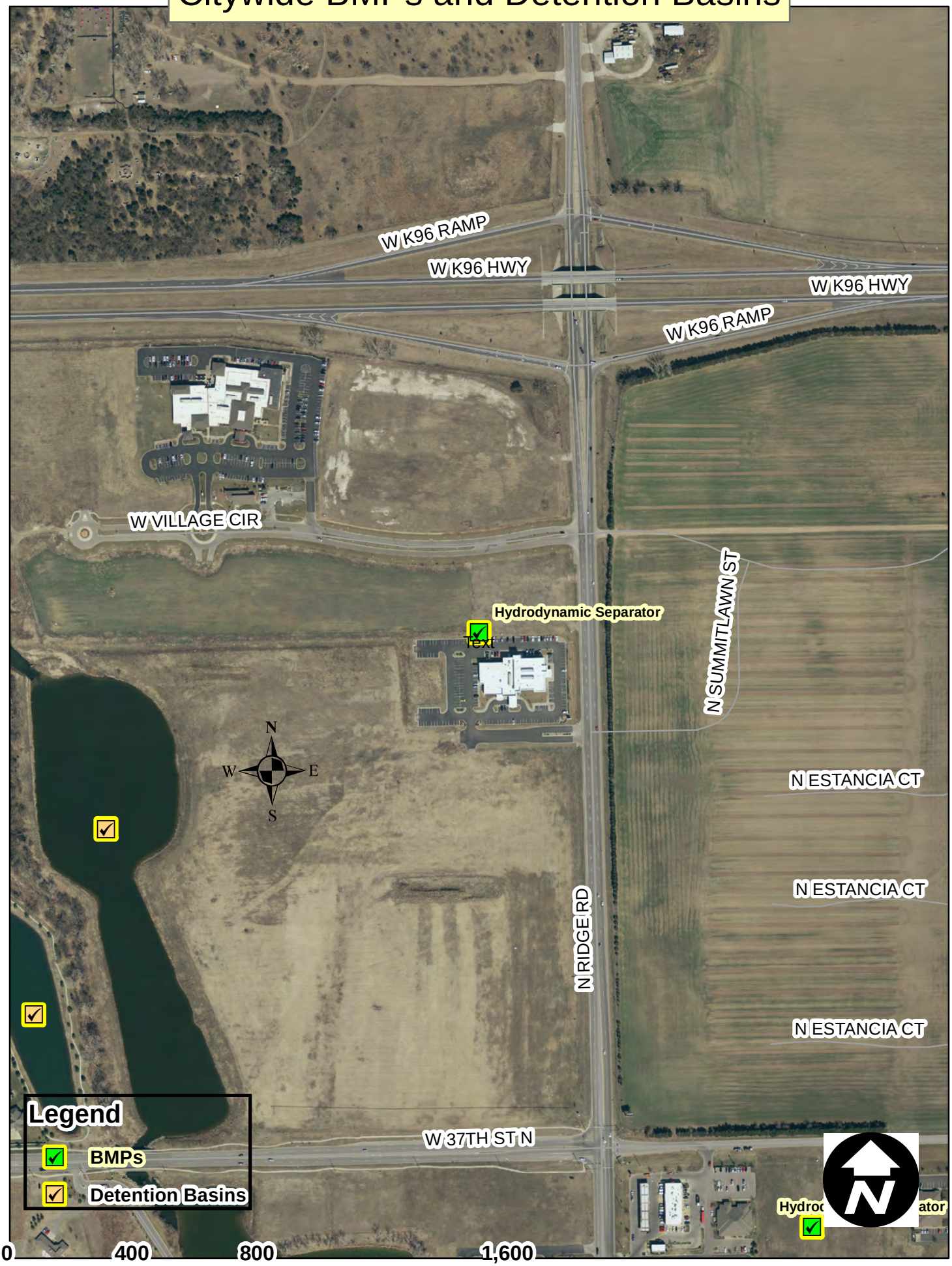

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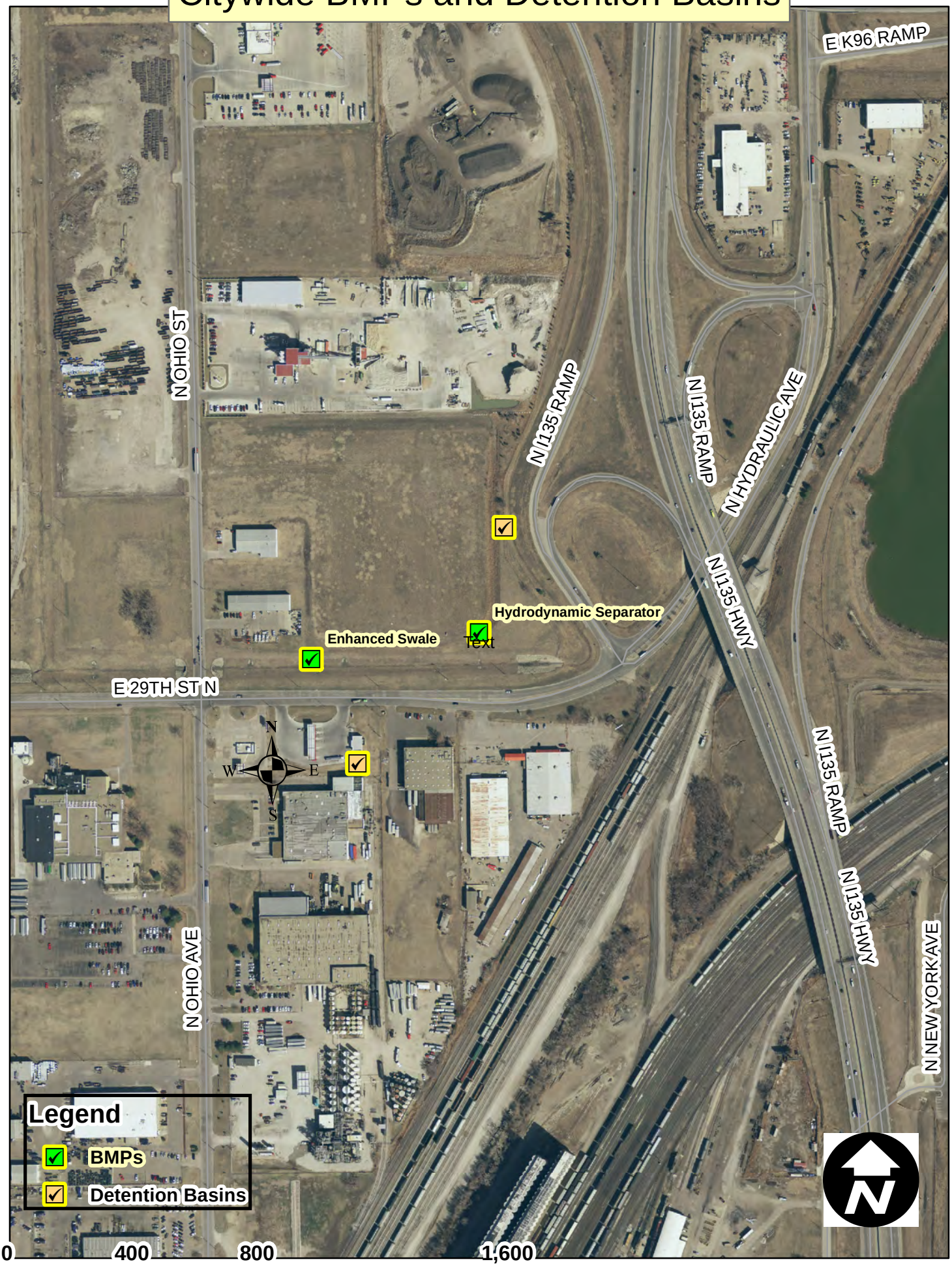

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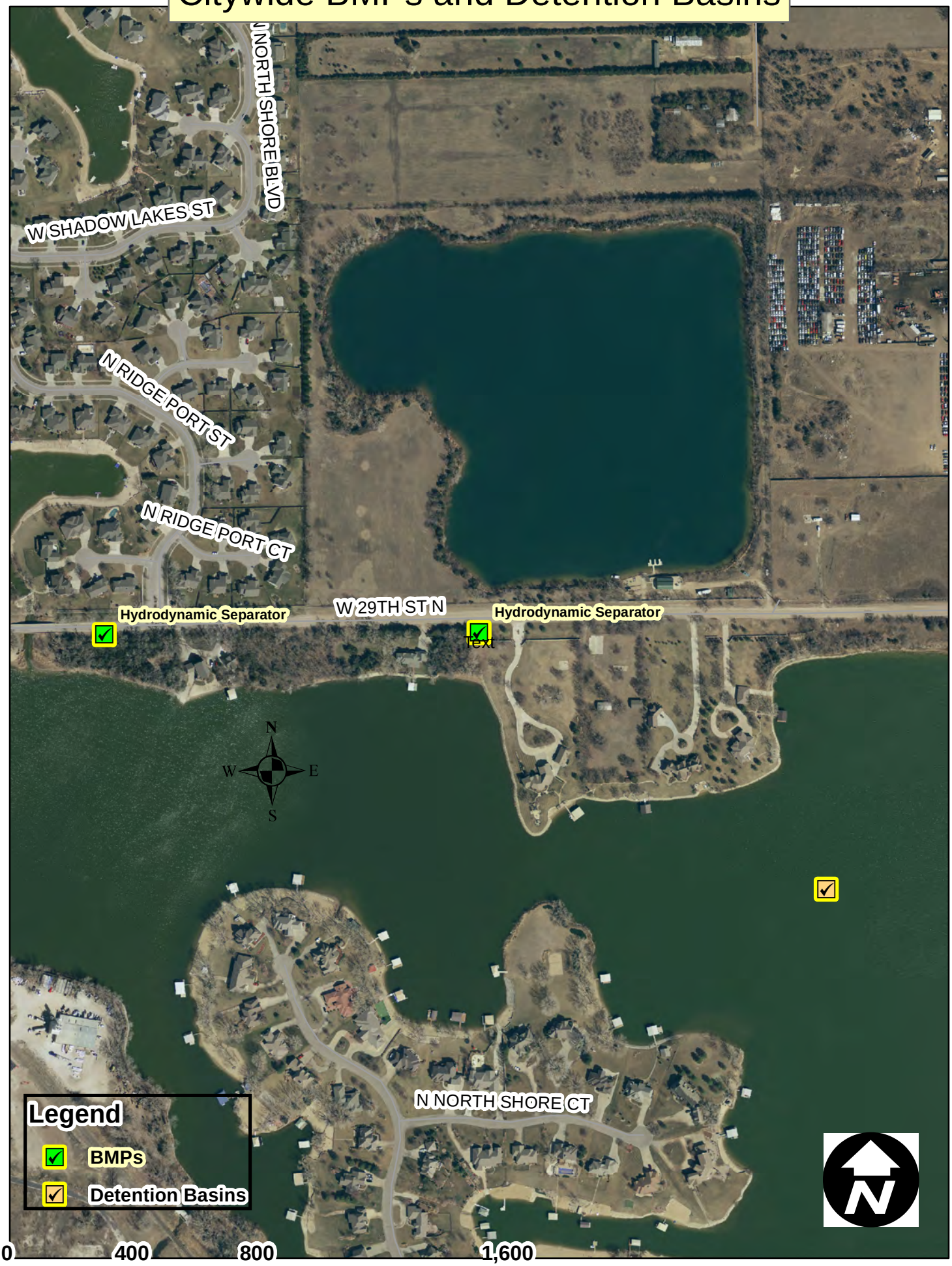

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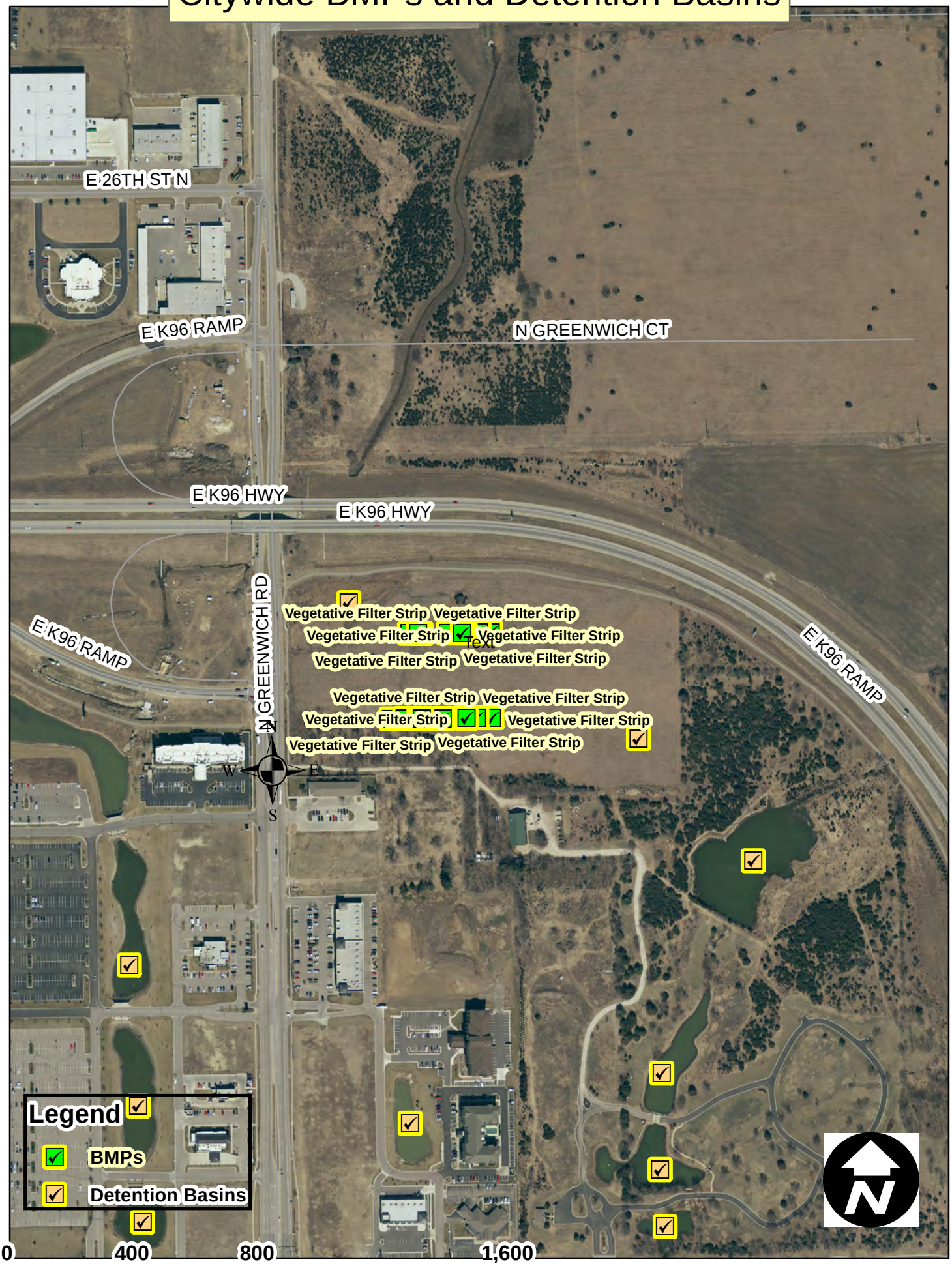

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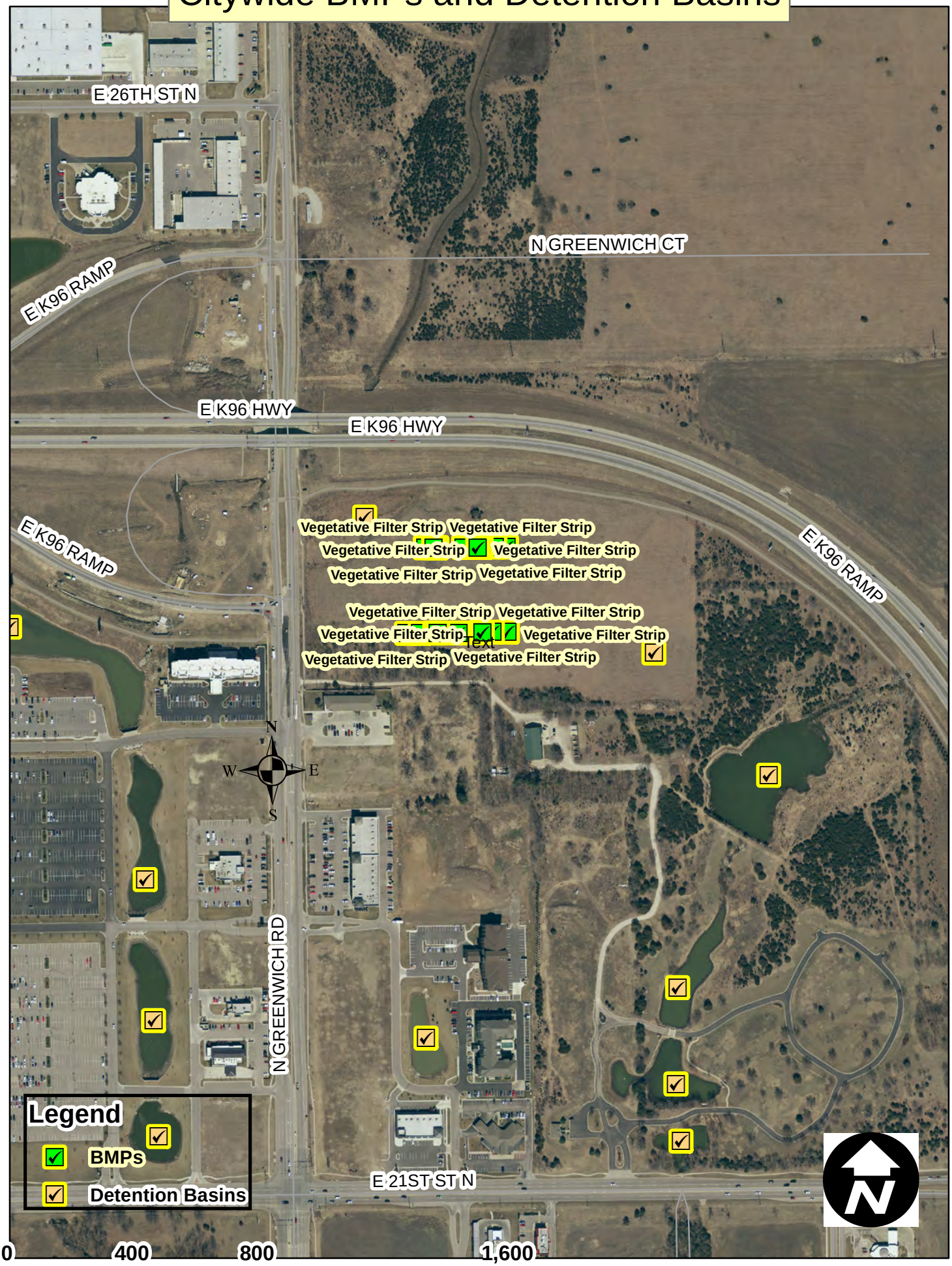


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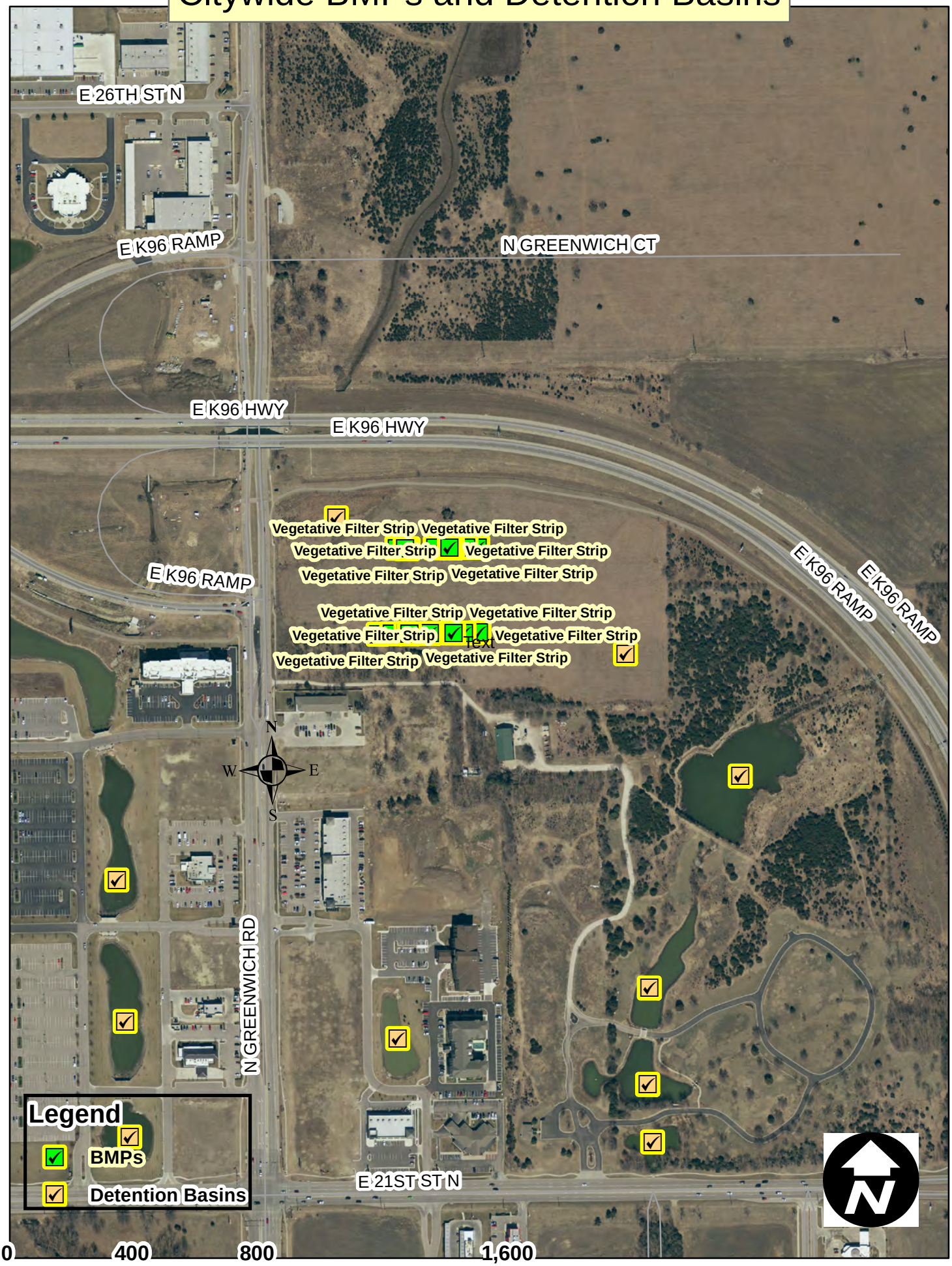

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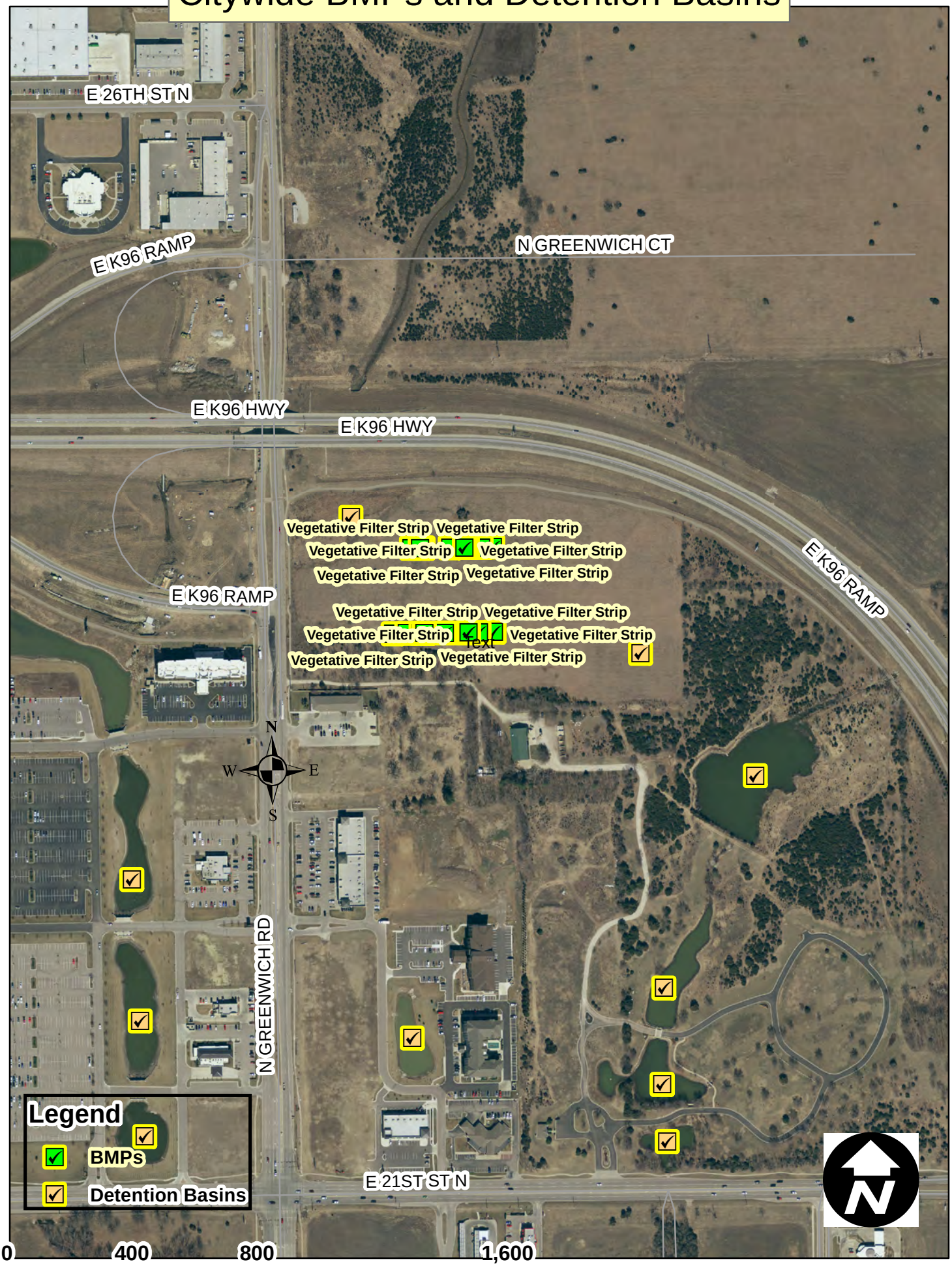

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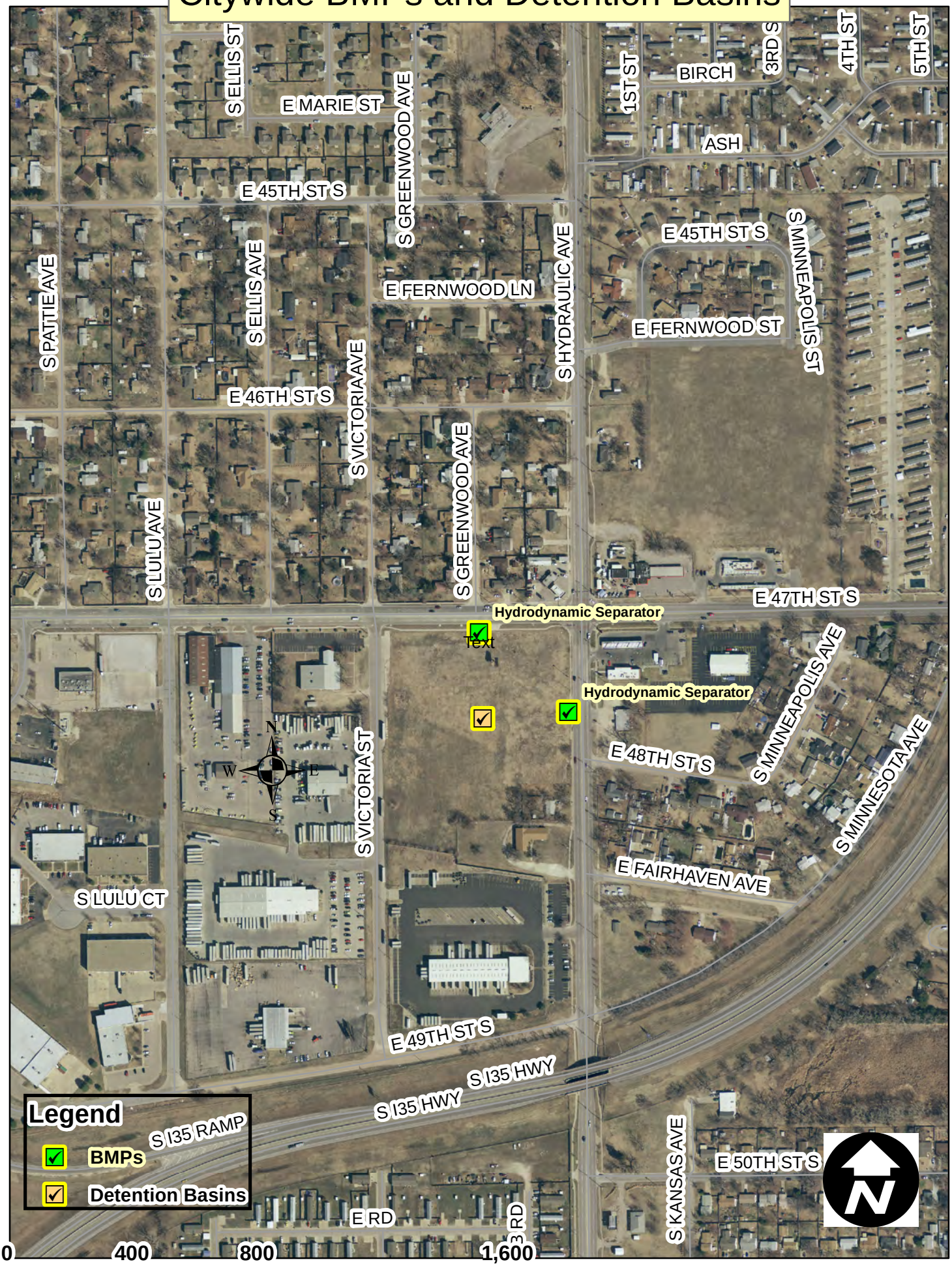

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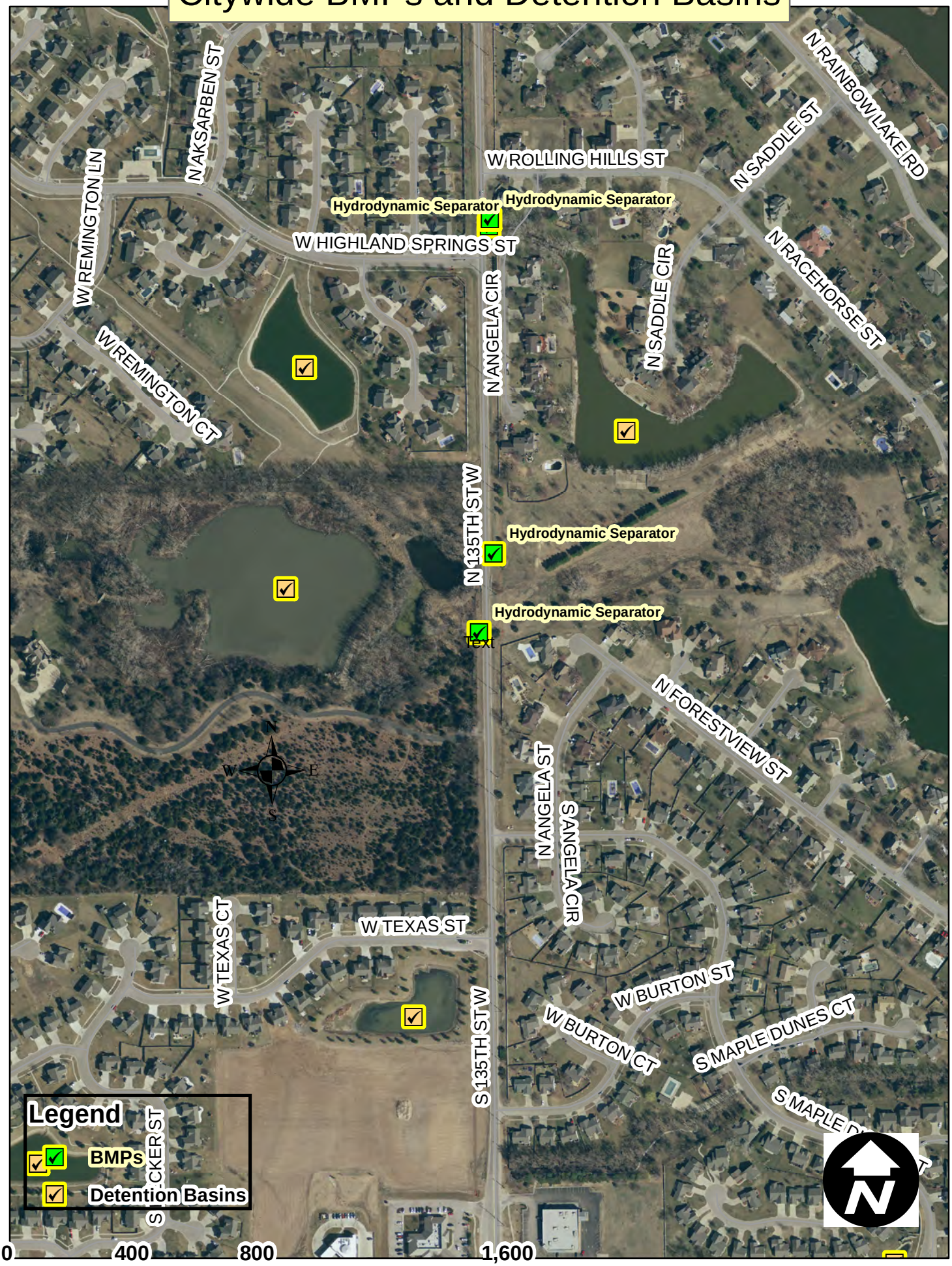

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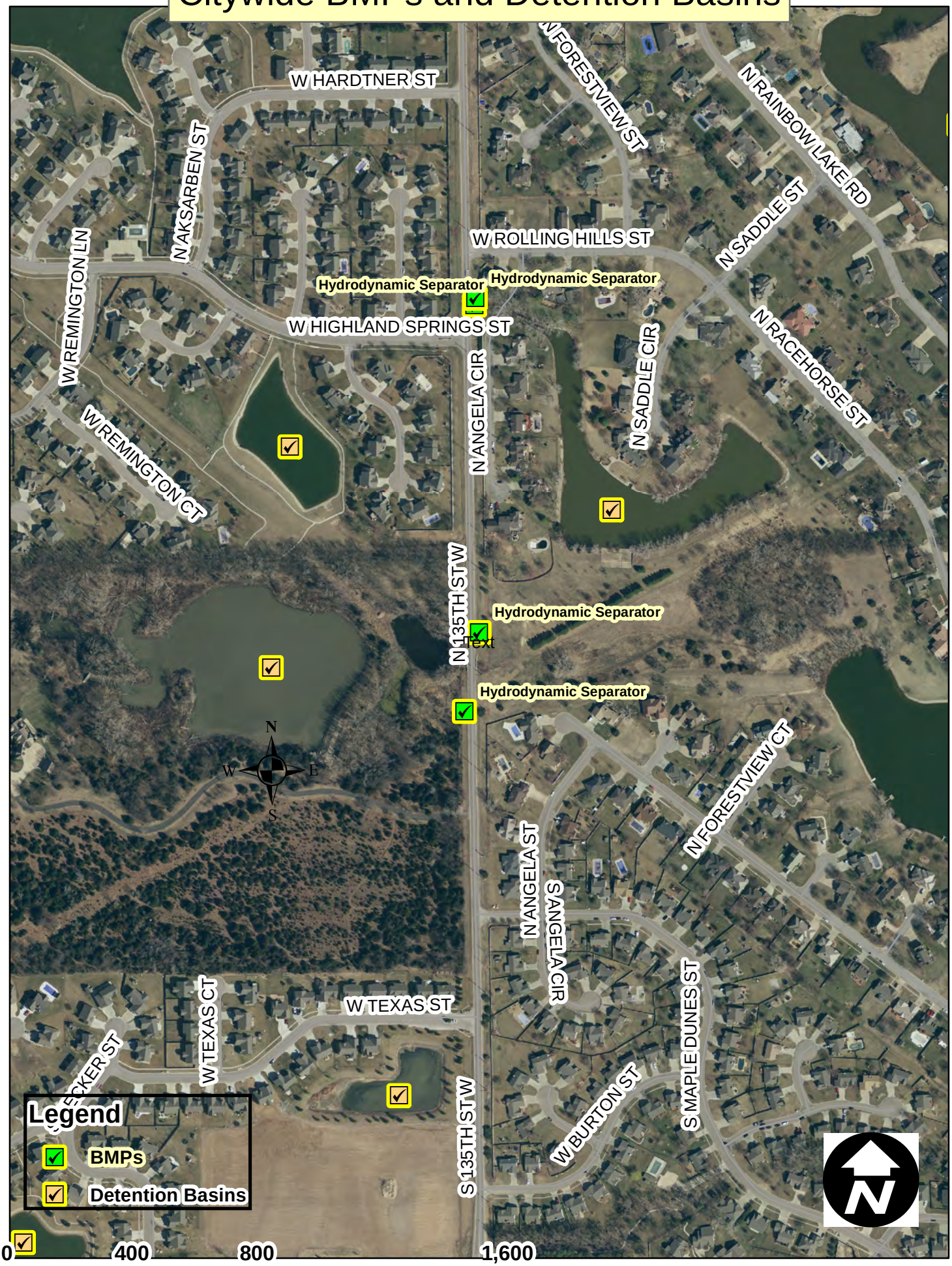

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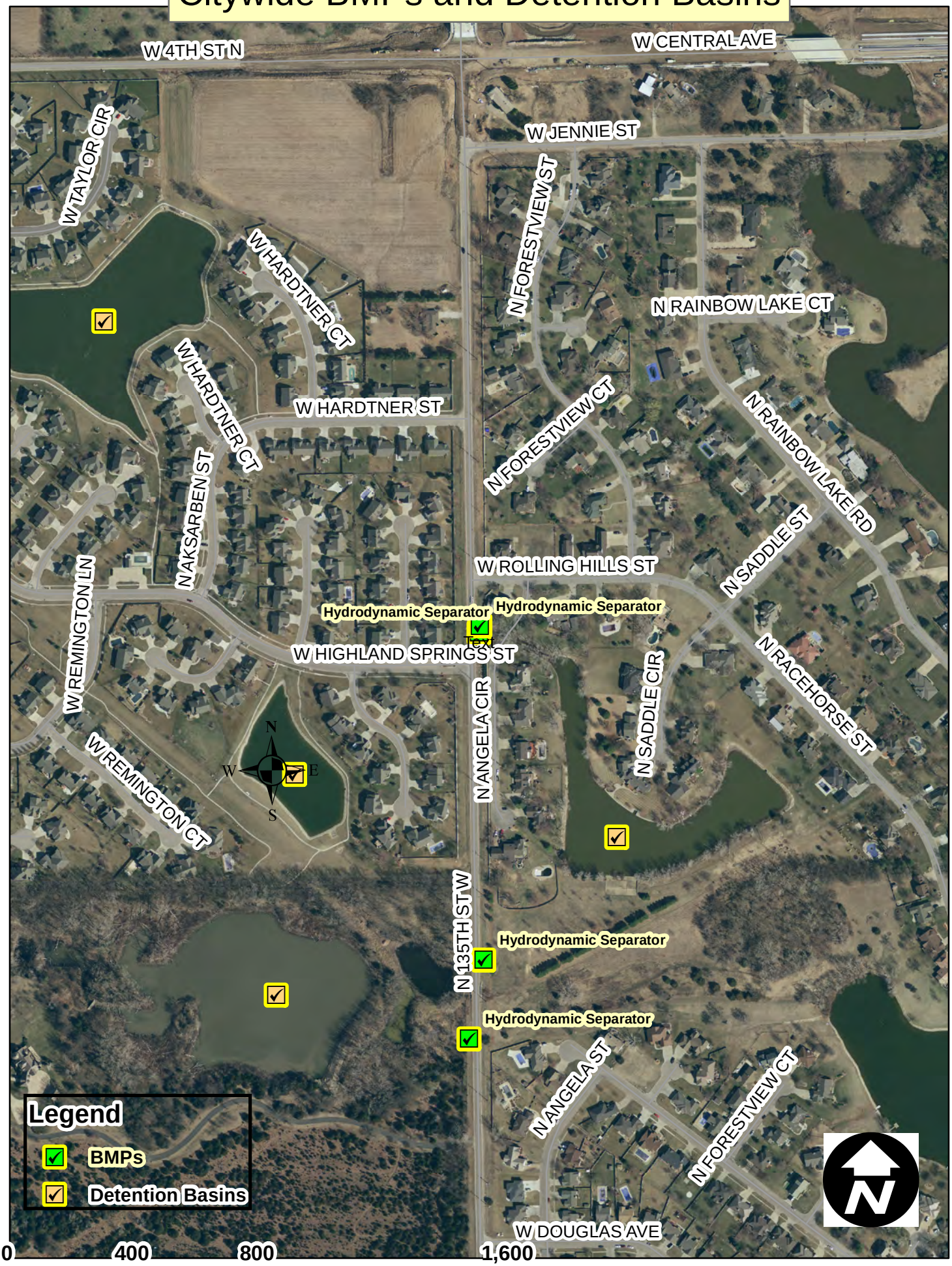

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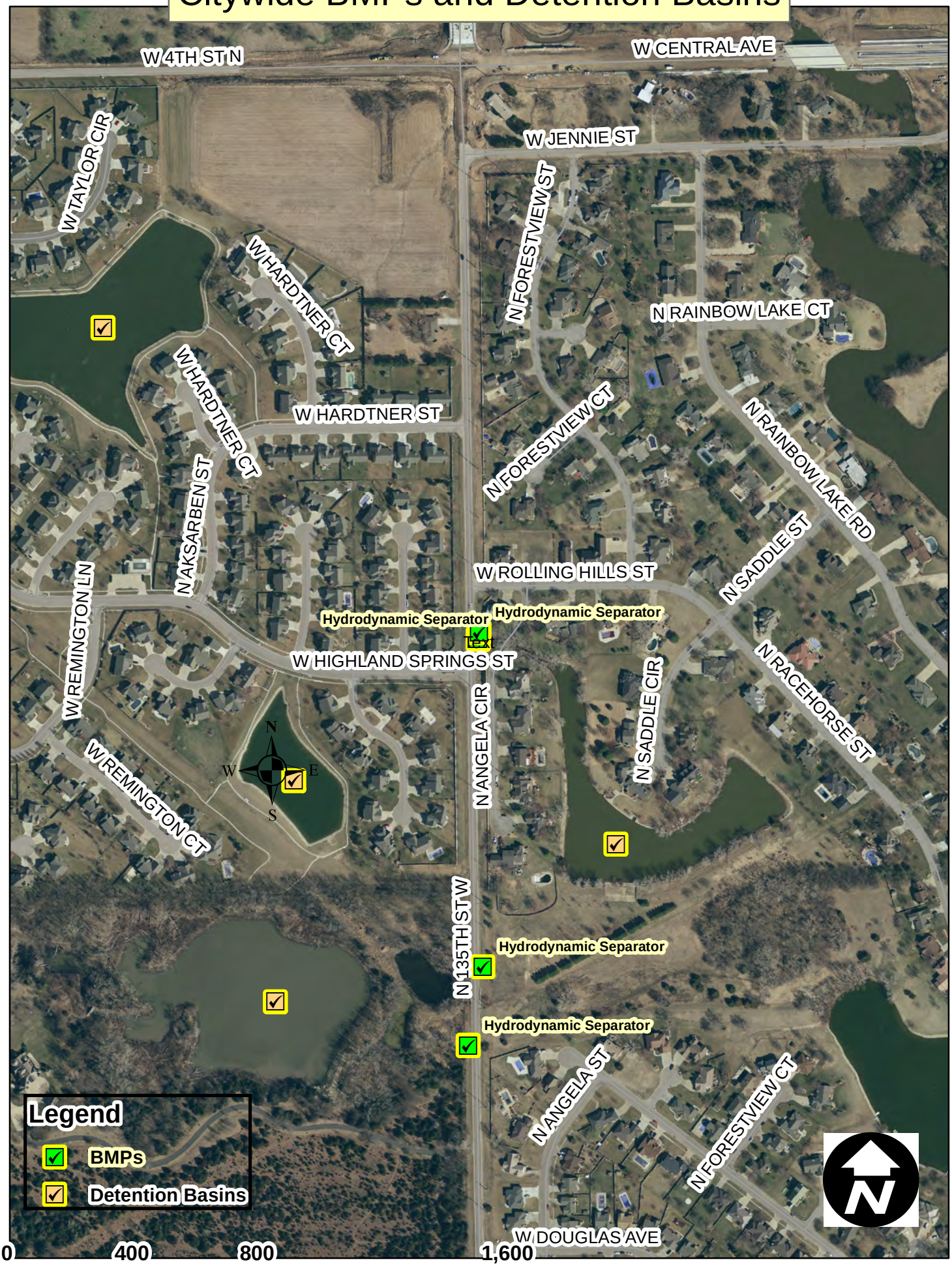

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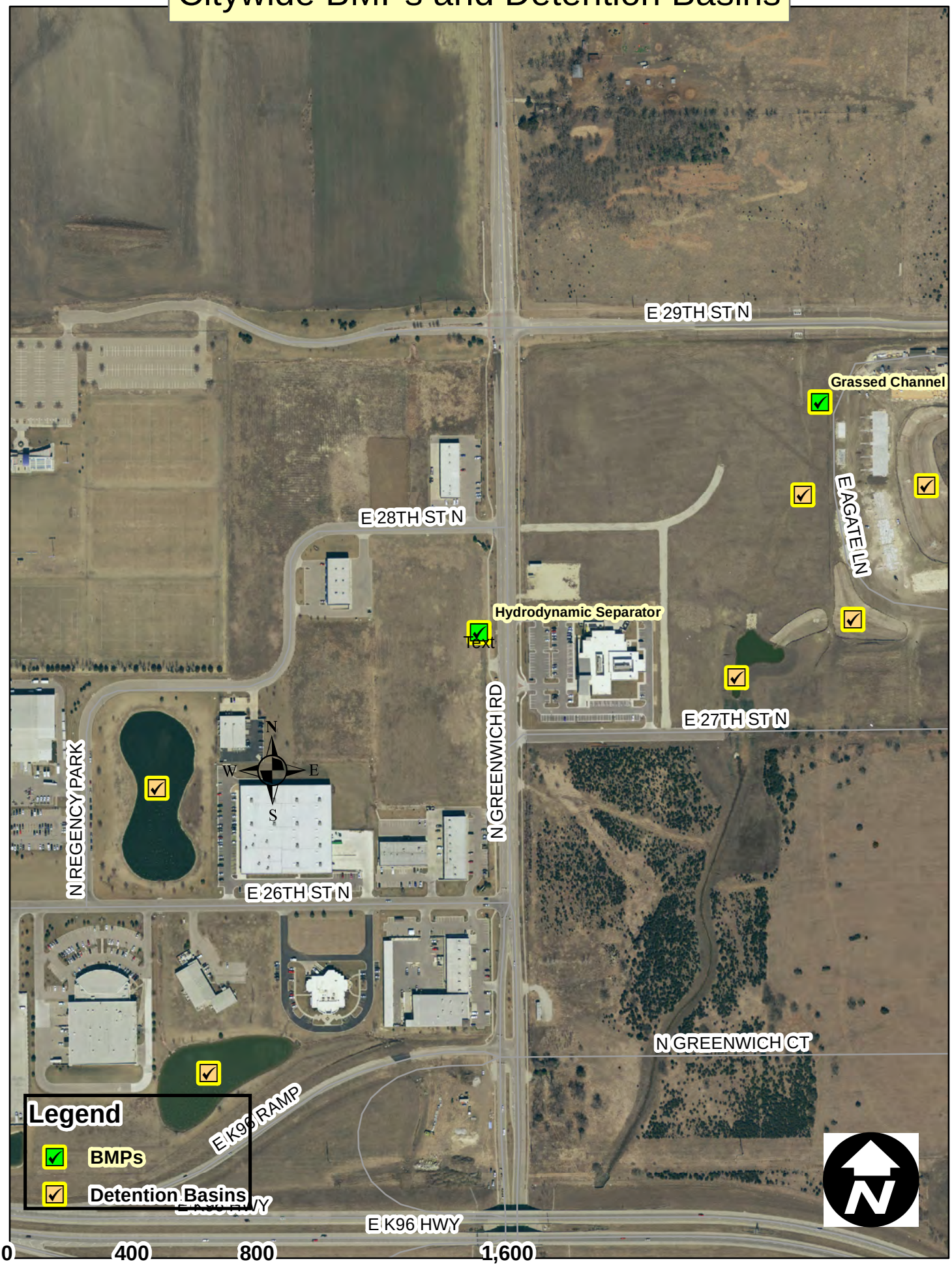

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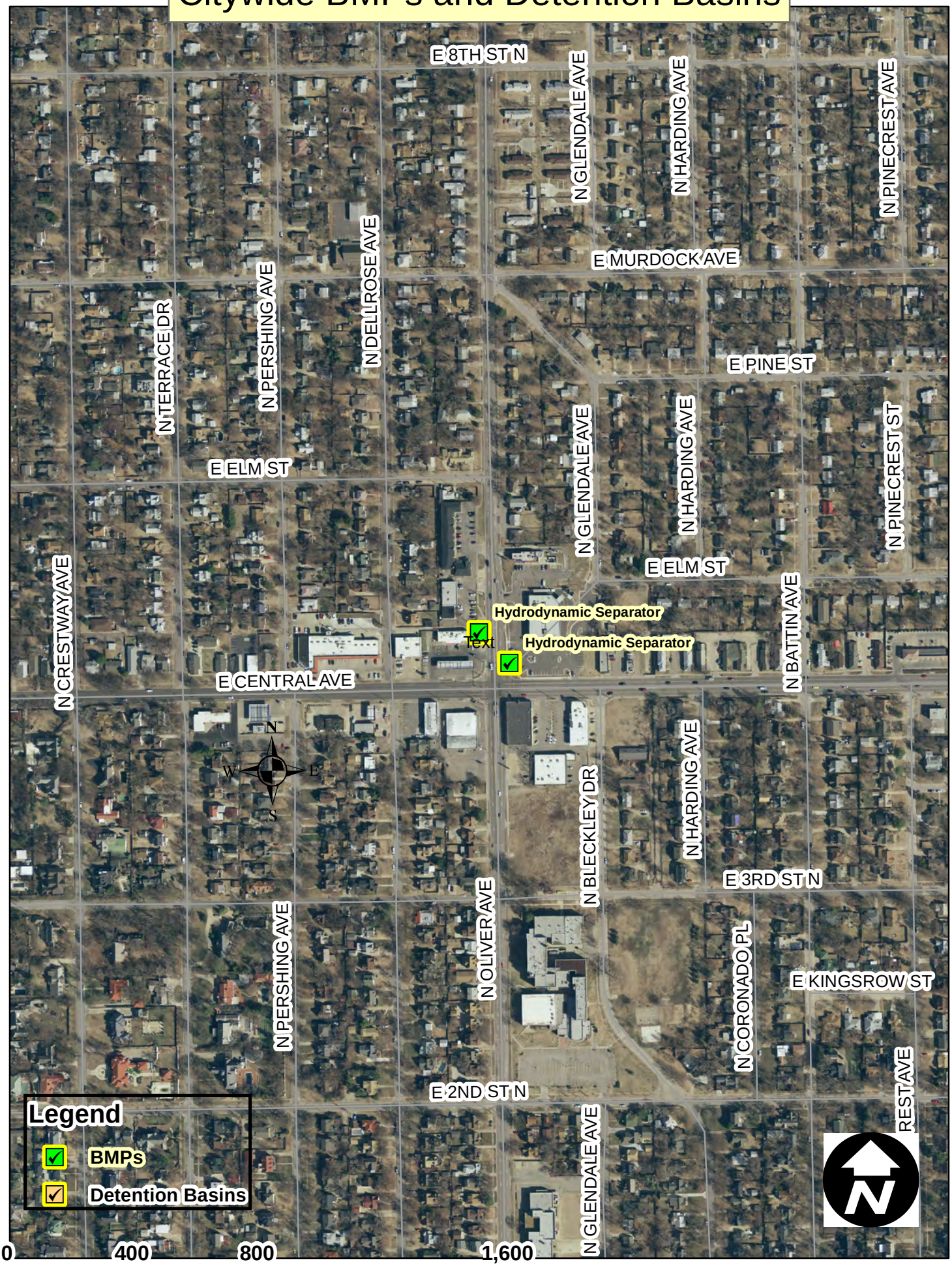

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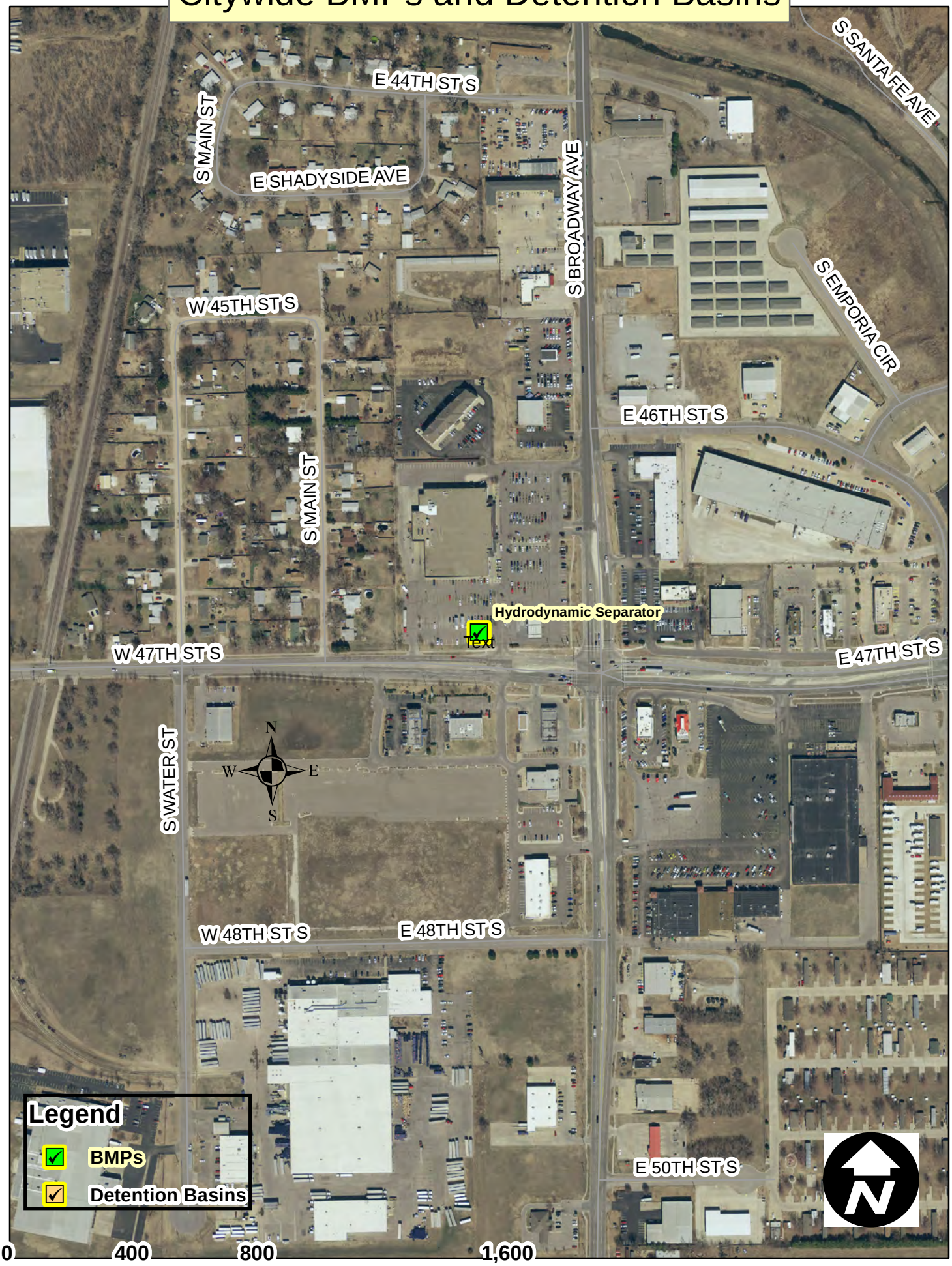

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