

National Pollution Discharge Elimination System Permit

MS4 Permit No. NE0133671

Annual Report

September 1, 2010 - August 31, 2011

Permit Year 4 of 5

for

The City of Lincoln, Nebraska



Public Works and Utilities

Watershed Management Division

Reporting Requirements Summary

The City of Lincoln is required by federal law to comply with the provisions of the [Federal Clean Water Act](#). In Nebraska, the [U.S. Environmental Protection Agency](#) has given the Nebraska Department of Environmental Quality the authority to implement the conditions of the Clean Water Act and the responsibility to insure that municipalities in Nebraska are compliant.

The City of Lincoln complies with the federally mandated regulations of the Clean Water Act through a State-issued National Pollutant Discharge Elimination System ([NPDES](#)) permit. On July 1, 2008 the State reissued an NPDES permit to the City for municipal [stormwater discharges](#) to local waterways and lakes.

The following is a list of programs the City has implemented to comply with the State's requirements for Lincoln's municipal stormwater NPDES permit. Each program (numbered 1-8) has a link to an EPA website to provide a summarized description of the requirements. The items listed below are not inclusive of all of the efforts made by the City in the 2010-11 fiscal year.

For the 2010-2011 permit year (September 1, 2010 to August 31, 2011) the City of Lincoln, operated under a permit to discharge stormwater runoff [NPDES MS4 permit](#) to Salt Creek and its tributaries within the Lincoln corporate limits. The following is a summarized version of the annual report that was provided to the Nebraska Department of Environmental Quality for the stormwater programs that were implemented in the 2010-2011 permit year.

It is estimated that approximately \$5.5 Million was spent in Fiscal Year 2010-11 on stormwater programs and projects related to water quality and the NPDES permit.

Not included in the above cost are \$381,924 of [Wastewater maintenance](#) costs for sanitary inspection to check for leaks in the system to assure compliance with the City's Municipal Separate Storm Sewer System permit requirements.

Stormwater Quality Programs

1. [Public Education and Outreach](#)

- In this permit year, the City provided 12 rain barrel classes and rain garden classes through the local community college and at community events.
- The City promoted the practice of obtaining a soil test to avoid over fertilizing in a movie slide at six local theaters.
- The Parks and Recreation Department provided several [programs](#) for elementary school students and the general public which describe positive and negative impacts



humans have on the environment. The classes were attended by 35,094 students and their adult leaders.

- Fifty thousand persons receiving a pet license renewal letter also received a flyer that explained the importance of picking up and properly disposing of [pet waste](#).
- The City posted two billboards promoting the importance of picking up pet waste and denoting that “all storm drains lead to streams and creeks”.



- The City of Lincoln gave away over 100 copies of a [booklet of Best Management Practices](#) specifically created for individual and small construction sites. Copies of the booklet were provided to local builders and contractors.
- The City also imprints a “No Dumping - Leads to Stream” design into all new precast concrete top sections of storm drain. In the 2010-11 fiscal year, approximately 100 such inlet lids were placed.
- The City provided education to 71 persons regarding methods for [making their own compost](#).
- The Watershed Management staff distributed a “NebGuide” (series of three brochures for construction, landscaping and maintenance of [rain gardens](#)). The City continues to have these brochures reprinted for distribution.
- The City conducted five public meetings for [basin planning](#) and watershed projects. Invitations were sent to landowners and various organizations and governmental agencies for the meetings.
- The City made 1,000 cubic yards of [compost](#) available, free to the public.
- Various departments maintain web pages on the City [website](#) which are dedicated to stormwater quality related topics.
- Through a 319 grant from the State of Nebraska Department of Environmental Quality and additional State sponsored funding for stormwater (LB1226), the City completed six water quality Best Management Practices projects, and provided 500 bags of [no phosphorous fertilizer](#) to persons that filled out a lawn care survey.

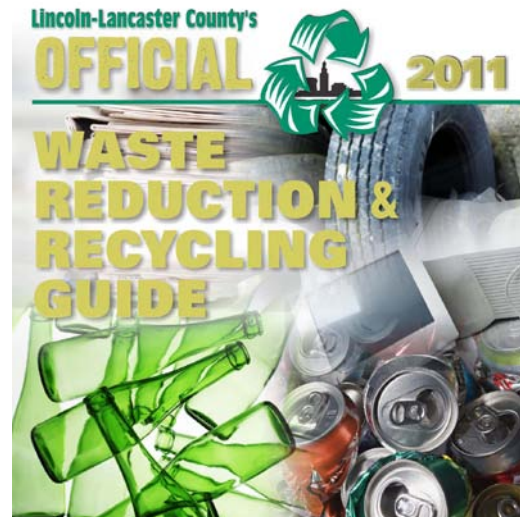
2. [Public Participation and Involvement](#)

- The Health Department provided nine [Household Hazardous Waste](#) collection drives in the 2010-11 fiscal year.
- One hundred twenty five persons took part in seven “Adopt-a-Stream” clean up events.



- Watershed Management provided information to the public at a booth at the Spring Home and Garden Show. It is estimated that the 500 persons stopped by the booth to ask questions or take a survey. A travel mug was given to persons who completed a survey used to assess public knowledge on water quality issues for the local Lincoln area. Watershed Management also provided a rain garden seminar for approximately 70 persons.

- Volunteer groups marked 653 [storm drains](#) and placed approximately 1,000 informational door hangars.
- The [Earth Wellness Festival](#) is a elementary school level program for area 5th graders. It is a one day event where school kids take part in hands on experiments, attend classes and receive information on environmentally based topics. This year’s event was attended by approximately 3,000 students.
- The Lincoln Public Schools and area schools provide curriculum for recycling and ecology based classes. [Garbology](#), which is an ecology based program that includes water quality components. The classes were provided to 4,076 2nd grade level students.
- The City provided a program to accept recyclable materials at various [locations](#). Persons dropped off 11,710 gallons of used oil and 6,022 tons of recyclable materials such as news paper, plastics, cardboard, glass, tin and aluminum cans.
- The Watershed Management Division provided two education training modules for developers, builders, site designers, and contractors through a cooperative effort with the Stormwater Awareness Network (SWAN).
- The League of Conservation Voters held an “Earth Day” event on April 23, 2011. Watershed Management participated in the event. The event was attended by approximately 1,500 persons.



- Approximately 5,340 persons attended “Public Works Week”. Persons attending met with City staff and viewed equipment used by the various divisions of Public Works.

3. [Illicit Discharge/Disposal](#)

- During the period from June to August of 2011, 60 storm drains in Lincoln were monitored for pollutants and samples were able to be taken at 25 of the sites. The work was completed to provide a field screening analysis for illicit connections and illegal dumping for selected field screening points at or near major storm drain outfalls (see Figure 1).
- Public Works Drainage Maintenance crews reported seepages or septic water into the storm/drain system where encountered.
- The Lincoln Fire Department’s Hazardous Materials ([HazMat](#)) team responded to 138 calls to conduct spill containment for hazardous material spills. The Health Department conducts [investigations and enforcement](#) for HazMat responses as appropriate (some locations are shown on Figure 2).
- The Health Department responded to 56 illicit discharge responses. Of those responses, 15 either impacted water or had a potential to impact stormwater (some locations are shown on Figure 2). Nine of these resulted in enforcement actions.

4. [Construction Site Stormwater Programs](#)

- The Watershed Management Division maintains a database for tracking permits for [construction site activity](#). All of the investigations that were conducted by the Watershed Management and the Lower Platte South NRD were logged in a database (see Figure 3).
- Watershed Management received 15 “sediment in the public right-of-way” or general complaints regarding construction sites, all complaints were investigated. The City sent 191 “Notices” to site owners for miscellaneous violations. Compliance was achieved in most cases. Development areas that had a grading permit were inspected to verify that the site was graded according to the plan submitted to the City. A total of eight grading inspections were conducted (see Figure 4).



- On site education was provided to construction site owners when City staff became aware of, or were notified of sediment in the public-right-of-way issues.
- Watershed Management provided two education training modules for developers, builders, site designers, and contractors through a cooperative effort with the Stormwater Awareness Network (SWAN).

5. Post Construction Runoff Control

- The City installed 18 [rain gardens](#) with an (50/50) cost share from the Nebraska Environmental Trust, property owners, city and the Lower Platte South NRD. City staff coordinated a “[Rain Barrel Art Contest](#)” in which 25 artists painted rain barrels which were auctioned off with the proceeds going to the Lincoln Children’s Zoo.
- Using grant funds from the State of Nebraska, the city made available 500, 20 pound bags of [no phosphorous fertilizer](#) free to persons living in the Holmes Lake [watershed](#) that filled out a stormwater survey.
- Sixty-five [Retention/Detention Ponds](#) were inspected to assess their functionality with regard to reducing pollutants from stormwater runoff and controlling flooding (locations are shown on Figure 5).
- The Watershed Management Division developed and implemented a wet weather [monitoring plan](#) to assess the effectiveness of education efforts provided to the public in the Holmes Lake watershed to reduce pollutants from urban stormwater runoff.
- Portions or all of several projects were designed and/or constructed including:

Water quality projects associated with stream stability along streams and drainage ways (Herbert Park, North Star High School Wetland, Antelope Creek Watershed Basin Plan and Antelope Creek Main Stem Project, Camp Away, and SW 5th and 6th Street BMPs).

6. Pollution Prevention and Good Housekeeping

- All [residential streets](#) were cleaned with street sweepers three times per year on a rotating schedule of locations (7,746 curb miles swept). All arterial streets were cleaned with street sweepers at a rate of typically once every two weeks (11,552 curb miles swept).



- All business districts were cleaned with street sweepers, typically once every four days (2,260 curb miles swept).
- The combined street sweeping of all types of streets listed above produced 4,333 tons of landfill material, or about 300 dump truck loads (typical 10 cubic yard capacity truck). This material would have ended up in local streams and creeks if not collected by the street sweepers.

- City crews inspected: 525 manholes, 15,353 inlets, and 136,879 linear feet of piped storm drainage systems to ensure that the City storm drainage system is in good repair and that no sanitary lines connect to them.
- In this permit year, the Health Department conducted inspections for all 22 of the City's municipal facilities that are required to be inspected under EPA's "Good Housekeeping" program (see Figure 6).

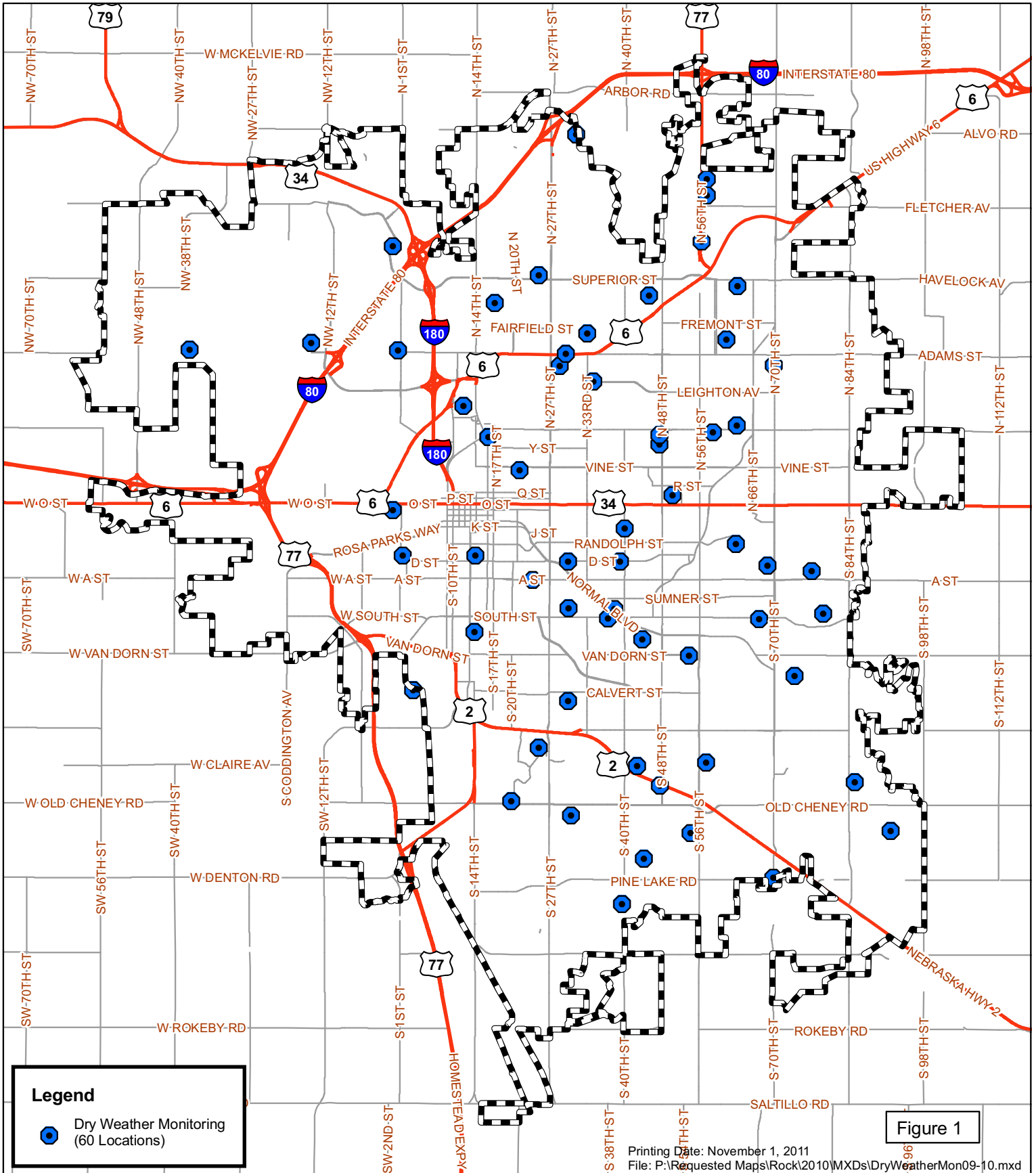
7. **Industrial and Related Facilities**

- The Health Department continued the process of determining which industries in Lincoln (according to federal Standard Industrial Classification listing) will require an annual inspection. The Health Department updated the list in the 2010-11 permit year.
- The Health Department inspected 91 industries that are required to have a [State permit](#) for discharge of stormwater to the surrounding environment (see Figure 7).

8. **Monitoring Program**

- The Watershed Management Division partnered with the US Geological Survey (USGS) and the University of Lincoln, Civil Engineering College to implement a pollutant monitoring program. USGS created a [website](#) that displays "real-time" monitoring data for the two monitoring stations (Colonial Hills Park and Taylor Park). Water quality samples are taken from approximately March through October of each year (see Figure 8).

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Legend


 Dry Weather Monitoring
(60 Locations)

Figure 1

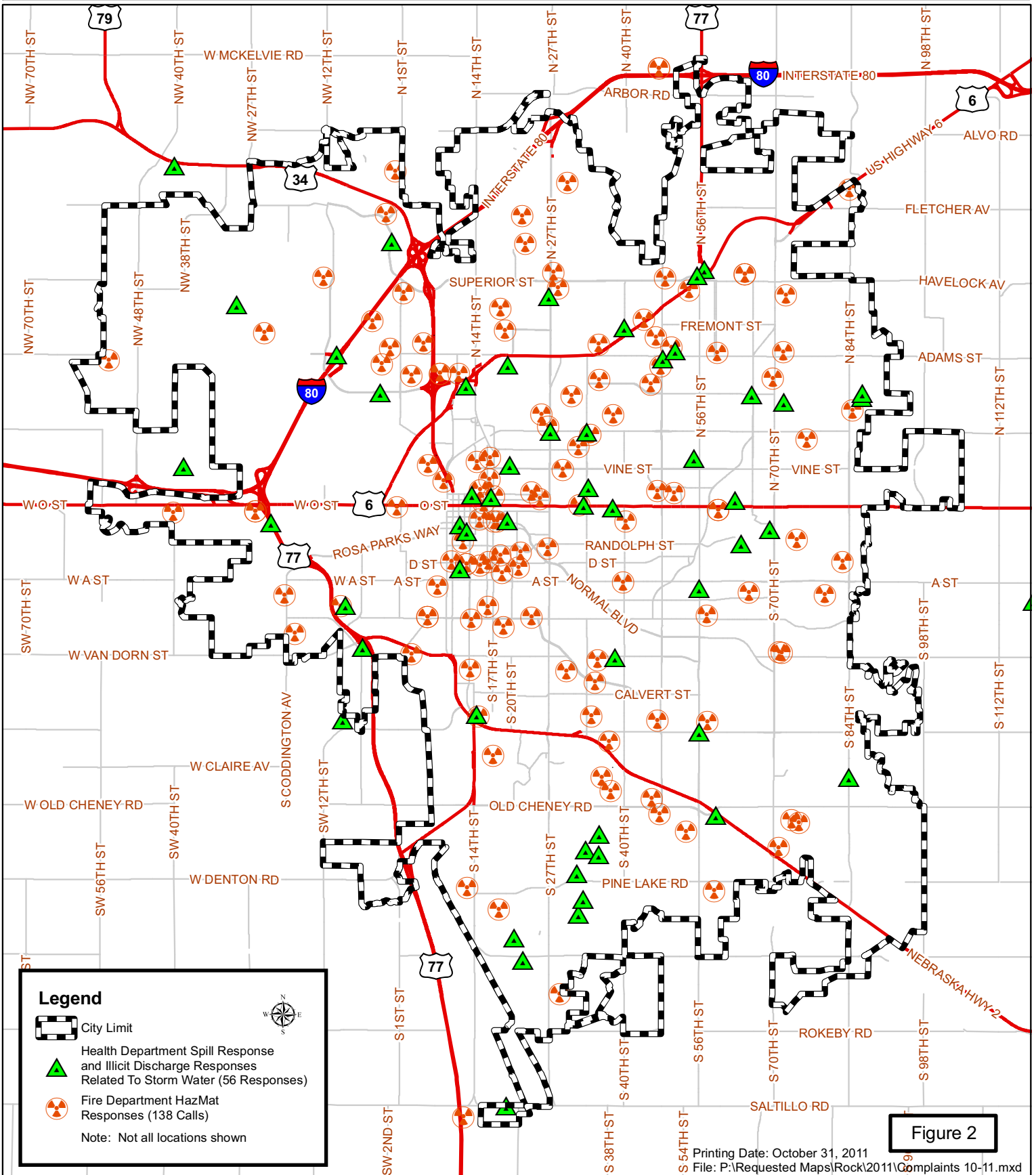
Printing Date: November 1, 2011
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2010 - 2011 Stormwater Permit Activities Dry Weather Monitoring Locations



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Legend




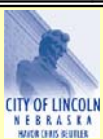
-  City Limit
 -  Health Department Spill Response and Illicit Discharge Responses Related To Storm Water (56 Responses)
 -  Fire Department HazMat Responses (138 Calls)
- Note: Not all locations shown

Figure 2

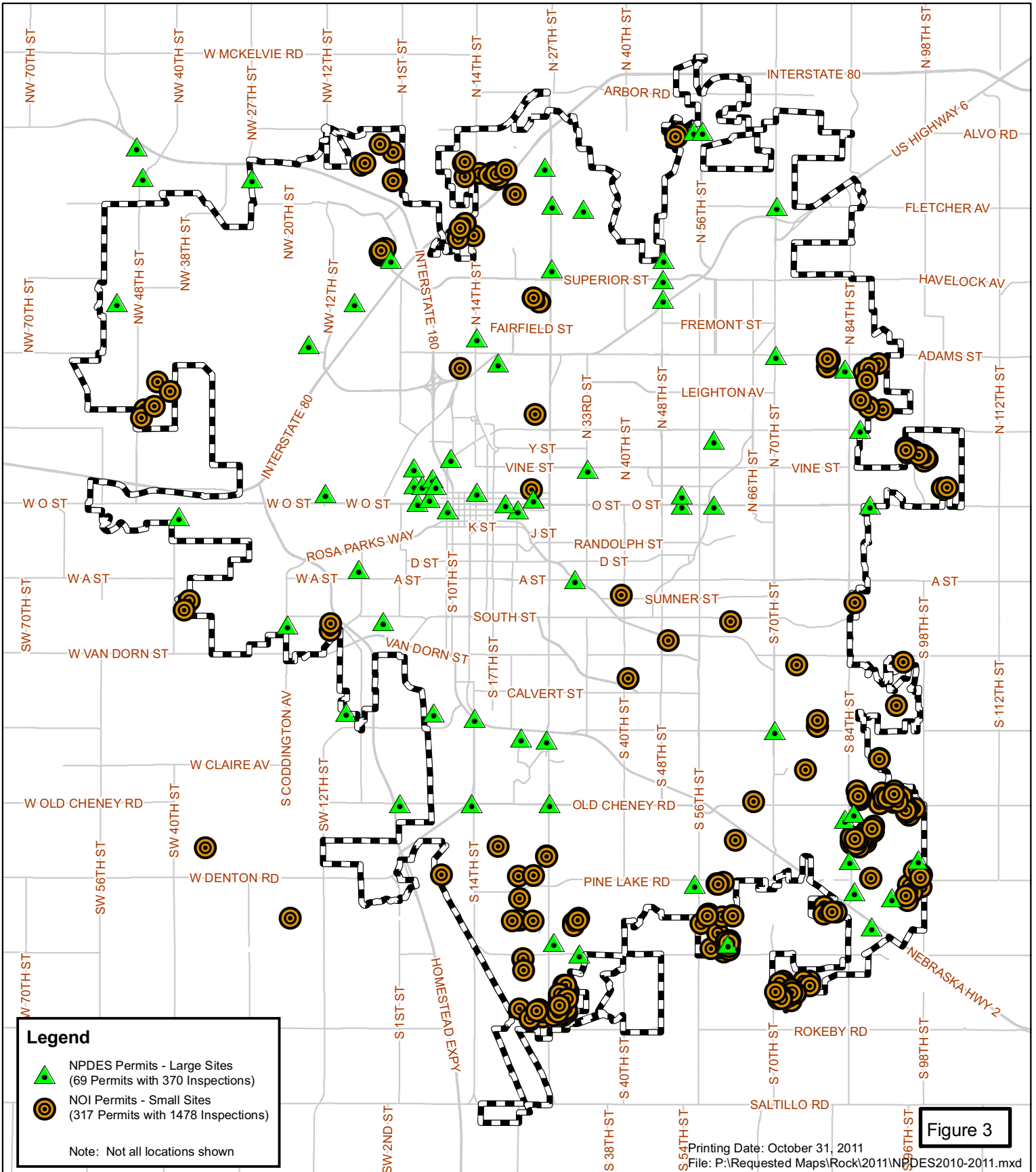
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2011 - 2011 Stormwater Permit Activities Complaints/Response Locations for Illicit Discharge



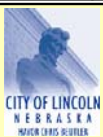
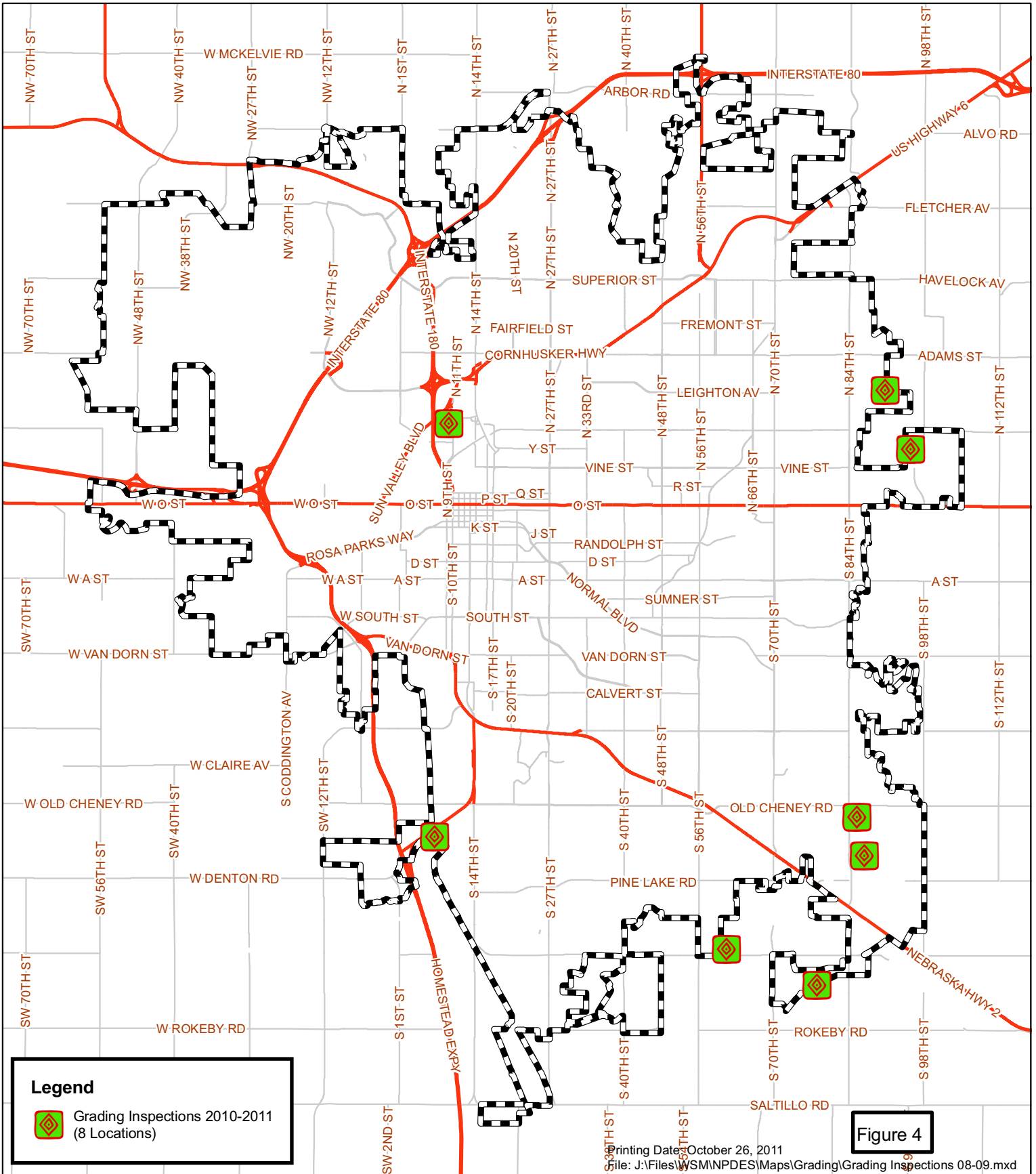
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2010 - 2011 Stormwater Permit Activities Complaints/Response Locations Erosion and Sediment Control



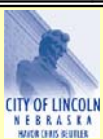
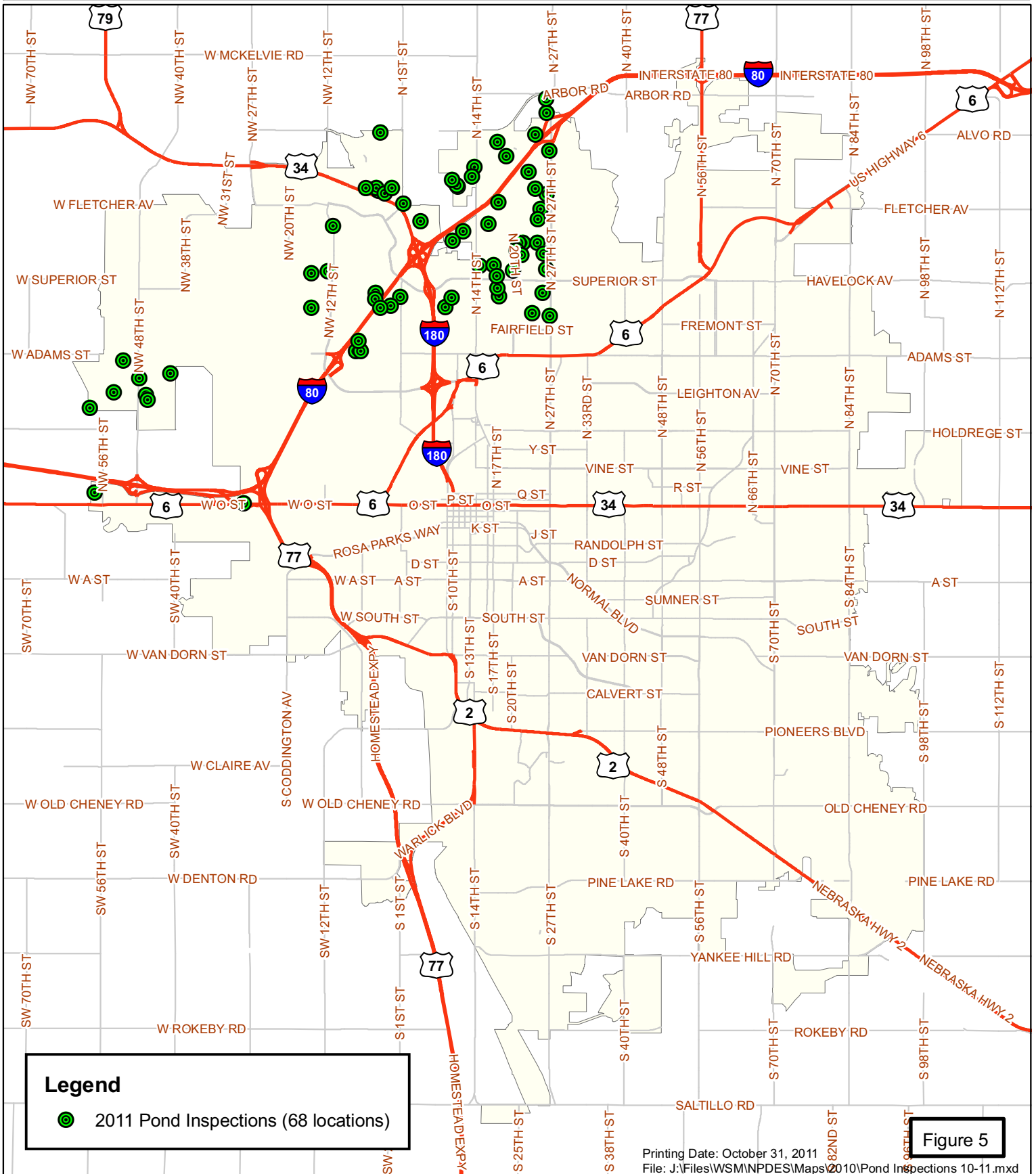
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2010 - 2011 Stormwater Permit Activities Grading Inspection Locations



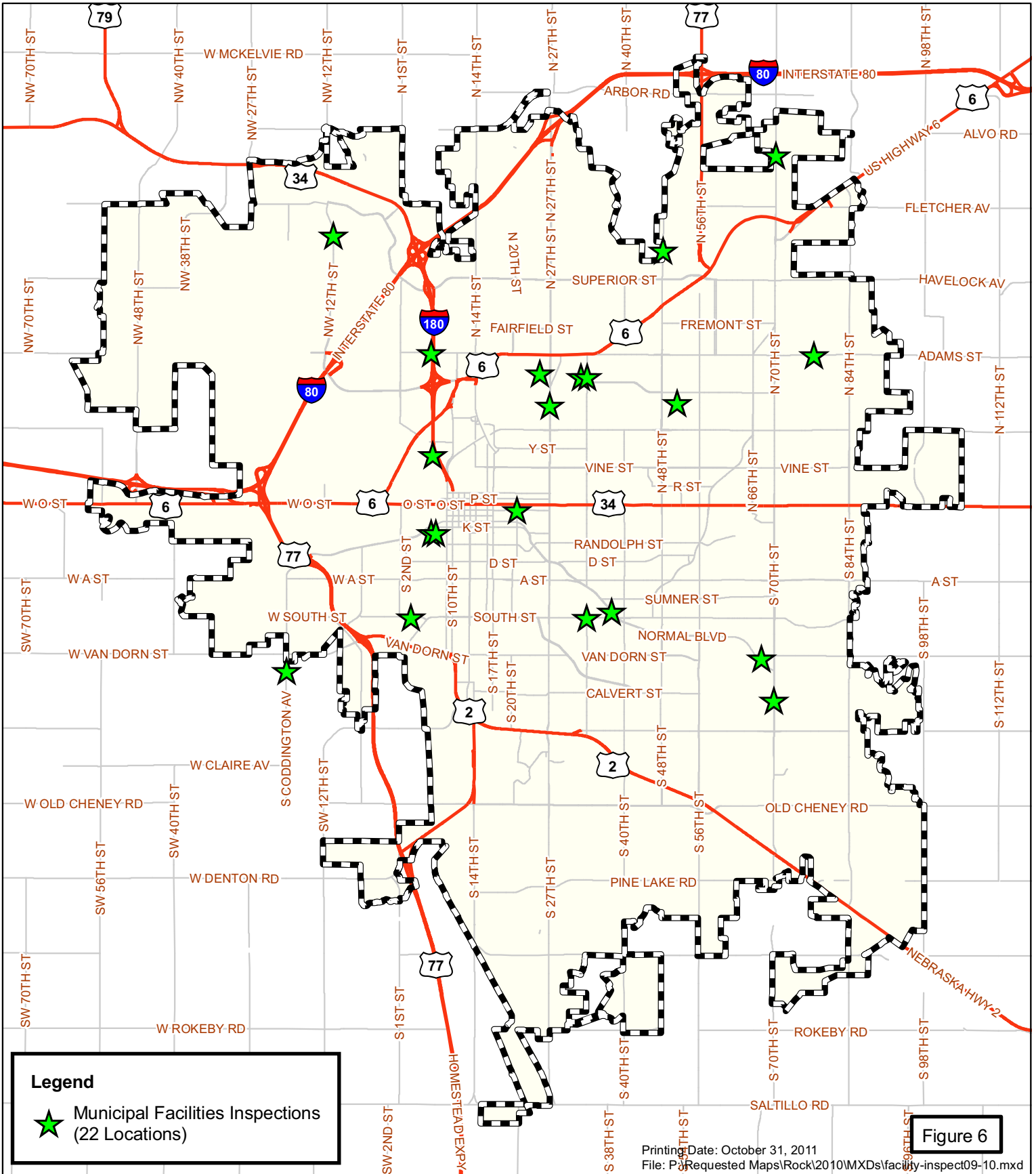
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2010 - 2011 Stormwater Permit Activities Pond Inspection Locations



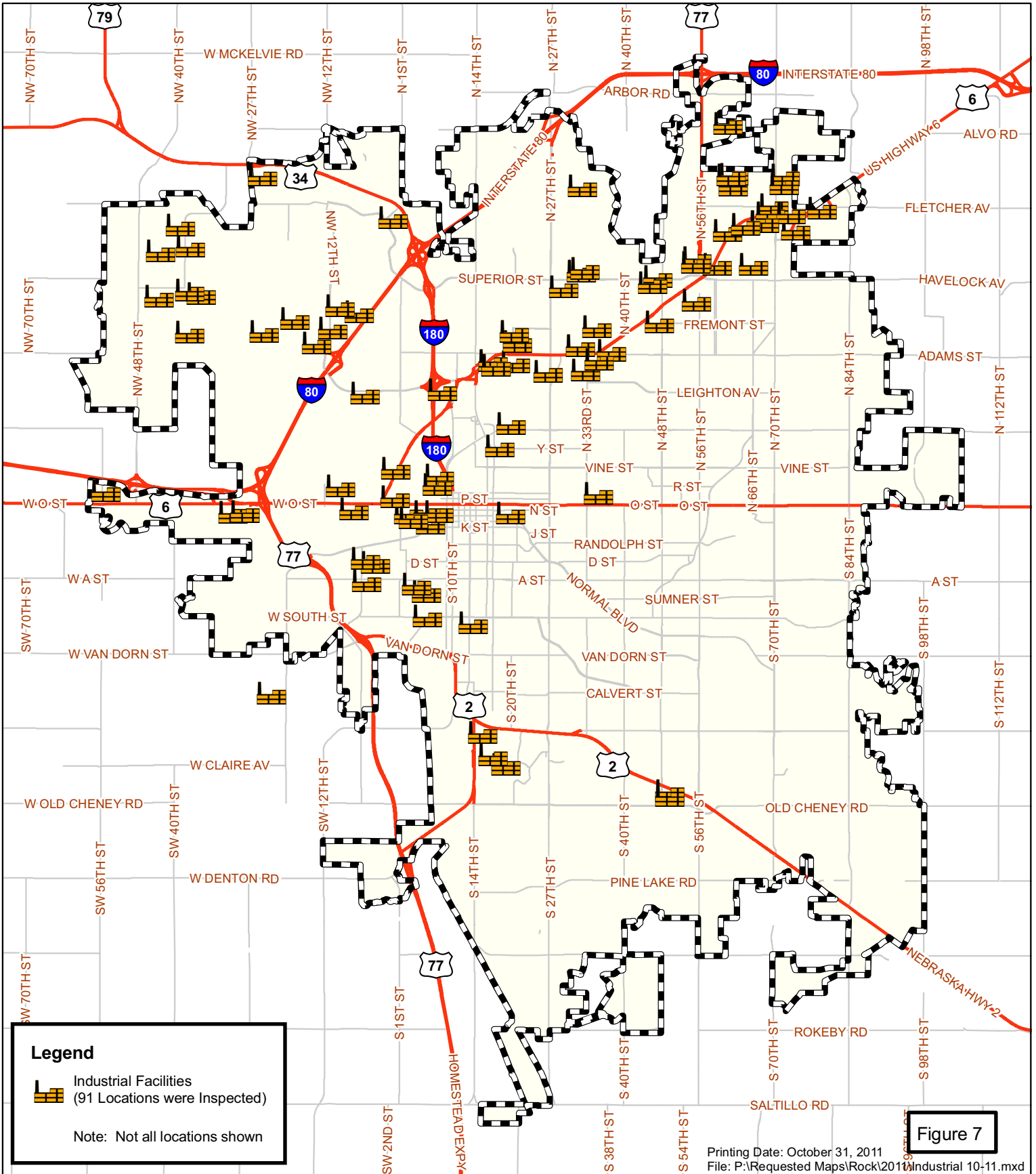
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2010 - 2011 Stormwater Permit Activities Municipal Facility Inspection Locations



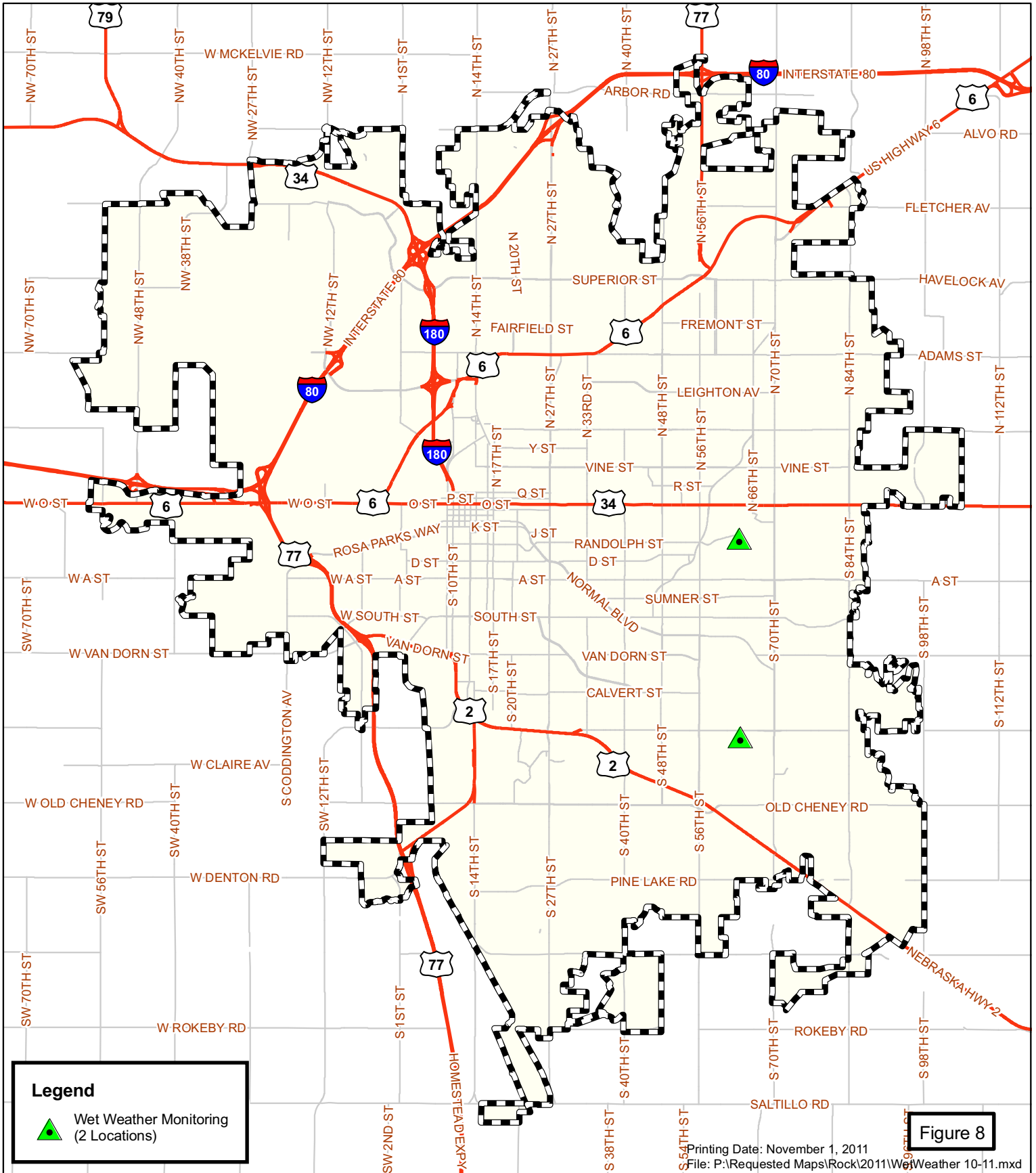
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2010 - 2011 Stormwater Permit Activities Industrial Facility Inspection Locations



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Legend


 Wet Weather Monitoring
(2 Locations)

Figure 8

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2010 - 2011 Stormwater Permit Activities Wet Weather Monitoring Locations

