Municipal Pollution Prevention-Good Housekeeping Operation and Maintenance Plan

CONTENTS

A. Purpose

The City of Nixa is a regulated small MS4 Phase II permit holder, and is required to develop and implement a Municipal Operation and Maintenance (O & M) Plan as part of the SWMP. This document serves as that O & M Plan.

As required, the O & M Plan lists procedures to minimize stormwater pollution from high impact activities. The O & M Plan includes appropriate Pollution Prevention and Good Housekeeping procedures for all of the following operations, activities, and/or types of facilities that are owned and/or operated by the City.

1) Stormwater collection and conveyance system, including catch basins, piping, channels, ditches and culverts.

2) Deicing and snow removal on roads and parking lots.

3) Storage, washing and maintenance of vehicle fleets and fueling facilities.

4) External building maintenance, including cleaning and painting.

5) Proper application of fertilizer, pesticides and herbicides on "parks and open spaces" as well as sediment and erosion control, landscape maintenance and vegetation disposal, and trash management for those areas.

6) Stormwater protection at material storage areas, heavy equipment storage areas and maintenance areas.

7) Any other facilities that would have a reasonable potential to discharge contaminated stormwater runoff.

This Plan applies to all City of Nixa Employees at all City owned/operated Municipal Operation Facilities (see complete list at the end of this document).

B. Stormwater Collection and Conveyance System

This section addresses the stormwater collection and conveyance systems, to the extent that the City is responsible for the Operation and Maintenance. It does not cover any privately held or owned stormwater collection system (i.e. the Villas at Wicklow). MCM #3, the Illicit Discharge Detection and Elimination Chapter and MCM #5, the Post-Construction Stormwater Management Chapter of the City's Stormwater Management Plan (SWMP) address the overall maintenance and monitoring of the stormwater collection and conveyance system in greater detail.

Due to the sheer size of the City's overall stormwater system (8.48 square miles; 51 miles of total stormwater system; 16 miles of culverts and pipes; 11.6 miles of trickle channel; 147 acres of basins and 2427 manholes, inlets, outlets, junction boxes, weir structures, curb inlet boxes and grated inlet boxes currently within our stormwater map GPS database) it is virtually impossible to inspect every lineal foot, basin or every inlet/outlet structure, pipe and ditch even once annually. The City has developed a map outlining the method for dividing the City into 5 sections, one of which to be inspected each year of the MDNR stormwater permit cycle, so as to inspect all 5 sections once each permit cycle. *See addendum MCM #6-1-1 Copy of this inspection outline map.*

The stormwater collection and conveyance system includes catch basins (detention/retention), piping and other facilities used for stormwater conveyance.

1) Catch Basins: Most catch basins have a storage area at the bottom to trap sediments, debris, and other particles that can settle out of stormwater, that would otherwise cause clogging of downstream piping and washing of these solids into the surface water and ultimately to the final receiving waters. When the catch basin is approximately 50 percent full of sediment, sediment can begin to wash into stormwater piping.

a) Clean catch basins when they are half full or when the sediment and debris is within 18 inches of the bottom of the outlet pipe, or at any time the flow of stormwater is impeded. Any dredged material, accumulated sediment, and other debris is hauled to the vacant property at the City's Wastewater Treatment facility where it can be stockpiled and protected with the proper BMP until such time as it can be either utilized elsewhere or incorporated into the fill material at this location. Any liquids or floatables are collected and deposited into an oxidation ditch at the City's Wasterwater Treatment Facility where they are drained for treatment.

The City's will inspect approximately 20% (one section) of these basins once annually. The goal is to inspect and maintain every structure/asset/facility within the stormwater system at a minimum of once during the permit cycle.

b) The City will record the date, location, maintenance actions taken and the approximate amount of sediment and debris removed (if applicable) on every basin inspected and addressed.

c) Additionally, anytime an issues arises and is either discovered by City field staff or information is received from a citizen, the City will take appropriate action to remediate each issue, no matter which section of the City it is in.

2) Stormwater Piping: Stormwater piping (other than private piping or private driveway culverts) should be maintained in a good, clean and functioning condition.

a) Piping should be inspected regularly and repaired & cleaned as needed so as not to impede the free flow of stormwater. Any dredged material, accumulated sediment, and other debris is hauled to the vacant property at the City's Waste Water Treatment facility where it can be stockpiled and protected with the proper BMP until such time as it can be either utilized elsewhere or incorporated into the fill material at this location. Any liquids or floatables are collected and deposited into an oxidation ditch at the City's Wasterwater Treatment facility where they are drained for treatment.

The City will inspect approximately 20% (one section) of the City's stormwater piping annually. The goal is to inspect and maintain every structure/asset/facility within the stormwater system at a minimum of once during the permit cycle.

b) The City will record the date, location, approximate lineal footage, maintenance actions taken and the amount of sediment and debris removed (if applicable) on each section of piping inspected and addressed.

c) Additionally, anytime an issues arises and is either discovered by City field staff or information is received from a citizen, the City will take appropriate action to remediate each issue, no matter which section of the City it is in.

3) Stormwater inlet boxes: Stormwater inlet boxes (whether curb inlet, grated inlet, area inlet or other) should be maintained in a good, clean and functioning condition. There are a total of 2427 manholes, inlets, outlets, junction boxes, weir structure, curb inlet boxes and grated inlet boxes currently within our stormwater map GPS database.

a) Inlet boxes are and will continue to be inspected, cleaned and repaired on a regular basis, so as not to impede the free flow of stormwater. Any dredged material, accumulated sediment, and other debris is hauled to the vacant property at the City's Waste Water Treatment facility where it can be stockpiled and protected with the proper BMP until such time as it can be either utilized elsewhere or incorporated into the fill material at this location. Any liquids or floatables are collected and deposited into an oxidation ditch at the City's Wasterwater Treatment facility where they are drained for treatment.

The City will inspect 20% (one section) of the City's stormwater inlet boxes annually. The goal is to inspect and maintain every structure/asset/facility within the stormwater system at a minimum of once during the permit cycle.

b) The City will record the date, location, box number, maintenance actions taken and the amount of sediment and debris removed (if applicable) on each inlet box inspected and addressed.

c) Additionally, anytime an issues arises and is either discovered by City field staff or information is received from a citizen, the City will take appropriate action to remediate each issue, no matter which section of the City it is in.

4) Roadside Ditches

The following BMPs or equivalent measures are required for activities related to the maintenance of roadside ditches:

a) Inspect roadside ditches to identify sediment accumulations and areas of localized erosion.

b) Keep ditches free of rubbish and debris.

c) Conduct ditch maintenance (seeding, fertilizer application, and mowing) when most effective, usually in late spring and/or early fall.

d) Do not apply fertilizer unless needed to maintain vegetative growth.

e) Do not leave material from the ditch cleaning on roadway surfaces.

f) Sweep and remove dirt and debris that remains on the pavement at the completion of ditch cleaning operations.

g) Segregate clean materials from suspect or contaminated materials. Non-contaminated soils may be handled as "clean soils" and non-contaminated vegetative matter can be composted. Any dredged material, accumulated sediment, and other debris is hauled to the vacant property at the City's Waste Water Treatment facility where it can be stockpiled and protected with the proper BMP until such time as it can be either utilized elsewhere or incorporated into the fill material at this location. Any floatables are hauled and deposited into an oxidation ditch at the City's Wasterwater Treatment Facility.

The liquid and floatable are drained for treatment through the wastewater treatment facility and the solids are allowed to dry and are disposed of as described above.

Suspected contaminated or contaminated material removed are be tested and handled according to the Dangerous Waste Regulations unless testing indicates that it is not dangerous waste.

h) Remove vegetation only when flow is blocked or excess sediments have accumulated.

i) Establish vegetation from the edge of the pavement if possible or at least from the top of the slope of the ditch.

j) The City will inspect approximately 20% (one sector) of the City's roadside ditches annually. The goal is to inspect and maintain the roadside ditches in one sector each year of the stormwater permit cycle so as to cover the entire system at a minimum of once during the that cycle.

k) The City will record the date, location, approximate lineal footage, maintenance actions taken and the amount of sediment and/or debris removed (if applicable) on each section of ditch inspected and addressed.

l) Additionally, anytime an issues arises and is either discovered by City field staff or information is received from a citizen, the City will take appropriate action to remediate each issue, no matter which sector of the City it is in.

5. Other Stormwater Facilities: Other facilities can include both structural and non-structural stormwater facilities, such as green stormwater infrastructure elements including trees, vegetation, and soil.

a) All of these facilities require routine maintenance to ensure their functionality is maintained. Frequency and level of maintenance varies based on the facility location, function, and exposure to impacts.

b) The City will record the date, location, description of facility and maintenance actions taken on each facility inspected and addressed.

c) Additionally, anytime an issues arises and is either discovered by City field staff or information is received from a citizen, the City will take appropriate action to remediate each issue, no matter which section of the City it is in.

The NPDES permit requires the City of Nixa to develop a storm sewer system map showing the locations of all known storm drain outfalls, labeling the receiving waters, and delineating the areas contributing runoff to each outfall. This map is for all practical purposes is complete and is available online at www.nixa.com/stormwater or a printed paper copy is must be available on request at 1111 W. Kathryn St.

Additionally, the NPDES Permit requires the City of Nixa to conduct field inspections and visually inspect for illicit discharges at all known outfalls that discharge to surface waters. The City of Nixa will visually inspect, at a minimum, 50% of all known outfalls each year of current permit, and develop and implement procedures to identify and remove illicit discharges (see IDDE Manual). Records of inspections and follow-up activities will be maintained.

C. Deicing and Snow Removal

1) Snow Removal: Snow removal is preferred to de-icing with chemicals.

2) Selecting Deicers: Select deicers and anti-icers that result in the least adverse environmental impact. Apply only as needed using minimum quantities. Where feasible and practical, use roadway deicers such as calcium magnesium acetate, potassium acetate, or similar materials that cause less adverse environmental impact than and sodium chloride.

3) Maintenance After Deicing: Increase maintenance of stormwater structures as necessary. Sweep or clean up excessive accumulated (un-dissolved) deicing and anti-icing materials and grit from roads as soon as possible after the road surface clears.

D. Street Sweeper Cleaning & Sweepings Disposal

The operation & maintenance of street sweepers, if not conducted properly, can contribute to stormwater pollution. Pollutants, such as sediments, oil and trash may be picked up by rain and end up in local waterways, affecting the environment. All sweeper waste must be disposed of properly: take waste directly to a permanent disposal site, or to a secure temporary storage area.

The goal of this section is to provide guidance for municipal employees to help prevent stormwater pollution.

1) Procedures

a) Sweeper Wash Out

• Follow Heavy Equipment & Vehicle Maintenance procedure for washing procedures.

b) Sweepings Disposal

• Do not empty sweeper hoppers, even temporarily, onto areas near storm drains or surface water bodies or where wind or rain could wash the debris into the storm sewer system or scatter the debris.

• Temporary storage area for debris should be protected from wind, rain and surface runoff (when applicable).

• Disposed of properly any swept dirt or debris from traffic accidents.

• Dispose of sweeper debris at a designated dump site or by contract waste removal company (such as a roll off dumpster) to be properly disposed of in a land fill.

2) Employee Training

a) Train applicable employees on this section, including information on how to avoid and report spills. Conduct refresher training periodically.

3) Records

a) *The following records could be used to document activities performed:*

• *Employee's training*

• *Sweeper logs containing information on what streets are swept, lane miles swept, and number of loads dumped with approximate weight recorded.*

4) Possible Pollutants to watch for

a) Fine-grained sediment

b) Organics

c) Oil & Grease

d) Trash

e) Road Salt

f) Metals

g) Toxins

5) Good Housekeeping

a) Temporary covers/tarps

b) Employee Training

c) Proper cleanup and disposal procedures

d) Dry cleaning methods

e) Stormwater retrofits

6) Related Procedures

a) Heavy Equipment/Vehicle Maintenance

b) Spill Prevention and Response

c) Vehicle Fueling

E. Storage, Washing and Maintenance of Vehicles and Equipment

Pollutants released while washing vehicles and equipment include surfactants, petroleum hydrocarbons, toxic organic compounds, oils and greases (floatables), nutrients, metals, and suspended solids. These pollutants must not be discharged to the storm drainage system or directly into receiving waters.

1) Vehicle and Equipment Storage: Ensure that stored vehicles are not leaking oil or other fluids where they may be washed into storm drains.

2) Vehicle and Equipment Washing: Wastewater from cleaning vehicles and equipment must be collected to be properly treated. This wash water waste shall not be allowed to discharge into the Stormwater system.

a) Conduct indoor vehicle and equipment washing in an area with floor drains that are plumbed to the sanitary sewer (or an underground holding tank that can be cleaned out regularly to prevent overflows) to prevent the wash water from flowing outside and entering the storm drainage system.

i) These underground storage tanks are on occasion pumped out and the waste (solids, liquid and floatables) are deposited into an oxidation ditch at the City's Wasterwater Treatment Facility. The liquid and floatable are drained for treatment through the wastewater facility and the solids are allowed to dry and are disposed of.

b) Conduct outdoor vehicle and equipment washing in a designated wash area (wash pad) that drains to a sump (like a grit separator) or a catch basin and then can be pumped out to be disposed of in the sanitary sewer or; another appropriate wastewater treatment or; recycling system. This wash area must be clearly marked.

3) Vehicle and Equipment Maintenance: The following BMPs or equivalent measures are required of all facilities engaged in automotive repair and maintenance activities:

a) Employees must be educated annually about the need for careful handling of automotive fluids. Employees that routinely change or handle these fluids must be trained in spill prevention and cleanup (see addendum MCM#6-3 Spill Prevention and General Response Plan). All training must be documented.

b). Spill cleanup materials, such as rags and absorbent materials, must always be kept close at hand when changing oil and other fluids (see addendum MCM #6-3 Spill Prevention and General Response Plan). Soiled rags and other cleanup material must be properly disposed of or professionally cleaned and reused.

c) Whenever practicable, all maintenance and repair activities must be conducted indoors.

d) Drain all fluids that have the potential to leak from wrecked vehicles, and equipment when they arrive. Store and dispose of fluids properly.

e) If the work must be performed outdoors or at a mobile location such as a construction site, drip pans or other containment devices must be used beneath the vehicle or equipment to capture all spills and drips.

f) Make sure all outside materials that have the potential to leak or spill to the drainage system are covered, contained, or moved to an indoor location.

g) Maintenance and repair areas cannot be hosed down. Instead, they must be swept weekly or more often as needed to collect dirt, and spills must be wiped up with rags and other absorbent materials. If pressure washing is necessary, the wastewater must be collected and disposed of properly. It cannot be discharged to the stormwater drainage system.

h) Drains located inside buildings should be connected to the sanitary sewer (with prior approval by Wastewater Superintendent) or a holding tank that is pumped on a regular basis so as to not over flow and create an illicit discharge.

i) If extensive staining and oily sheen is present, absorbent pillows or booms must be used in or around catch basins and properly maintained to prevent oil from entering the stormwater drainage system.

F. Building Exterior Maintenance

1) Pressure Washing: Eliminate or minimize building exterior pressure washing whenever possible. Avoid soap when pressure washing; use heat, steam and/or water pressure instead (see addendum MCM #3-14 Best Management Practices for Pressure Washing and Impervious Surface Cleaning-Draft).

a) If pressure washing with cold water and the building exterior is not coated with lead-containing paint or other hazardous material, it is okay discharge the wash water to a storm drainage system.

Otherwise, collect the wash water for appropriate disposal in the local sanitary sewer or offsite as a hazardous waste. Install berms to keep contaminated wash water from entering storm drainage system.

b) If the job generates a lot of sediment or debris, lay filter fabric on the ground or; install a commercial filter basin insert in the drain inlet to catch the debris or; at the very least, install silt sock or silt fence to catch the sediment and debris. Dispose of this accumulated sediment and debris appropriately.

c) When washing loading docks or drain trenches, berm the area and/or block the drain. Collect the wash water in containers. Let solids settle before decanting liquid and skim floatable objects off the top. Dispose of wash water in the sanitary sewer or floor drain plumbed to a holding tank or; if the water contains hazardous materials (e.g. metals, paint), manage it as hazardous waste.

d) Don't allow wash water to soak into landscaping unless you have made arrangements with grounds staff. Collect wash water for discharge to sanitary sewer. Obtain permission from the Wastewater Superintendent to discharge to sanitary sewer during construction-related activity.

2) Use of Solvents or Cleaners: Avoid the use of acids, solvents, soap or detergents whenever possible. Even products that are labeled "biodegradable" are not allowed to enter storm drains.

a) If soap or detergents must be used, collect your wash water using berms, plastic and other means. Dispose of wash water into a sanitary sewer unless the building is coated in lead paint. If you are washing surfaces coated with lead paint, collect and take a sample of the wash water. If the lead concentration exceeds 3 ppm, the wash water cannot be disposed into the sanitary sewer. It must be managed as hazardous waste.

b) If you must use solvents, collect the wastewater for disposal as hazardous waste.

G. Application of Fertilizer and pesticides

Avoid fertilizer and pesticide application whenever possible. If pesticides or herbicides are used, they must be carefully applied in accordance with label instructions and the Federal Insecticide, Rodenticide and Fungicide Act (FIFRA) and applicable State laws. Maintain appropriate vegetation, properly apply fertilizer where necessary, or consider the use of pest resistant varieties when possible.

1) Application of Pesticides: Choose the least toxic pesticide that is capable of reducing the infestation to acceptable levels.

Conduct any pest control during the life stage when the pest is most vulnerable. For example, if it is necessary to use some Bacillus thuringiensis (microbe naturally found in soil, proteins that are toxic to immature insect larvae) application to control tent caterpillars, it must be applied before the caterpillars form their cocoons or it will be ineffective. The pest control method should be site-specific rather than using a generic one size fits all method. When necessary to use, apply pesticides according to the directions on the label and use the following BMPs:

a) Conduct spray applications according to specific label directions and the applicable local and state regulations.

b) Do not apply pesticides (outdoors) if it is raining or immediately before expected rain (unless the label directs such timing).

c) Ensure that the pesticide application equipment is capable of immediate shutoff in the event of an emergency.

d) Do not apply pesticides within 100 feet of open waters including wetlands, ponds, streams, sloughs, or any drainage ditch or channel that leads to open water. Take care to avoid contamination or site disturbance during applications.

e) Never apply pesticides in quantities that exceed the manufacturer's instructions.

f) Mix pesticides and clean the application equipment under cover in an area where accidental spills will not enter surface water or ground water and will not contaminate the soil.

2) Storage of Pesticides:

a) Store pesticides in enclosed areas or in covered impervious containment.

b) Do not hose down the paved areas to a storm drain or conveyance ditch.

c) Ensure that pesticide-contaminated waste materials are kept in designated covered and contained areas, and disposed of properly.

d) Rinsate (water containing low concentrations of contaminants, resulting from the cleaning of containers etc.) should be used as product or recycled into product.

3) Application of Fertilizer

a) Ensure that all fertilizers are applied by properly trained personnel. Document and keep all training records.

b) For commercial and industrial facilities, ensure that fertilizers are not applied to grass swales, filter strips, or buffer areas that drain to sensitive receiving waters.

H. Material and Equipment Storage

1) Outdoor Storage of Materials

This section applies outdoor storage and transfer of solid raw materials, byproducts, or products such as but not limited to gravel, sand, salts, topsoil, compost, sawdust, wood chips, and other stockpiled materials typically stored outside.

a) Cover and contain materials to prevent erosion whenever possible. Erosion results in stormwater contamination and loss of valuable product.

b) Sweep paved storage areas daily or more often as necessary to collect and dispose of loose solid materials. Do not hose down the material storage areas if the discharge will flow into a storm drainage conveyance system.

c) Whenever practicable, store materials inside a building or on a covered outdoor paved area, preferably surrounded by a berm.

d) Place temporary plastic sheeting (polyethylene, polypropylene, hypalon, visqueen or equivalent) over the material. Anchor sheeting to prevent contact with rainfall.

For large stockpiles that cannot be covered:

i) Install containment devices, such as a berm or a low wall around the perimeter of the pile and at any catch basins as needed to prevent erosion of the stockpiled material and to prevent discharge of leachate from the stockpiled material off the site or to the storm drainage system.

ii) Ensure that contaminated stormwater is not discharged directly to catch basins without being conveyed through a treatment BMP.

2) Storage of Contaminated Soils

This section applies to the storage of soils contaminated with toxic organic compounds, petroleum products, or metals (see addendum #6-3 Spill Prevention and General Response Plan)

a) Cover or enclose the storage area for the contaminated soils and contain it with a curb, dike, or berm constructed around the material storage area if possible.

b) Sweep paved storage areas daily or more often as needed. Stock cleanup materials such as brooms, dust pans, and vacuum cleaners near the storage area.

c) Regularly inspect and maintain catch basins and other drainage systems on the site to prevent contaminated materials from leaving the site and entering storm drainage system.

3) Outdoor Portable Container Storage

The following applies to outdoor portable containers used to store accumulated food wastes, vegetable or animal grease, used automotive fluids, liquid feedstock or cleaning compounds, chemicals, or dangerous wastes (liquid or solid), and contaminated stormwater.

a) Wherever possible, store containers on a paved surface under a roof or other appropriate cover or in a building.

b) Store materials in a leak-proof container with a tight-fitting lid.

c) All containers must have labels identifying their contents. Apply labels and position containers so labels are clearly visible. If the material is hazardous waste, it should have a hazardous waste label.

d) Place drip pans beneath all taps on mounted containers and at all potential drip and spill locations during the filling and unloading of containers.

e) Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, overfills, and failure of piping systems. Check containers daily for leaks and spills. Replace containers, and replace and tighten bungs in drums as needed.

f) Secure drums in a manner that prevents accidental spillage, pilferage, or any unauthorized use.

g) Keep the minimum amount of materials necessary on hand to prevent large quantities of liquids on site.

4) Hazardous Material

A **hazardous material** is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.

Hazardous materials are defined and regulated in the United States primarily by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a "hazardous material."

OSHA defines hazardous waste as any substance or chemical which is a "health hazard" or "physical hazard," including: chemicals which are carcinogens, toxic agents, irritants, corrosives, sensitizers; agents which act on the hematopoietic system; agents which damage the lungs, skin, eyes, or mucous membranes; chemicals which are combustible, explosive, flammable, oxidizers, pyrophorics, unstable-reactive or water-reactive; and chemicals which in the course of normal handling, use, or storage may produce or release dusts, gases, fumes, vapors, mists or smoke which may have any of the previously mentioned characteristics. (Full definitions can be found at 29 Code of Federal Regulations (CFR) 1910.1200.)

EPA incorporates the OSHA definition, and adds any item or chemical which can cause harm to people, plants, or animals when released by spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment. (40 CFR 355 contains a list of over 350 hazardous and extremely hazardous substances.)

DOT defines a hazardous material as any item or chemical which, when being transported or moved in commerce, is a risk to public safety or the environment, and is regulated as such under its Pipeline and Hazardous Materials Safety Administration regulations (49 CFR 100-199); which includes the Hazardous Materials Regulations (49 CFR 171-180). In addition, hazardous materials in transport are regulated by the International Maritime Dangerous Goods Code; Dangerous Goods Regulations of the International Air Transport Association; Technical Instructions of the International Civil Aviation Organization; and U.S. Air Force Joint Manual, Preparing Hazardous Materials for Military Air Shipments.

NRC regulates materials that are considered hazardous because they produce ionizing radiation, which means those materials that produce alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. This includes "special nuclear material," by-product material, and radioactive substances. (See 10 CFR 20).

Hazardous Materials Disposal

Hazardous materials are required to be handled/removed by professionals who are responsible for and properly qualified to manage such materials. This includes managing hazardous materials at any point in their life-cycle, from process planning and development of new products; through manufacture, distribution and use; and to disposal, cleanup and remediation.

For hazardous materials, also include the following:

a) Provide covered secondary containment. Alternatively, the storage area shall be paved and surround by a berm or dike and covered. The dike must be high enough to hold a volume of 110 percent of the total volume of the enclosed container(s). The area must be sloped to drain into a dead-end sump for the collection of leaks and small spills.

b) Ensure that the storage of reactive, ignitable, or flammable liquids complies with federal or state regulations and the International Fire Code, if applicable.

c) Keep containers with hazardous materials inside a building unless this is impractical due to site constraints or the requirements of the International Fire Code and the regulatory agencies list above.

5) Storage of Liquids in Permanent Aboveground Storage Tanks

This section applies to aboveground storage tanks that contain liquids (excluding uncontaminated water) including, but are not limited to, aboveground heating oil tanks and gasoline and diesel tanks. Design containment areas around the tank so that potential stormwater contamination can be minimized and managed. Locate and design tanks to prevent and minimize stormwater contamination as follows:

a) To prevent stormwater contamination, install secondary containment or a double-walled tank. Add safeguards against accidental releases, including guards around the tanks to protect them from vehicle or forklift damage, and place tags on valves to reduce human error.

b) Locate permanent tanks in an impervious (Portland cement concrete or equivalent) secondary containment area.

c) Surround the secondary containment area with dikes or provide double walled tanks approved by the Underwriters Laboratory (UL). Design the dike to be of sufficient height to provide a containment volume of either 110 percent of the total volume of the enclosed tank(s).

d) Secondary containment must be emptied regularly to prevent contaminated liquid from overflowing into the drainage system.

e) If the tank containment area is not covered, equip the outlet from the spill-containment sump with a shutoff valve, which is normally closed. The valve should only be opened to convey contaminated stormwater to an approved treatment system or disposal facility or to convey uncontaminated stormwater to the storm drainage system.

f) Place adequately sized drip pans beneath all mounted taps and locations where drips and spills might occur during the filling and unloading of tanks.

g) Include a tank overfill protection system to minimize the risk of spillage during loading.

h) Inspect tank containment areas regularly to identify problems (e.g., cracks, corrosion, leaks) with components such as fittings, pipe connections, and valves. Document and keep all inspection records.

6) Parking Lot Maintenance and Storage of Vehicles and Equipment

This section applies to parking lots and areas where vehicles or equipment are stored outside. The following BMPs or equivalent measures are required for activities related to the parking and storage of vehicles and equipment:

a) Sweep or vacuum parking lots, storage areas and driveways regularly to collect dirt, waste, and debris. Properly dispose of the collected solid waste.

b) Do not hose down or pressure wash areas that drain to the storm drainage system or to the surface water ultimately receiving drainage water.

c) Make sure all outside materials that have the potential to leak or spill to the storm drainage system are covered, contained, or moved to an indoor location.

I. OTHER CITY FACILITIES

1) Cleaning and Maintenance of City Swimming Pool

a) Swimming pool water may be discharge into the City's storm sewer system only after it has been properly de-chlorinated.

J. A LIST OF ALL MUNICIPAL OPERATIONS THAT ARE IMPACTED BY THIS OPERATION AND MAINTENANCE PROGRAM.

101	PUBLIC WORKS CAMPUS #1	1010 N. EAGLECREST ST.
102	PUBLIC WORKS CAMPUS #2	1111 W. KATHRYN ST.
103	PARKS DEPT. (OLD CITY HALL) "REMOVED"	106 E. MT. VERNON ST.
104	ROTARY PARK (OLD CITY PARK)	N. FORT ST.
105	OLD SHOP BUILDING	203 E. ST. LOUIS ST.
106	STREET DEPARTMENT STORAGE BUILDING "A"	972 S. OLD RIVERDALE RD.
107	WASTE WATER STORAGE BUILDING "B"	972 S. OLD RIVERDALE RD.
108	OLD DOG POUND BUILDING "C" "REMOVED"	972 S. OLD RIVERDALE RD.
109	WASTE WATER TREATMENT FACILITY	972 S. OLD RIVERDALE RD.
110	POLICE DEPARTMENT SHOOTING RANGE	972 S. OLD RIVERDALE RD.
111	COMPOST BUILDING #2	972 S. OLD RIVERDALE RD.
112	NEW DOG POUND BUILDING #1	972 S. OLD RIVERDALE RD.
113	CITY HALL/FINANCE/P&Z	715 W. MT. VERNON ST.
114	UTILITY BILLING DEPARTMENT	707 W. CENTER CIRCLE
115	POLICE DEPARTMENT	715 W. CENTER CIRCLE
116	NIXA COMMUNITY CENTER (PARKS DEPT.)	701 N. TAYLOR WAY
201	WELL #1	203 E. ST. LOUIS ST.
202	WELL #2	GENE ST. (MDNR monitoring equipment)
203	WELL #3	702 N. HILL ST.
204	WELL #4	308 W. TOWER ST.
205	WELL #5	911 W. MT. VERNON ST.
206	WELL #6	727 E. MT. VERNON ST.
207	WELL #7	514 S. NICHOLAS RD. (HIGH SCHOOL)
208	WELL #8	1240 W. TRACKER RD.
209	WELL #9	1355 E. NORTH ST. (HIGH POINTE)
210	WELL #10	S. NORTON RD.
301	ESPY SUB-STATION	350 S. GREGG RD.
302	DOWNTOWN SUB-STATION	101 N. NEW ST.
303	TRACKER SUB-STATION	476 W. CHRISTOPHER DR.
304	NORTHEAST SWITCHING STATION	1661 N. MONET RD.
401	A & J PRINTING (REMOVED)	1113 N. KENNETH ST.
402	BENTWATER	821 W. MYRA DR.
403	BLUEBIRD HILLS	1667 N. MALLARD DR.
404	CITY CENTER SOUTH (REMOVED)	716 W. MT. VERNON ST.
405	COBBLE CREEK	865 S. OZARK ST.
406	THOMAS SCHOOL (REMOVED)	105 N. RICE ST.
407	FAIRFIELD ESTATES (REMOVED)	401 N. MARIE ST.
408	FOREST SOUTH (BYPASSED/OFF LINE)	409 S. WHITE ASH ST.
409	INDUSTRIAL PARK	711 W. KATHRYN ST.
410	INMAN SCHOOL	1300 N. NICHOLAS RD.

411	KELBY CREEK	362 S. WATERSTONE BEND
412	KELTNER (REMOVED)	113 ASPEN DR.
413	MAPLEDALE (REMOVED)	935 N. MAIN ST.
414	NORTH EAST REGIONAL	941 E. MT. VERNON
415	NORTH WEST REGIONAL	801 W. TRACKER RD.
416	OAKMONT	1321 W. WOODCASTLE DR.
417	ROLLING HILLS	1120 W. INMAN RD.
418	SUPER 8 MOTEL	419 N. MC CROSKEY ST.
419	TIMBER CREEK	938 TIMBER SPRINGS RD.
420	WASSON #1 (REMOVED)	411 N. MILTON DR.
421	WASSON #2	940 W. NORTHVIEW RD.
422	WELLINGTON PARK	1352 W. BERKSHIRE AVE.
423	WICKLOW (REMOVED)	1577 N. MAPLES RD.
424	RAINTREE (REMOVED)	913 DABNEY ST.
425	GREENBRIAR (REMOVED)	N. FLORA ST.
426	SPRINGMANOR (REMOVED)	390 NIANGUA DR.
427	COMMUNITY CENTER (REMOVED)	701 N. TAYLOR WAY

101 – 116 General Operation Facilities;

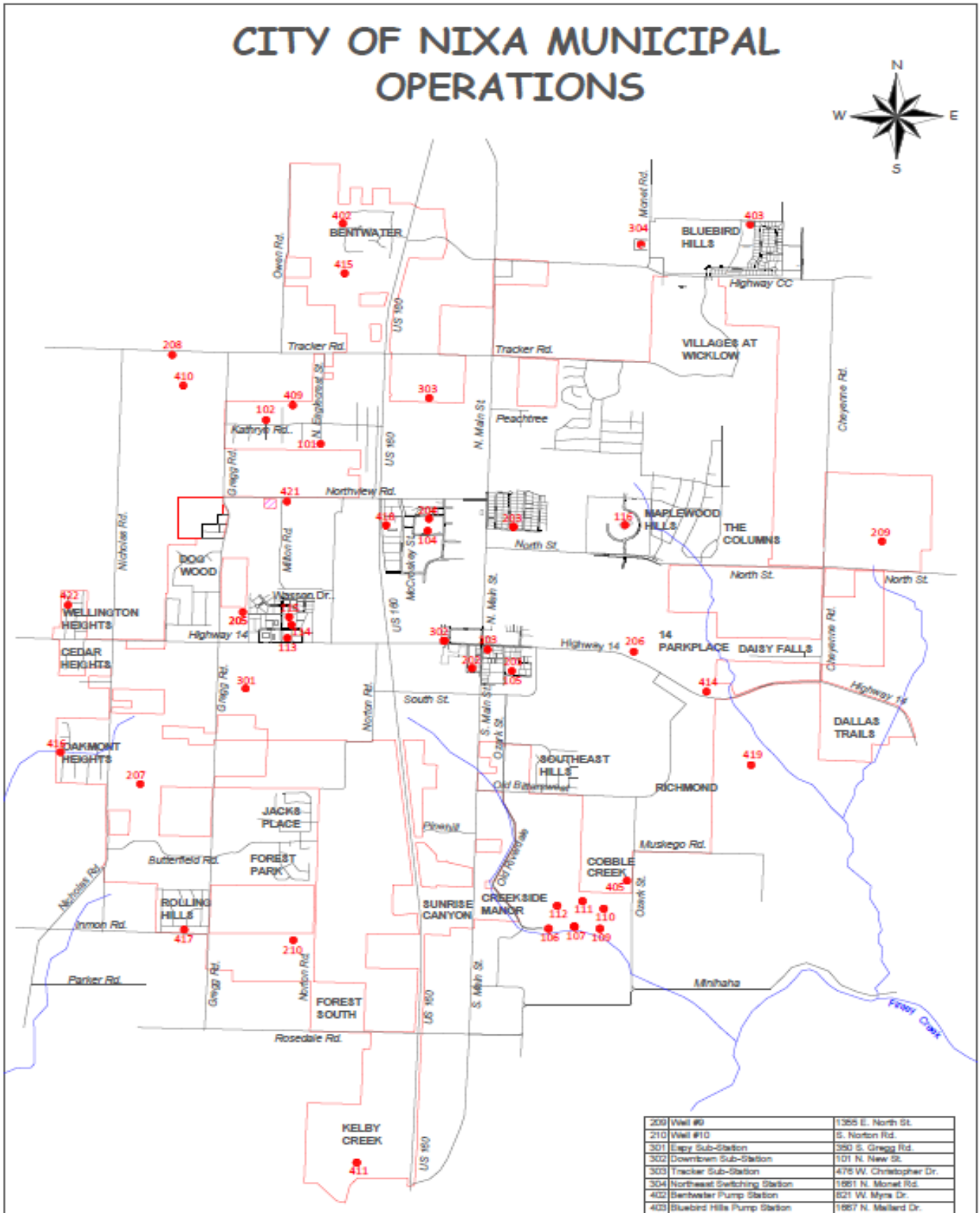
201 – 210 Water Well and Tower sites;

301 – 304 Electric Sub-station and Switching-station sites;

401 – 427 Sewage Pump Station sites;

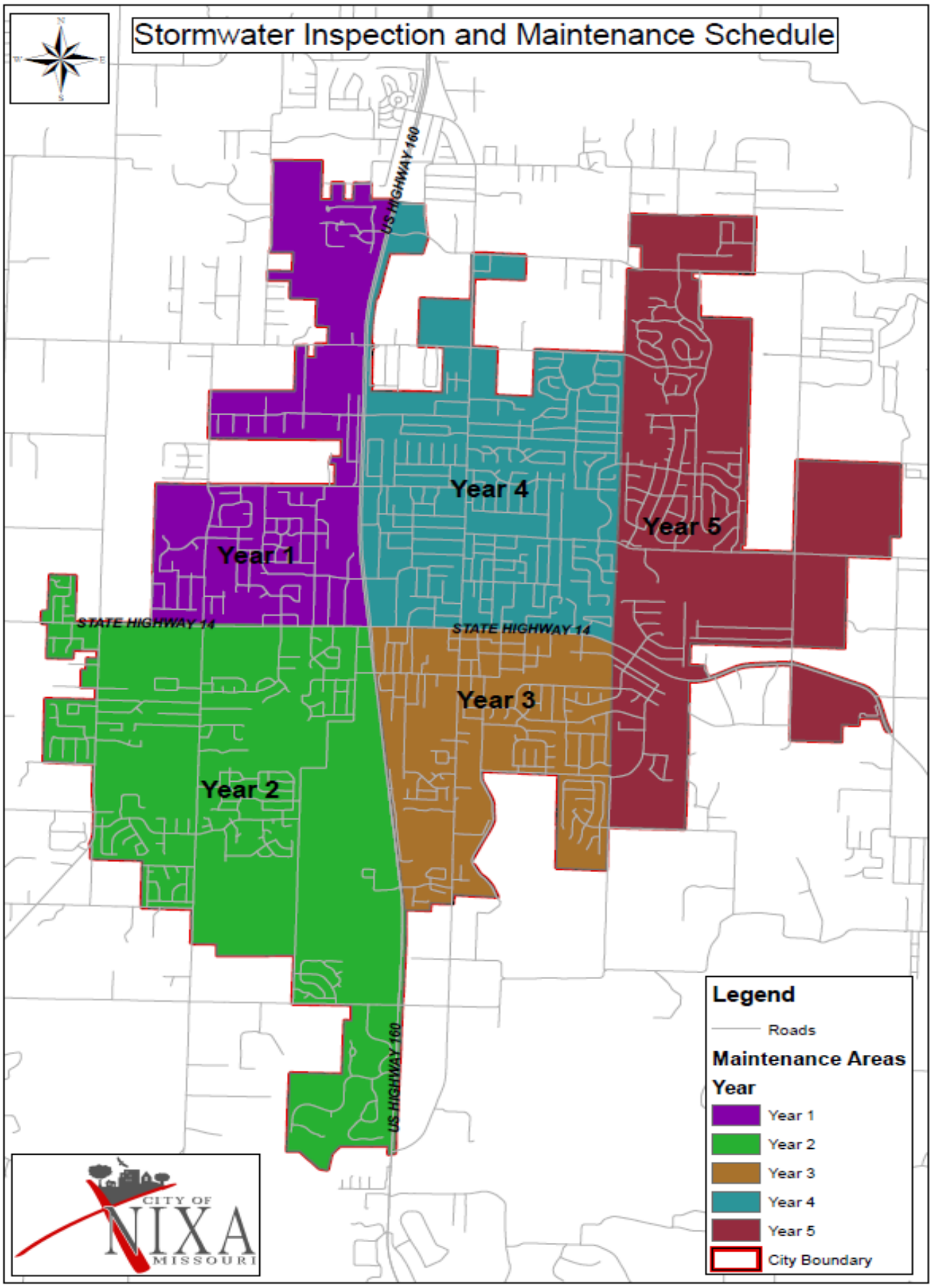
(Removed)-no longer exists.

CITY OF NIXA MUNICIPAL OPERATIONS



101	Public Works Campus #1	1010 N. Eaglecrest St.	113	City Hall/Finance/ P & Z	715 W. Mt. Vernon St.	405	Cobble Creek Pump Station
102	Public Works Campus #2	1111 W. Mt. Vernon St.	114	Utility Billing Department	707 W. Center Circle	409	Industrial Park Pump Station
103	Parks Dept. (Old City Hall)	108 E. Mt. Vernon St.	115	Police Department	715 W. Center Circle	410	Inman School Pump Station
104	Rotary Park (Old City Park)	N. Fort St.	116	Nixa Community Center	701 N. Taylor Way	411	Kelby Creek Pump Station
105	Old Shop Building	203 E. St. Louis St.	201	Well #1	203 E. St. Louis St.	414	Northeast Regional Pump Station
106	Street Dept. Storage Bldg A	972 Old Riverdale Rd.	202	Well #2	Gene St.	415	Northwest Regional Pump Station
107	Wastewater Storage Bldg B	972 Old Riverdale Rd.	203	Well #3	702 N. Hill St.	416	Oakmont Pump Station
108	Old Dog Pound Building	972 Old Riverdale Rd.	204	Well #4	308 W. Tower St.	417	Rolling Hills Pump Station
109	Wastewater Treatment Plant	972 Old Riverdale Rd.	205	Well #5	911 W. Mt. Vernon St.	418	Super 8 Pump Station
110	Police Dept. Shooting Range	972 Old Riverdale Rd.	206	Well #6	727 E. Mt. Vernon St.	419	Timber Creek Pump Station
111	Compost Building #2	972 Old Riverdale Rd.	207	Well #7	514 S. Nicholas rd.	421	Wasson Pump Station
112	New Dog Pound Building #1	972 Old Riverdale Rd.	208	Well #8	1240 W. Tracker Rd.	422	Wellington Park Pump Station

209	Well #9	1355 E. North St.
210	Well #10	S. Norton Rd.
301	Espy Sub-Station	350 S. Gregg Rd.
302	Downtown Sub-Station	101 N. New St.
303	Tracker Sub-Station	476 W. Christopher Dr.
304	Northeast Switching Station	1661 N. Monet Rd.
402	Bentwater Pump Station	821 W. Myra Dr.
403	Bluebird Hills Pump Station	1667 N. Mallard Dr.
405	Cobble Creek Pump Station	668 S. Ozark St.
409	Industrial Park Pump Station	711 W. Kathryn St.
410	Inman School Pump Station	1300 N. Nicholas Rd.
411	Kelby Creek Pump Station	362 S. Waterstone Bend
414	Northeast Regional Pump Station	941 E. Mt. Vernon St.
415	Northwest Regional Pump Station	601 W. Tracker Rd.
416	Oakmont Pump Station	1321 W. Woodcastle Dr.
417	Rolling Hills Pump Station	1120 W. Inman Rd.
418	Super 8 Pump Station	419 N. Mc Crowley St.
419	Timber Creek Pump Station	938 Timber Springs Rd.
421	Wasson Pump Station	940 W. Northview Rd.
422	Wellington Park Pump Station	1352 W. Berkshire Ave.


Stormwater Inspection and Maintenance Schedule
US HIGHWAY 160
STATE HIGHWAY 14
STATE HIGHWAY 14
US HIGHWAY 160
Year 1
Year 2
Year 3
Year 4
Year 5
Legend
Roads
Maintenance Areas
Year
Year 1
Year 2
Year 3
Year 4
Year 5
City Boundary
CITY OF
NIXA
MISSOURI