

City of Fargo

Policy on Stormwater Discharge and Treatment Requirements

April 2023 Update

Table of Contents

General Stormwater Requirements	3
Appendix A Stormwater Management Plan	5
Appendix B Existing Parking Lot Stormwater Requirements	8
Appendix C Stormwater Discharge Requirements (Newly Platted Developments or Undeveloped Existing Plats)	9
Appendix D Re-Development of Currently Developed Properties	12
Appendix E MS4 Water Quality Design Requirements	15
Appendix F Stormwater Retention, Detention, and Discharge Pond Design	17
Appendix G Design Requirements within Special Zones	23

GENERAL STORMWATER REQUIREMENTS

Authority and Purpose

The City of Fargo operates a Municipal Separate Storm Sewer System (MS4) under authority of the North Dakota Department of Environmental Quality Permit NDR04-0000 (Discharge Permit), and City of Fargo Code of Ordinances, Chapters 17 and 37. In compliance with this authority, Fargo has developed this Policy on Stormwater Discharge and Treatment Requirements. This policy establishes standards for stormwater discharge rates and stormwater quality treatment for all development within the City of Fargo's jurisdiction.

Intent of the Policy

The intent of this policy is to provide guidance to those persons working with the City of Fargo **Stormwater Management Ordinance** and to establish uniform, simplified standards that work within the framework of the City's storm sewer infrastructure.

Target Audience

This policy is applicable to all development (Code of Ordinances, Chapter 37, Paragraph 37-0102 7.) under the jurisdiction of the City of Fargo.

Stormwater Management Plan

All previously undeveloped properties and subdivisions; re-plats of existing properties for purposes of development; or re-development of existing developed or un-developed lots one (1) acre in size or larger, or part of a larger common development that is one (1) acre in size or larger, shall provide a Stormwater Management Plan (plan) for the subject area.

Submission of a schematic stormwater management plan shall be included with submittal of the draft plat for approval. Submission and approval of the full stormwater management plan is required prior to construction plan approval. Stormwater management plan requirements are discussed in **Appendix A**.

Existing Parking Lot Stormwater Requirements

Stormwater management requirements for existing parking lots are outlined in **Appendix B**.

Stormwater Discharge Requirement/Limit

The maximum stormwater discharge rate as defined in **Appendix C** or **Appendix D** shall apply to the following categories:

1. Newly Platted Ag Conversion that is (1) one acre in size or larger or is part of a common development one acre in size or larger (**Appendix C**).
2. Re-plat of currently platted parcel that is part of a common development that is one acre in size or larger and is currently undeveloped (**Appendix C**).
3. Re-development of existing parcel that is one acre in size or larger, or is part of a common development that is one acre in size or larger (**Appendix D**).

Water Quality Treatment

Water quality treatment is required for all new developments or re-plats one (1) acre in size or larger, common developments collectively one acre or larger, re-development sites one acre or larger, and on existing parking lots as outlined in **Appendix B**. Requirements for water quality treatment are specified in **Appendix E**.

Stormwater Detention, Retention, and Discharge Pond Design

Appendix F outlines the requirements for stormwater pond design.

Design Requirements within Special Zones

Appendix G covers the design parameters and coverage area for special design requirement areas, including areas that have been developed with regional drainage facilities, and the Downtown Mixed Use zoning area.

APPENDIX A

STORMWATER MANAGEMENT PLAN

1. The Stormwater Management Plan schematic preliminary drawing and final plan shall be prepared by a Professional Engineer registered in the State of North Dakota.
2. All newly platted Ag Conversion properties, new subdivisions within a larger common development, and infill projects within a larger platted development equal to or greater than 1 acre in size are required to have a stormwater management plan that includes those Best Management Practices (BMPs) required for the addition or subdivision to meet stormwater quality and quantity requirements. Approval of the regional stormwater management plan is considered part of the plat approval process.
3. Previously platted lots less than one acre in size, which are part of a larger common development, will be required to have a stormwater management plan when the lot is developed. This stormwater management plan shall analyze the impact this newly improved lot will have on the overall stormwater features of the common development. As a minimum, these lots shall drain to a common inlet that is connected to the City storm sewer system, while meeting the allowable release rate and water quality requirements.
4. Article 37-0201 of the City of Fargo Code of Ordinances states: “An owner must submit to the City Engineer a plan for stormwater management and control including detention and retention facilities. The plan shall be submitted, and approval obtained from the City Engineer prior to the owner (a) obtaining approval of an application for a plat, pursuant to Section 20-0907 of the Land Development Code of the City, or (b) engaging in any land disturbing activity.”

The plan may include “in the discretion of the City Engineer, arrangements for further planning and implementation of permanent facilities for stormwater management and control by subsequent owners of the property being platted or by the current owner at a later time.” Delay in producing the stormwater plan will be considered when extenuating circumstances dictate but will generally not be allowed.

5. The stormwater management plan, at a minimum, shall consist of:
 - a) A Stormwater Management Plan Report prepared using a stormwater modeling system that provides a modeling report similar in nature to HydroCad. The report shall document the assumptions, methodologies, and analysis used in arriving at the selected stormwater management solution. The report must be global, in that it looks at the entire area to be developed as well as any impacts to the site created by neighboring areas. The report shall be conceptual in nature and include:

1. A narrative describing the existing site conditions, proposed site conditions, types and locations of stormwater BMPs proposed to be used.
 2. Model calculations for the post-development 2-, 10-, and 100-year storm events as identified under the most current NOAA Atlas precipitation data for Fargo.
 3. Hydrographs depicting flows into and out of all detention/retention facilities and all flows into the City storm sewer system.
- b) Conceptual plan drawings and topographic maps noting all items covered in the report.
1. A detailed drawing of the outlet structure indicating maximum water elevations for the 2-, 10-, and 100-year storms.
 2. A written description of the proposed water quality treatment method.
- c) Conceptual Operations and Maintenance (O&M) plan for the system, covering all requirements for keeping the system operating as designed.

The above-noted items shall be stamped and signed by a Professional Engineer registered in the State of North Dakota.

6. The plan may utilize regional or on-site detention/retention and water quality facilities; however, per the Fargo Comprehensive Plan, the City prefers to see stormwater facilities constructed as regional amenities whenever possible. A regional stormwater plan can use any combinations of BMPs, selected by the owner and their engineer, which enable the benefitting properties to meet the stormwater quantity and quality requirements. If a regional facility is used, the pond shall be located to facilitate capture of as much site stormwater as possible prior to discharging into the City stormwater system.
7. The submitted conceptual stormwater plan will be reviewed by the City's Engineering Department. The Engineering Department will evaluate the stormwater plan and communicate change requirements or recommendations to the owner and their engineer. Changes made to the stormwater plan prior to plat approval will be considered part of the original plan. If the plan is very complex, it may be brought before the City Commission for discussion and/or public comment prior to approval.
8. If a subdivided property is covered by a previously approved stormwater plan, the previously approved plan shall be reviewed to determine if the subdivided property is still in compliance. A letter from a North Dakota Registered Professional Engineer can accomplish this with City Engineer review and approval.

9. The approved plan will exist for the life of the subject property, including any changes approved by the City Engineering Department. The final approved plan will be included with the amenities plan.
10. The plan may require dedication of stormwater or access easements or additional right-of-way for the construction of stormwater conveyance and/or storage facilities.
11. The plan must ensure the subject area conforms to the site specific performance requirements noted in **Appendices B, C, D, and E** of this policy.

APPENDIX B

EXISTING PARKING LOT STORMWATER REQUIREMENTS

Current parking lots being maintained, repaired, replaced, or expanded shall comply with the requirements outlined in this Appendix and shall follow the following categories.

1. Application of these requirements and whether or not City storm sewer is available within a reasonable distance of the site shall be as determined by the City Engineer.
2. Parking lots that expand over time beyond the original grandfathered project may add enough impervious surface through surfacing or added buildings to trigger stormwater requirements.
3. Existing Parking Lot maintenance or repairs, including up to complete removal of asphalt or concrete surfacing, localized repair of gravel or subgrade, or surface treatments (spray coatings, chip/fog seals, crack sealing, striping), with no expansion of the current parking areas and result in no change in drainage, will be exempt from the stormwater requirements.
4. For existing parking lots that are (1) one acre to under (3) three acres and that involve full asphalt or concrete removal, or extensive gravel and subgrade modifications, or mill and overlays that result in modification of drainage patterns, the site shall be required to collect on-site stormwater into inlets, add a water quality device, and convey stormwater into the City stormwater system. A pre-versus post-development drainage study shall be done. If the post-construction flows are the same or less than the pre-construction flows, then no detention is required. If the post-construction flows are larger, then detention shall be required to mitigate the increase in flow only.
5. Existing parking lots (3) three acres or larger that involve full parking lot reconstruction (to include full pavement & base removal) shall be required to collect on-site stormwater in inlets and convey stormwater into the City storm sewer system, and shall comply with stormwater requirements contained in **Appendices C/D and E** for modeling, discharge rate control, and water quality for the existing parking lot being reconstructed and improved.
6. A pre-post stormwater model shall be accomplished for any site, one acre or larger, on which a building addition/expansion is triggering expansion of the parking lot(s). If the post-construction model results in a greater stormwater discharge rate than the pre-construction model during the 100-year event, discharge rate of the added volume shall meet City discharge rate requirements. If the new impervious area is over one acre, water quality requirements must also be met.

APPENDIX C**STORMWATER DISCHARGE REQUIREMENTS (NEWLY PLATTED DEVELOPMENT OR UNDEVELOPED EXISTING PLATS)**

1. The discharge rate for stormwater discharging from any site, equal to or greater than 3 acres in size, into any drain system within City jurisdiction, shall be limited to 1 cfs/acre. For parcels between 1 and 3 acres, the maximum discharge shall be per the following table:

Parcel Size (Acres)	Release Rate (cfs)
1.0	2.00
1.1	2.05
1.2	2.10
1.3	2.15
1.4	2.20
1.5	2.25
1.6	2.30
1.7	2.35
1.8	2.40
1.9	2.45
2.0	2.50
2.1	2.55
2.2	2.60
2.3	2.65
2.4	2.70
2.5	2.75
2.6	2.80
2.7	2.85
2.8	2.90
2.9	2.95
3.0	3.00

This table shall apply to all projects covered under this policy except existing parking lots, which are addressed in **Appendix B**, and re-development of currently developed properties, which are addressed in **Appendix D**.

2. A stormwater report is required for all developments one acre in size or greater or if part of a larger common development that is one acre or larger. The report must comply with the requirements specified in **Appendix A**.
3. All sites except existing parking lots (as described in **Appendix B**) are required to comply with the State Water Quality Design Considerations. Water Quality Design Consideration information is included as **Appendix E** to this policy.
4. The discharge rate noted above will drive detention requirements for a particular site. Dry or wet ponds, oversized pipe, underground stormwater storage facilities, or other methods can be used to achieve required storage volumes.

If a regional detention system, as opposed to site-specific ponds, is chosen for the development area, all water shall be routed to the regional pond prior to discharge into the City system. The original, conceptual stormwater plan (see **Appendix A**) must address the conveyance of stormwater from all parcels in the development to the regional detention facility and shall cover all details of operation and maintenance responsibilities.

If the City of Fargo storm sewer system provides conveyance to the regional facility, the 1 cfs/acre criteria shall be used unless otherwise planned for. If the owner requires larger flows to the regional facility, this must be considered/negotiated during the development of the original regional stormwater plan and the original amenities plan (such as parallel storm sewer lines or open channel flow to existing ponds).

5. Discharge or overland flow of stormwater onto a neighboring property shall not be allowed unless included in the regional plan (see **Appendix A**) and facilitated through the designation of required easements, dedications, or other methods allowing such conveyance.
6. The State of North Dakota Water Quality standards must be met. The method of treatment shall be selected by the design engineer from the options presented in **Appendix E** or as approved by the City Engineer.

Construction of rain gardens, grassy swales, and other methods of achieving water quality are encouraged and will be evaluated on a case-by-case basis.

7. Criteria for construction of regional detention facilities is discussed in **Appendix F**.
8. Each plan set submittal requiring retention/detention shall include a storm system table identifying:
 - Lot size (acreage and square feet)
 - % impervious area

- Required retention/detention volume (100-year storm event)
- Supplied retention/detention volume (100-year storm event)
- Water quality method being proposed, including manufacturer's data
- Allowable release rate for 100-year event (cfs)
- Actual release rate for 100-year event (cfs)

APPENDIX D

RE-DEVELOPMENT OF CURRENTLY DEVELOPED PROPERTIES

- For re-development of currently developed properties, Fargo has increased the allowable release rates to take into account expected existing impervious areas. It should be noted that increases in the release rates for 1 to 4 acre sites is greater than the rate increases for 4 to 8 acres. Fargo believes that re-developments of 4 to 8 acres have more latitude to accommodate stormwater runoff mitigation within the design. The stormwater discharge rate from any site, equal to or greater than 8 acres in size, into any drain system within City jurisdiction, shall be limited to 1 cfs/acre. For parcels between 1 and 8 acres, the maximum discharge shall be per the following table:

Parcel Size (acres)	Allowable Release Rate (cfs)
1	3
1.5	3.77
2	4.53
2.5	5.3
3	6.07
3.5	6.83
4	7.6
4.25	7.64
4.5	7.68
4.75	7.72
5	7.76
5.25	7.79
5.5	7.82
5.75	7.85
6	7.88
6.25	7.9
6.5	7.92
6.75	7.94
7	7.96
7.25	7.97
7.5	7.98
7.75	7.99
8	8

This table shall apply to all projects covered under this policy except existing parking lots, which are addressed in **Appendix B**, and newly platted development or existing undeveloped plats, which are addressed in **Appendix C**.

In no circumstance shall the allowable release rate from a re-development lot be greater than the pre-redevelopment release rate. The current condition of the lot shall be evaluated up to 5 years prior to re-development to determine existing impervious values for determining acceptable release rates.

2. A stormwater report is required for all developments one acre in size or greater or if part of a larger common development that is one acre or larger. The report must comply with the requirements specified in **Appendix A**.
3. All sites except existing parking lots (as described in **Appendix B**) are required to comply with the State Water Quality Design Considerations. Water Quality Design Consideration information is included as **Appendix E** to this policy.
4. The discharge rate noted above will drive detention requirements for a particular site. Dry or wet ponds, oversized pipe, underground stormwater storage facilities, or other methods can be used to achieve required storage volumes.

If a regional detention system, as opposed to site-specific ponds, is chosen for the development area, all water shall be routed to the regional pond prior to discharge into the City system. The original, conceptual stormwater plan (see **Appendix A**) must address the conveyance of stormwater from all parcels in the development to the regional detention facility and shall cover all details of operation and maintenance responsibilities.

If the City of Fargo storm sewer system provides conveyance to the regional facility, the 1 cfs/acre criteria shall be used unless otherwise planned for. If the owner requires larger flows to the regional facility, this must be considered/negotiated during the development of the original regional stormwater plan and the original amenities plan (such as parallel storm sewer lines or open channel flow to existing ponds).

5. Discharge or overland flow of stormwater onto a neighboring property shall not be allowed unless included in the regional plan (see **Appendix A**) and facilitated through the designation of required easements, dedications, or other methods allowing such conveyance.
6. The State of North Dakota Water Quality standards must be met. The method of treatment shall be selected by the design engineer from the options presented in **Appendix E** or as approved by the City Engineer.

Construction of rain gardens, grassy swales, and other methods of achieving water quality are encouraged and will be evaluated on a case-by-case basis.

7. Criteria for construction of regional detention facilities is discussed in **Appendix F**.
8. Each plan set submittal requiring retention/detention shall include a storm system table identifying:
 - Lot size (acreage and square feet)
 - % impervious area
 - Required retention/detention volume (100-year storm event)
 - Supplied retention/detention volume (100-year storm event)
 - Water quality method being proposed, including manufacturers' data
 - Allowable release rate for 100-year event (cfs)
 - Actual release rate for 100-year event (cfs)

APPENDIX E

MS4 WATER QUALITY DESIGN REQUIREMENTS

The following information is taken from page 29 of the current North Dakota NDR04-0000 MS4 Permit, dated April 1, 2021 and effective to March 31, 2026.

Water Quality

A water quality treatment system is required in developments as defined under **Appendices B, C, & D**. The system must meet the minimum standards specified below.

The post-construction controls outlined below are intended to manage water quality by reducing pollutants carried in the first flush of stormwater runoff.

The design considerations for treating a water quality volume for common post-construction controls are as follows:

Control	Water Quality Design Consideration
Wet Detention Ponds	Water Quality Volume (V_{wq}) = 1800 ft³ per impervious acre draining to the pond. The drawdown time for the V_{wq} should be a minimum of 12 hours.
Dry Detention Ponds (w/Extended Detention)	Extended Detention / Water Quality Volume (V_{wqed}) = 1800 ft³ per impervious acre draining to pond. The drawdown time for the V_{wqed} should be a minimum of 24 hours and not more than 72 hours.
Infiltration	Water Quality Volume (V_{wq}) = 0.5 inches from impervious area. The volume captured in rain gardens, or passed through bio filters with under drains, would be grouped with infiltration for water quality treatment.
Flow-Through Treatment Devices	Size devices to treat the first 0.5 inches of runoff from impervious area.
Redevelopment / Retrofit	Incorporate water quality criteria by reducing impervious surface area and implementing controls to treat the first 0.5 inches of runoff from impervious areas.

The water quality criteria apply to on-site or regional systems for post-construction stormwater management. The water quality considerations do not replace or substitute for water quantity or floodplain management requirements for development. The water quality features may be incorporated into the design of structures for flow control or water quality control may be achieved with separate features. Flow-through treatment devices

such as “Defenders™” shall provide a minimum of 80 percent removal of sediment with a particle size distribution equivalent to the standard OK-110 at a feed concentration of 300 mg/L. The treatment device design shall include a bypass for storm flows above the ½” rain event from the impervious area being served.

If it is impractical to meet the water quality criteria, alternative practices may be used (e.g., grassed swales, smaller ponds, or grit chambers). If a combination of practices is used, the water quality volume is accounted for on a percentage basis. Low impact development and/or green infrastructure practices may be used as an alternative to post-construction controls.

The selection and design of post-construction controls must consider clogging or obstructions, freeze-thaw cycles, effects on slope stability and groundwater, and the ability to effectively maintain the control. Design post-construction controls for ease of inspection and maintenance access (e.g., a stabilized access that allows equipment to enter a pond).

Recommended resources for planning and designing controls for urban stormwater runoff are found in the “North Dakota Stormwater Criteria Manual”: <https://www.dot.nd.gov/manuals/design/designmanual/designmanual.htm>

The property owner is responsible for operating and maintaining the water quality device in accordance with the manufacturer’s recommendations. The property owner shall maintain records of maintenance of the water quality device and shall prepare an annual inspection report. These records are to be maintained with the property owner and shall be made available to the City upon request.

APPENDIX F

STORMWATER DETENTION, RETENTION, AND DISCHARGE POND DESIGN

The following information shall apply to Standard Regional Pond Design.

Design Requirements

Pond design shall be in conformance with the current NDPDES permit.

Minimum pond design shall be for a 100-year storm event based upon the most recent NOAA Atlas 14 Point Precipitation Frequency Estimates data, and shall include one (1) foot freeboard. All design modeling shall be done using HydroCAD or equal commercially available modeling software that produces similar model reporting as HydroCAD. The designer shall provide to the City a drainage report signed by a ND Professional Engineer and shall provide an electronic copy of the complete design drainage model.

Drainage and pond modeling shall include 2-, 10-, and 100-year, 24-hour rainfall events as part of the analysis.

The pond design shall include a control outlet structure with emergency overflow design. The overflow structure shall include provisions to prevent overflows from affecting adjoining properties. The outflow and overflow structure shall be designed to prevent plugging, be easily accessible to maintenance personnel, and shall require minimal maintenance. Maximum outflow to a City storm sewer shall be as defined in **Appendices C and D**. The release rate may be less depending on measures needed to meet water quality standards as defined in **Appendix E**. However, the minimum outlet orifice size shall be 4 inches and shall have a screen ahead of the orifice to prevent plugging.

The pond drawdown time criteria is outlined in **Appendix E**.

Geometry

Pond design shall include 15 feet minimum of level ground from the top of back slope of the pond to the property line.

Dry Pond:

1. Slopes shall be 5:1 or flatter up to 15 foot of vertical depth, 6:1 or flatter if 15 foot of vertical depth or greater.
2. 1.5% grade in pond bottom to low flow channel and 0.4% grade from pond inlet to pond outlet with channel liner and 1% grade from pond inlet to pond outlet without channel liner.

3. Dry ponds do not require a safety bench and slope protection armoring if less than or equal to 10 feet deep. Dry ponds do require a safety bench and slope protection armoring if greater than 10 feet deep.
4. Dry ponds require a sloped pond bottom and an underdrain system sufficient to maintain a “dry” state.

Wet Pond:

1. Slopes shall be 6:1 or flatter up to 15 feet of depth. If the designer wishes the pond to be deeper than 15 feet, a geotechnical evaluation of the pond slope stability is required. If the pond backs up to residential homes or legal drains, a geotechnical evaluation of the pond slope stability is also required. The pond shall be designed with safety features such as edge plantings to deter entrance to ponds and a safety ledge or bench at pond perimeter one to two feet below normal water level and extend out 10 feet before continuing on slope.
2. Slope protection shall be installed to one foot below safety bench, or one foot above and one foot below normal water level, whichever is greater. The slope protection shall be riprap or turf reinforcement with seeding.
3. The remainder of exposed slopes shall be turf reinforced and seeded. Rip rap shall meet City of Fargo and NDDOT standards.

All pond aesthetic features such as shape, side slopes, and vegetation that are proposed shall be identified on the plans and match the land area requirements identified in the Zoning Ordinance and project development master plan.

City Ownership of Ponds

The City may take ownership of a stormwater pond that is designed according to the following criteria:

1. To qualify as a regional pond for purposes of City ownership and maintenance, the minimum pond size for a **dry pond shall be 7.5 acre-feet** with a minimum bottom width of 100 feet. The minimum pond size for a **wet pond shall be 15 acre-feet** with an average bottom width of 100 feet. However, the City will review on a case-by-case basis whether a pond qualifies as a regional pond for purposes of City maintenance if its size is smaller than the minimum size identified.
2. A City-owned regional pond should have sufficient right-of-way access for routine and special maintenance as determined by the City Engineer.

3. For ponds to be accepted by the City for maintenance and operation as a regional pond, the features in general shall not result in unusual and/or costly future operation and maintenance, as determined by the City Engineer. Bridges and box culverts, if required, shall meet the design criteria of the regulating authority and shall meet State and Federal safety standards.
4. No fountains or bubblers shall be allowed within City-owned regional wet ponds.

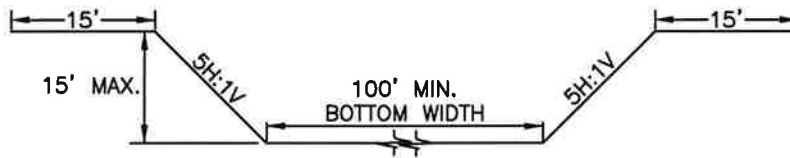
Alternative Design

Ditches, swales, and channels may be designed for a variety of capacities depending on the protection required. When ditches serve as a primary surface water collector in the upper part of a drainage basin, they shall be designed per NDCC 89-14-01 except that as a minimum, shall convey the 10-year storm event without ponding in the roadway or adjacent private property. The City Engineer will ultimately decide if ditches, swales, or channels are allowed in lieu of conventional underground piping.

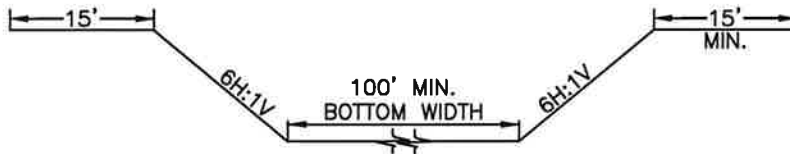
The City of Fargo Stormwater Service Charge policy identifies credits that may be achieved through building of detention or retention ponds larger than required as determined by this policy. Developers and designers are encouraged to familiarize themselves with the current Stormwater “Determination and Review Policy” for stormwater fees.

NOTES:

- 15' MAX. VERTICAL DEPTH
- MIN. POND SIZE = 7.5 ACRE/FEET
- MIN. 100' BOTTOM WIDTH
- MIN. 1' FREE BOARD FOR 100 YEAR EVENT
- NO BENCH REQUIRED



DRY POND
(15' MAX. VERTICAL DEPTH)



DRY POND
(GREATER THAN 15' VERTICAL DEPTH)

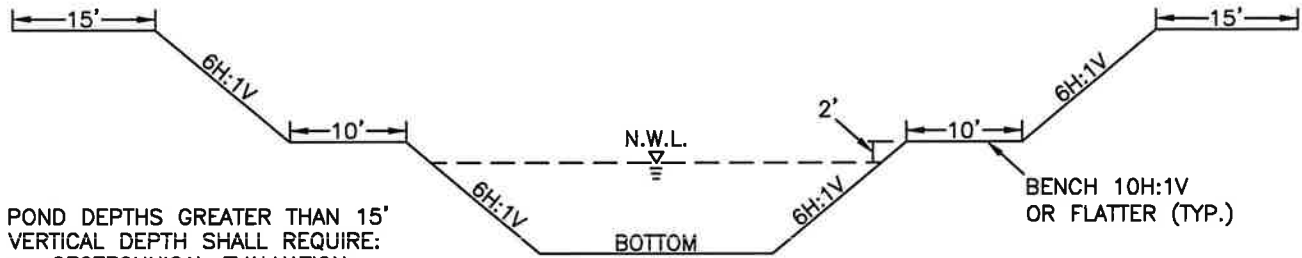
NOTE:

SIDE SLOPES DISPLAYED WITH 5X
VERTICAL EXAGGERATION



SIDE SLOPES SHALL BE 6H:1V
OR FLATTER FOR POND
DEPTHS UP TO 15' VERTICAL

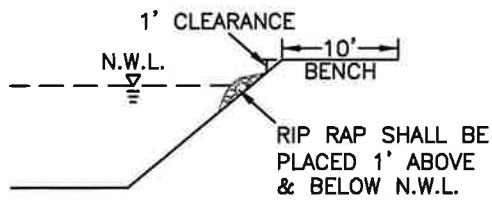
WET POND
(15' MAX. VERTICAL DEPTH)



POND DEPTHS GREATER THAN 15'
VERTICAL DEPTH SHALL REQUIRE:

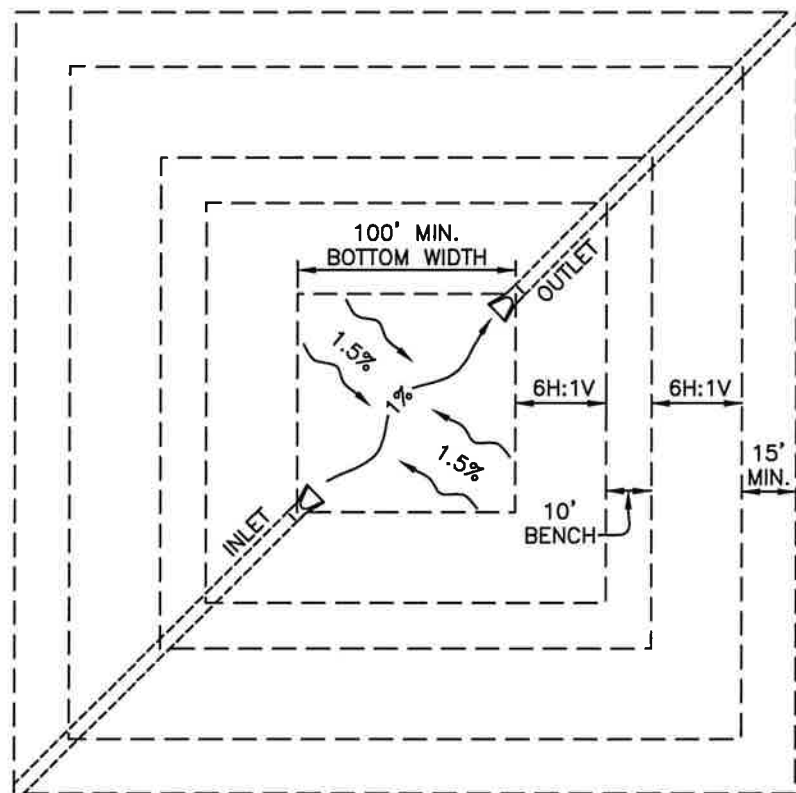
- GEOTECHNICAL EVALUATION
- SLOPE REINFORCEMENT

WET POND
(GREATER THAN 15' VERTICAL DEPTH)

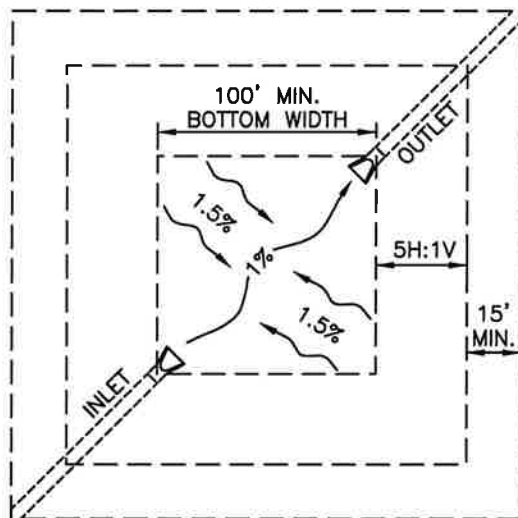


TYPICAL RIP RAP
PLACEMENT

NOTE:
SIDE SLOPES DISPLAYED WITH 5X
VERTICAL EXAGGERATION



POND BOTTOM PLAN VIEW
(GREATER THAN 15' VERTICAL DEPTH)



POND BOTTOM PLAN VIEW
(15' MAX. VERTICAL DEPTH)

APPENDIX G

DESIGN REQUIREMENTS WITHIN SPECIAL ZONES

Southwest Metro Stormwater Design Parameters and Pond Coverage

The following information shall apply to the coverage area for the new Southwest Metro Stormwater Pond. Properties that develop in the area shown will have regional stormwater detention and stormwater quality coverage managed by the City of Fargo. Maps of the drainage boundaries and conceptual design are found in this Appendix.

Fargo has moved forward since 2021 to construct the Lift Station and the first phase of the Southwest Metro Stormwater Pond. Drainage ditches and storm sewer piping within public rights-of-way and easements are being installed as properties and streets develop. Interim measures may be necessary to be constructed while the larger system is being fully designed and developed, due to a proposed improvement parcel's location and distance from currently completed conveyance system components. This stormwater master planning will allow properties within the area outlined to build without meeting discharge and water quality requirements outlined in this Design Policy.

However, developing properties will need to be aware that the City of Fargo designs their street storm sewers for a 2-year rainfall event on local streets and 5-year rainfall event on arterial streets, and developing properties shall design their sites to account for the limited street conveyance of stormwater if not directly discharging to the conveyance ditch system or the pond.

Downtown Mixed Use Zoning (DMU) Requirements for Stormwater

A modification to the stormwater retention policy for the existing areas classified as within the Downtown Mixed Use zoning district as of July 27, 2015 is as follows: Any development on a parcel one acre in size or larger within the DMU shall be allowed a maximum stormwater runoff rate that is not greater than the existing condition's runoff rate from the parcel for the 2-, 10- & 100-year, 24-hour synthetic rainfall events. No stormwater retention will be required on the parcel unless necessary to maintain the runoff rate below the existing (pre-development) runoff rate. Lots under one acre are exempt from the retention requirements.

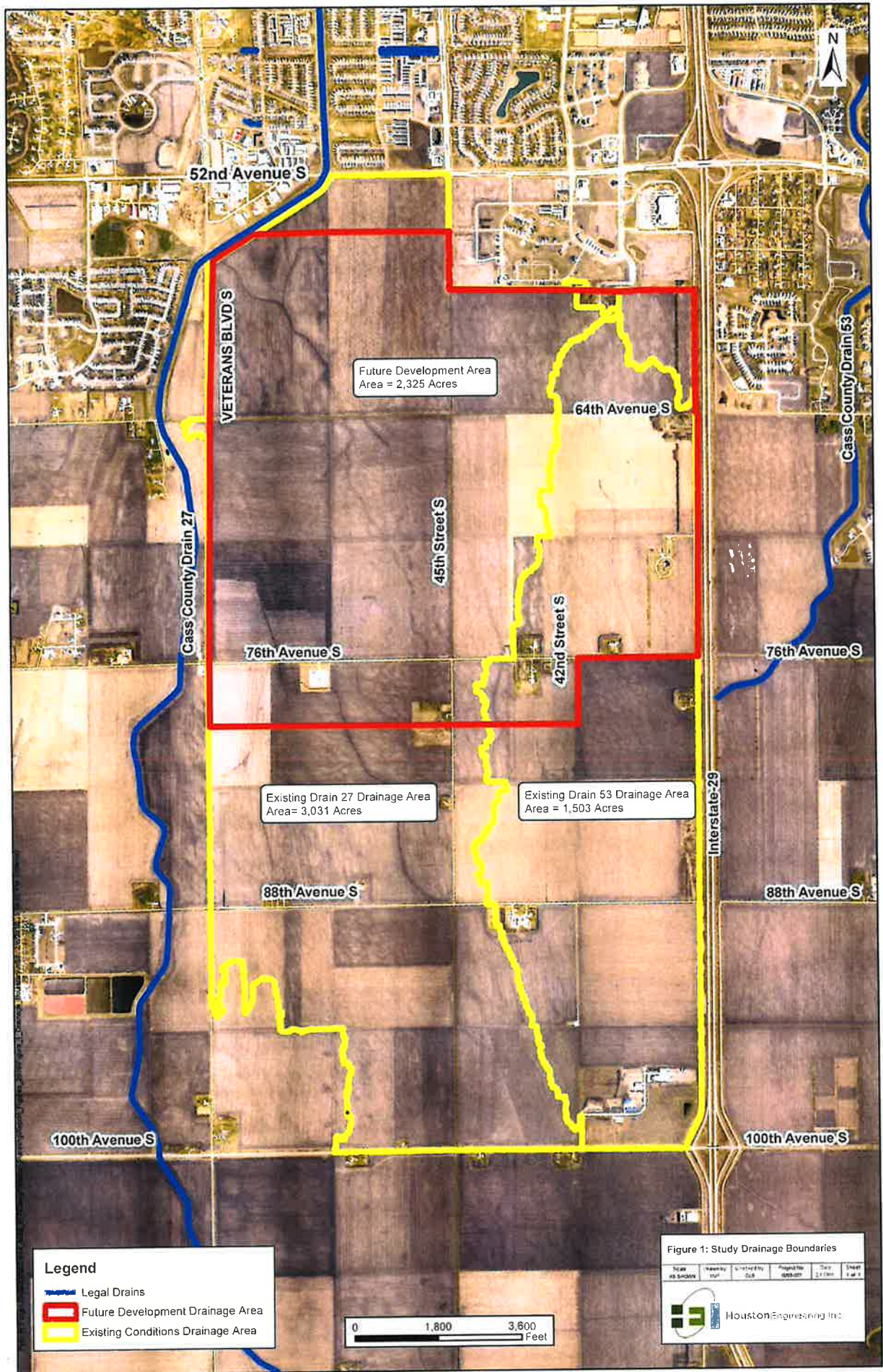
This modified policy does not affect the North Dakota Department of Environmental Quality's water quality requirements. Development of all parcels within the DMU are still required to follow, as applicable, the water quality requirements set by the DEQ.

For parcels completing a zoning change to DMU after the effective date of July 27, 2015, property improvements shall meet all stormwater detention and water quality standards per the policy.

New Developments with Regional Detention and Special Release Rates

This section applies to new developments with Site Amenities Plans or Developer's Agreements that provide for regional detention, water quality, and design release rates that differ from the normal requirements covered in this design policy.

The most recent and complete record of these special design areas is available on the City of Fargo public GIS site. The GIS layer to be displayed is "StormPolicyDesignDeviations" with the modified design requirements notated within the differentiated areas.



DMU July 27, 2015

