Watershed Management Plan Amendment

LOWER MINNESOTA RIVER WATERSHED DISTRICT

TAC Meeting — February 8, 2017

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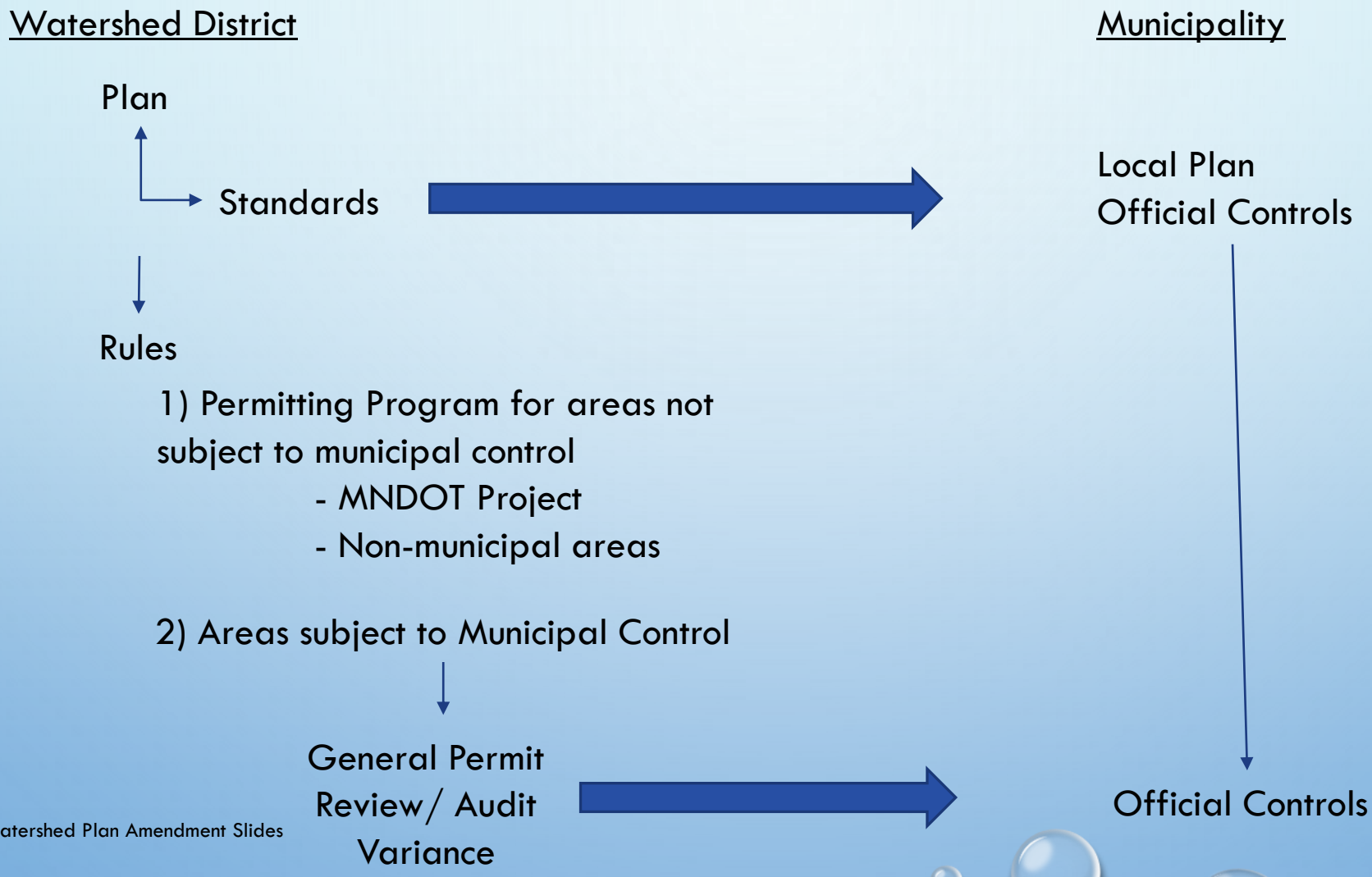
OVERVIEW

1. Plan Amendment Framework and Schedule
2. Standards Development Approach
3. Review of Municipal, Existing and Proposed Standards
   - ✓ Erosion and Sediment Control
   - ✓ Floodplains
   - ✓ Stormwater Management
4. Next Steps - TAC Meeting on February 22, 2017 from 11am – 1pm

PLAN AMENDMENT FRAMEWORK



PLAN AMENDMENT SCHEDULE (TENTATIVE)

1. TAC Meetings
   - Session 1 – 8 February 2017
   - Session 2 – 22 February 2017
   - Session 3 – 8 March 2017
2. Submit Petition with Redline Draft to BWSR for 60-day Review – 24 April 2017
3. Respond to Comments, Host Public Hearing and Update the Plan – June – July 2017
4. Submit Final Draft to BWSR for 90-day Review – August 2017

STANDARDS DEVELOPMENT APPROACH

RESOURCE MANAGEMENT STRATEGY

PRESERVE

MAINTAIN IN ITS EXISTING STATE

PROTECT

A FORMAL MEASURE INTENDED TO PRESERVE THE FUNCTION AND VALUE OF A RESOURCE

RESTORE

TO RETURN TO A FORMER CONDITION OR THE INTENDED CONDITION

LAKES

PRESERVE

- GENERAL EXISTING STANDARDS
  - NPDES GENERAL CONSTRUCTION STORMWATER PERMIT AND MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMITS
- PROJECT(S):
  - MONITORING PLAN (JUNE – SEPTEMBER) – NON-FLOODPLAIN LAKES
    - TOTAL PHOSPHORUS
    - CHLOROPHYLL-A
    - SECCHI TRANSPARENCY
  - FLOODPLAIN LAKES – DETERMINE HOW OFTEN THEY ARE FLOODED AND THE CONSEQUENCE(S)
  - DETERMINE A FLOODPLAIN LAKES PRESERVATION STRATEGY(IES)

PROTECT

- ALL REQUIREMENTS FOR PRESERVATION
- HIGHER STANDARDS (TROUT LAKES)
- PROJECTS
  1. ASSESSMENT OF IN-LAKE AND WATERSHED CONTRIBUTIONS: RUNOFF VOLUME AND QUALITY, AND IN-LAKE DYNAMICS (NON-FLOODPLAIN LAKES)
  2. COMPLETE USE ATTAINMENT ANALYSIS
  3. SEDIMENT CORE ANALYSIS AND IN-LAKE NUTRIENT DYNAMICS (VEGETATION, AQUATIC SPECIES, INVASIVE, ETC.)AND COMPLETE RECOMMENDED PROJECTS
  4. RESOURCE MANAGEMENT MODEL(S)

RESTORE

- ALL REQUIREMENTS FOR PRESERVATION AND PROTECTION
- IDENTIFY GAPS BETWEEN THE CURRENT CONDITION OF THE RESOURCE AND THE ‘ORIGINAL’ CONDITION
- ELIMINATE THE GAPS, THROUGH PROJECTS AND MORE STRICT REGULATIONS

STREAMS

PRESERVE

- GENERAL EXISTING STANDARDS
  - NPDES GENERAL CONSTRUCTION STORMWATER PERMIT AND MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMITS
- PROJECT(S):
  - MONITORING PLAN (APRIL - OCT)
    - TURBIDITY
    - DISSOLVED OXYGEN
    - TEMPERATURE
    - SPECIFIC CONDUCTIVITY
    - PH SAMPLING

PROTECT

- ALL REQUIREMENTS FOR PRESERVATION
- HIGHER STANDARDS (TROUT STREAMS)
- PROJECTS
  - CONDUCT COMPREHENSIVE STREAM ASSESSMENT(S)
    - CHANNEL CONDITION
    - RIPARIAN ZONE
    - BANK STABILITY
    - INSECT/INVERTEBRATE, FISH HABITAT
  - RESOURCE MANAGEMENT MODEL(S)

RESTORE

- ALL REQUIREMENTS FOR PRESERVATION AND PROTECTION
- IDENTIFY GAPS BETWEEN THE CURRENT CONDITION OF THE RESOURCE AND THE 'ORIGINAL' CONDITION
- ELIMINATE THE GAPS, THROUGH PROJECTS AND MORE STRICT REGULATIONS

WETLANDS/ FENS

PRESERVE

- GENERAL EXISTING STANDARDS
  - NPDES GENERAL CONSTRUCTION STORMWATER PERMIT AND MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMITS
  - MINNESOTA DEPARTMENT OF NATURAL RESOURCES – GW APPROPRIATIONS
- PROJECT(S):
  - MONITORING PLAN (WELLS)
  - DAKOTA COUNTY FEN STUDY

PROTECT

- ALL REQUIREMENTS FOR PRESERVATION
- HIGHER STANDARDS (FENS)
- PROJECTS
  - FLORISTIC QUALITY ASSESSMENT (FQA) – MID-JUNE THROUGH JULY
  - MINNESOTA ROUTINE ASSESSMENT METHODOLOGY (MNRAM)
  - GROUNDWATER MODELING

RESTORE

- ALL REQUIREMENTS FOR PRESERVATION AND PROTECTION
- IDENTIFY GAPS BETWEEN THE CURRENT CONDITION OF THE RESOURCE AND THE 'ORIGINAL' CONDITION
- ELIMINATE THE GAPS, THROUGH PROJECTS AND MORE STRICT REGULATIONS

BLUFF AND STEEP SLOPES

PRESERVE

- MINNESOTA DEPARTMENT OF NATURAL RESOURCES SHORELAND REGULATION

PROTECT

- ALL REQUIREMENTS FOR PRESERVATION
- ADOPT THE RECENTLY MISSISSIPPI RIVER CORRIDOR CRITICAL AREA (MRCCA) STANDARDS AND DEFINITIONS (BLUFF, STEEP SLOPES AND VERY STEEP SLOPES)
- PROJECT
  - LIDAR ANALYSIS/EVALUATION PROJECT

RESTORE

- ALL REQUIREMENTS FOR PRESERVATION AND PROTECTION
- IDENTIFY GAPS BETWEEN THE CURRENT CONDITION OF THE RESOURCE AND THE 'ORIGINAL' CONDITION
- ELIMINATE THE GAPS, THROUGH PROJECTS AND MORE STRICT REGULATIONS

EXISTING MUNICIPAL AND TOWNSHIP STANDARDS REVIEW

Municipalities and Townships

- Bloomington
- Burnsville
- Carver
- Chanhassen
- Chaska
- Eagan
- Eden Prairie
- Jackson Township
- Lilydale
- Louisville Township
- Mendota
- Mendota Heights
- Savage
- Shakopee

Standards Reviewed

- Construction Erosion & Sediment Control Standard
- Stormwater Standard (Rate and Volume)
- Floodplain Standard
- Shoreline and Streambank Standard
- Bluff and Steep Slopes Standard

PROPOSED STANDARDS

CONSTRUCTION EROSION AND SEDIMENT CONTROL STANDARDS (EXISTING MUNICIPAL)

Higher: Land Disturbing Activity is defined as "any activity which changes the volume or peak flow discharge rate of stormwater runoff from the land surface, including the grading, digging, cutting, scraping, or excavating of soil, placement of fill materials, paving, construction, substantial removal of vegetation or any activity which bares soil or rock…" Any "land disturbing activity" is prohibited, unless ALL of the following criteria are met:

(1) Disturbed area is less than 5,000 square feet;

(2) Volume of earth moved is less than 50 cubic yards;

(3) No drainage is blocked;

(4) Activity more than 100 feet from watercourse or 100 year floodplain. (e.g. Mendota Heights).

Mid Range: Greater than 1.0 acre disturbed permit necessary (same as NPDES Construction Permit requirement). Some cities reference the 1.0 acre standard directly and/or adopt the NPDES permit requirements via ordinance without specifying a 1.0 acre standard.

Lower/Other: The majority of city ordinances list at least a 1.0 acre disturbance permit requirement or indicate that NPDES permit requirements must be met prior to the city issuing a development work permit. Some ordinances use square feet and/or cubic yards to designate standards (e.g. Eagan, Burnsville, Eden Prairie, Chanhassen, Chaska, Jackson, Louisville).

EROSION AND SEDIMENT CONTROL STANDARDS

EXISTING DISTRICT STANDARD

- Trigger
  - 1.0 Acres – Land Disturbance
- Standard
  - Stormwater Pollution Prevention Plan (SWPPP)

PROPOSED STANDARD

- General
  - NPDES Construction Stormwater Trigger and Requirements
- High Resource Value Areas
  - Triggers
    - 5,000sf or more
    - grading, excavating, filling or storing on site of greater than 50 cubic yards of soil or earth material.
  - Grading/ Erosion Control Plan
  - SWPPP for site disturbing 1 acre or more
  - Maintenance and Inspection

FLOODPLAIN STANDARDS (EXISTING MUNICIPAL)

Higher: Numerous use restrictions and exceptions exist.

Mid Range: No structure, fill/deposit, obstruction, storage of materials or equipment may be allowed as a conditional use that will cause any increase in the state of the 100 year or regional flood or cause an increase in flood damages in the reach or reaches affected (Mendota Heights, Mendota, Eagan, Bloomington, Chaska, Carver, Jackson).

Lower/Other: Temporary storage or fill or other materials may be allowed that would cause an increase to the state of the 100 year flood - certain conditions must be satisfied to build conditional use structures (e.g., Burnsville). Accessory structures are allowed under certain conditions. No structure, fill, deposit, obstruction, or other use is allowed which adversely affects the capacity of the floodway or increases flood heights (e.g., Savage, Eden Prairie).

FLOODPLAINS

Existing District and Proposed Standard

- Trigger
  - Any alteration or fill below the 100-year flood elevation
- Standard
  1. STORAGE: No filling is permitted in the floodplain without the provision of compensatory storage.
  2. ELEVATION: The lowest ground level of any structure must be 2 feet above the 100-year level of the nearby surface waters or 1 foot above emergency overflow level for stormwater improvements, whichever is greater, unless they have protection through flood proofing or by another approved construction technique.
  3. FLOODWAY: No permanent structure may be located within the floodway. (Proposed addition) **Conditional uses for storage, Fill, Dredge material or other materials may be allowed.**

STORMWATER STANDARDS (EXISTING MUNICIPAL)

Rate Control

Higher: Not found.

Mid Range: Detention basins should maintain existing flow rates for the 2,10, and 100-year 24 hour rainfalls. (Mendota Heights, Mendota, Burnsville, Savage, Chanhassen, Chaska, Carver, Jackson). Chanhassen standard allows variances if no adverse downstream effects can be shown.

Lower/Other: New Drainage systems shall accommodate discharge rates with a 10% chance of occurrence. Must evaluate capacity to attenuate flows as part of Storm Water Pollution Prevention Plan (e.g. Eden Prairie).

STORMWATER STANDARDS (EXISTING MUNICIPAL)

Volume Control

Higher:

A. Sites that create one or more acres of impervious surface shall capture and retain on site 1.0 inch of runoff from new impervious surface. (e.g. Eden Prairie, Jackson, Louisville, Bloomington)

B. 1.1 inch abstraction from all impervious surface (e.g. Eagan)

Medium: Runoff volume retention onsite shall be 0.5 inches of runoff over new impervious surfaces. (e.g. Mendota Heights, Savage, Chaska, Carver)

Lower/Other:

A. Any proposed development will not increase the runoff rate or decrease the storm water infiltration rate. (e.g. Lilydale).

B. New impervious portions of a project must retain a runoff volume of 1 inch and redevelopment impervious portions, a runoff volume of 0.5 inches (e.g. Burnsville).

C. Stormwater management plans shall be consistent with adopted watershed management plans (e.g. Shakopee).

D. No net increase in annual runoff volume (e.g. Chanhassen).

STORMWATER MANAGEMENT STANDARDS

Existing District Standard

- Trigger
  - 1.0 Ac new Impervious Surface
- Standard
  - Rate - 1 or 2, 10 and 100 year meet predevelopment conditions
  - Volume and Water Quality - NPDES General Construction Permit and SWPPP

STORMWATER MANAGEMENT STANDARDS

PROPOSED STANDARDS

General

- Trigger
  - 1.0 Ac new Impervious Surface
- Standard
  - Rate - 1 or 2, 10 and 100 year meet predevelopment conditions (Atlas 14)
  - Volume will meet NPDES Construction Stormwater abstraction requirements
  - Water Quality - No net increase in Total phosphorus (TP) and total suspended solids (TSS).

STORMWATER MANAGEMENT STANDARDS

PROPOSED STANDARDS

High Resource Value Areas

- Triggers
  - 1 - Development, redevelopment, and drainage alterations (including roads) creating new impervious areas greater than 10,000 square feet (sq. ft.).
- Standard
  - Rate - meet predevelopment conditions for the 2, 10 and 100-year 24 hour events using atlas-14
  - Volume
    - 1.1 inches of runoff retained for new and re development projects
    - transportation projects shall capture and retain the larger of the following: 0.55 inches from new or reconstructed surface or 1.1 inches of runoff from the net increase in impervious area
  - Water Quality
    - New Development shall have 60% annual removal of TP and 80% removal for TSS.
    - Redevelopment shall achieve a net decrease (on an average annual basis) of TP and TSS.

NEXT STEPS

- Technical Advisory Commission (TAC) and Stakeholders
  - February 22nd
  - March 8th
- Expect materials one week before each meeting
- Finalize draft Plan Amendment