Barton & Loguidice | The Experience to Listen. The Power to Solve.

Stormwater Management

David Hanny
Barton & Loguidice

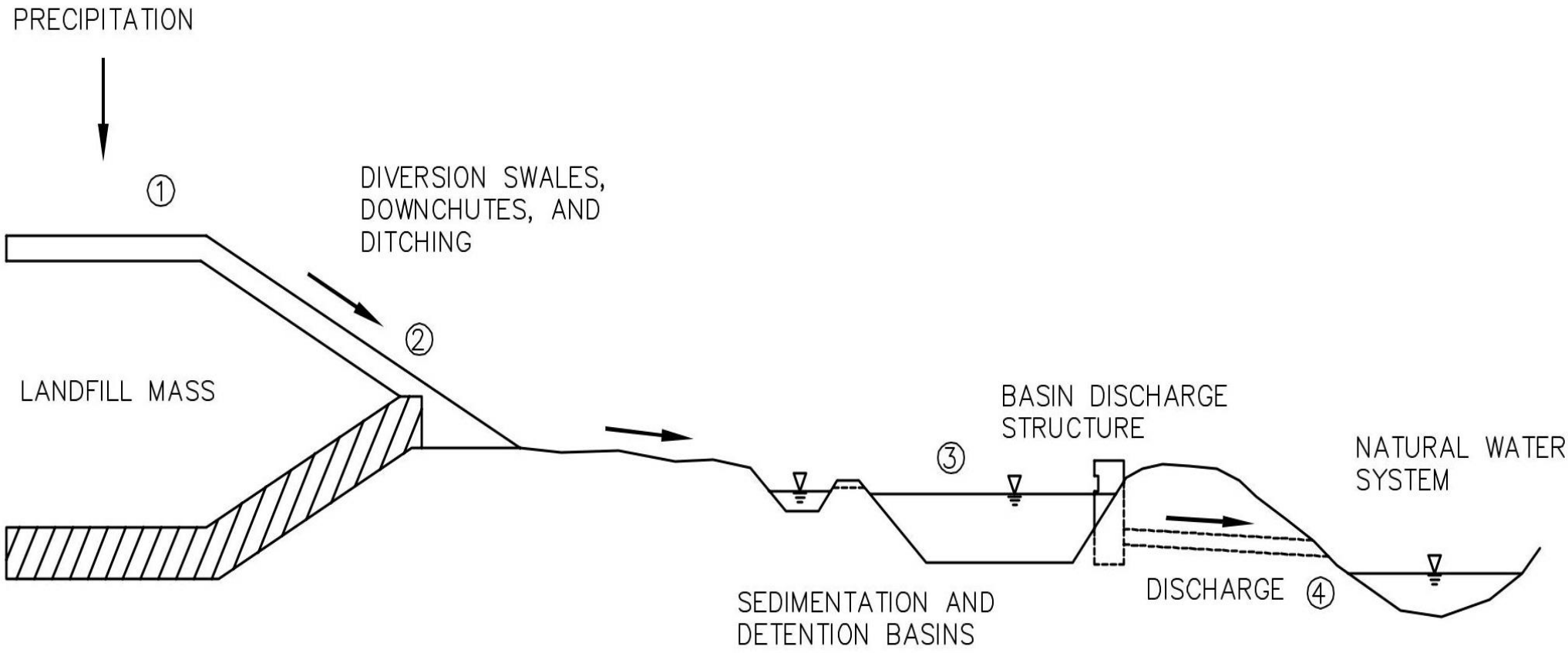
New York State Association for Solid Waste Management

Why Manage Stormwater?

- Regulatory Requirement
  - Multi-Sector General Permit
    - MSGP 0-23-001 (Effective March 8th 2023)
- Reduce Pollutants Entering Surface Waters
  - 50% of waterways are impacted by stormwater runoff
  - Sediment from construction
  - Chemical transport
    - oils/grease
    - herbicides, pesticides, nutrients

Presentation Outline

- Stormwater Best Management Practices
  - Erosion and Sediment Control
  - Site Planning
- Industrial Stormwater Regulations
  - MSGP 0-23-001 Requirements
  - Steps for Compliance
    - Inspections and Monitoring
- Updated Draft Stormwater Management Design Manual



① LIMIT THE PRECIPITATION–BARE SOIL CONTACT AREAS

② LIMIT THE VELOCITY OF THE RUNOFF

③ PROVIDE AREAS OF SLOW MOVING, NON–TURBULENT WATER TO ALLOW SOIL SEDIMENT

④ CONTROL DISCHARGES TO NATURAL WATER COURSES IN ORDER TO LIMIT DOWNSTREAM EROSION

Compliance Standards

- No “substantial visible contrast” in turbidity.
- No increase in solids that will impair waters for their best usages.
- No residue from oil and floating substances.

Erosion and Sediment Control Practices

Traditional E&SC Practices:

- Straw Bales
- Silt Fence
- Check Dams

Additional practices need to be incorporated to prevent erosion.

Slope Stabilization

Most Important ESC Practice

- ☐ Can Eliminate >90% of Sediment Loss
- ☐ Stop the Problem Before it Starts!!

Achieved by:

- ☐ Seeding (Permanent & Temporary)
- ☐ Mulch Application
- ☐ Jute Mesh
- ☐ Rolled Erosion Control Products (Steep Slopes)

Photo by Doug Lowry (from IECA)

Tracking

BMP Considerations

- Stabilize Drainage Swales:
  - Vegetation/Erosion Control Fabric/Turf Reinforcement Mat
  - Check Dams
  - Rock Outlet Protection
- Limit Disturbed Areas
  - Seed and Mulch
  - Project Phasing
  - Preserve Vegetation

Runoff Control

Erosion can be limited by reducing or limiting the velocity of runoff

Runoff Control

Diversion Berm

Downchute

(Source: USDA - Natural Resources Conservation Service)

Photo by Carolyn Roan (from IECA)

Perimeter Controls

E&SC Planning Process

- Install & Maintain Erosion and Sediment Controls
- Control Runoff
  - Easier to manage runoff and prevent erosion than to control sediment
  - Divert clean runoff away from disturbed areas
- Minimize Disturbed Areas
  - Construction Phasing
  - Define Clearing and Grading Limits
- Maintain natural drainage areas and flow paths
- Temporary and Permanent Stabilization

NYSDEC "Blue Book"

- Available at:
- http://www.dec.ny.gov/chemical/29066.html

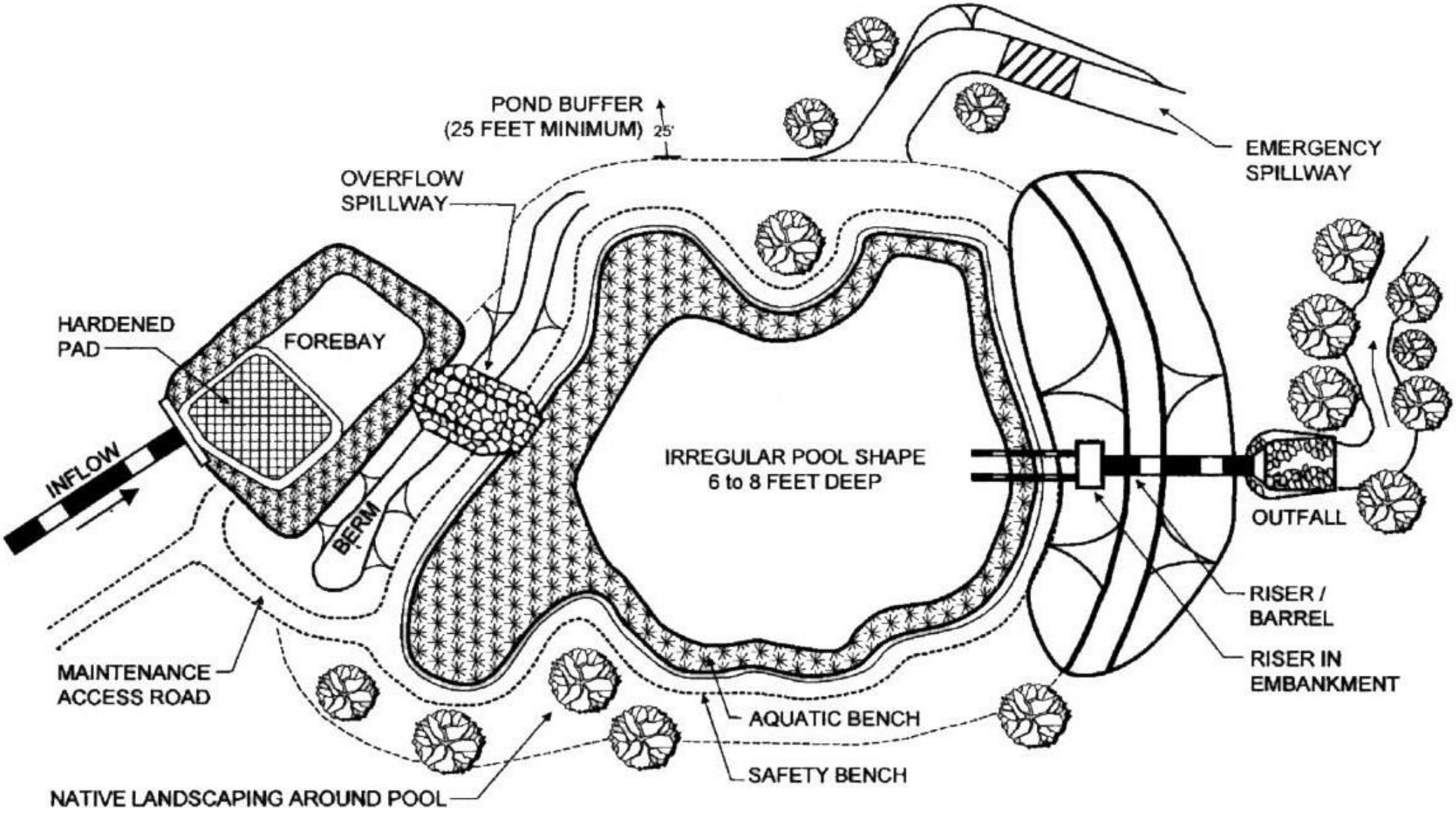
FINAL

New York State
Standards and Specifications
for Erosion and Sediment Control

November 2016

Stormwater Ponds

- Provide Quantity and Quality Control
- Design Requirements
  - Forebay
  - Benches
    - Aquatic and Safety
  - Outlet Control Structure
  - Spillway



Plan View of Wet Pond

Source: NYS Stormwater Management Design Manual – Chapter 6

Presentation Outline

- Stormwater Best Management Practices
  - Erosion and Sediment Control
  - Site Planning
- Industrial Stormwater Regulations
  - New Permit Requirements
    - GP-0-23-004
  - Steps for Compliance
    - Inspections and Monitoring

Background

- Permits are required for stormwater discharges from industrial activities to surface waters of the State
- Permitting Options
  - General Permit
    - MSGP-0-23-004
      - Landfills
      - Transfer Stations
      - Recycling Facilities
      - Vehicle Maintenance
      - Others
  - No Exposure Waiver
  - No Discharge (100-yr, 24-hr storm event)
  - Individual Permit

MSGP (GP-0-23-004) Requirements

- Benchmark Sampling
  - Period 1: January 1 – June 30
  - Period 2: July 1 – December 31
- Quarterly monitoring required for discharges to impaired waters
- DMRs due within 28 days of last monitoring period
- Annual Certification Report due by January 28 the following Year
- All Reports submitted electronically

Steps for Compliance

- Monitoring
  - Quarterly Visual at each Outfall
    - Within 30 minutes of rainfall >0.1-inch
    - Color, Odor, Suspended solids, Sheen
  - Annual Dry Weather Flow
    - After at least 3 dry days
    - NYSDEC must be notified within 14 days for non-authorized discharges

Refer to Sections 7 and 8 of the Operator's Training Manual

Steps for Compliance

- Routine Inspections
  - Frequency is Sector Specific
  - Weekly for Landfills
- Annual Comprehensive Site Compliance Evaluation
  - Modifications to the SWPPP Based on Results
    - SWPPP modifications required 14 days from inspection
    - BMP modifications within 12 weeks

Steps for Compliance

- Landfill Erosion and Sediment Control Inspections
  - Disturbed areas must be inspected once every 7 days
    - Qualified Personnel (DEC training)
  - >5-acres of Disturbance
    - Requires written approval from NYSDEC
    - Inspections twice every 7 days
  - Winter Shutdown
    - Temporary stabilization
    - Inspections once every 30 days

Steps for Compliance

- Landfill Erosion and Sediment Control Inspections
  - Inspection Reports
    - Digital Photos with Date Stamp
  - Corrective Actions
    - Notification to owner/operator within 1 business day
    - Corrective actions within 7 calendar days

Steps for Compliance

- Training
  - Facility Staff
    - Elements of the SWPPP
    - Spill Prevention and Cleanup
    - Identification of unaccepted materials
  - Incoming Drivers
    - Identification of unaccepted materials
    - Vehicle Leaks
    - Prohibit non-stormwater discharges

Compliance Forms

- http://www.dec.ny.gov/chemical/9009.html
- Corrective Action/Non Compliance Event Form
- Storm Event Data Form
- Representative Outfall Waiver Form
- Annual Certification Report
- Quarterly Visual Monitoring Form
- No Exposure Certification
- eReporting Guidance

MSGP 0-23-004

- MSGP 0-23-004 Changes
  - Compliance with the Climate Leadership and Community Protection Act (CLCPA);
    - Implement enhanced stormwater control measures for facilities that have the potential to be impacted by future climate risks.
    - Requirements based on site location related to flood risk.
  - Electronic Reporting Requirements;
  - Changes to monitoring and discharge reporting requirements;
  - Updated pollutants of concern and impaired waterbody monitoring requirements.

Draft Stormwater Mgmt. Design Manual

NEW YORK STATE OF OPPORTUNITY. | Department of Environmental Conservation

STORMWATER MANAGEMENT DESIGN MANUAL

DRAFT – May 2022

Barton&Loguidice

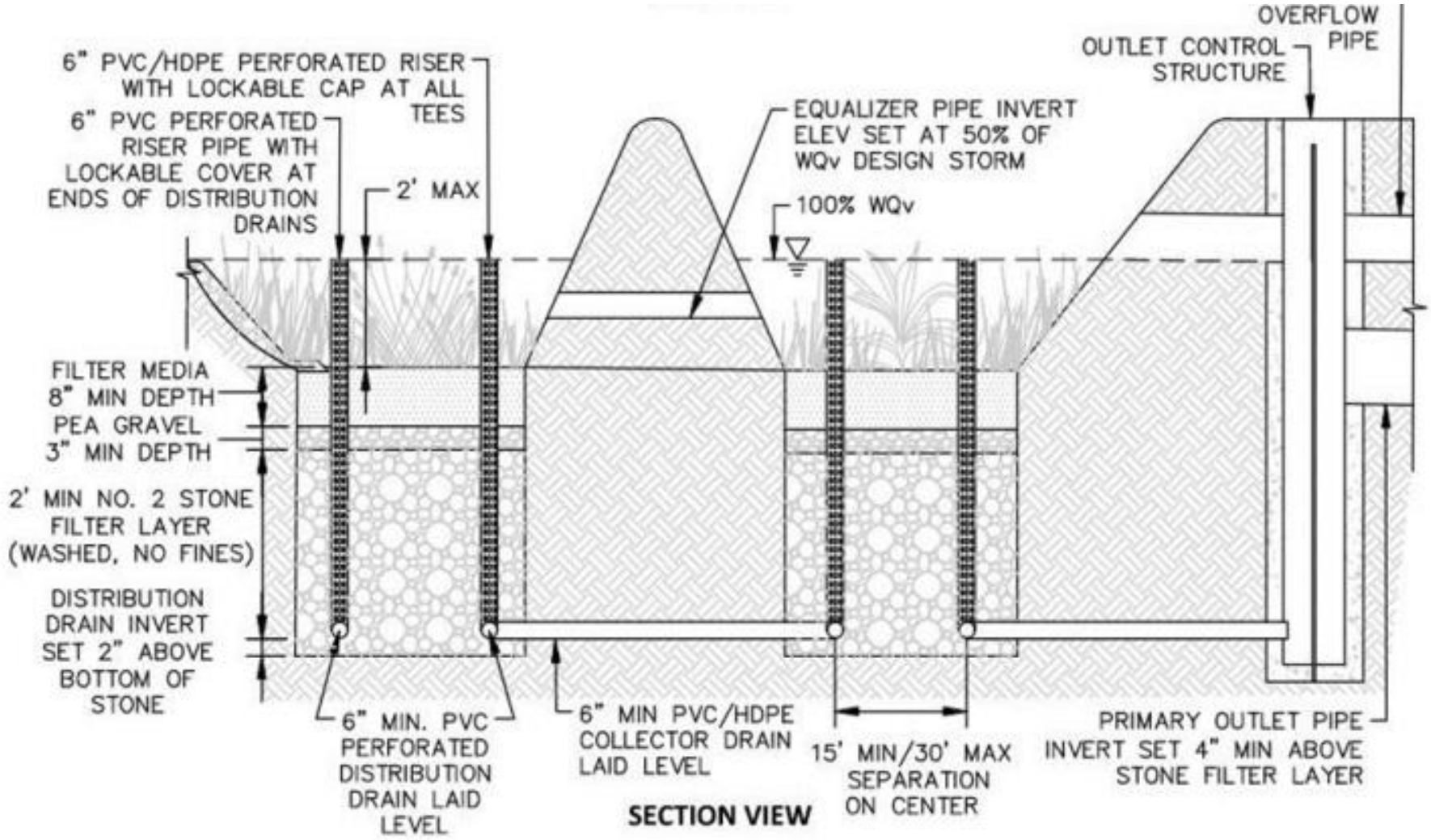
Draft Stormwater Mgmt. Design Manual

- Climate Change
- Site Limitations
- Infiltration Testing
- Infiltration Practices
- Bioretention
- New Practices
  - Gravel Wetland
  - Bioslope
- Channel Protection Volume
- Rainfall Data
- Flow Through Practice Calculations
- Redevelopment WQv Calculations
- Stormwater Hotspots
- Stormwater Design Examples
- SMPs in Urban Areas
- Pollutants of Concern
- Landscaping and Planting
- SMP Maintenance
- CAD Details
- Removed Pocket Pond and Organic Filter SMPs
- Relocated Appendix C Information

NEW YORK STATE | Department of Environmental Conservation

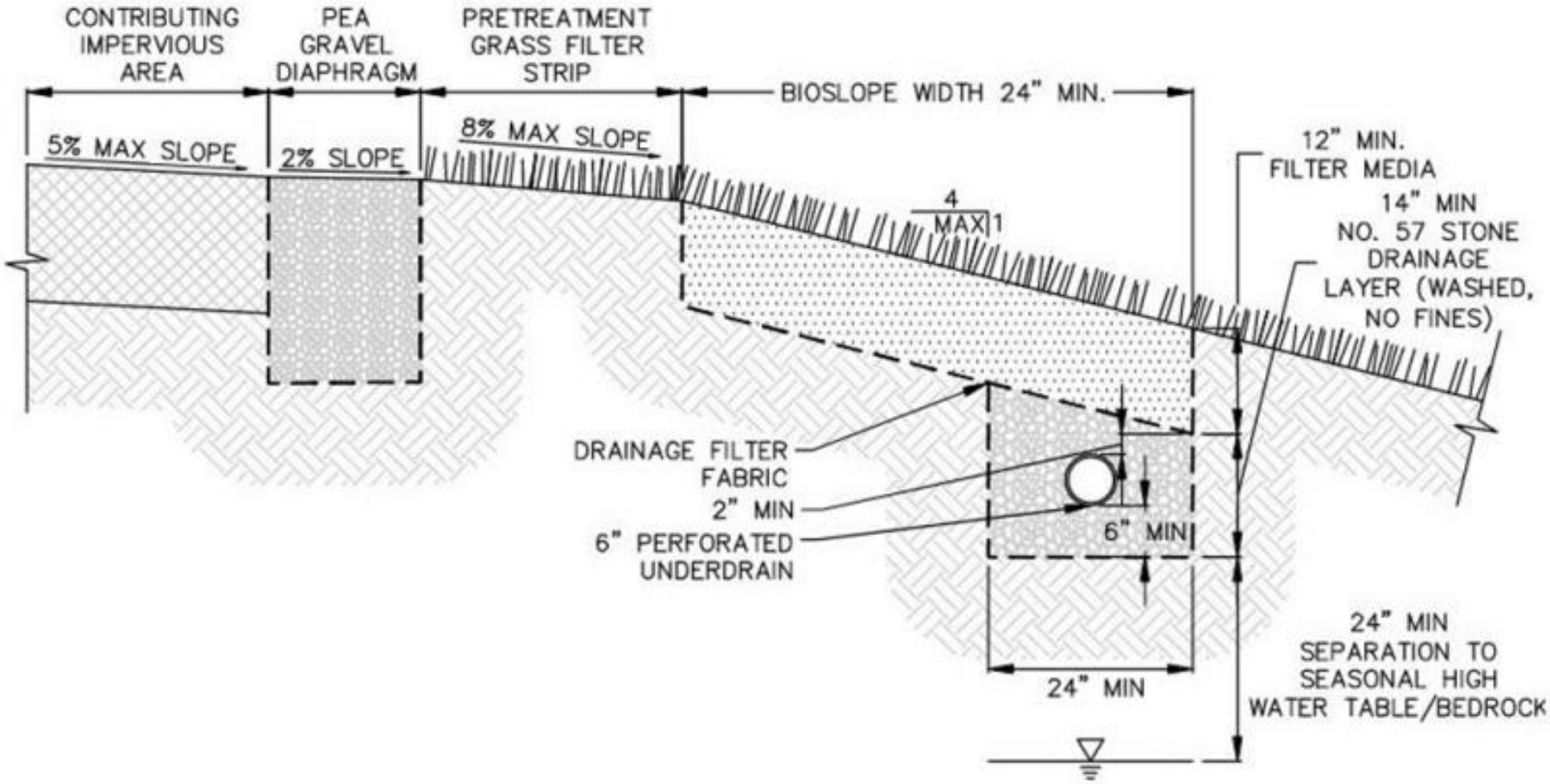
Draft Stormwater Mgmt. Design Manual

- New Stormwater Treatment Practices: Gravel Wetland



Draft Stormwater Mgmt. Design Manual

- New Stormwater Treatment Practices: Bioslope




26 3:16PM

Barton&Loguidice

Barton&Loguidice

Barton&Loguidice

Barton&Loguidice

Thank you!

For more information please contact:

David Hanny, CPESC, CPSWQ, LEED AP
Barton & Loguidice

Office: (585) 325-7190
Cell: (585) 953-6670
dhanny@bartonandloguidice.com