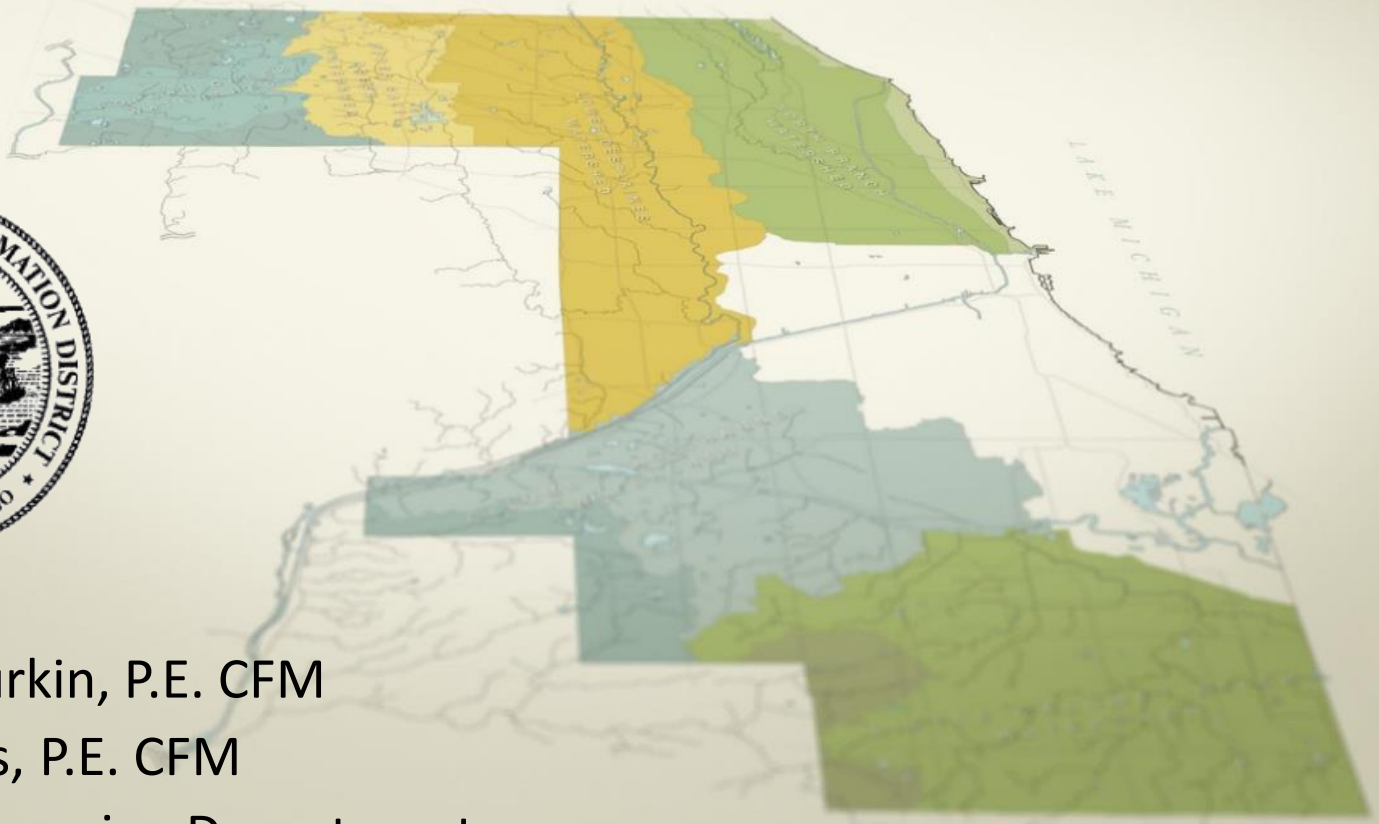
Get Your Permit Faster!

Avoiding Common Errors
During Watershed Management Ordinance Permit Review



IAFSM

Maureen Durkin, P.E. CFM

Daniel Feltes, P.E. CFM

MWRD Engineering Department

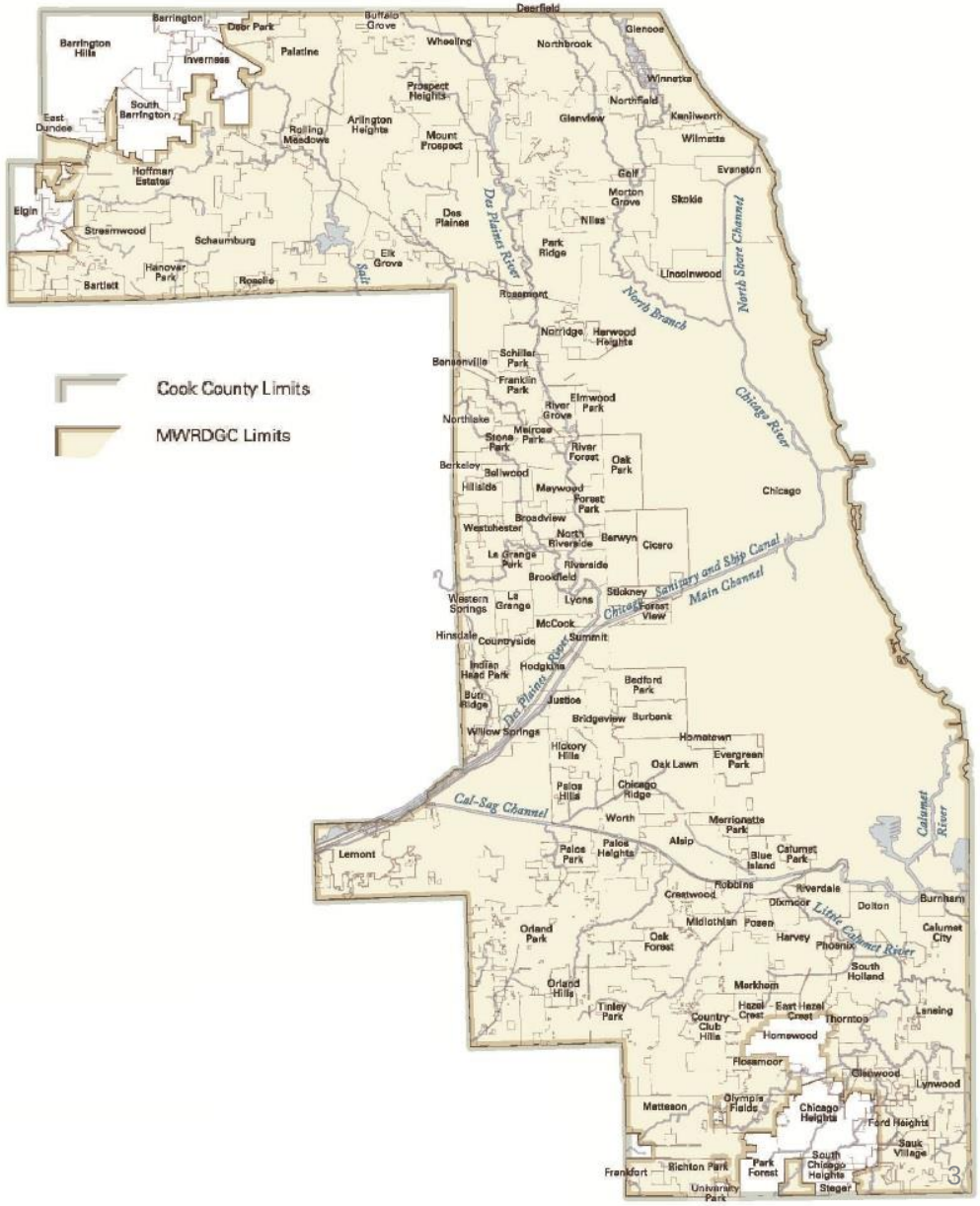
March 8, 2022

Agenda

- Brief MWRD/WMO Background
- WMO Objective
- *Top Ten Secrets to a Fast Permit*
- Permit Application Resources
- Sneak Peak of E-Permit Web Database
- WMO : Next Steps
- Questions

MWRD / WMO Background

- Independent Unit of Gov.
  - Established in 1889
  - Special-purpose district
  - Taxing body
  - Not part of City of Chicago
- Statutory Responsibilities
  - Wastewater Reclamation
  - Stormwater Management
- Demographics
  - 91% of Cook County
  - 883 square miles
  - 129 municipalities
  - 5.25 million people



WMO Objective

The primary goal of the Watershed Management Ordinance is to establish uniform, minimum, and comprehensive countywide stormwater management regulations for development.

Enabling Legislation for the Watershed Management Ordinance

"Stormwater management in Cook County shall be under the general supervision of the Metropolitan Water Reclamation District of Greater Chicago."

"The District may prescribe by ordinance reasonable rules and regulations for floodplain and stormwater management . . . in Cook County."

Public Act 093-1049

The Secret to Permit Success

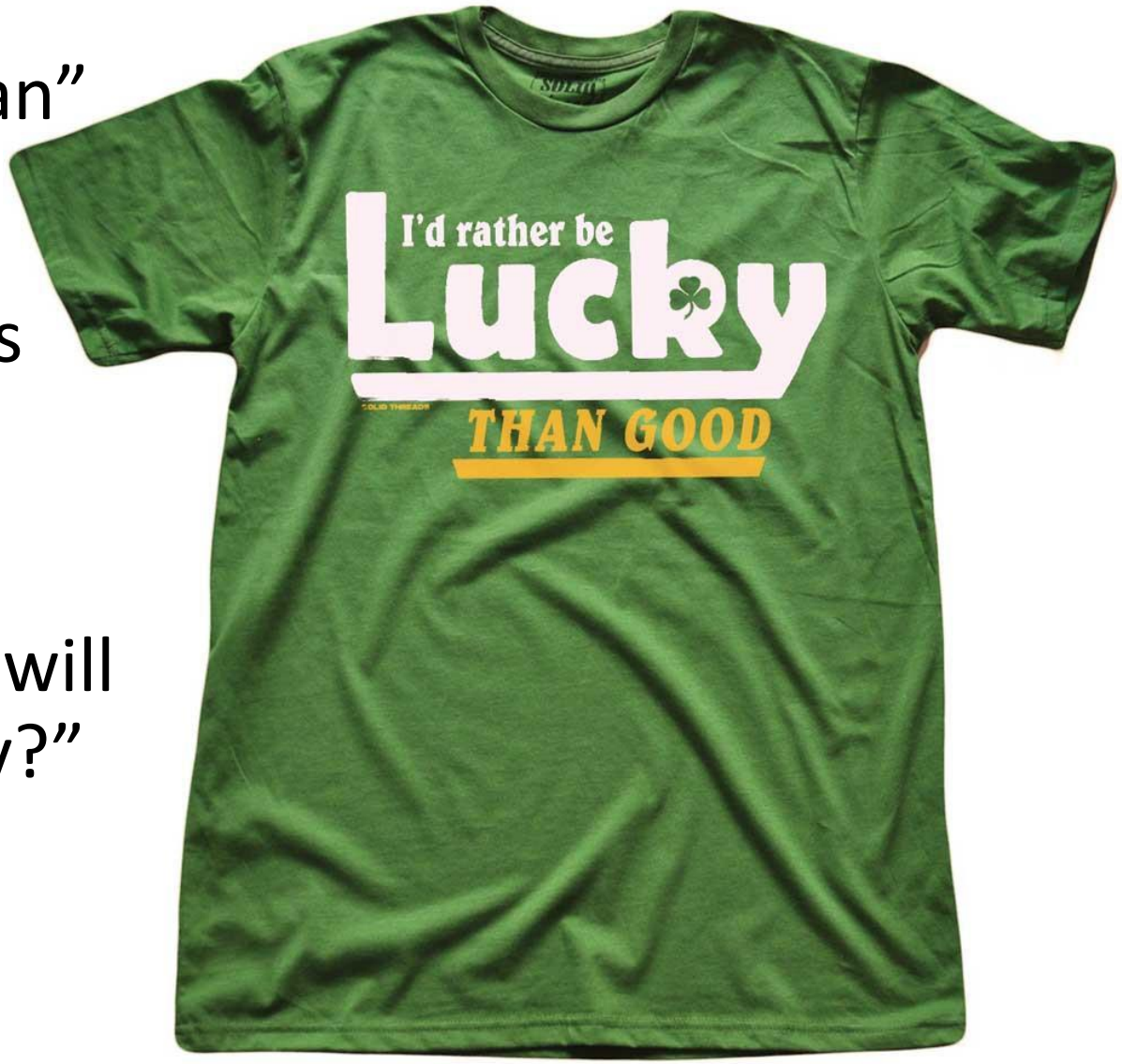
"Hope is not a plan"

However,…

a little luck always helps!

Please don't:

"Send it in! & we will see what they say?"



Lefty Gomez, NY Yankees 1930-'43

#1 Check MWRD Website Follow Instructions to Submit

1. Electronically Submit (follow the dotted line!)
   - Generally, 3 or 4 separate PDF Files
   - Plans (unique pdf)
   - Application
   - Narrative and supporting calculations
   - Fee Payment Voucher (when applicable)
2. Provide clear contact or read-me file in case of issues.
3. Use a PDF format, rather than an unusual file type.
4. Be concise - no hardcopy mail in, binders or massive files please.
5. Check website for recent updates (forms change).
6. Use MWRD details or follow them as applicable.
7. Follow up if no response. Reach out after three working days.

#2 Permit Triggers vs Detention Thresholds

First- Permit Trigger

1. Qualified sewer
   (Sanitary, Combined or Storm in CSA)
2. Development > 0.5 acre
3. Development within Floodplain or Wetland
4. Modifications to MWRD required det. basin
5. Direct connections to District facilities
6. Outfalls
   (New or reconstructed outfalls)

Next Consider Detention Thresholds

Development Type (See Appendix A for definitions)	**§502** **Runoff Requirements**[1,2]	**§503** **Volume Control Requirements**[1,2]	**§504** **Detention Requirements**[1,2]
Single-Family Home	Exempt	Exempt	Exempt
Residential Subdivision on **property holdings**	≥ 1 acre	≥ 1 acre	≥ 5 acres
Multi-Family Residential on **property holdings**	≥ 0.5 acre	≥ 0.5 acre	≥ 3 acres‡
Non-Residential on **property holdings**	≥ 0.5 acre	≥ 0.5 acre	≥ 3 acres‡
Open Space on **property holdings**	≥ 0.5 acre	Not Applicable	Not Applicable
Right-of-Way when new **impervious area**	≥ 1 acre	≥ 1 acre†	≥ 1 acre†

[1] **Stormwater** management requirements do not apply to **demolition** or **maintenance activities**.

[2] Requirements are applicable when a **Watershed Management Permit** is required under §201 of the **WMO**.

† Where practicable.

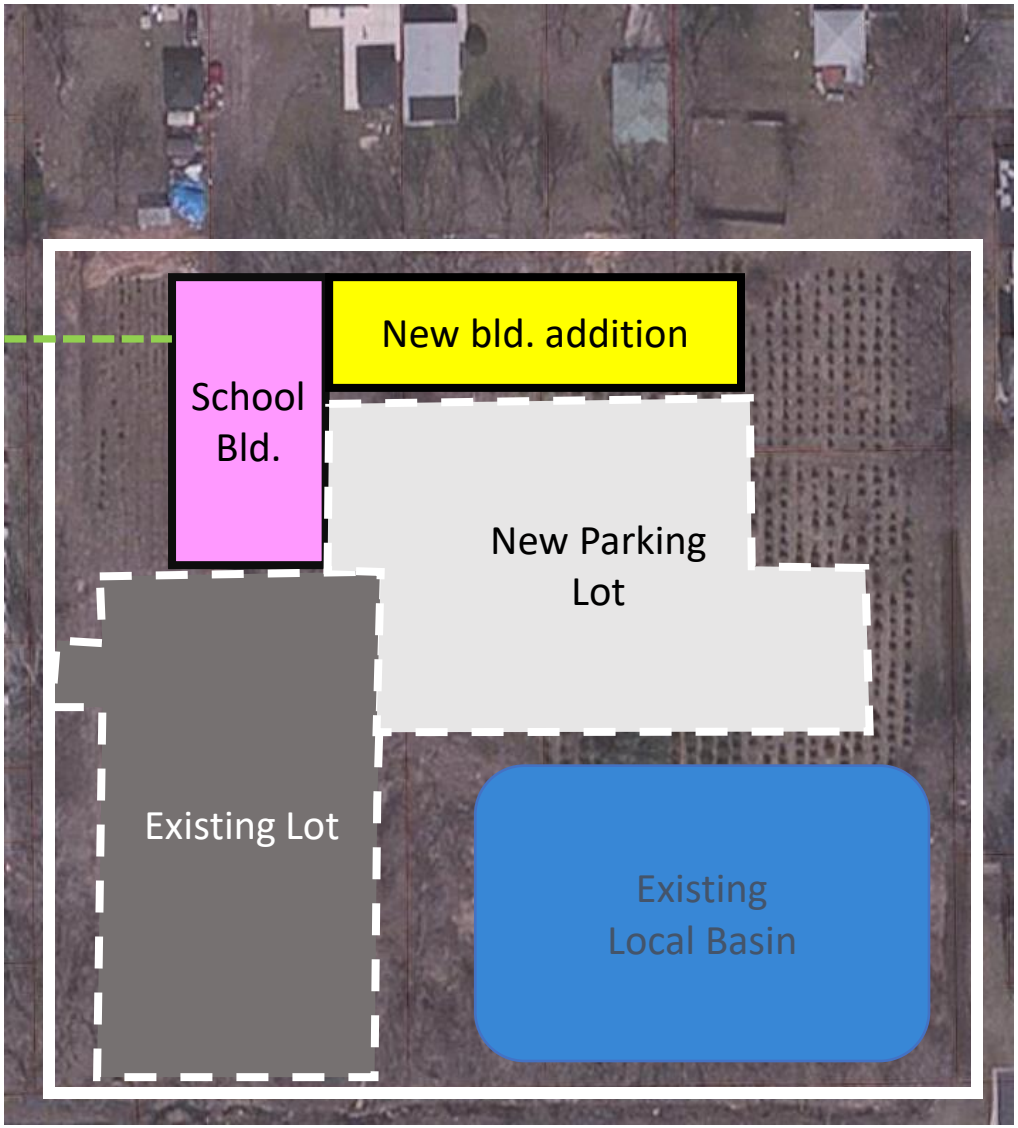
‡ Starting the effective date of the **WMO**, any new **development** within the **property holdings** that totals either individually or in the aggregate to greater than or equal to one-half (0.5) of an acre.

#2 Permit Triggers vs Detention Thresholds

Example

- Total Site: 3.5 acres
- 0.45 acre of development disturbance
- Planning a building addition and parking lot improvements
- Existing Local Basin
- No new sanitary sewer
- No wetlands or floodplain
- *No permit needed*

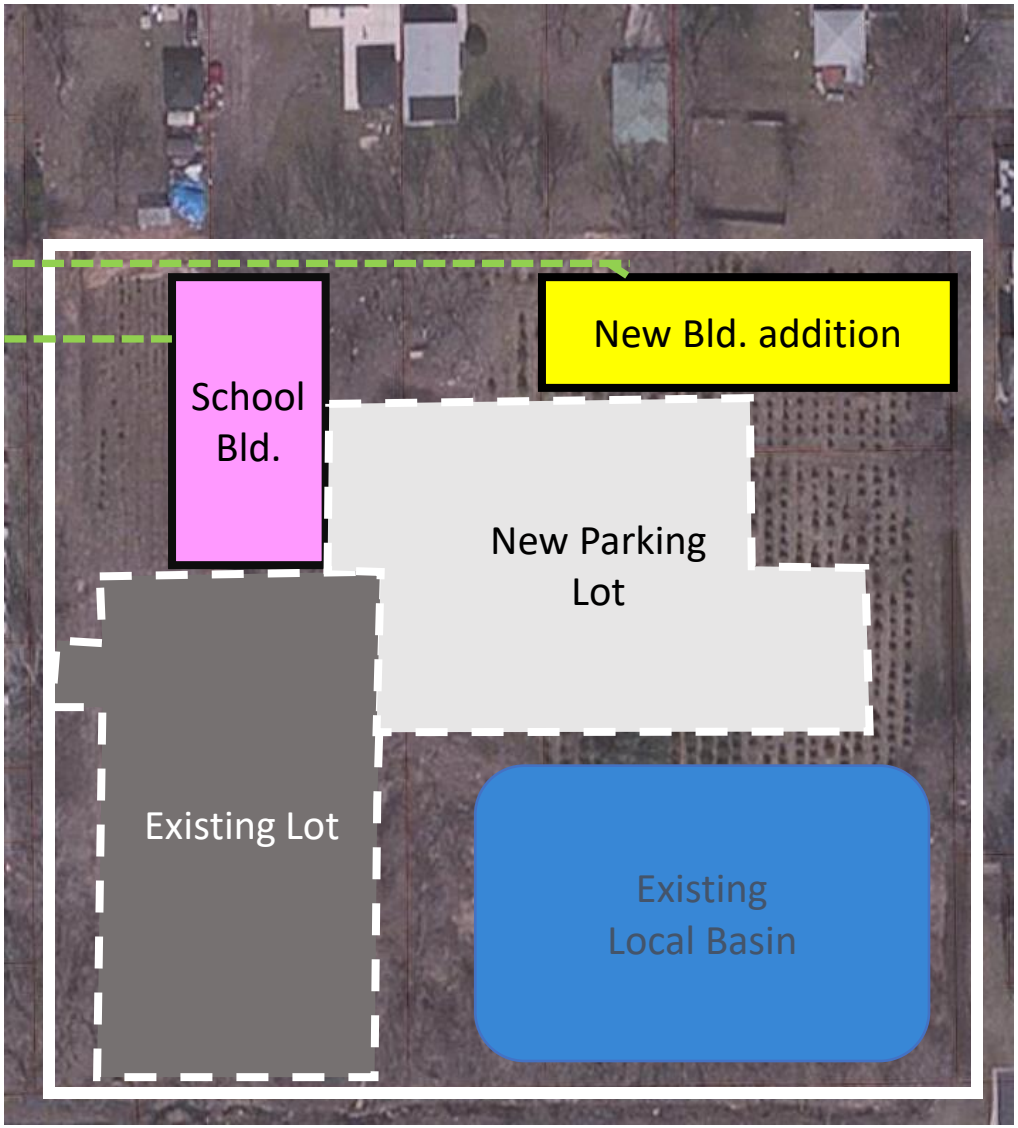
  Could request a Permit Determination Letter instead



#2 Permit Triggers vs Detention Thresholds

Example

- Total Site: 2.0 acre
- 0.45 acre of development disturbance
- Planning a building addition and parking lot improvements
- Existing Local Basin
- New sanitary sewer
- No wetlands or floodplain
- *WMO Permit Required & volume control applies*



#3 Narrative

- Overview of noteworthy permit information.
- Describe WMO applicability & WMO stormwater management requirements. Cite ordinance as needed.
- Just 2-3 paragraphs alone will save everyone review time.
- Describe local requirements if applicable / more stringent.
- Detail unusual site conditions.
- Floodplain and wetlands? Provide background data/references.
- Include prior MWRD consultations please:

    Pre-app meeting minutes

    Permit Determination

    Guidance from Village

    Violation reconciliation

#3 Narrative

Project Narrative 1

This report summarizes the stormwater management plan for the development of a building, sanitary sewer, and permeable paver parking lot on a property that has never been developed located at 123rd Ave, Springfield Creek, Illinois. The current property owner is Bill Murray LLC. The total parcel area is 5.0 acres, and the development area is 3.1 acres of which 2.2 acres is proposed impervious area, there are no site constraints, no floodplain, no depressional storage, nor site limitations.

The SWM practices provided are comprised of storm sewers and structures (inlets, catch basins, manholes, curb and gutter), permeable pavers (pretreatment of the volume control storage will be provided by a sump and hood upstream), and a wet-bottom detention basin with a control structure (orifice plate).

The stormwater analysis was performed based on the topographic survey and site engineering prepared in accordance with the local requirements and the Watershed Management Ordinance (WMO). See attached supporting calculations, maps and exhibits.

Applicability: Non-Residential development on property holdings greater than 3.0 acres. Runoff, Volume Control, and Detention requirements will apply. Also, the permeable paver system is not considered non-qualified development since it is a new parking lot and not in-kind replacement.

#4 Geotech Report

Applicant engineer must provide an Estimated Season High Ground Water Table Elevation (ESHGWT) whenever a retention-based volume control practice is planned.

The ESHGWT is often based on a geotech report prepared by a qualified expert from field conditions and often includes boring log and boring exhibit.

The ESHGWT is not the groundwater elevation encountered during drilling operations.

When the minimum distance cannot be maintained, the practice must be relocated, redesigned or development may qualify for a site constraint (e.g.: soil contamination).

Soil borings must extend seven (7) feet below grade and must extend a minimum of five (5) feet below the bottom elevation at the retention location.

A recommended min. of 2 borings for a site, and min. 1 boring/facility. For large facilities, 1 boring/acre of retention field space.

Boring site(s) should be at the planned retention-based practice(s).

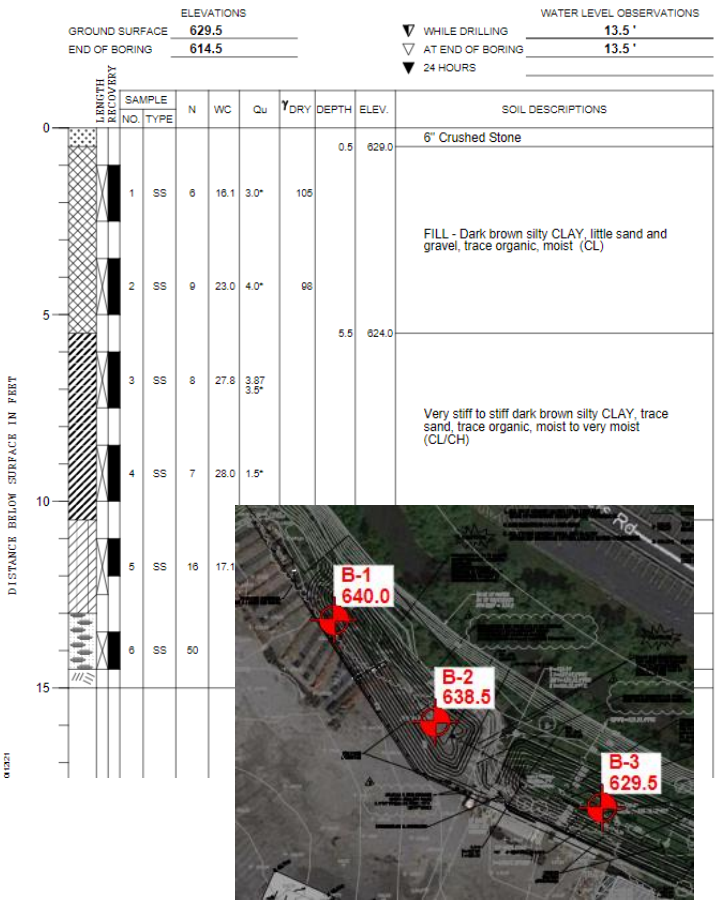


TABLE 5.2 SEPARATION DISTANCE FOR VOLUME CONTROL PRACTICE AND ESTIMATED SEASONAL HIGH GROUNDWATER TABLE

Stormwater Tributary to	Minimum Separation Distance
Waterway	2.0-feet
MWRD Facilities	3.5-feet

#5 Consistency

- Permit Application
- Various Schedules
- Exhibits
- Sewer Length
- Plan Set
- Stormwater Management Report
- Geotechnical Report
- Fee Payment Voucher

Schedule A:

Impervious area within project

C. Before development 1.71 acres

D. After development 1.6 acres

Schedule D:

C. Proposed impervious area of development ..... 1.54 acres

D. Gross volume control storage *(2.C / 12)* ..... 0.128 ac-ft

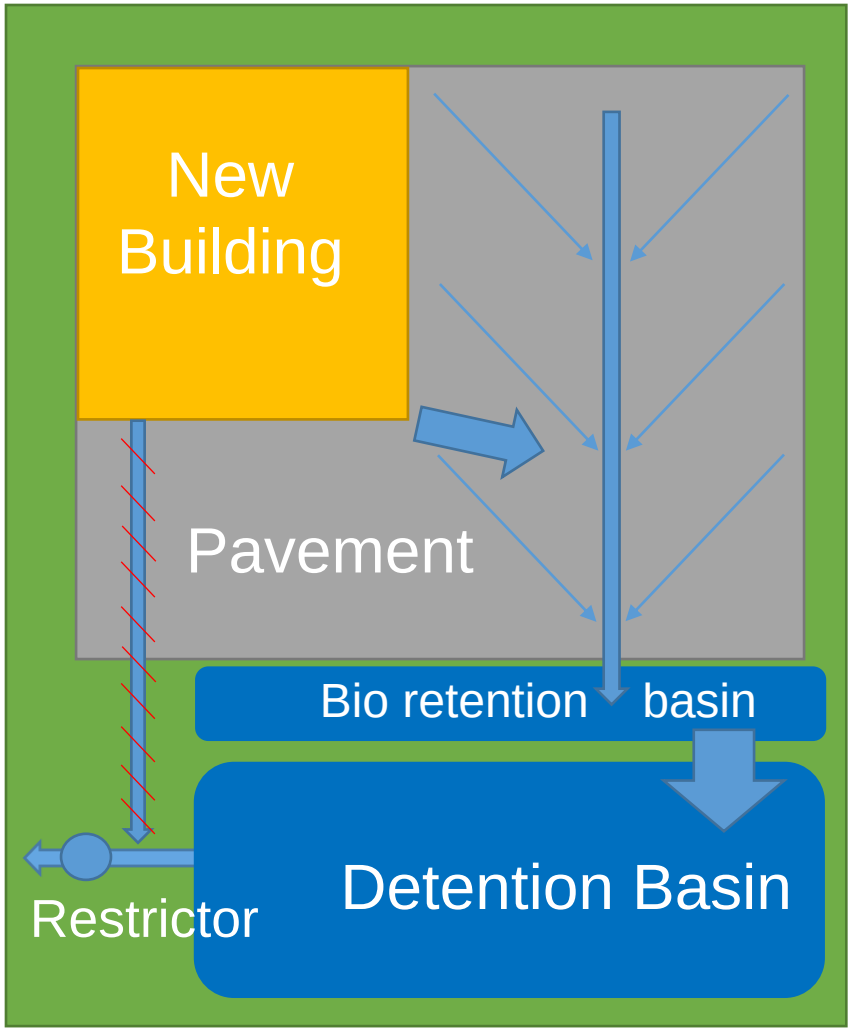
E. The onsite gross volume control storage may be reduced when a site constraint is present:

1. Existing impervious area within development ..... 1.71 acres

2. VC storage reduction *(5)(2.D)[1 – (2.C / 2.E.1)]* ..... 0.064 ac-ft

#6 Impervious Area Capture for Retention

- 1st inch of New Impervious Development Area Runoff
  - Treatment train Tributary to the Volume Control Facility
  - Pavement
  - Buildings (excluding green roof areas)
- Avoid surcharge systems
- Capture of pervious areas does not replace capture of impervious
  - Non-Compacted Gravel
  - Railroad Ballast
  - Synthetic Turf Fields
  - Green Roof



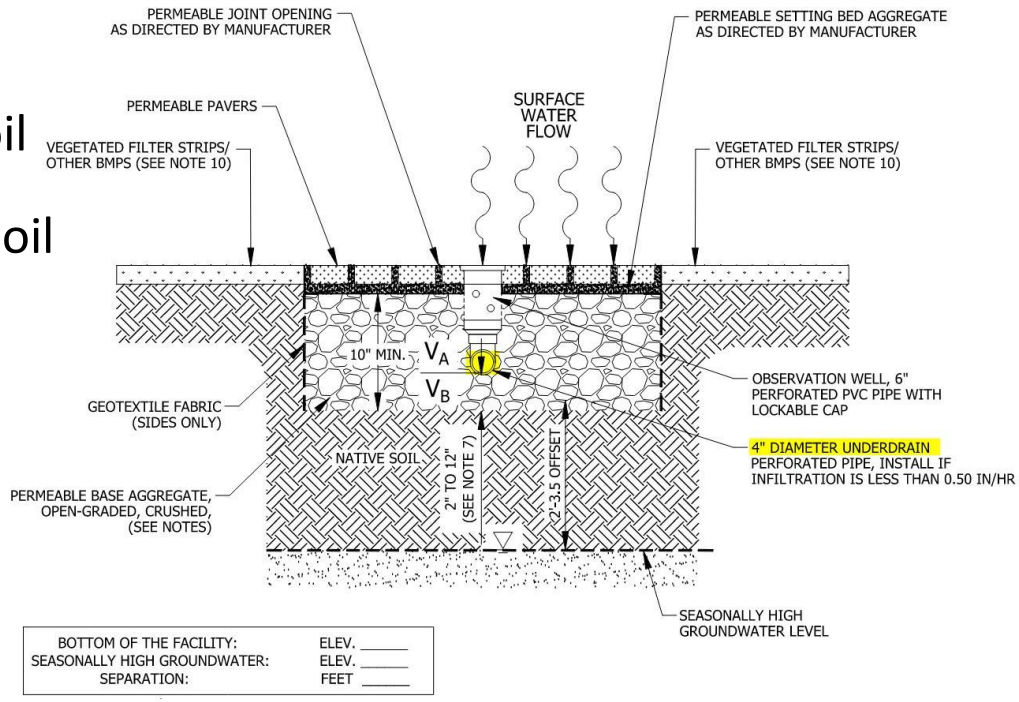
#7 Underdrain Required Retention Practice

Infiltration Rate

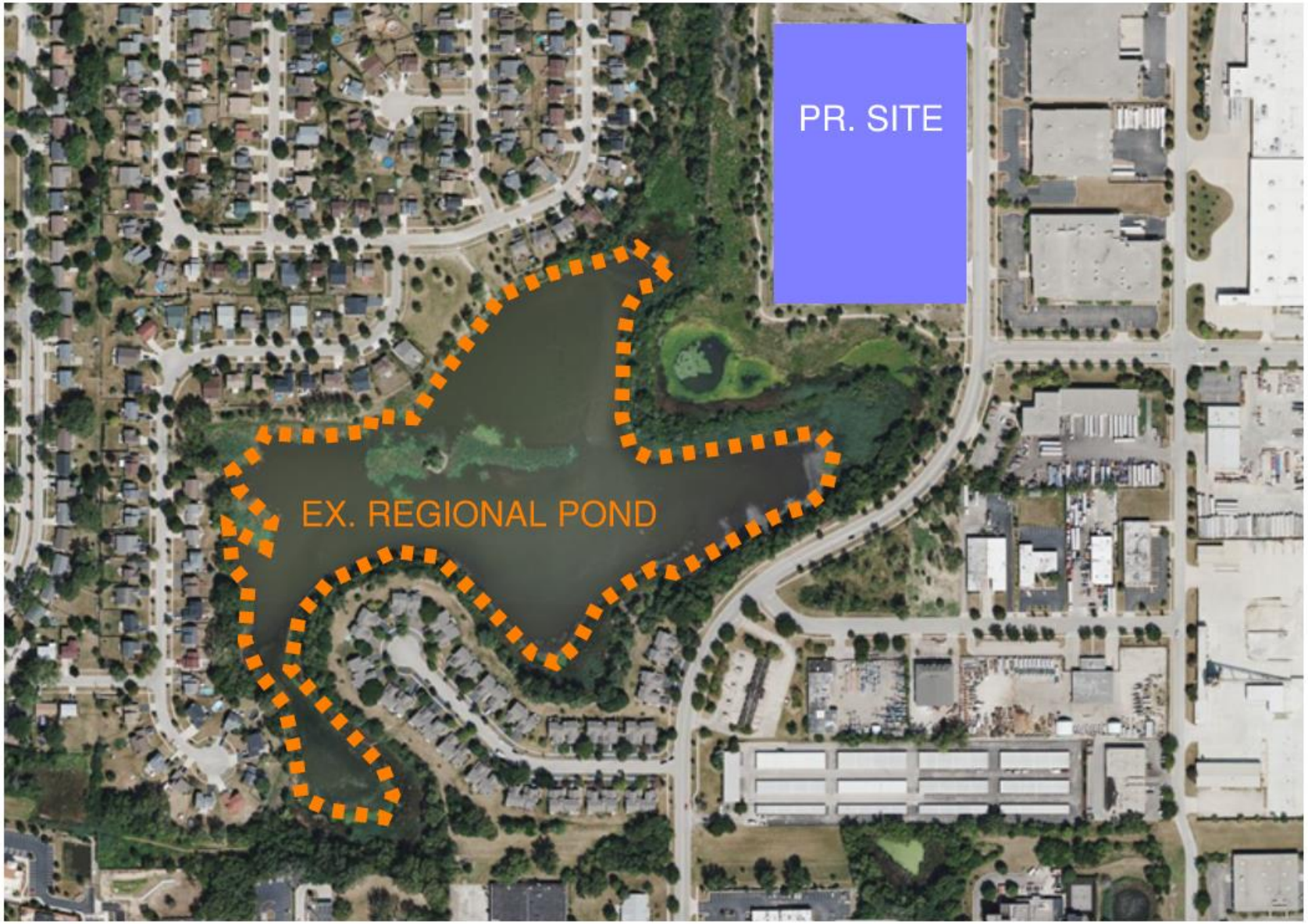
- Underdrain is required assuming < 0.5 inch/hour native soil
- Soils with poor infiltration rates are assumed in Cook County
- If high-rate soils exist, perform double-ring infiltrometer test (ASTM D3385)

Underdrain

- Invert >2 inches above native soil
- Invert ≤12 inches above native soil
- Size ≤ 4 inches
- Zero slope
- Spacing ≤ 30 feet on center



#8 Verify Existing Volume



#8 Verify Existing Volume

Detention is required now and “may” be existing… or not

- Permit design plan from 1982 is not sufficient
- Verify within 5 years of a new application
- Full basin survey is useful (but not always necessary)
- Alternative volume verification methods:
  - Cook County topography, LiDAR, spot grades, recent record drawings

Verify Control Structure

- Invert elevation and diameter
- Field Inspection or site photos

Signed and Sealed

- Professional Engineer or Professional Land Surveyor
- Provide statement and assert how it was verified

#9 Maintenance vs Redevelopment

Maintenance Activity

In-kind replacement, restoration, or repair of existing infrastructure, pavement, or facilities including, but not limited to, roadways and parking lots, provided they will perform the same function for which they were originally designed and constructed. [Compare maintenance activity with maintenance, development, and demolition.]

Redevelopment

Any human-induced activity or change to an existing developed property (including but not limited to, grading, paving, excavation, dredging, fill, or mining; alteration, subdivision, change in land use or practice; building; or storage of equipment or materials) undertaken by private or public entities that affects the volume, flow rate, drainage pattern, or composition of stormwater runoff on the previously developed land. The term shall not be understood to include maintenance.

#9 Maintenance vs Redevelopment

Maintenance

- In-kind remove and replace (often utility or pavement)
- No drainage improvement (no new CBs/Inlets/sewer)
- No change in use

Examples:

- Sealcoat and re-stripe
- Parking lot mill and overlay
- Internal building remodel
- Minor grading (<6 inches)

Redevelopment

- Replace a building (same footprint)
- Repave & new curb and sewer
- Net reduction of impervious area is still redevelopment.

Examples:

- Gravel lot to paved lot
- Synthetic turf or playground field
- Adding landscape islands, curb and gutter and sewers to an existing sheet flow parking lot

#10 Practice the 3 Ps

Patience

- Typical permit times are 12-15 working days, 10 working days for resubmittal
- Do not expect an issued permit in 3 days from initial submittal
- Prior project delays do not necessitate urgency

Polite

- Permit reviewers are people too
- Frustration and anger serve no benefit
- MWRD has a vested interested in fast compliance

Professional

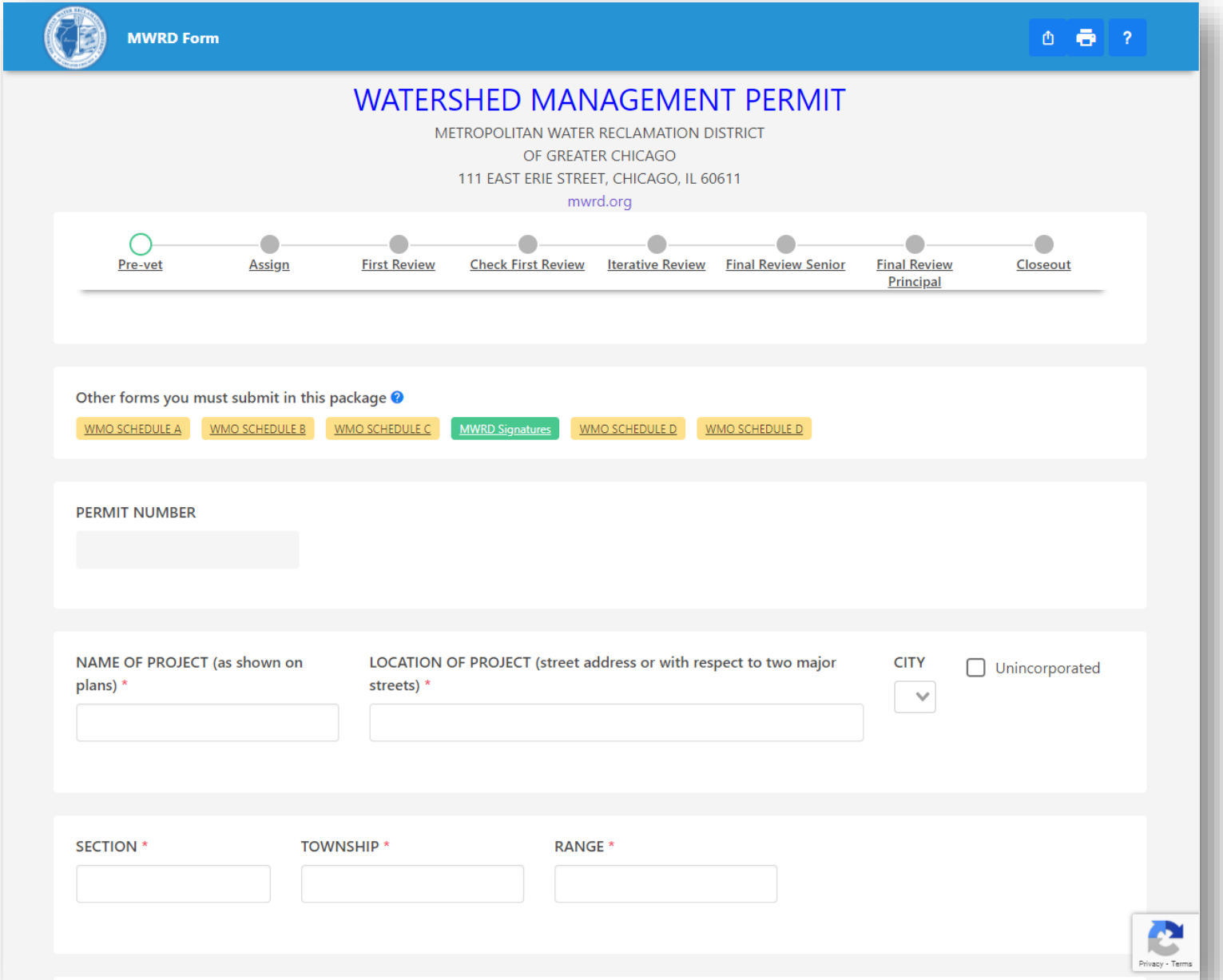
- Manage your client's expectations
- Requesting frequent status updates slows down the review process for all
- We cannot issue a permit that doesn't comply with the WMO

New E-Permit Web Application

Software based permit solution

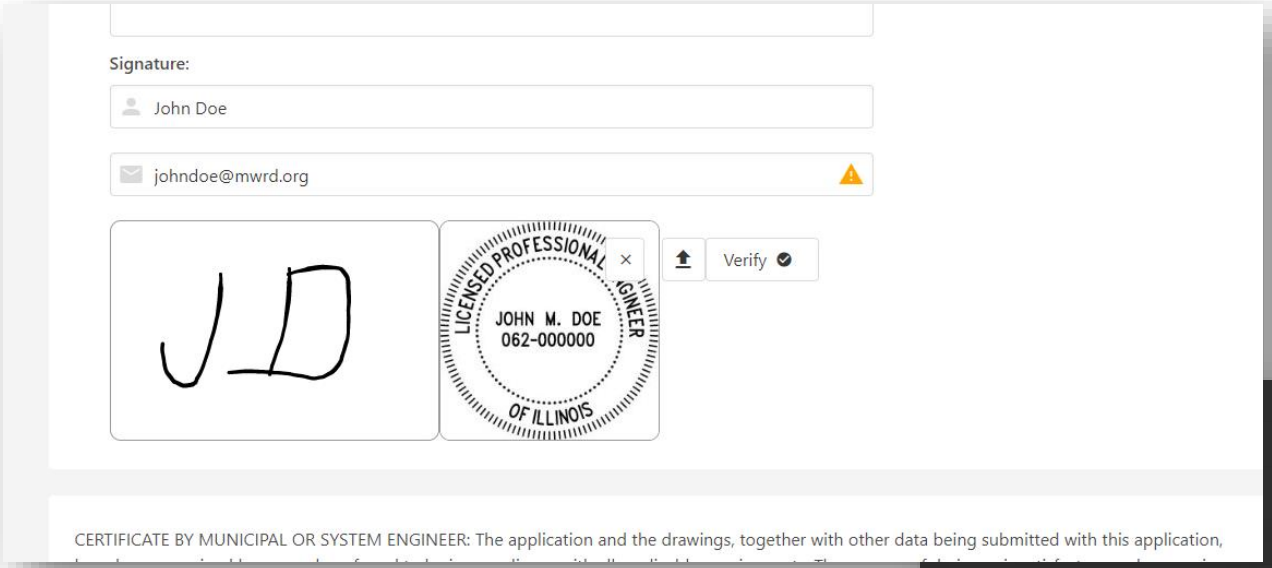
- Submit permits online in one integrated platform
- Move away from traditional paper/pdf forms
- Upload plans and reports as attachments
- Prepare and review permit application online prior to submitting
- Sign electronically
- Pay online or by mailing a check
- Track status and see progress

New E-Permit Web Application



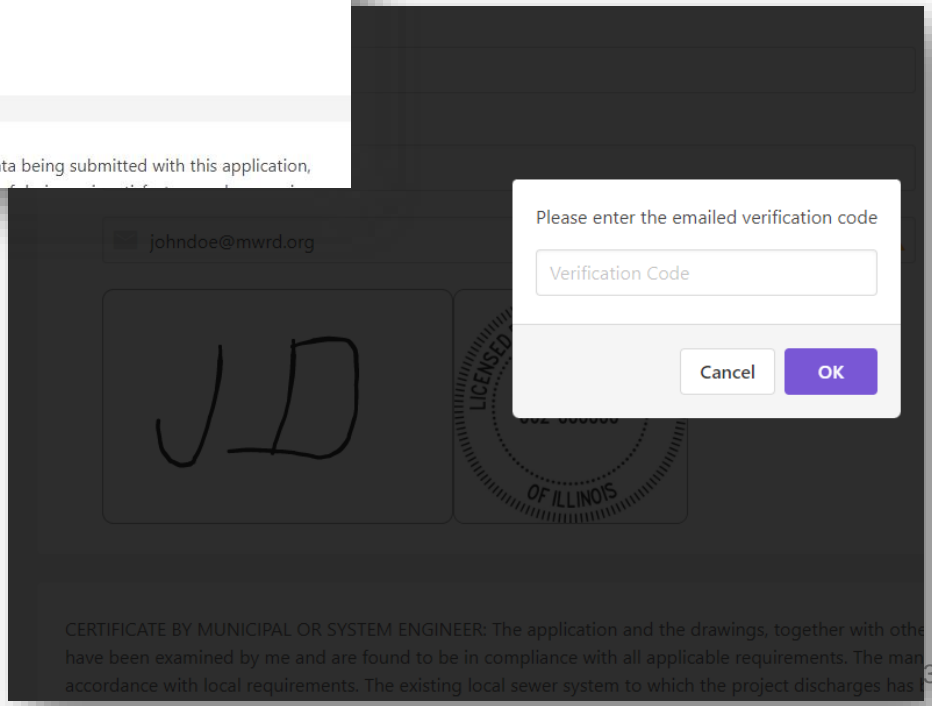
New E-Permit Web Application

Review and sign online to complete the permit application



Save time

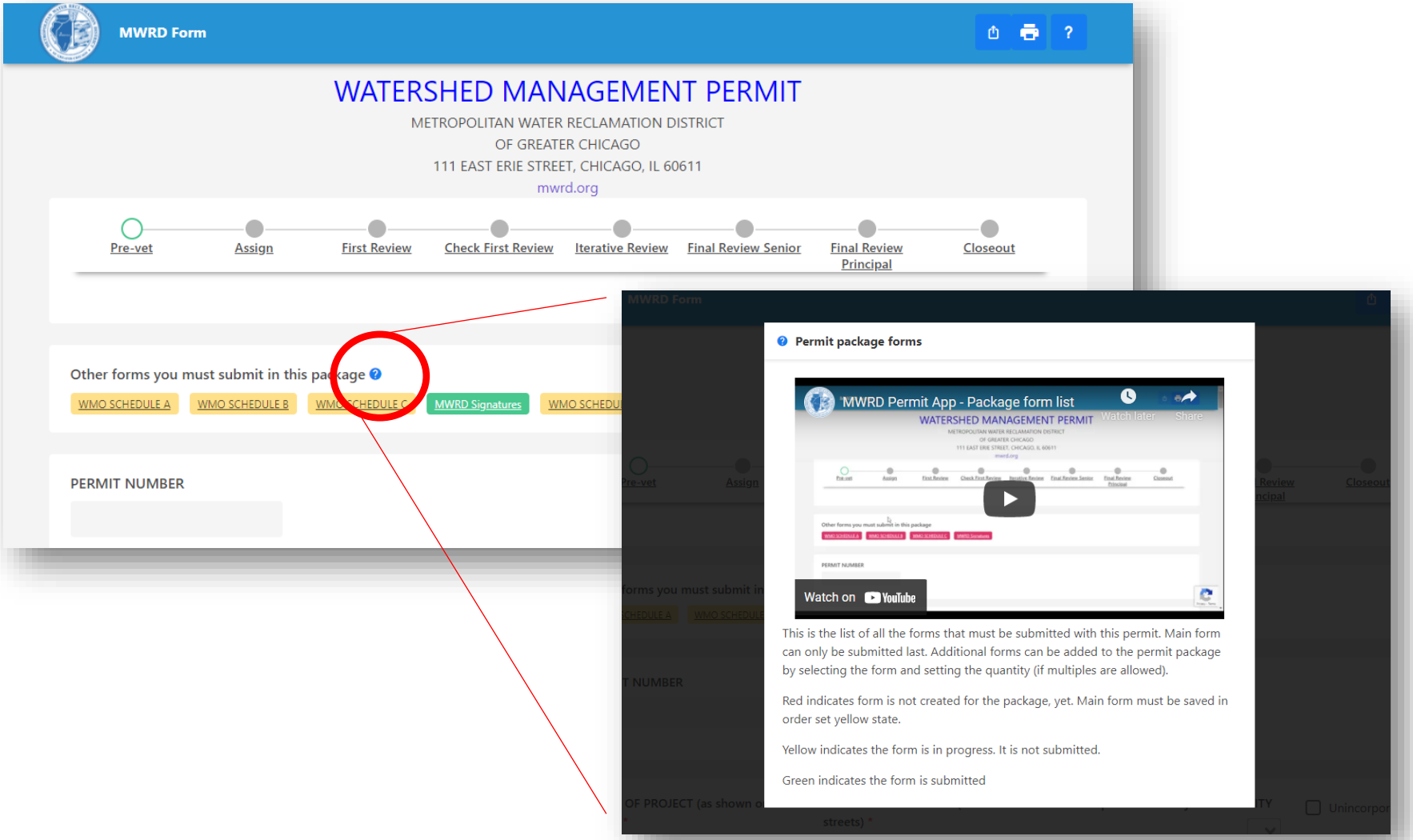
Share link with owner and village to apply



Initial, sign, and seal using secure two step e-verification

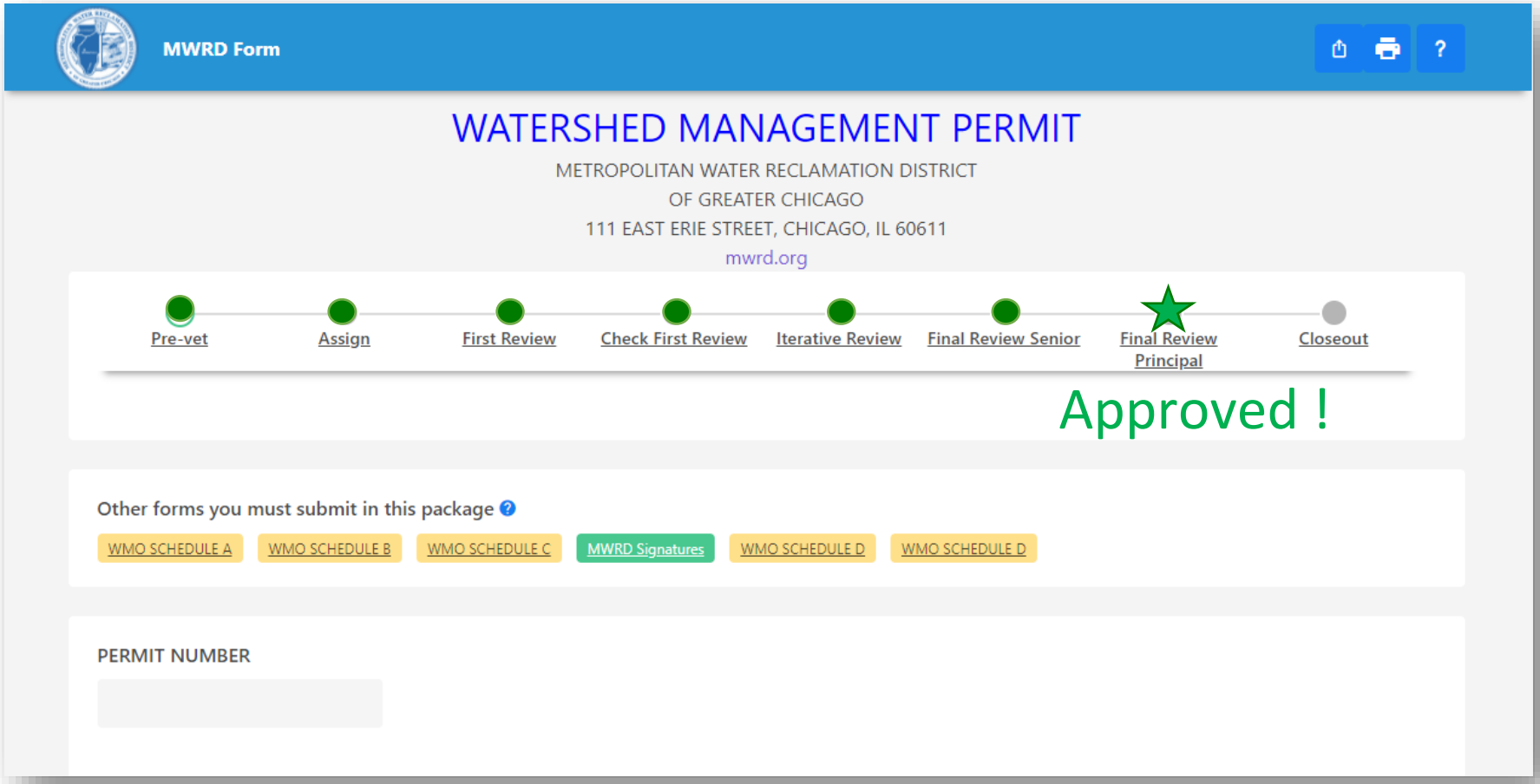
New E-Permit Web Application

Online help and Instructional Videos



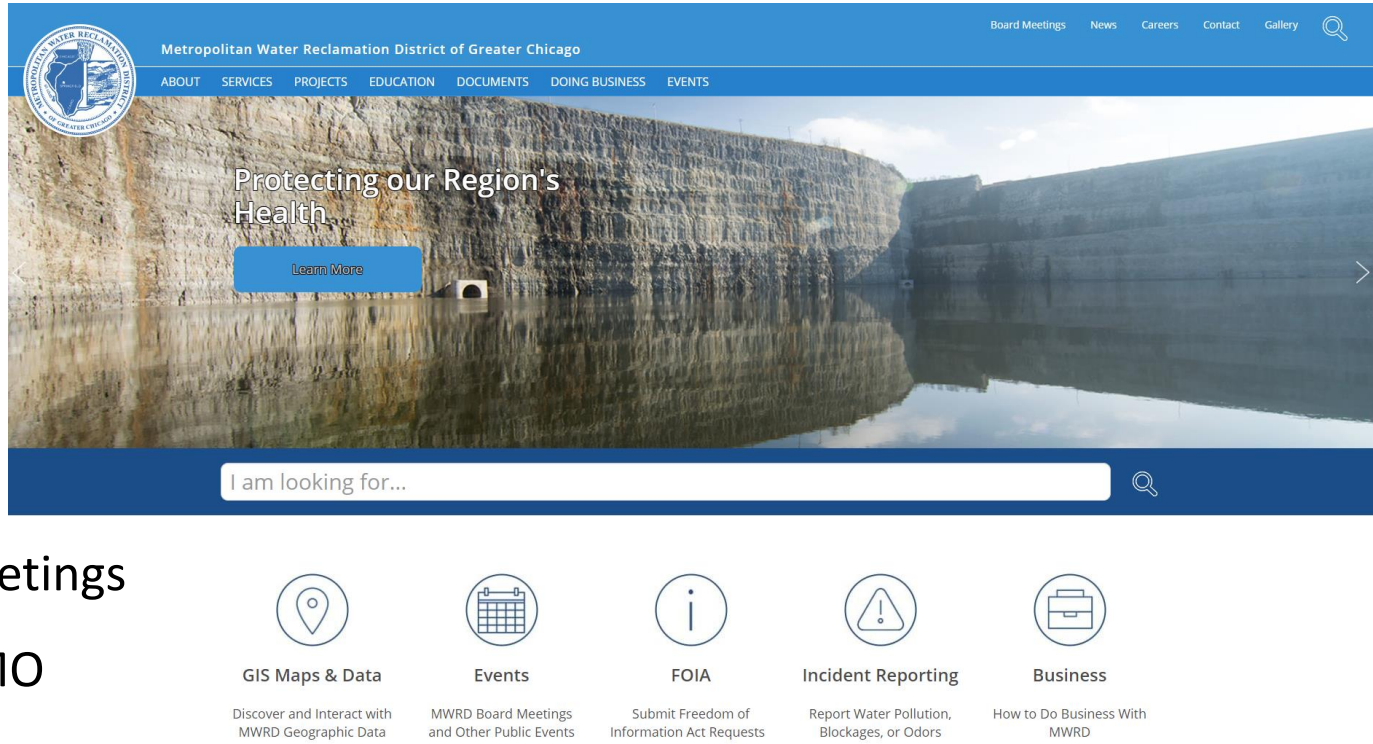
New E-Permit Web Application

Track status from progress bar



WMO Resources

- Website
  - **MWRD.ORG or MWRD.ORG/WMO**
- Check here before submitting
- Latest Information
- Permit Inquiry Link
- Detail Updates
- Ordinance Updates
- Pre-Application meetings
- Latest news on WMO



What is next for WMO?

- Upcoming Amendment in Spring 2022
  - Public notice / orientation on amendment upon Board approval
  - TGM update to follow (as applicable)
- New E-Permit Web Application
  - Spring/Summer 2022
  - Training sessions will be offered
  - How-to videos will be released
- Ongoing TAC Meetings in 2022
- Future Amendment Anticipated
  - Fees will likely be updated

Questions?

Thank you

Maureen Durkin, P.E., CFM
Durkinm@mwrd.org
312.751.3250
&
Daniel Feltes, P.E., CFM
feltesd@mwrd.org
312.751.3247

Metropolitan Water Reclamation District of Greater Chicago
100 E. Erie Street
Chicago, Illinois