

# MPCA – MIDS

## Developer Perspective

Paul Robinson  
Development Manger  
763-398-0320  
[paul@bancorgroup.com](mailto:paul@bancorgroup.com)

Bancor  
group



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# MPCA – MIDS

## Developer Perspective

### Presentation Assumptions

- Thinking about process from a residential development standpoint
- Areas controlled by Comprehensive Plans likely the Metropolitan Council.
- Primarily in areas with urban services (MUSA)

# Land Development Process

## Development Process is Complex

Generally Includes:

- A Due Diligence Process
  - Site/Property Evaluation
  - Regulatory Evaluation
  - Market Evaluation
- Entitlement Process
  - Receive Government Approvals
  - Apply for and receive applicable permits
- Construction
- Sales

# Cities & Agencies: - Locust Hills - Wayzata

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## City of Wayzata

- Al Orsen
- Loren Gorden
- Mike Kelly
- Don Johaneson

## City of Minnetonka

- Geoff Olsen
- Cary Teague
- Jo Colleran
- Jennifer Posma
- Lee Gustafson

## DNR

- Julie Ekman
- Dirk Peterson
- Daryl Ellison
- Wayne Barstad

## BSWR

- "Board of Soil & Water Resources"
- Brad Wosney

## SRF (City Consultants)

- Beth Bartz, Planning - EAW, 106 Review
- Julie Wischnack - Planning
- Larry Erickson - Bridges
- Jeremy West – Bridges

## BRAA (City Consultants)

- Paul Bokenstedt
- John Smyth

## SHPO

- Dennis Gimmestad

## US Army Corps of Engineers

- Joe Yanta

## Lake Minnetonka Conservation District (LMCD)

- Greg Nybeck,
- Judd Harper,

## Minnehaha Creek Watershed District (MCWD)

- Renae Clarke - Permitting Technician
- Eric Evenson - Executive Director
- James Wisker - Permitting Technician

## Hennepin County

- Craig Twinem - Roadway Policy and Design
- Bob Byers - Plat Approval
- Chris Sagsveen - CR 101 Project Manager

## Other Agencies/Players

- Environmental Control Board
- Minnesota Department of Health
- Metropolitan Council Environmental Services
- Minnesota Pollution Control Agency
- Xcel Energy
- Centerpointe Energy
- Mediacom
- Comcast
- Qwest

**10 Primary Reviewing Agencies & Consultant Teams – 9 Secondary Agencies**

# Consultants – Locust Hills - Wayzata

## Westwood Professional Services

- Dennis Marhula - Principal, Project Manager, Engineer
- Miles Lindberg - Project Planner/Landscape Architect
- Craig Morse - Surveyor
- David Weetman - Env. Scientist (Wetland Specialist)
- Allen Klugman - Traffic Engineer
- Jeremy Doehr - Env. Scientist (Fishery Expert)
- Justin Larson - Engineering
- Dwight Jelle – Engineering

## Sathre Bergquist

- Rick Sathre - Planning/Engineering Consultant

## Conheim & Associates

- Roger Conheim - Market Analysis

## Braun Intertech

- Gregg Jandro - Soil Scientist
- Henry Vloo - Soil Scientist

## American Engineering Testing

- Environmental & Hazardous Material Testing

## Applied Ecological Service

- Steve Apfelbaum - Ecologist
- Kim Chapman - Ecologist
- Doug Mensing - Ecologist
- Michael Blue - Landscape Architect

## Lockridge, Grindal, and Nauen

- Charles Nauen - Legal

## Kennedy and Graven

- Larry Wertheim - Legal

## Two Pines Resource Group

- Michelle Terrel - Cultural Resources, Archeology

## Summit Envirosolutions, Inc.

- Andrew Schmidt - Architectural Historian

## Fortin Consulting

- Carolyn Dindorf - Limnologist

## Keith Waters and Associates

- Keith Waters - Architecture and Design
- Jody Keppers – Architect

## Mally, Montague, Karnowski, Radosevich

- Paul Radosevich - Accounting

## EarthTech

- Leslie Knapp - P.G.- Project Mgr, Permitting Spec.
- Mark Rothfork - Ecologist

## Acorn Environmental Group

- Tom Braman - Wetland Delineation

## Sharatt Design Company

- Michael Sharratt – Architect
- Lissa Tenuta - Architect

## Leonard Street & Deinhard

- Hugh Maynard - Legal - Contract and Land Use
- Matt Seltzer - Legal – Wetland, Dredge, EAW
- Stephen Pflaum - Corporate

## The James H Gilbert Law Group

- James Gilbert -Legal - Docking

## Malkerson Gilliland Martin LLP

- Bruce Malkerson - Legal - Land Use, Environmental

## Collaborative Design Group

- Craig Milkert - Structural Engineer

## Landform

- Borris Fridkin - Site Renderings

## Simso Incorporated

- Amy Simso - Copy Writer -Website

## Feyereisen Studios, Inc

- Bob Feyereisen - Model Builder
- John Fogg - Model Builder

## Treefort.net

- Jeremy Gavin - Website Development

## Benson and Associates

- Doug Benson - Marketing Materials

## Docking

- Jeff Fox – Docking

## Xcel Boating Club

- Tom Jacob – Boat Club Manager

## Lifestyle Renovations

- Gary Elken – Renovations Estimate

28 Companies and over 45 Consultants

# City Permits/Approvals – Locust Hills - Wayzata

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## City of Wayzata

- Planned Unit Development Zoning
- Preliminary and Final Plats
- Shoreland Conditional Use Permit
- Wetland Conditional Use Permit
- Grading Permit
- Roadway Crossing Permit
- Wetland (MCWD Rule D – Reviewed by City)
- Stormwater Management for Land Development Projects (MCWD Rule N – Reviewed by City)
- Erosion Control Permit (MCWD Rule B Reviewed by City)
- Municipal Water and Sewer Connection Permit
- Tree Removal Permit and Tree Preservation Plan
- Wetland Conservation Act Approval (Wayzata LGU – Reviewed by City of Minnetonka, MCWD, DNR and BWSR)

## City of Minnetonka

- Rezoning to Planned Unit Development
- Master Development Plan
- Conditional Use Permit for Impervious Trail in Wetland Buffer
- Approval of Wetland Replacement Plan
- Right of Way Vacation Approval
- Wetland Permit
- Roadway Crossing Permit
- Erosion Control Permit (MCWD Rule B – Reviewed by City)
- Stormwater Management for Land Development Projects (MCWD Rule N – Reviewed by City)
- Floodplain Alteration Approval (Rule C – Reviewed by City)
- Municipal Water and Sewer Connection Permit
- Grading Permit
- Bridge Permit
- Right-of-Way Work Permit

**29 Approvals and/or Permits between the two Cities**

# Other Permits/Approvals – Locust Hills - Wayzata

## Minnesota Department of Health

- Well Abandonment
- Water Main Extension Approval
- Water Appropriation Permit
- Public Waters Work Permit
- Variance for Treatment of Contaminated Groundwater

## Hennepin County

- Plat Review
- Temporary and Permanent County Road Access Permits (Minnetonka and Wayzata)
- Permit for Utility Work in ROW

## Minnesota Department of Natural Resources

- Utility Crossing of Public Lands and Waters License
- Aquatic Plant Management Control Permit (Not yet Applied for)

## Minnehaha Creek Watershed District

### **In Minnetonka**

- Stream and Lake Crossing (Rule G)
- Wetland Buffer (Rule )

### **In Wayzata**

- Floodplain Permit (MCWD Rule C)
- Stream and Lake Crossing (Rule G)

## Minnesota Pollution Control Agency

- 401 Water Quality Certification or Waiver
- Sanitary Sewer Extension Approval
- NPDES/ SDS General Permit
- Development Response Action Plan Approval
- Sanitary Sewer Connection Permit

## U.S. Army Corps of Engineers with State Historic Preservation Office

- Corps of Engineers – 106 Historic Properties Mitigation – Memorandum of Agreement

## U.S. Army Corps of Engineers

- Corps of Engineers – 404 Wetland Permit
- Corps of Engineers - 401 Water Quality Certification Waive

## Federal Emergency Management Agency

- Letter of Floodplain Map Amendment (Not yet Received)

## Lake Minnetonka Conservation District

- Multiple Dock Design Approval and License

**22 Additional Approvals and/or Permits (51 Total)**

# Land Development Process

## Approval (Entitlement) Timeline

- While we used to plan on 4-6 months to get approvals we now need 1-2+ years. (PUD Examples)
- Locust Hills
  - 1  $\frac{3}{4}$  years from starting Sketch Plan to Final Plat Approval
- Woodland Cove
  - 2  $\frac{1}{2}$  year process best case
- Our timelines have expanded and in turn increased costs and risks



# Land Development Process

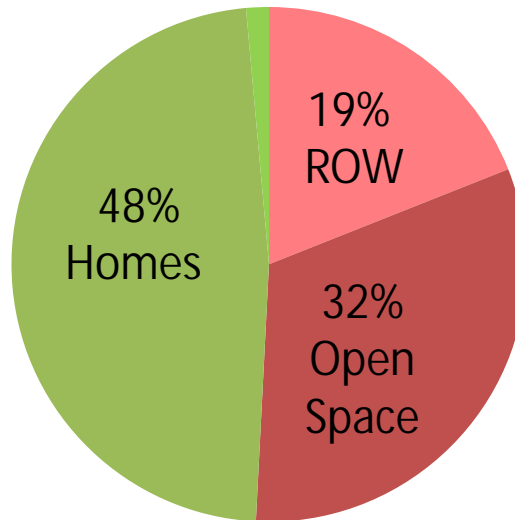
## Developer thoughts about the process

- Each time you work on a development you add something to your list that you never heard of or encountered before. (new rules, new fees, new rule interpretations)
- The list never gets shorter.
- You can ask the same question multiple times and get different answers.
- You are always looking out for what will be the next Achilles heel. What did you miss.
- New rules are developed as a reaction to what we are proposing. This does not lead to open sharing of information/trust.
- Rules can change at any time, rarely repercussion to agencies, almost always repercussions to developers, usually adding more cost/burdens.

# Land Development Process

“What has been happening to land?”

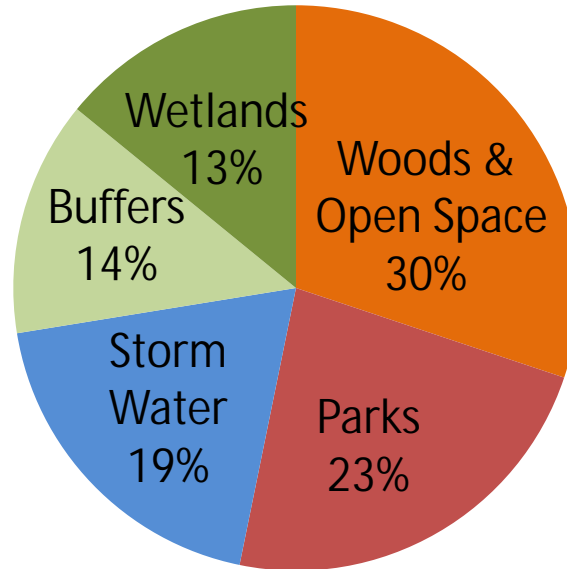
Land Development Pie



Woodland Cove – Concept Plan		
	Acres	%
ROW - Public and Private	93	19%
Open Space - Total	156	32%
Commercial Areas	7	1%
Residential Areas	234	48%
<b>Total Acres</b>	<b>490</b>	<b>100%</b>

# Land Development Process

“What has been happening to land?”




Woodland Cove - Open Space	Open Space Acres	% of Open Space	% of Development
General Open Space (Woods, Prairie)*	47	30%	10%
Public and Private Parks*	36	23%	7.5%
Storm Water	30	19%	6%
Wetlands*	21	13%	4%
Wetland Buffers*	22	14%	4.5%
<b>Total Open Space</b>	<b>156</b>	<b>100%</b>	<b>32%</b>

\* 45 wooded acres are included in these open space numbers

# Woodland Cove

Total Open Space:

 All Open Space – 156 Acres (32%)


 Parks – 36 Acres (7%)

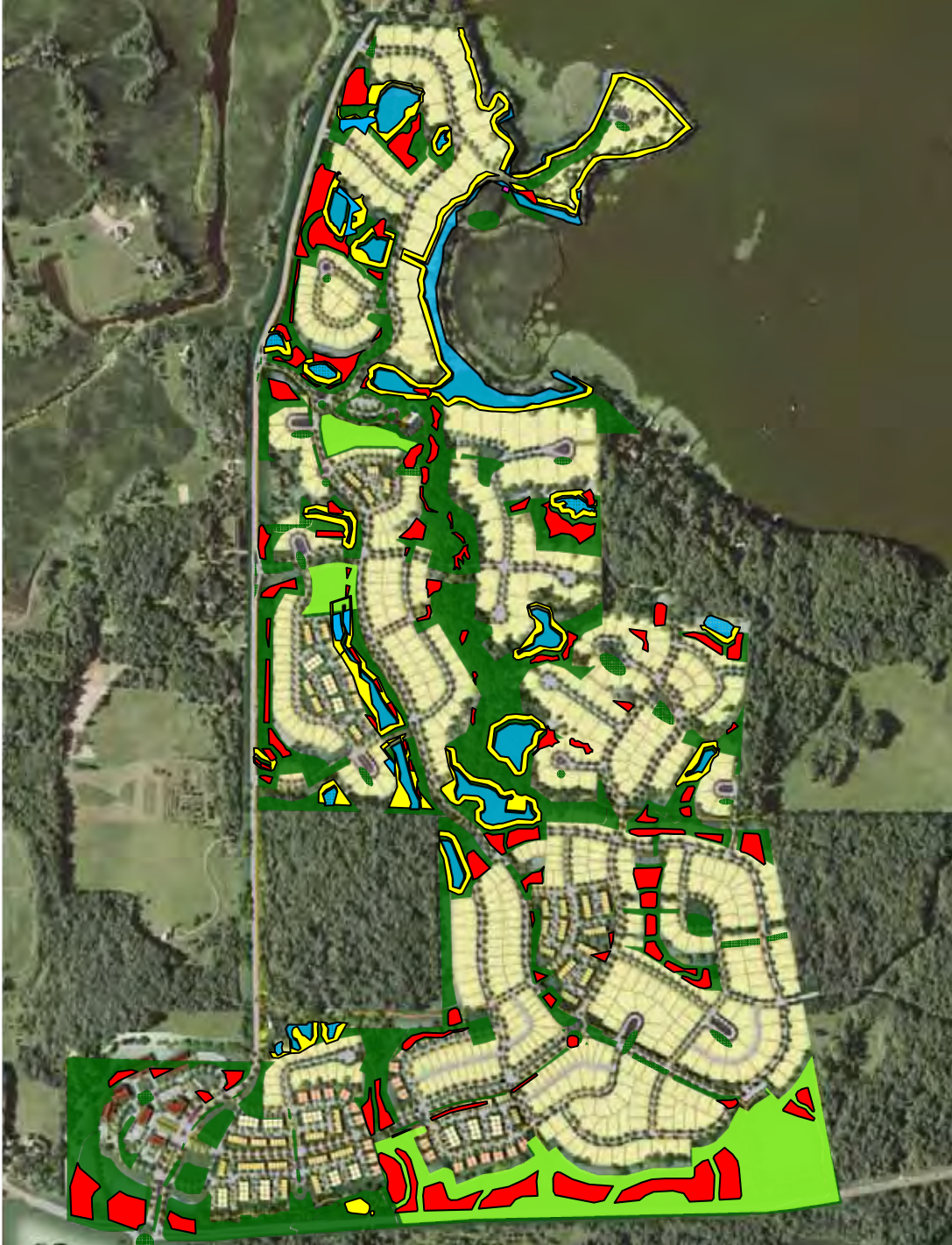
 Wetlands – 21 Acres (4%)

 Buffers - 22 Acres (4%)

Storm Water Treatment - 30 Acres (6%)

(20% of Open Space)

 Sedimentation basins,  
Infiltration and other low  
impact development  
techniques (LID) – 106 areas



# Land Development Process

## “What has been happening to land?”

### Woodland Cove

#### What is left to develop?

- 234 acres out of 490 acres.

#### How many units are required?

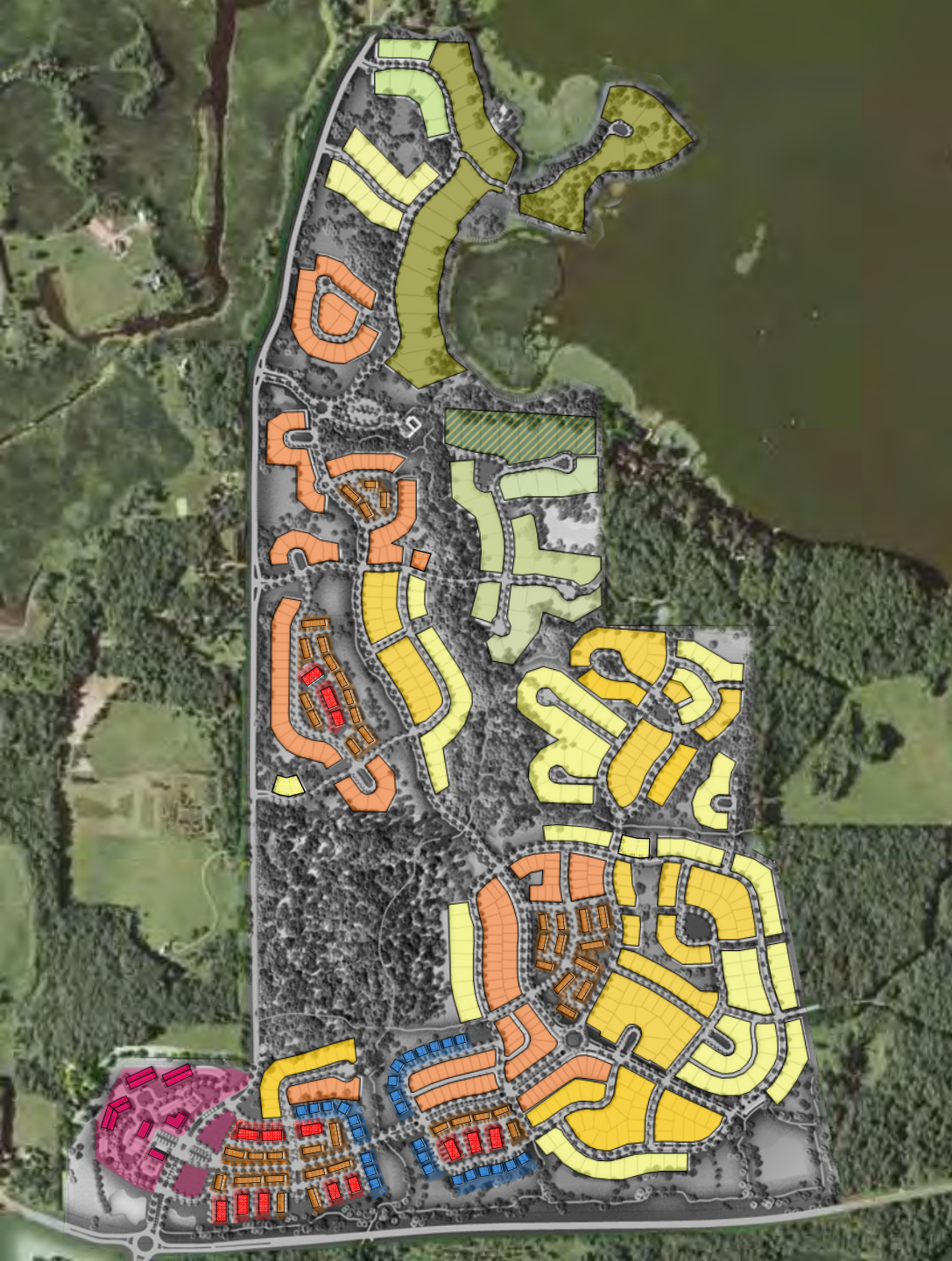
- Met Council/City Minimum Units 1,071 – Negotiated 2.2units/Acre – Less than current requirement.

#### What does that mean?

- 234 acres/1071 units = 1/5 acre or 9,500 sq. ft. per lot
- 1,071 lots 70' x 135' more of an urban standard, not typical for area 30 miles from Minneapolis, 14 miles from 494.
- Not practical or possible to make all 9,500 sq. ft. SF lots
- Would not meet the DNR shoreland standards 100' width, 50% open space (23,000 sq.ft. min lot size in overlay, 14,500 in R-1)
- Requires use of multi family housing options.

# Woodland Cove

Concept Data:



Product Category	3-8-10 Concept
Lakeshore Single Family	26
Lakefront Single Family	8
Custom Single Family	34
Large Lot Single Family:	140
Medium Lot Single Family:	174
Small Lot Single Family:	207
<b>Single Family Totals:</b>	<b>589</b>
Twin Homes:	54
Row Townhome:	207
Back to Back Townhome:	106
Multi-Story	115
<b>Multi-Family Totals:</b>	<b>482</b>

<b>ALL UNITS TOTAL</b>	<b>1071</b>
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- 208 Lots - 1 – 1/2 acre
- 381 Lots – 1/4 acre - 12,000 to 1/5 acre 8,000 sq. ft.
- 484 Units – Multi-Family (Twin, TH, BB, Condo) – 45% of the total units

# Land Development Process

## Storm Water Rules

### What does our experience tell us about the evolution of storm water rules?

- Rules are getting more complicated
- Everyone is trying to catch up with an evolving field/body of knowledge and we are often caught in the middle.
- Many ways to review and analyze storm water. Often each organization, agency, uses different methods that may conflict with one another
  - WinSLAMM, XP-SWMM, SWAT, RECARGA, P8, HydroCAD, etc.
  - Curve Numbers, etc.
  - To calibrate or not to calibrate, monitoring – throwing money away?
- New rules tend to..... increase complexity, increase restrictions, increase uncertainty.

# Land Development Process

## Storm Water Rules

### **Two Examples of Complexity**

- Coordinating Multiple Agencies
- Evaluating Rule Making Process



# Land Development Process

## Storm Water Rules – Example of Complexity

### Woodland Cove

#### Background

- Multi-Agencies
  - Agencies with formal and informal authority
  - Evolving storm water rules
    - City (WSB) – Flocculation bias
    - Three Rivers Park District – Non-Degradation Interpretation bias
    - MCWD (Wenck)– More is better bias
    - Developer – Enough is enough bias
- (don't take the bias comments to seriously)*

#### Proactive Coordination

- Decide to model a portion of the site to clarify rules, modeling, assumptions , and interpretations.
- All agencies participated voluntarily

NOTE: No time to explain why three agencies, multiple agencies not unusual.

# Land Development Process

## Storm Water Rules – Example of Complexity

### **Broke the coordination process into stages**

1. General Information
  - Rules, how reviewed, their goals, etc.
2. What model(s) to use (Could spend 20 minutes on this)
  - P8 – pollutant and nutrient loading
  - HydroCAD for volume and rate
3. Assumptions for existing and proposed conditions.
  - Curve Numbers
  - Infiltration Rates
4. Modeled Existing Conditions
5. Modeled Proposed Conditions – Rubber hit the road

*(process took 5+months May-Dec)*

# Land Development Process

## Storm Water Rules – Example of Complexity

### Issues Raised/Resolved

- Issue using P8 to model existing row crop. (understates the phosphorus reductions)
- Verified culverts and field assumptions - Concrete vs. Corrugated
- Curve numbers (Soils Maps)
- # of other Technical questions.....(Time of concentration, downstream impacts, etc)
- The right combination – sedimentation basins(used Min NURP) vs. infiltration used 35% v. 65% mix
- **Infiltration rates**

NOTE: No time to talk about how the 885 page MN Storm Water Manual is fast becoming a hammer and/or an excuse for added regulation when convenient.

*“The directive the Manual Sub-Committee received from the SSC was to produce a document that could be used as a single source to **guide** stormwater managers through the maze of Regulations”*



# Land Development Process

## Storm Water Rules – Example of Complexity

### Infiltration Rates (w/o testing)

- Soils Survey – Site has C and B soils
- Soils Borings – Predominately “Clayey” - Typically C and D Soils
- MN Storm Water Manual – Range of Rates per Soil Classification or Type

B	Loam, silt loam	SM – Silty sand or silty sand with gravel	0.6
		ML – Silt OL – Organic silt or organic silt with sand or gravel or gravelly organic silt	0.3
C	Sandy clay loam	GC – Clayey gravel or clayey gravel with sand SC – Clayey sand or clayey sand with gravel	0.2

# Land Development Process

## Storm Water Rules – Example of Complexity

### Infiltration Rates (How implemented?)

Assume B soils – MN Storm Water Manual .3 -.6 inch/hour

- Regulator 1 – If no additional testing –take average of the MN Storm Water Manual .45.
- Regulator 2 – If no additional testing – use .3 plus safety factor
- Regulator 3 – Design it, build it and then we will test each infiltration area and see. Scary.....Did we do that with NURP ponds?

# Land Development Process

## Storm Water Rules – Example of Complexity

### Infiltration Rates (What we did)

- We wanted to get ahead of the curve.
  - Double Ring Tests - B soils .5 inch/hour – C soils .25 inch hour – (cost \$350-\$500 each without any excavation) – Used .25 inch/hour for the model
- Realized this may not be enough, that .25 may be too conservative, we wanted to find out what we really had. (Thought more testing would add more certainty)
  - Based on suggestion from Three Rivers we contacted John Gulliver U of M- They were willing to conduct test for us using the Modified Phillip Dunn method they developed.
  - Asked the Agencies if they were o.k. with this. All Agreed.
  - When we asked how and a where the test would be done. Wide range of opinion. (Explaining this alone could take 20 minutes)

# Land Development Process

## Storm Water Rules – Example of Complexity

### Infiltration Testing (Issues)

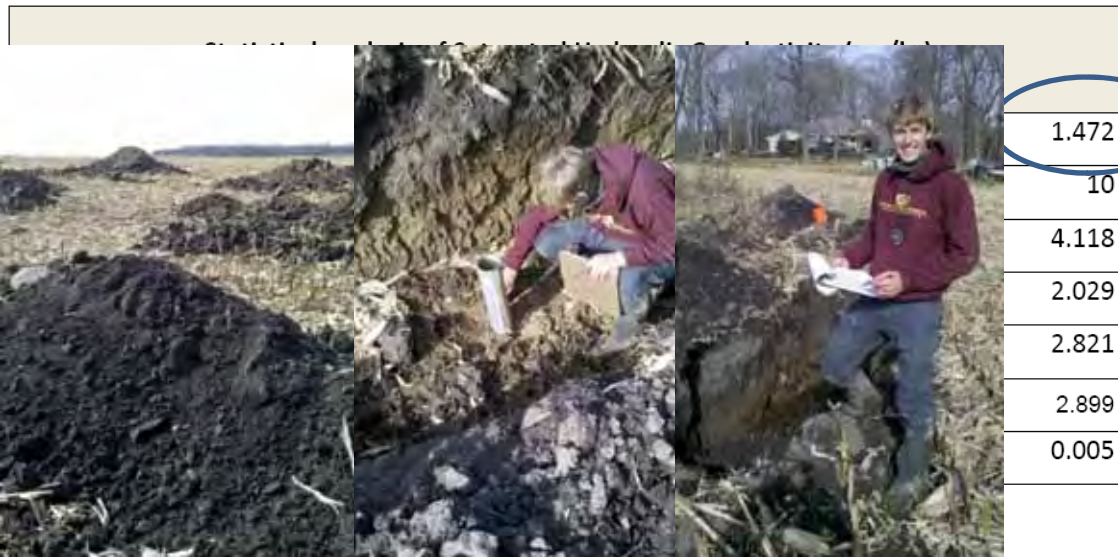
- Significant variability
- Testing open to wide interpretation
- While agencies say they would use actual tests over ranges in the MN Storm Water Manual we are concerned that this will depend on who you are working with and not the rule itself.

# Land Development Process

## Storm Water Rules – Example of Complexity

- Example of variability
  - A2 - Low - .001 cm/hour
  - B2 - High – 5.3 cm/hour
- Some rules call for 1 test per site.
- Let's hope it's A2 and not B2
- Some for 5 feet below practice, not practical.
- Testing each infiltration basin is also not practical.
- Commercially done each site could cost \$ 3,500.

Location	Saturated Hydraulic Conductivity(cm/hr)
A1	3.110
A2	5.300
B1	0.001
B2	0.001
B3	1.020
B4	0.067
C1	4.420
C2	0.580
C3	0.220
C4	0.001



1.472
10
4.118
2.029
2.821
2.899
0.005

.58 inches/hour



# Land Development Process

## Storm Water Rules – Example of Complexity

### **MCWD Proposed Rules**

- Generally we have worked well with MCWD.
- Have collaborated with them on several projects
- Current rules are going too far. New wetland buffer rule will added 50% more buffer area.
- Analyzed their rules
  - Focus - abstraction credits for handling storage of 1" of rainfall over impervious surfaces.

# Land Development Process

## Storm Water Rules – Example of Complexity

### MCWD Proposed Credits

#### Assumptions

- Abstraction credits in terms 1 ac. ft.
- Costs above open space. Cost do not include typical seeding and preparation or land cost.

#### Abstraction Credits (Ways to Meet Abstraction Requirement)

- **Infiltration** – Seems to be the standard and the most efficient if you have the space – Costs \$ 25,000 -\$100,000 per ac. ft. credit. (1 acre of land needed)  
(Similar to the added costs for development for each acres of storm water treatment added)
- **Infiltration Trench** - \$135,000 - \$150,000 per ac. ft. credit (3/5 Acre of Land Needed) (100' x 100' x 4')

# Land Development Process

## Storm Water Rules – Example of Complexity

### MCWD Proposed Rules

#### Abstraction Credits (Ways to Meet Requirements)

- **Saving Trees** – Need 120 acres of trees - 1 ac. ft. credit.
- **Planting New Trees** – Need to plant 15,000, 2 ½ trees (15' radius) at \$ 250 each = \$3,750,000 per ac. ft. credit (300- 500 Acres)
- **Amended Soils** – Depends on amendment requirements - \$4,500 an acre to amend – Amend 25+- acres = \$112,500 = per ac. ft. credit (uses a lot of land/maintenance cost \$) – (25 Acres)
- **Filtration** - \$150,000 - \$200,000 per ac. ft. credit – (depends on engineered soils) (2 Acres land needed)

# Land Development Process

## Storm Water Rules – Example of Complexity

### MCWD Proposed Rules (Other thoughts)

- To a developer when you talk about meeting storm water rules it gets confusing. What exactly are you trying to meet.
  - Volume Control
  - Rate Control
  - Phosphorus Reduction
  - Pollutant ReductionTakes time to understand the interrelationships
- For Woodland Cove we planned for what we thought was worst case increased stormwater treatment areas from 3-4% to 6-8% of the site.
- Found that we barely meet the new rules on a site with over 30% open space.
- When you add doubling the areas for storm water with the 50% increase for wetland buffers, together almost 20 -30 acres of additional area was lost.

# Land Development Process

## Storm Water Rules – Example of Complexity

### How much protection do we need?

- Rules and agencies are always trying to protect the down side. Like using a safety fact or having to replace 2 times the wetland area impacted.
- **Little focus on the up side. Such as the benefits from native vegetation getting established in infiltration areas, increasing infiltration rates over time.**

# Land Development Process

## Storm Water Rules – Example of Complexity

- Little focus on the up side. There is a common understanding that as native vegetation gets established infiltration rates go up!



Before



After

# Land Development Process

## Summary

- We want to be good stewards.
- Need rules that are clear.
  - Consider setting a maximum land dedication, e.g. 5%?
  - We need to be able to understand and be able to plan a development prior to construction.
- Need rules that can be easily applied
  - Boards and Councils often do not understand the nuances of the technical regulation.
  - Staff members, while they may say they are implementing the boards policy, often have a significant amount of discretion over exactly how the board implements a rule. (Non-Degradation – Oxymoron)
- Want rules that are fair, ones that don't place an undue burden on a particular segment of the public.
  - Pre-Settlement – means “essentially no change since before settlement”. If every agency set that as their benchmark we should all get out of our cars and start walking.
- Recognize that there are increasing demands on the costs to develop.
- Recognize that the land requirements for development have changed considerably over time.

# MPCA – MIDS

## Developer Perspective



End of Presentation