VILLAGE OF DOWNERS GROVE
Report for the Village Council Meeting
10/10/2017

SUBJECT:	SUBMITTED BY:
Discussion of Potential Amendments to Stormwater Management Regulations	Nan Newlon Director of Public Works

SYNOPSIS

Staff is requesting Village Council discussion of potential amendments to stormwater management regulations.

STRATEGIC PLAN ALIGNMENT

Consider Amendments to Stormwater Regulations and *Consider Amendments to the Stormwater Utility* are Priority Action Items for 2017-2019. As part of these action items, the Village Council directed staff to consider more stringent stormwater management regulations to lessen the negative impacts of runoff generated by residential activity.

FISCAL IMPACT

N/A

RECOMMENDATION

Provide direction to staff on the proposed changes to the stormwater regulations.

BACKGROUND

Stormwater runoff generated by new residential construction, additions to homes and construction of accessory structures that comply with current Village regulations sometimes negatively impacts adjacent properties. The negative impacts, primarily standing or ponding water and saturated ground conditions, are generally caused by:

- New impervious area constructed in established neighborhoods that lack adequate stormwater management systems and infrastructure
- Significant grade differences causing increased stormwater runoff from the construction site to adjacent properties
- Sump pumps that serve large, deep basements discharging substantial amounts of water
- Lack of stormwater infiltration into the ground due to high clay content in soils and compaction during construction.

To address the issue and causes summarized above, Village staff identified several potential changes to regulations for review and consideration by the Stormwater and Floodplain Oversight Committee (SWFPOC) which were discussed at their June 23, 2016 and August 11, 2016 meeting. Those potential changes are reflected in the table below:

Item	SWFPOC Recommendation	Effectiveness	Costs	Administrative Burden
Require on-site stormwater detention with an outlet to an established minor drainage system	✗	💧💧💧💧💧	$$$$$	✏✏✏✏✏
Require sump pumps to connect to a minor drainage system or Post Construction Best Management Practices (PCBMP)	✓	💧💧💧	$	✏✏
Maximum impervious area regulation / open space requirement	✓	💧💧💧	$$	✏
Require additional PCBMPs for basements deeper than nine feet (9')	✗	💧💧	$$	✏✏
Eliminate the building coverage "bonus" for detached garages and front porches	✗	💧💧	N/A	N/A
Restrict foundation and/or finished grade elevation	✗	💧	N/A	N/A
Reduce minimum foundation drain tile size requirement from six-inch (6") diameter to four-inch (4") diameter	✓	💧	$	N/A
Increase the minimum required side yard setback in the R-4 zoning district to six feet (6') or 10% of the lot width, whichever is greater	✓	💧	$	✏
Increase the stormwater runoff fee and/or fee-in-lieu for constructing PCBMPs	✓	💧	$$	✏
Remove local PCBMP requirements (700 square feet instead of 2,500 square feet)	✗	💧	Reduction in costs	N/A

The items considered are intended to reduce the amount of stormwater runoff negatively affecting adjacent properties, increase funds for potential projects, improve the effectiveness of the strategies used, improve resident satisfaction, and reduce time spent responding to resident calls for service regarding stormwater runoff. Each of the options considered has specific likely impacts that are described in the attached "Potential Stormwater Code Change Summaries".

ATTACHMENTS

Staff Report to Village Council
Minutes of the Stormwater and Flood Plain Oversight Committee meeting dated June 23, 2016
Minutes of the Stormwater and Flood Plain Oversight Committee meeting dated August 11, 2016

Staff Report to Village Council

Potential Amendments to Village Regulations to Reduce the Negative Impacts of Stormwater Runoff from Residential Construction Activities

October 18, 2016

Background

In 2015 the Village Council identified *Consider Changes to the Stormwater Utility* as a Top Priority Action Item. While the fundamental policy question to be addressed relates to the source of revenue to be used to pay for stormwater related expenses (utility fees or property taxes), the Village Council also directed staff to consider more stringent stormwater regulations to lessen the negative impacts of runoff generated by residential construction activity.

Over the past several years, established residential neighborhoods have been redeveloping. First generation homes are being demolished and replaced with new and larger homes. Since 2011, 360 new single family homes have been constructed. Over 95% of these homes were built in existing neighborhoods, meaning an existing home was demolished and a new home, or homes, was built in its place.

Stormwater runoff generated by new home construction, additions to homes, and construction of accessory structures that is in compliance with current Village regulations sometimes negatively affect adjacent properties. The negative impacts, primarily experienced as standing or ponding water and saturated ground conditions, are generally caused by:

- New impervious area added in established neighborhoods that lack adequate stormwater management systems and infrastructure
- Significant grade differences causing an increase in stormwater runoff from the construction site onto adjacent properties
- Sump pumps that serve large, deep basements which discharge substantial amounts of water
- Lack of stormwater infiltration into the ground due to high clay content in soils

Existing Regulations

Current Village regulations are intended primarily to prevent flooding of building structures. The regulations have been effective and structural flooding from stormwater runoff occur rarely. When structures flood it is usually due to extreme rain events.

The Village has adopted regulations consistent with and in some cases more stringent than the DuPage County requirements. Development sites that propose more than 25,000 square feet of net new impervious require extensive stormwater management systems. This system requires grading and an on-site detention facility and conveyance that controls the volume and rate of discharge.

In 2015, the Village adopted a revision to its stormwater ordinance that requires all developments that result in new impervious area of greater than 700 square feet to install Post Construction Best Management Practices (PCBMPs) to mitigate the stormwater impacts of new development on neighboring properties. Examples of these include dry wells, rain gardens or permeable pavers. These regulations are intended to improve water quality and reduce the amount of runoff flowing onto adjacent properties and entering the public portion of the stormwater management system.

Construction in Neighborhoods Lacking Adequate Infrastructure

Many areas of the Village were developed prior to the creation of the stormwater regulations discussed above. The concept of stormwater management did not exist until the 1970s, when the Village was well over 100 years old and established. As a result, some areas of the Village have modern infrastructure with adequate capacity to effectively manage most rain events while other areas' systems are either insufficient or have no infrastructure. Current requirements now include larger public storm sewers, detention basins, best management practices and engineered overland flow routes; however, this was not the case when many of the Village's homes were built.

Areas in yellow show streets lacking storm sewer

The building trends over the past couple of decades involve tearing down small houses and replacing them with ones that are considerably bigger, building additions to houses, and adding accessory structures to properties. All of these have contributed to the increase in runoff and interrupt existing drainage patterns. Many of these teardowns are in older areas which already have insufficient or no infrastructure, thus exacerbating existing drainage problems. In 2012, the amount of impervious area in the Village was about 102 million square feet. Since then, approximately 1.2 million square feet of new impervious area has been added through new construction. This represents an increase of around 1.2%.

Rear yard flooding in an LPDA

Due to existing grading and the lack of stormwater detention and conveyance in parts of the Village, some areas are prone to holding water and have been classified as localized poor drainage areas (LPDAs). These are regulated by the Village similar to floodplain, as they are recognized to reduce the demand on the storm sewers during and immediately after rain events.

These natural detention areas are typically located on private yards. Many residents express frustration with having a pond on their property and have expressed concern with lawn maintenance, smell, and mosquitoes. Increases in runoff due to new construction near LPDAs can add to these water problems.

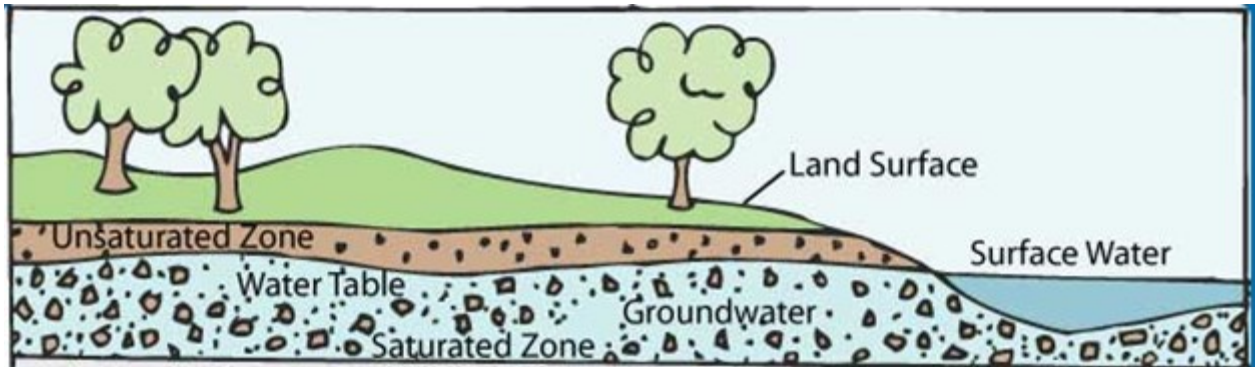
Long-time residents of a neighborhood regularly report an increase in the severity of drainage problems over the last decade. Some formerly dry yards hold water on a regular basis. Some below-grade entry doors and garages that never received water are now subject to flooding. Nearby new construction is often pointed to as the cause of the problems.

Grade Differences Between Adjacent Houses

Significant grade differences between properties tend to direct water towards adjacent houses quickly. Drainage swales between houses, a common method to direct stormwater runoff towards the front or back yard, tend to be less effective with this configuration, resulting in more water being directed at the foundation of the lower profile house.

Sump Pumps and Groundwater

Large, deep basements displace a significant volume of groundwater. Groundwater is the water present below the surface of the ground that flows through spaces between rocks and earth. The depth of the groundwater, or the water table, in the Village is high, meaning that it is close to the ground's surface in many areas.



When homes with deep basements are constructed, groundwater is pumped to the surface by sump pumps. If not contained in the yard, this becomes runoff onto adjacent properties.

Runoff from sump pumps

Lack of Infiltration into the Ground Due to Clay

All of these conditions are made worse by the high levels of clay in soils around Downers Grove. Any stormwater that cannot be absorbed into the ground, or infiltrate, becomes runoff. Clay is the predominant soil type in Downers Grove and is not conducive to infiltration. Clay soil is composed of tiny particles that are hard and easily compacted. When clay soil is compacted it is very dense and, as a result, infiltration is very slow.

In an ideal condition, permeable soils filter stormwater runoff, removing pollutants, while allowing the runoff to recharge the water table. The Village has implemented local Post Construction Best Management Practices, or PCBMP requirements, for new construction that adds more than 700 sq ft of impervious surfaces to a property. PCBMPs, such as rain gardens and dry wells, hold a certain volume of water and allow time for infiltration. However, in soils with a heavy clay content, these measures can be challenging to construct and operate.

Proposed Code Changes

Staff prepared various alternatives to reduce drainage concerns as they relate to new residential development. These items were brought to the Stormwater and Floodplain Oversight Committee (SWPFOC) and presented and discussed in detail at two meetings.

Item	SWFPOC Recommendation	Effectiveness	Costs	Administrative Burden
Require on-site stormwater detention with an outlet to an established minor drainage system	✗	💧💧💧💧💧	$$$$$	✏✏✏✏✏
Require sump pumps to connect to a minor drainage system or Post Construction Best Management Practices (PCBMP)	✓	💧💧💧	$	✏✏
Maximum impervious area regulation / open space requirement	✓	💧💧💧	$$	✏
Require additional PCBMPs for basements deeper than nine feet (9')	✗	💧💧	$$	✏✏
Eliminate the building coverage "bonus" for detached garages and front porches	✗	💧💧	N/A	N/A
Restrict foundation and/or finished grade elevation	✗	💧	N/A	N/A
Reduce minimum foundation drain tile size requirement from six-inch (6") diameter to four-inch (4") diameter	✓	💧	$	N/A
Increase the minimum required side yard setback in the R-4 zoning district to six feet (6') or 10% of the lot width, whichever is greater	✓	💧	$	✏
Increase the stormwater runoff fee and/or fee-in-lieu for constructing PCBMPs	✓	💧	$$	✏
Remove local PCBMP requirements (700 square feet instead of 2,500 square feet)	✗	💧	Reduction in costs	N/A

- Effectiveness of each item on a scale of one to five 💧, with five being most effective.
- Cost of each item on a scale of one to five $, with five being most costly. For comparision, required detention has been estimated to cost between $10,000 and $35,000.
- Administrative burden reflects the antipated additional work required by Village staff to implement the proposed changes.

POTENTIAL STORMWATER CODE CHANGE SUMMARIES

1. Require On-Site Detention for More Residential Developments

Current

Stormwater detention is not required for new construction which results in less than 25,000 square feet of net new impervious area.

Considered

Require detention for all new residential construction that results in 700 square feet or more of net new impervious area. The detention outlet would be required to connect directly into a minor stormwater system in the right-of-way such as a storm sewer or ditch.

The average new single family home in the R4 district would require 1,850 cubic feet of detention (43' x 43' x 1' deep or 20' x 20' x 4.5' deep).

Motion to **Not Recommend** requiring on-site stormwater detention for new residential development, approved with a 5-0 vote.

Comments from Committee:

- High construction costs ($10,000 to $35,000 for the detention basin plus up to $50,000 for the connection to established minor drainage system).
- Lack of infrastructure throughout the Village for the detention system to outlet
- Significant maintenance for homeowner
    - keep inlet(s) into detention basin clear, clean and maintain restrictors (outlet pipes) so they don't become clogged.
- Significant resource commitment for Village
    - Review design for compliance, inspect during construction and inspect annually for functionality and ensure restrictor remains in place and throughout construction process, enforce maintenance requirements.
- Gravity flow will not work for many locations, requiring pumps to convey water to the storm sewer/ditch. Per code, pumps require two independent sources of power (e.g. electric and gas generator). Homeowner must maintain pump and generator.

2. Require Sump Pumps to Connect to an Infiltration System

Current

Sump pump discharge must terminate no closer than 20 feet from the downstream property line (or drain across a minimum of 20 feet of green space before leaving the lot). In many cases, sump pumps meeting code requirements discharge significant amounts of water, which negatively affect adjacent properties. Staff has found that sump pumps are often very active during construction and at final inspection. An infiltration system is then required to be constructed for the discharge prior to issuing a Certificate of Occupancy. The overflow of the infiltration system may be connected to a minor stormwater system, where available. Homes that are completed during dry weather don't always have an active sump pump. If excessive discharge becomes problematic during rainy periods, the new homeowner is then required to construct modifications to address the drainage issue.

Considered

Require sump pump discharge for all new construction to connect to an infiltration device, such as a rain garden or a dry well.

Homeowner/developer would be required to construct an infiltration system based upon the size of the house. The infiltration system for a typical house in the R4 district will be approximately 83 cubic feet - a drywell 11' x 11' x 2' deep would meet this volume requirement. Prices for these systems vary from $1,500 to $3,000 and typically increase if incorporated later during or after construction instead of during design.

☑ Motion to **Recommend** the requirement of an infiltration practice for all sump pump discharges with an option to connect an overflow to an established minor drainage system was passed with a 5-0 vote.

Comments from Committee:

- Reduction in sump pump discharge on adjacent properties
- Require it on all developments so it's an up front cost
- Provides additional stormwater storage

3. Implement a Maximum Impervious Area or Minimum Open Space Requirement

Current

The Village does not currently have a maximum impervious area restriction or a minimum open space requirement. A resident may elect to cover their entire back yard with impervious surface if it meets the setback and PCBMP requirements. Some adjacent communities have either maximum lot coverage and/or minimum open space requirements.

Community	Open Space Requirements
Darien	50% - R1 50%- R2 40% -R3
Downers Grove	No requirement
Lisle	66% - R1, R2 60% - R3
Lombard	67% - R0 50% - R1, R2 50% - R3 (1-2 units) 35% for attached SF
Oak Brook	No requirement
Westmont	20% - R1, R2, R3 0% - R4, R5
Woodridge	65% - R1 60% - R2 50% - R3

Previous studies completed on watersheds in the Village have concluded that for each 10% increase in impervious, a 6% increase in runoff and volume would be seen and overall the developments have cumulative impacts.

3. Implement a Maximum Impervious Area or Minimum Open Space Requirement (Cont.)

Considered

Implement either a minimum open space or a maximum impervious area requirement. The impervious coverage on residential properties continues to increase as residents construct additions, patios expansions and with the construction of new homes. PCBMPs are designed for smaller rain events (1.25 inches of rain). Implementing a maximum impervious / open space requirement will preserve the character of Downers Grove for future generations, as well as help alleviate flooding from stormwater runoff.

☑ Motion to **Recommend** the concept of establishing a maximum lot coverage and/or open space regulation for residential properties within the Village that varies based upon lot size or zoning district was passed with a 4-0 vote.

Comments from Committee:

- More open (green space) on lots and reduction in runoff
- Challenges with regulating existing non-conforming properties
- Establishing a threshold for minor modification (i.e. air conditioner pad that puts property over the allowable)
- Definition of open space and impervious must be established
- Thresholds for each zoning district and lot size must be established for open space/maximum impervious
- Majority of all existing residential development is currently between 20% and 50% impervious coverage
- Only 17% of residential development have impervious coverage of 50% or more
- Less than 3% of the 142 new homes competed since 2013 have impervious coverage of 50% or more

4. Require On-site Detention for Basements Deeper than Nine Feet (9')

Current

The current code does not regulate the depth of basements. New houses are often constructed with deep basements and elaborate sump pump systems to pump the water from the structure. In some cases, where the basement floor is below the elevation of the water table, sump pumps operate frequently, with the flow typically increasing during periods of heavy rain. In some situations sump pumps discharge water even during dry periods and may create conditions where low lying areas stay continually wet.

Considered

Require the installation of additional PCBMPs to promote infiltration and water storage for basements in excess of nine (9') of depth.

☒ Motion to **Not Recommend** the installation of additional PCBMPs for basements whose depth is deeper than nine (9') was approved by a vote of 5-0.

Comments from Committee:

- Infiltration practices are being recommended for all sump pumps based upon item above.
- Not enough data exists to quantify additional storage volume for deeper basements.
- There is not a clear link between basement depth and sump pump activity.

5. Eliminate the Building Coverage Exception for Detached Garages and Front Porches

Current

The current code encourages construction of front porches and detached garages and is intended to enhance the aesthetic appearance of neighborhoods. Detached garages in the rear yard and rear-loading attached garages with a building footprint of 500 square feet or less are not counted towards overall building coverage. In addition, Front porches with a total footprint of 250 square feet or less are not counted towards building coverage.

The maximum building coverage in the Zoning Ordinance is 32% of the lot area. Building coverage is measured as the area of the lot that is occupied by principal and accessory buildings and by structures with a surface area of more than four (4) square feet and a height of 18-inches

(18") or more. All areas beneath a roof are counted for purposes of measuring building coverage, except on R-zoned lots with a lot width of 60 feet or less.

Considered
Eliminate the exceptions that are granted to detached garages and front porches. Removing the exceptions would likely result in less front porches and more attached garages (snout houses).

☒ Motion to **Not Recommend** eliminating the building coverage exception for detached garages and front porches with the condition other Committees concerned about incentivizing additional impervious surfaces be looked at by Plan Commission was passed with a 5-0 vote.

Comments from Committee:

- Consensus of the Committee was that this was an item that should be considered in conjunction with zoning and planning issues.
- This should be looked at as part of lot coverage/open space requirements.
- Committee felt Plan Commission should review this code as it incentivizes an increase in impervious.

6. Require Foundation and Finished Grade Elevations to Align with Adjacent Properties

Current
The Village Code does not include regulations regarding the elevation of the tops of foundations for new houses and additions. In some cases, the foundations are constructed at elevations significantly higher than those of adjacent houses. Since proposed building height is measured from the proposed grade at the building corners, this can result in a house considerably taller than the adjacent properties.

Considered
Require tops of foundations and grades adjacent to homes to be set in line with adjacent properties so as to not unduly direct runoff to neighboring homes.

☒ Motion to **Not Recommend** requiring foundation and finished grade elevations align with properties on either side of the site was passed with a 5-0 vote.

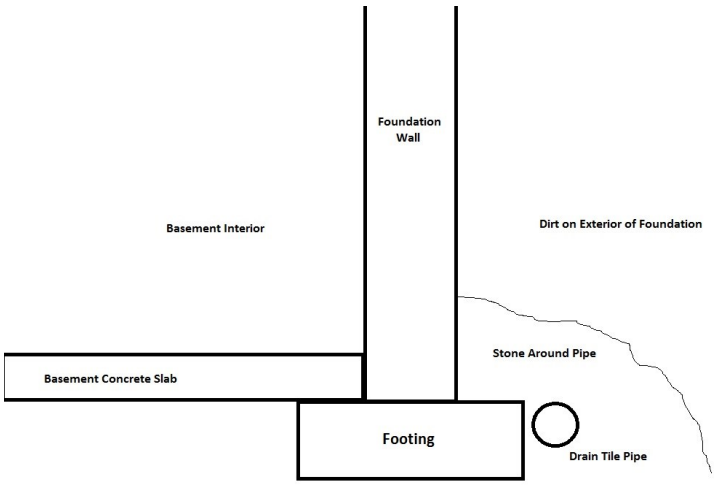
Comments from Committee:

- Limited effectiveness in areas with variable topography
- Overall grading must take into account conveyance (sometimes top of foundation must be raised to provide positive drainage away from existing and proposed structures)
- Inability of design engineer to effectively design a new home to provide positive pitch away from both the new and existing homes.

7. Reduce the Minimum Size of the Foundation Drain Tile

Current

Under the current code, the minimum size of the foundation drain tile is six inches. This is a local code amendment. The International Building Code requires a minimum size of four inches. The six-inch drain tile may carry substantially more water than a four-inch drain tile and increases the amount of water flowing through the sump pump discharge.



Foundation Cross Section

Considered

Reduce the minimum size of the foundation drain tile from six inches (6") to to four inches (4'). The cost of 4" perforated pipe is less than 6", and the 4" perforated pipe is easier to obtain for contractors.

☑ Motion to **Recommend** reducing the required foundation drain from 6" to 4" was passed a 4-0 vote with one member abstaining.

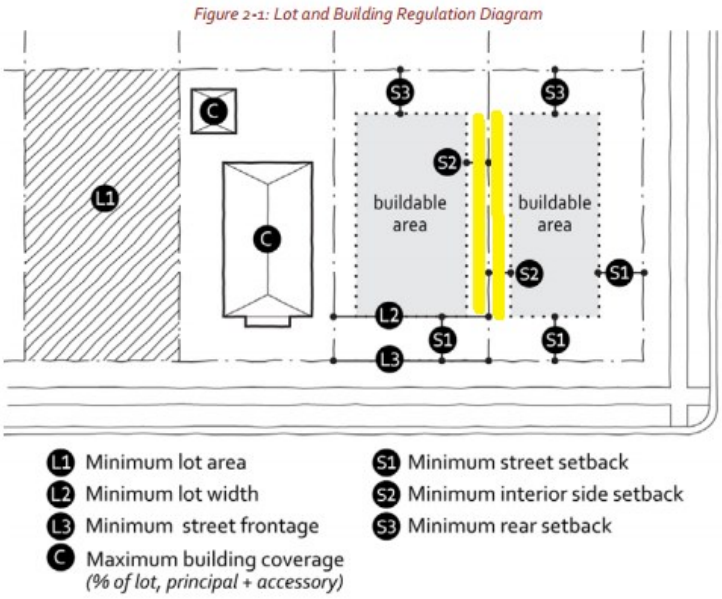
Comments from Committee:

- The Committee consensus was that the four inch (4") pipe was sufficient as this was the standard for all other communities

8. Increase the Required Minimum Interior Side Yard Setback in the R-4 District

Current

The minimum required interior side setback in the R-4 District is five-feet (5') or 10% of the lot width, whichever is greater. Many new single family houses and additions to existing houses are constructed on 50-foot wide lots, resulting in a five-foot (5') side yard setback. Some structures are allowed to encroach into the side yard setback, including, but not limited to fireplaces, bay windows, AC units, and window wells. The typical encroachment allowed for a five-foot (5') setback is 18-inches (18").



Considered

Increase the minimum side yard setback in the R-4 District to six-feet (6') or 10% of the lot width, whichever is greater. In most situations this will result in the construction of homes two-feet (2') narrower, which may result in the home being longer to accommodate the loss in square footage. An additional 1-foot (1') of green space will be provided in each side yard. The encroachment allowed in a six-foot (6') setback is generally 24-inches (24").

☑ Motion to **Recommend** increasing the minimum side yard setback in the R-4 District from five feet (5') or 10% of the lot width, whichever is greater, to six feet (6') or 10% of the lot width, whichever is greater, with special consideration given to corner lots passed with a 3-1 vote.

Comments from Committee:

- Increase space for drainage swales between homes and decrease side slopes
- Increase green space between residences
- Increase open space when there are encroachments from 3.5 feet to 4 feet
- Special considerations be given to corner side yards as the increase would reduce the buildable area for the structure.

9a. Increase the Site Runoff Storage Fee

Current

The Village collects a fee based on the net new impervious for all construction projects. Projects that provide detention (generally subdivisions or commercial projects) are exempt from this fee. Revenues from these fees are placed in the Stormwater Fund. The purpose of this fee is to provide revenue to construct regional storage for runoff, including costs for engineering, land acquisition, construction and operations and maintenance.

Considered

Adjust the fee to account for increases in costs of land acquisition and construction, as well as potential conveyance infrastructure to convey runoff from new construction to regional storage facilities. Staff has not calculated these increases, however, anticipates this fee could increase as much as 50% to account for these additional costs. The typical fee for a new single family house is currently around $800 and, in 2015, a total of $113,157.25 in fees were paid. The typical fee for a new, single family house would likely increase to $1,200.

☑ Motion to **Recommend** the Site Runoff Storage Fee be adjusted to account for increases in the cost of land acquisition and construction on a regularly occurring basis was passed with a 5-0 vote.

Comments from Committee:

- Funds generated could be used to expand the cost share program and/or fund neighborhood stormwater projects
- Incentive to construct less impervious areas
- Fees should be re-evaluated every five (5) years

9b. Increase the Fee in-Lieu-of Constructing PCBMPs

Current

The Village may consider a fee in-lieu-of constructing PCBMPs when the Stormwater Administrator concurs that the construction of such PCBMPs is not practical. The Village has only granted one such variance to date. Funds collected are transferred to the County to construct stormwater improvements. Based upon cost estimates from local contractors, the current fee structure is significantly lower than actual construction costs.

Considered

Modify our Stormwater Code to allow funds to remain within the Village. Adjust the current fee in lieu structure to increase fees to reflect actual construction costs and use the fees collected to fund local water quality improvements within the same watershed the fee was collected.

Motion to **Recommend** an Increase of the Post Construction Best Management Practice (PCBMP) Fee in Lieu to reflect the actual cost of construction and land acquisition and modify the code to allow funds to remain within the Village was passed with a 5-0 vote.

Comments from Committee:

- PCBMPs have limited effectiveness in some instances due to high ground water tables and existing drainage patterns. In those cases, granting a fee in lieu may be considered.
- Align fees with actual construction costs.
- Modify code so funds collected stay within the Village
- Projects constructed from fee-in-lieu may not be constructed immediately or even adjacent to the new construction, so benefit may not be seen by adjacent property owners.
- Continue to require PCMPBs whenever practical

10. Remove Local Post Construction Best Management Practices (PCBMP) Requirements

Current

In 2015 the Village adopted a revision to its stormwater ordinance that requires all developments that result in a net new impervious area greater than 700 square feet install PCBMPs. Examples of these include dry wells, rain gardens or permeable pavers with additional stone base. These regulations were intended to improve water quality and reduce the amount of runoff flowing onto adjacent properties and entering the public portion of the stormwater management system.

Considered

Repeal the requirement that all developments that result in net new impervious area greater than 700 square feet install PCBMPs and revert to the County threshold of 2,500 square feet of net new impervious to require PCBMPs. Staff receives significant concerns from new homeowners,

adjacent property owners, and builders regarding the functionality and aesthetics of PCBMPs. The Village has many areas with clay soils and, as a result, the water in some rain gardens does not infiltrate, resulting in standing water, dead plants, and concerns about mosquitos. On many properties the drywells hold water for long periods of time , making them ineffective. Overflows from some PCBMPs release in a concentrated discharge point, which can result in erosion and soggy ground on neighboring properties. Although difficult to make work for some sites, the PCBMPs do provide a volume of storage and water quality for the property.

☒ Motion to **Not Recommend** repeal of the requirements of the local PCBMP Ordinance was passed with a 4-1 vote.

Comments from Committee:

- PCBMPs provide storage and water quality
- PCBMPs collectively provide a benefit to the Village
- Benefits downstream properties

VILLAGE OF DOWNERS GROVE
Stormwater and Flood Plain Oversight Committee Meeting
June 23, 2016
Downers Grove Public Works Facility
5101 Walnut Avenue, Downers Grove, Illinois

I. CALL TO ORDER

Chair Gorman called the meeting to order at 7:00 PM.

II. ROLL CALL

Members Present: Chair Gorman, Mr. Civito, Mr. Crilly, Mr. Ruyle, Mr. Scacco, Mr. Schoenberg

Members Absent: Mr. Wicklander

A quorum was established.

Staff Present: Nan Newlon, Director of Public Works
Kerry Behr, Development Engineer

Public Present: Mary Jane & Jim Haley, Mike Ricklefs, John Possidoni, Jim Koziol, John Kahovec, Rich Kulovany; Jim Zajicek; Scott Krafthefer; Greg Nammari; Richard Karuhn; Chris Salman; Richard Kus; Kent Conness

III. APPROVAL OF MINUTES – May 12, 2016

Mr. Ruyle moved, seconded by Mr. Scacco to approve the May 12, 2016 minutes as corrected. Motion carried unanimously by voice vote.

IV. PUBLIC COMMENTS

1. Mr. Jim Haley of 4717 Saratoga Avenue explained that the house behind them at 4712 Saratoga is a two-story structure on a 70' lot with an unattached garage. Since the construction of that house, he has experienced water issues on his property. The sump pump at 4712 has a large hose emptying into his yard, and a recent heavy rain resulted in a large amount of water runoff into his yard and family room, which is 3' below ground. The builder told Mr. Haley he should construct a ditch on his side of the property. Mr. Haley believes the builder should do that. He asked the Committee what can be done about the situation.

Ms. Behr replied that she has been to the site and the builder has not increased the amount of impervious area with the new construction. Staff is working with the developer to get the water drained to the front of the construction site. The back yard downspout also impacts the drainage. The high clay content of the soil impacts the drainage as well.

Mr. Haley commented that the developer or landscaper has actually created a little ravine on one side of the 4712 property, and has affected another of their neighbors as well.
Staff will look at the plans to determine where the runoff goes for both the new construction and the existing properties.

2. John Kahavec of 406 Lincoln commented that his story isn't much different than other stories the Committee has probably heard. When new construction comes into an area the water runoff negatively affects the existing homes in that area. He believes it is the newer policies instituted by the Village that has put them on this path. Builders come onto a site, dig down nine or ten feet deep removing all the clay, and using that same clay as backfill to top off the property. He would like to see the Village immediately come up with a policy requiring developers to use an appropriate soil mix as backfill in the new homes. Mr. Possidoni has lived in his home for 15 years. His home was built in 1947, and many of the neighborhood homes are of that age. The Village allows the clay to be dug up, left on top and allows the developers to skip on the sod, which is the case in two of the homes near his home. Those homeowners literally have clay for their front and back yards.

Mr. Kahavec said he has attended Village Council meetings to discuss stormwater and instead the Council discusses fees, how they are going to charge them, and how much money they will collect from the mismanagement of stormwater in the Village. He believes this decision has to be made right now instead of discussions about how residents will be charged $39 a month to manage the problem that the Village created. He said that everything he has read does not address businesses, and looking around the Village he is curious about businesses with massive parking lots, or the car dealerships along Ogden Avenue that have a significant problem right now. He asked what the Village is charging these businesses to help cover the stormwater runoff costs. As a resident he would like to know that the Village has a comprehensive plan all the way around.
It was recommended that Mr. Kahavec speak to someone in the Building Department regarding how issues can be addressed during construction. Mr. Kahavec replied that if he has to talk with all of the staff people in all of the individual departments that might address this issue it would be his full time job. He noted that there are three new houses in his neighborhood, and as a result sump pumps of the older homes are going constantly. He said that this is happening all around the Village. Staff said that is why this Committee is present to meet with property owners who are experiencing these water issues in their back yards or property in general.

Mr. Kahavec said this water issue is affecting the whole area south of Ogden and near Stonewall. He said that the Ford dealership that is moving was required to meet with the residents and they said they would be paving over almost ten acres of property. The Village has come out already to drain water out of that section of land, which is a natural wetland. Part of Ziegler's plan was to do a slow release detention plan for the property. Residents need to know that this is happening before the problem starts, and not wait until it's too late.

Ms. Behr asked Mr. Kahavec to call her because the Ford dealership is required to address all of the issues including stormwater, wetlands, drainage, etc. Mr. Kahavec replied that paving ten acres of property on Ogden Avenue sounds like a pretty serious problem to him.

3. Greg Nammari of 4914 Bryan Place said that on the 14th of the month there was a very big rainfall and the sewer at the bottom of the hill backed up past the sidewalk, and about 90% of his front yard was flooded. They also had an inch of water in their basement. Neighbors said that the water coming down so fast couldn't be handled by the one sewer to bring the water downstream. He said he has lived there a year and a half but the neighbors have lived there 19 years and have told him that flooding and backup problems are getting worse. He also said that they are going to tear down the area across the street from him and build new homes. That is a concern to him and his neighbors. He asked that they find out more information on this. Ms. Newlon suggested he call Public Works to meet with Staff and they can schedule a meeting with him and neighbors.

4. Richard Karuhn of 5134 Lee lives on St Joseph Creek, which he said has turned into St. Joseph River and has ended up in his back yard. They are seeing more and more erosion occurring. In 1962 the Creek was dredged by the County for a 10' wide dredging. The Creek is now 40' wide and in his back yard. It bisects his property. His property has a drop off of six feet to the Creek, and when there's a rain they can visibly see the erosion taking place. Mr. Karuhn said it looks like the Mississippi River during flood stage. He asked whether this Committee addresses the erosion problem. He is familiar with the floodplain map.
Chairman Gorman commented that the County has worked recently on the Creek for some erosion control. Mr. Karuhn replied that the program lasted one year and the State pulled the money. He said that he has two lots side by side for 150' width. His major concern is that the Creek is literally changing its position due to erosion upstream and sending silt down. When the water level drains about 12 hours after a major event you can see swales down the Creek. He noted that during the summer the water is stagnant. He said he has photo documentation for the past ten years of erosion, and does not know what to do or who to speak with.

Ms. Newlon responded that last year Staff did a complete survey of St. Joseph's Creek and is working with the County to try and free up some money to continue working on problem areas identified in that section of the Creek. Mr. Karuhn said that the section along Lee Avenue, before Belmont, is the worst that the County inspectors have seen.

Chair Gorman commented that as far as funding for erosion control, they are fortunate to have had some assistance from the Village and County and hope to see that continue. He said it is a costly project involving construction of structures to stabilize the area. It takes time and money. Mr. Karuhn said they had a quote from a contractor for $10,000 to do 150 feet on one side of the Creek. It is difficult to see thousands of dollars being flushed away with every rainstorm. Ms. Newlon informed Mr. Karuhn that every year in reviewing the Village's budget there is capital budgeting for stormwater projects. She advised him that budget meeting would occur in October.

5. Richard Kus of 1852 Grant Street said their house was built in 1976. He has two lots resulting in a lot width of 250' and a depth of 567'. Water comes down the area in large volumes. He explained that a ditch was placed in front of his house; however, the adjacent lot has a problem caused by the ditch that is eroding and getting close to his gas and electric lines. They will soon be exposed. The other problem is that they have a drain next to their property that is supposed to take the water into a larger pipe. It does not flow into the larger pipe but goes along the driveway, and roadway. It's affecting his neighbors' yard as well. They'd like someone to come out and look at it, especially after a larger rain

Ms. Behr said she would have someone come out and see what is happening there. Chair Gorman asked whether this property is the same wetland they are referring to with regard to the Ogden Avenue issue. Mr. Kus said it was, and they had a contract with a developer to take the back portion of his property. Chair Gorman instructed Mr. Kus to bring that up when staff comes out to investigate the site.

6. Mr. Kahavec spoke again, saying that something needs to be done with all the construction that is creating the problems for current residents. They have to correct the mismanagement of the stormwater in the first place, and he hopes they address that. Chair Gorman replied that when projects are going before the Plan Commission pubic hearing process and variances are requested, that is the time that the public should bring up these issues.
Mr. Kahavec responded that it would be nice if the Village was level and all houses were at the same level, but his neighbor's property is two feet higher than his. He would hope residents could count on the Village to be involved in the variances and prevent problems for the existing residents. He will attempt to make as many meetings as he can.

7. Jim Zajicek of Clarendon Hills said he is a builder and has a project in Downers Grove. He would rather contribute to a comprehensive stormwater plan as a builder. He worked with seven or eight communities in the western suburbs, and rather than contribute money to a system that doesn't work, he would consider contributing $10,000 toward a comprehensive stormwater plan. It would address issues better than digging individual holes and filling them up with gravel. He said he would rather see that money given to the Village to improve the existing stormwater system, or a type of "deep tunnel" project. If they are paying for things that don't work it's also frustrating for the builders. He's had frustrating developments in Hinsdale and Western Springs as well as other communities. He'd rather see the money go toward a project that would work on a larger scale than on a smaller scale. If every builder is held to the same standard it creates an equal playing field.

V. NEW BUSINESS

A. Proposed Amendments to Stormwater & Zoning Regulations

Ms. Newlon provided background information on stormwater in the Village going back to the 1970s. She then summarized the 17-page staff report, which had been distributed to the members of the Committee.

Stormwater runoff generated by new home construction, additions to homes and construction of accessory structures that comply with current Village regulations sometimes negatively impacts some adjacent properties. The negative impacts, primarily standing or ponding water and saturated ground conditions, are generally caused by:

- New impervious area constructed in established neighborhoods that lack adequate stormwater management systems and infrastructure
- Significant grade differences causing increased stormwater runoff from the construction site to adjacent properties
- Sump pumps that serve large, deep basements discharging substantial amounts of water
- Lack of stormwater infiltration into the ground due to high clay content in soils

To address the issue and causes the Village staff has identified the following changes to regulations for review and consideration by the Stormwater and Floodplain Oversight Committee:
Require the following for the construction of all new homes; and additions and accessory structures that result in a net increase of 700 square feet or more of impervious area:

- stormwater detention with an outlet that connects to an established minor drainage system in the right-of-way (storm sewer, ditch, creek, etc.) or other similar approved location
- sump pumps to discharge into a minor drainage system, detention area, rain garden, dry well or cistern
- additional detention capacity to manage sump pump discharge for basements with a depth of greater than nine feet
- foundation and finished grade elevations to be aligned with the properties located on either side of the site
- Repeal the current requirement for the construction of Post Construction Best Management Practices (PCBMP's) for construction resulting in 700 square feet or more of net new impervious area (return to the 2,500 square foot threshold)
- Increase the site runoff storage variance fee and the fee in-lieu-of constructing PCBMP's
- Reduce the minimum drain tile size requirement from six-inch (6") diameter to four-inch (4") diameter
- Increase the minimum required side yard setback in the R-4 zoning district to the greater of six feet (6') or 10% of the lot width
- Include detached garages and front porches in the calculation of building coverage (eliminate the exception for these items currently included in the code)

Ms. Newlon emphasized that there is no silver bullet that will work in every situation. Each of the options presented is intended to reduce the amount of stormwater runoff negatively affecting adjacent properties and to reduce the amount of staff time spent responding to resident calls for service regarding stormwater runoff. She noted that in 2015, the Village adopted a revision to its stormwater ordinance that requires all developments that result in new impervious area of greater than 700 square feet to install Post Construction Best Management Practices (PCBMPs) to mitigate the stormwater impacts of new development on neighboring properties. Examples of

these include dry wells, rain gardens or permeable pavers. These regulations are intended to improve water quality and reduce the amount of runoff flowing onto adjacent properties and entering the public portion of the stormwater management system.

Chair Gorman suggested opening the floor to discussion from the Committee. Ms. Newlon commented that Staff's intention is for people to be satisfied with the Village's response to complaints. Properties that never had water problems in the past are now facing flooding issues. Chair Gorman commented that the Committee would be better spent in looking at the design of construction. Sump pumps are an area they hear complaints about constantly. Downers Grove doesn't have any requirements. Residents are complaining that they have more water in their yard since the onset of new construction, and that has to be addressed. Somehow drainage paths are not responding to the conveyance of the water, which has been somehow blocked. The issue appears to be more important than simply grade differences. It is important that there is a path established for the water to travel without negatively impacting existing properties. There was also discussion of the importance of consideration tree preservation and how that impacts the design of a site.

Ms. Behr responded to a question regarding requiring builders to measure the release rate both pre-development and post-development, saying that this is not a requirement now within the Code. Where possible they attempt to determine the discharge rate for the front half of the house draining toward the street, and the back half of the house draining toward the back yard. She said that Staff attempts to match the existing drainage patterns when possible. She noted that some communities do require this; however, she has spent many years doing design and consulting work and has found that modeling isn't always accurate. They can have a situation where the same square footage of impervious area exists, yet there is a change in the amount of flooding to surrounding existing buildings.

As to what the engineer sees in terms of drainage from lot to lot, Ms. Behr said that they look at the front half and the back half and attempt to maintain the existing drainage patterns. She referenced the use of rain gardens in some cases, where the water flow is concentrated because the rain garden has a limited capacity and when it overflows, it may be concentrated to one particular spot. She further responded that the Village attempts to encourage designers to get as much water flow out to the street as possible as a general policy, but it doesn't tell them to tie directly into the storm sewers. She noted that in some cases when they see downspouts going out to the back of a property, they can request that they be buried and redirected out to the front because perhaps the lot grade is not conducive to improving the drainage.

As to what is policy and what is practice, Ms. Behr replied that there is nothing specifically stated in the Code as to directing builders concerning lot drainage. She noted that staff spends a good amount of time on every single-family home, and in some cases, builders complain that staff is spending too much time analyzing them. Ms. Behr said they do spend a fair amount of time because if patterns are changed, residents come back to staff saying that the property did not used to drain that way before construction, and staff wants to try and match patterns as closely as possible.

There was some discussion with the County regarding standard dry well design and whether the size should be increased and placed at a depth below grade. The subject of soil borings was also discussed, noting that soil borings provide only a snapshot of the water level, and often it is not appropriate for design purposes. There is no specific regulation as to the depth of the borings and this could be a matter for future discussion.

It was noted that often a neighbor might see that the house next door to theirs is much higher, and they'll expect to be flooded; however, often because of how the next door house roof is sloped, or the lot grading or location of the downspouts, the water might drain smoothly with no runoff issues. This is not always an intuitive issue.

As to the Village's intent for stormwater control, the intent is not to create a situation whereby the Village can handle the 100-year event. There is a limit as to what people can be charged to create a balanced stormwater system. Unless the Village can afford to create a "high and dry" situation, there will still be wetness depending upon the kind of event that occurs. There are portions of the Village that do not have an infrastructure to handle the type of construction that's occurred over the years. Newer homes possess larger footprints than many of the older homes in the Village.

With regard to how developers removes soil prior to construction, and how that soil is replaced on the property upon completion, it was mentioned by a member of the Committee that removing topsoil and replacing it with clay is not an acceptable practice and should be addressed by the Village in a timely manner. Topsoil should be replaced and sod used to finish off the front and back yards. Preservation of drainage paths should be put on the list of issues. Lack of infiltration doesn't address that.

Resident expressed concern about builders changing grades and not putting back good black dirt. Chair Gorman responded that it's hard to do but we do require at least 6" of topsoil to be put down.

Mr. Scacco asked a general question, why can't we require the discharge from a site after it's built is the same as before it's built and take into account a regional bypass even if the engineering fees double. Aren't they still going to be much less than $10,000? I don't understand why it can't have the same hydraulic characteristics as before it was built. Staff responded it could be an option that we consider. However, we do have a number of vacant lots, that wouldn't be able to be developed or would need detention to match existing release rates. Chair Gorman said this means that you have retention instead of detention.

Chair Gorman further explained, that's what I was getting at for sizing the sump pump for the depth. There is a requirement that Council passed, increase of 700sf of impervious requires BMPs and having it be part of the approved plans so it's part of the design and a known cost. Staff explained that if we find a sump pump to be active, we require an additional BMP for the discharge. We have them note this on the plans if sump pump is found to be active, an

additional BMP is required. It's sized for 25% of the volume of what would be required for the house. Also have code requirements for nuisance problems caused by sump pumps. Typically 80-100cf of additional storage.

Chair Gorman said this is where I am advising a drywell or chamber as a known and planned cost instead of something unknown. It should be more formulaic. Jim Z, local builder, stated in the real world drywells don't work. The reality is after CO is issued, homeowners pump it into the sanitary. What you are trying to solve with $10k system ends up taxing the sanitary system.

Chair Gorman stated that for successive rains, they may not work, but what's the better plan? You need volume somewhere. Staff explained this is the problem they are having withdrywells, there is no conveyance system to connect to. No storm sewer, no ditches.

Mr. Schoenberg made a follow up to Mr. Scacco's comment. He don't like the flow speed rates, everyone ends up with a big volume of water on their property. Typically to keep that rate, you have a very tiny outlet, a glorified straw. Whatever it is we propose, it has to be effective, it can't be too disruptive, or too costly, or people won't do it, and must be easy to maintain. If you have a big volume of water, tiny outlet, it won't be maintained people and will try and avoid using it. We are talking large areas where a lot is turned over and small amounts of water detention. This would be different if we had porous soils everywhere, but we don'. That's why requiring these features on every single lot, for relative small areas of development, won't meet any of those criteria. I would hesitate to require these and mind you, in other capacities, I do require these in some cases, but only for sump pumps and not for an increase in impervious. Sump pump discharges are different and should be treated differently. Staff Behr explained the concern of residents trying to maintain very small restrictors, the size of a pencil. Leaves, grass clippings, would clog it. Need to keep it clean. Another concern is the lack of a gravity discharge would require a pump with a back up power source, a pump with natural gas back up to make sure it operates.

Chair Gorman thought this is definitely not the first option. In 20 years from now, pumps will burn out. But we've run out of options. I think we are focusing on local impacts, I think we have talked about the larger downstream floodplain issues. Our discussion here is running parallel to the comprehensive plan committee. Staff stated that we should go through the potential revisions to see where staff should focus time.

Option 1: - Single Lot Detention w Conveyance System
Mr. Scacco wanted to know from builders if drywells don't work, what else does work? Jim Z. stated he has put in a large drywell in Hinsdale, first rain the drywell filled up, so Village had us put a connection into the storm sewer. He's unsure what happens downstream, but that new lot is good. Chair Gorman stated option for detention in backyard isn't going to help and would be a long term concern on how Village would maintain these systems and inspect them. Mr. Scacco felt otherwise and would like to have retention considered. Staff explained the size of

detention on a typical R-4 lot would be 1800 cubic feet of storage. A 20'x20'x4.5' vault in the back yard, almost the entire back yard.

Jim Koziol, a local consultant, stated other municipalities use detention, but you have storm sewers to connect to. But in general the BMPs don't work. Builders would rather pay a few dollars and let Village buy or build something. However, these are separate issues. One is detention, and one is for BMPs, which the County treats as two separate issues. Every time I put my stamp on the plans, I know the BMP won't work, but it will get me a permit. This starts with feds, goes to the County, and is passed to Village. It won't take care of your stormwater issues.

Chair Gorman explained the Contech systems, etc. have their place and can be used for detention or, more appropriately, retention. It's a way to get 100% of the effective volume. I think the first priority is to convey the water offsite to a ditch or sewer, then look at a drywell. A BMP has to be handled separately. First I consider, can I get water off to a storm sewer or ditch so it won't cause problems via grading or a pipe sometimes with a back flow preventer, and if that fails, then a drywell kicks in. Drywell is not the best solution, but it helps some. It catches some water. And it does help with nuisance issues when neighbors complain their yard is wet, can't use yard, dog is muddy, it's not flood control. It also acts as a dis-incentive, to building a detached garage, and extending a driveway, or adding a patio. That's why we are looking at open space requirements. You can pave the whole thing. There is nothing in our code except the 700sf to quantify that. That's why a simple ordinance could put some limit on it cumulatively.

Mr. Koziol explained it would be nice if everyone was on a level playing field and just paid the money instead of tweaking numbers to have one site not provide BMPs and the next site needs them. Chair Gorman said I think we will take that comment, if the Village can take money and buy property that's one way to go. It doesn't address issue between neighbors.

Mr. Scacco said this Village has different problems in different areas. I think all of these solutions should be brought to bear. But we have different zones, some places that don't have low lying areas and you can't get the water to the system, and the system is overtaxed. If you can do those things, there is no need for on-site detention for those lots, as a third alternative, retain water on-site, maintain entry and discharge points in existing points, one of those three tactics will get rid of the issues between neighbors. I think all of this becomes extra stuff. Let water that comes into you site still come to your site and maintain the amount of water coming off of your site to existing conditions.

Staff explained the Village is variable and complains vary. For example, recent drainage complaints on new homes found the change in existing and proposed impervious to be all over the place (33% to 36%; 22% to 23%; 30% to 29%; 9% to 14%; 17% to 40%). We can't find consistency, defining zones could be difficult. It looks good on paper and then part way through design we see problems.

Mr. Crilly was concerned about impervious at ground level and if the development calculating amount of dirt and clay below displaced for the basement. Staff explained that is not part of the review.

Chair Gorman stated it sounds like what may work best is a decision matrix. We are not a one size fits all community. Some have ditches, some have sewers, some have a curb inlet, some flows down the street. To help guide the process, it should be understood by both sides equally. Does it have drainage in back yard? Maybe a drywell, or infiltration trench. No other community has this complicated of a system.

Staff said it sound like a combination of the options. Committee has engineering concerns with top of foundation requirements. Mr. Schoenberg stated to throw out the top of foundation option as it only works with uniform sloped land. Allowing neighbors to comment on the design choice of others is a really bad idea. Chair Gorman agreed.

Local code 6" foundation drain may be increasing sump pump drainage.
Staff explained this to be a local amendment. Mr. Schoenberg stated the volume of water is greater from the runoff, but the sump pump runoff can last for days and days. Staff explained the sump pumps are long term nuisance, the rain has stopped, but why is yard wet 7 days later? Chair Gorman thought the size of foundation is immaterial. I wouldn't want to encourage water backing up against a foundation.

Side yard setbacks in R-4.
Staff explained currently it is 5' or 10%, whichever is larger. Proposing 6' or 10%, whichever is greater. This adds more green space, but house will likely just get longer. Chair Gorman stated five feet is small. With a window well you get three feet, side yard swales are calculated well, icy ground, many of our flood problems come from flooding in window wells, lack of fire access between homes. Mr. Schoenberg stated it preserves the overall conveyance that has been missing and we haven't paid enough attention to conveyance. We have identified low spots carefully, and pipes, but not how water gets from low spots out. Identify them, preserve them. But having wider side yards increase the chance to preserve them. Mr. Koziol suggested having the Village prepare a document to coordinate with adjacent neighbor's to install a mutual side yard swale. Chair Gorman thought we could prepare a form stating importance of drainage, but not get involved with negotiating of the work. I hate to put this on the builder, go to each home owner on the side, have a common swale. Suggested a sign off sheet to each neighbor to make a better swale now.

Incentives for garages in rear and front porch.
Staff explained building coverage is calculated based upon house, accessory structures or items 18" in height or greater. However, if you have a detached garage, you can subtract 500sf. It was an incentive item done to reduce the snout houses and give a nicer front look. Front porch, you get a 250sf reduction, again aesthetics. Done as part of building permit process. No maximum lot coverage, but a building coverage. Chair Gorman stated he is less inclined to talk about aesthetics and rather what affects stormwater. I would rather talk about open space

requirements and retention and detention. The way that the Ordinances are addressing some of those things are not adequate. We are very glad to get the 700sf, we wanted 500sf, we are more concerned about volume and rate of runoff instead of front porches. I don't think we should be talking about it. This is building coverage, not lot coverage. Ms. Newlon stated you won't make this decision; it would go to Plan Commission if you thought it should be looked at.

Mr. Scacco: I would like to add a few things. Look into requiring discharge points to match the existing site, both in location and in sheet and concentrated flow, in situations where you can't connect to storm system. Another thing, flow through site should be maintained. You need to pass that flow. I think all of these things tie together.

Staff passed out various handouts that showed lot coverage for all Village property, then it breaks it down for R-1, R-2, etc. It shows how much pavement is down. The second sheet showed impervious for just newer homes that have been closed out since 2013. Shows most of our homes are between 30-50% impervious. New single family homes are where staff is seeing the most amount of complaints.

Ms. Newlon stated Council did approve a variance last month at 174 63rd, stormwater medallions have been placed, and there is one new item. Ms. Behr handed out info for an appeal for a violation we had issued for fill within a FEMA floodplain.

Chair Gorman stated we need to determine schedule of next meeting. Would the 20th of July be possible? Any further public comments:

Kent Conness from 1846 Grant: Stormwater utility tax calculations? I would love to see how this is calculated and thought it could be improved, maybe take a ratio. Chair Gorman stated yes we have a stormwater utility and that was an option looked at. Mr. Conness continued, everything we saw and heard was about residents. Is there a Village Comprehensive plan to deal with water? Chair Gorman stated yes, the Village did a dozen years ago, and then another more recent one done. The WIIP in 2007 and most recent 2014 Stormwater Plan. But what we are talking about tonight is nuisance, those plans are more about flooding of structures. This is really focused on nuisance. Our staff works within the Countywide ordinance. It's more we can give you in one sheet. Start on the website and staff can help you with more.

Ms. Newlon stated that Dan asked about status of referendum questions, first reading on Tuesday, and slated to be voted on next Tuesday at Council. It is about questions regarding how revenue is collected for stormwater.

VI. Staff Report
No staff report

VII. Public Comments
No further Comments

VIII. Old Business

No Old Business

IX. Adjorn

Mr. Schoenberg made a motion, seconded by Mr. Scacco to adjourn the meeting at 9:30 p.m. Motion carried by voice vote of 6-0.

VILLAGE OF DOWNERS GROVE
Stormwater and Flood Plain Oversight Committee Meeting
August 11, 2016, 7:00 p.m.

Downers Grove Public Works Facility
5101 Walnut Avenue, Downers Grove, Illinois

I. CALL to ORDER

Chair Gorman called the meeting to order at 7:01 p.m. A roll call followed, and a quorum was established.

II. ROLL CALL

Members Present:	Chair Gorman, Mr. Crilly, Mr. Ruyle, Mr. Schoenberg, Mr. Wicklander
Members Absent:	Mr. Scacco, Mr. Civito
Staff Present:	Nan Newlon, Director of Public Works Julie Lomax, Development Engineer Kerry Behr, Development Engineer
Public Present:	Mr. Don Rickard, 4735 Main Street, Downers Grove

III. APPROVAL of July 20, 2016 Minutes

Mr. Wicklander made a motion, seconded by Mr. Crilly, to approve the June 23, 2016, minutes. **Motion carried by a voice vote 5-0**.

IV. PUBLIC COMMENTS

None – Mr. Don Rickard introduced himself.

V. NEW BUSINESS

None

VI. STAFF REPORT

None

VII. OLD BUSINESS

Staff and committee talked about the potential code changes to be considered to address stormwater issues in the Village. The SW&FPOC reviewed the previous discussions on each item. Then each item was voted on as either "Recommend" or "Not Recommend" as a potential code change for consideration of the Village Council. Bullets as to why or why not

this item was recommended based upon information from this meeting and the June 23, 2016 meeting are included.

1. Increase the Minimum Required Side Yard Setback in the R-4 District
Staff read current requirements which state, the minimum required side yard setback in the R-4 District is five feet (5') or 10% of the lot width, whichever is greater. Many new single family houses and additions to existing houses are constructed on 50-foot wide lots, resulting in a five foot (5') side yard setback. In some cases, the five foot (5') side yard does not provide ample room for stormwater drainage improvements and negatively impacts adjacent properties.

Mr. Schoenberg wanted to know what the allowable encroachment into the sideyard setbacks would be, because if we increase the side yard, but then allow a larger encroachment, we wouldn't be gaining much in terms of conveyance. Mr. Ruyle expressed concerns with corner lots. This may result in a less than allowable building space.

Motion to **Recommend** the Minimum side yard setback be increased in the R-4 District to six feet (6') or 10% of the lot width, whichever is greater, with special consideration given to corner lots, was made by Mr. Schoenberg and seconded by Mr. Ruyle. **Motion passed with a 3-1 vote with one person abstaining from voting.**

Discussion Points/Reasons for recommendation:

- Increased space for overland flow path/drainage between homes
- Increased green space between residences

Considerations:

- Special considerations be given to corner side yards as the increase would reduce the buildable area for the structure.

2. Maximum Impervious Area / Open Space Requirements

It was decided to discuss this item at the end of the meeting.

3. Require Sump Pumps to Connect to a Minor Stormwater System or PCBMP
Staff explained that under the current code, sump pumps are required to discharge onto yards with a minimum setback of 20 feet from downstream lot lines. Staff finds sump pumps are often very active after new construction. In many cases, sump pumps meeting code requirements still discharge significant amounts of water which negatively affects adjacent properties. In these cases, the Village policy is to require the sump pump to discharge into a PCBMP. When feasible, these systems overflow to a minor stormwater system. Staff explained how the additional BMP is sized. Chair Gorman and Mr. Schoenberg, suggested that any additional BMP be placed outside of easements, outside of overland flow paths. Mr. Ruyle likes making these known costs up front and keeping it black and white. He advises that the wording of the motion needs to be re-worded so it's not a choice of connection, but a requirement to construct the infiltration practice with an

optional connection to a minor stormwater system. These should be required for all development projects that install a sump pump.

Mr. Ruyle expressed concerns that developments may try to avoid installing a sump pump, in order to avoid the requirement to install an infiltration practice. Staff stated they would investigate and confirm that sump pumps are required.

Motion to **Recommend** the Requirement of an Infiltration practice for all sump pump discharges with an option to connect an overflow to an established minor drainage system was made by Mr. Ruyle and seconded by Mr. Schoenberg. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for recommendation:

- Reduction in sump pump discharge on adjacent properties
- Require it up front so it's a known cost to builders instead of a last minute add on

Considerations:

- Not all areas in the Village have storm sewer or ditch for the overflow to be connected; in some cases it may overflow towards the neighbor's
- Must be placed outside of easements
- Must be placed outside of overland flow paths

4. Increase the Site Runoff Storage Fee

Staff explained that under the current code the Village collects a fee for added impervious for all construction projects that do not provide detention. Revenues from these fees are placed in the Stormwater Fund. The current fee ranges between $0.565 per square foot to $0.71 per square foot of impervious area, depending on the watershed in which the project is located. The typical fee for a new single family house is $800. In 2015, a total of $113,157.25 in stormwater runoff fees were paid. The purpose of this fee is to provide revenue to construct regional storage for runoff and it includes costs for engineering, land acquisition, construction and operations and maintenance. The Village may consider increasing the fee to account for increases in the cost of land acquisition and construction, as well as potential conveyance infrastructure to convey runoff from new construction to regional storage facilities.

Committee felt this concept was similar to an impact fee. Mr. Ruyle was concerned about those sites that do not discharge into any Village system, and hold their stormwater on site due to poor drainage. Staff explained these fees were determined over 10 years ago and based upon detention costs for each watershed, and are currently collected.

Motion to **Recommend** the Site Runoff Storage Fee be adjusted to account for increases in the cost of land acquisition and construction on a regularly occurring basis was made by Mr. Schoenberg and seconded by Mr. Crilly. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for recommendation:

- Funds generated could be used to expand the cost share program and/or fund neighborhood stormwater projects
- Incentive to construct less impervious
- Should be re-evaluated every five (5) years

5. Increase the Post Construction Best Management Practice (PCBMP) Fee in Lieu
Staff explained that the current code allows the Village to grant a fee in lieu to applicants that demonstrate they are unable to provide the required PCBMPs on-site. The Village has only granted one such variance in the past. Current funds collected are given to the County to construct improvements. Staff has found the fees collected are significantly lower than actual construction costs. The Village may consider modifications to the current fee in lieu structure to increase funds collected and allow these funds to remain in the Village.

Staff explained that all sites have found a way to store the required volume and treat the pollutants of concern, with the exception of the one site. Staff explained that currently when someone constructs a BMP, they are required to determine the Estimated Seasonal High Water Level (ESHWL) and ensure that the BMP is constructed above that point so as to be effective. If the Village elected to modify the structure of the fee in lieu and collect the money, those funds would need to be used by the Village within the watershed and would not necessarily be adjacent to the new development.

Mr. Wicklander felt the fee should be in line with actual construction costs. Mr. Crilly was concerned that granting the fee-in-lieu doesn't provide any immediate relief to adjacent owners.

Motion to **Recommend** the Increase the Post Construction Best Management Practice (PCBMP) Fee in Lieu to reflect the actual cost of construction and land acquisition and modify the code to allow funds to remain within the Village for future use was made by Mr. Ruyle and seconded by Mr. Crilly. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for recommendation:

- PCBMPs have limited effectiveness in some instances due to high ground water tables and existing drainage patterns. In those cases, granting a fee in lieu may be considered.
- Align fees with actual construction costs.
- Modify code so funds collected stay within the Village
- Maintain the currently policy that PCBMPs must be provided whenever possible.

Considerations:

- Projects constructed from fee-in-lieu may not be constructed immediately or even adjacent to the new construction, so no benefit would be seen by adjacent property owners.

6. Require Additional PCBMPs for Basements Deeper than Nine Feet (9')
Staff stated that new houses often has deeper basements than existing homes, and thus more active sump pumps. The current code does not regulate the depth of basements. New houses are often constructed with deeper basements than older houses and can require multiple or extensive sump pump systems to manage groundwater. In some cases sump pumps may run continuously, even during drier periods, and volume will increase during periods of rain. This often creates a condition where low lying areas stay continually wet from constant discharge.

Mr. Schoenberg stated with the proposed change to sump pump discharge above (requiring PCBMPs for sump discharge), there is no need for this new code amendment. Mr. Ruyle, asked if staff can quantify how much additional water is generated from deeper basements. Staff said as it's groundwater we are unable to quantify. Mr. Wicklander felt not enough information and statics are available to make this recommendation.

Motion to **Not Recommend** Additional PCBMP's for deeper basements was made by Mr. Ruyle and seconded by Mr. Wicklander. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for not recommending:

- Infiltration practices are being recommended for all sump pumps based upon item #2above.
- Not enough data exists to quantify a required additional storage volume for deeper basements.

7. Require Foundation and Finished Grade Elevations to be Aligned with the Properties Located on Either Side of the Site
Staff explained that the current Village code does not include regulations regarding the elevation of the tops of foundations for new houses and additions. In some cases, the foundations and adjacent grades are constructed at elevations significantly higher than those of adjacent houses and overall building height is measured from the proposed grades.

Previous discussions by committee indicated such a requirement would not allow the design engineer to effectively design a new home to provide positive pitch away from both the new and existing homes.

Motion to **Not Recommend** Requiring Foundation and Finished Grade Elevations to be Aligned with the Properties Located on Either Side of the Site was made by Mr. Schoenberg and seconded by Mr. Crilly. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for not recommending:

- Limited effectiveness in areas with variable topography
- Overall grading must take into account conveyance (occasionally top of foundation must be raised to provide positive drainage away from existing and proposed structures)

8. Require On-site Stormwater Detention for New Residential Development
Staff explained that under the current Village code, stormwater detention must be provided for new construction with 25,000 square feet or more of net new impervious area. Proposed changes would require on-site detention for all single family homes. Staff summarized some of the costs and site planning issues to SWFPOC.

Cost for the system would vary between $11,000 and $22,000, that cost does not include a conveyance system. A typical single family home would require a detention vault 20' x 20' x 4.5' deep. Easements would be required over the system and the outlet. Homeowner's would be required to do maintenance to keep the system operating and the outlets will be prone to clogging due to small restrictor size, comparable to a pencil in diameter. Village staff would need to regularly inspect the system.

Motion to **Not Recommend** Requiring On-site Stormwater Detention for New Residential Development was made by Mr. Wicklander and seconded by Mr. Schoenberg. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for not recommending:

- High construction costs
- Lack of infrastructure throughout the Village for the detention system to outlet
- Significant maintenance for homeowner to ensure system remains functional.
- Numerous inspections from Village staff needed during construction and after
- Easements will be required for the detention and the connection/conveyance which may cover a large portion of a property

9. Remove Local PCBMP Requirements
Staff stated that in 2015, the Village adopted a revision to its stormwater ordinance which requires all developments that result in new impervious area of greater than 700 square feet to install PCBMPs. Examples of these include dry wells, rain gardens or permeable pavers with added base. These regulations are intended to improve water quality, to mitigate the stormwater impacts of new development on neighboring properties, and to reduce the amount of water entering the public portion of the stormwater management system.

Mr. Schoenberg stated he felt that keeping the requirement doesn't seem like a good use of staff time. Feels it's not an effective drainage facility. He suggest modifying it to 2,500sf. To require the BMP for 700sf, is over kill. Chair Gorman felt it does provide some benefit to the local drainage system. Mr. Wicklander stated we made the change to the code, to collectively make an impact to the Village and the BMP requirement should stay in place. It will help the Village in the future. Mr. Schoenberg felt that staff gets most of the calls based upon water quantity, not water quality. Chair Gorman felt the local requirement is a good incentive for people to keep the new development under 700sf.

Motion to **Not Recommend** repeal the requirements of the local PCBMP Ordinance was made by Mr. Crilly and seconded by Mr. Ruyle. **Motion passed with a 4-1 vote.**

Discussion Points/Reasons for not recommending:

- PCBMP provide storage and water quality
- Benefits downstream properties

Considerations

- Some homeowners are un-happy with performance of their PCBMPs
- Some adjacent property owners are un-happy with outlets of neighbor's PCBMPs

10. Eliminate the Building Coverage Exception for Detached Garages and Front Porches
Staff summarized that the current code regulates building coverage only. It some cases it does not include detached garages in the rear yard and rear-loading attached garages with a building footprint of 500 square feet. Front porches with a total footprint of 250 square feet or less are also not counted towards overall building coverage as well. However, it does not impact how stormwater runoff fee is computed.

Mr. Ruyle felt this encourages a longer driveway with more pavement and that we should discuss this as part of lot coverage. Staff explained that we will regulate that for stormwater requirements. Mr. Wicklander stated we should not be voting on it, as it doesn't impact stormwater. Mr. Ruyle felt this encourages an increases runoff.

Motion to **Not Recommend (No Opinion**) Eliminate the Building Coverage Exception for Detached Garages and Front Porches was made by Mr. Schoenberg and seconded by Mr. Ruyle with the condition other Committees concerned about incentivizing additional impervious surfaces be looked at by Plan Commission. **Motion passed with a 5-0 vote.**

Discussion Points/Reasons for not recommending:

- Consensus of the Committee was that this was an item that should be considered in conjunction with zoning and planning issues.
- This should be looked at as part of lot coverage/open space requirements.
- Committee felt Plan Commission should review this code as it incentivizes an increase in impervious.

11. Reduce Minimum Foundation Drain Tile Size Requirement
Under the current code, the minimum size of the foundation drain tile is six inches. This is a local code amendment. The International Building Code requires a minimum size of four inches. The six-inch drain tile carries substantially more water than a four-inch drain tile and increases the amount of water flowing through the sump pump discharge.

Committee asked if this has an impact to stormwater. Staff stated they are unsure as it's groundwater; however, a larger pipe may bring in more water to the sump pump. Chair Gorman stated he talked with Lombard's building inspection staff, who stated 4" is typical and sufficient.

Motion to **Recommend** Reducing the required foundation drain from 6" to 4" as it has no discernable performance difference was made by Mr. Schoenberg and seconded by Mr. Ruyle. **Motion passed with a 4-0 vote with one member obtaining.**

Discussion Points/Reasons for recommendation:

- Committee felt 4" was sufficient and typical

12. Maximum Impervious Area / Open Space Requirements

Staff explained that currently the Village regulates the maximum building coverage in the Zoning Ordinance - 32% of the lot area. Building coverage is measured as the area of the lot occupied by principal and accessory buildings and by structures with a surface area of more than four (4) square feet and a height of 18 inches or more. Driveways, patios, and some decks are not included in this calculation, which can add significantly to the amount of stormwater runoff from a property. The Village does not currently have Open Space Requirements. If someone wanted to pave the entire backyard and meet setbacks, this can currently be done.

Chair Gorman stated this can either be an open space requirement or maximum impervious. Staff read some of the adjacent communities open space/lot coverage standards. Chair Gorman stated that even if PCBMP's are put in, you can still have impacts to neighbors. Overall the developments have cumulative impacts. Within 50 or 100 years Downers Grove will be built out and redeveloped and we need to consider regulations now.

Mr. Schoenberg stated each community defines impervious differently in terms of what's included. We will have to look at small lots differently than large lots because each lot needs to have a driveway and a sidewalk to front door.

Staff explained that Council would like to act on these recommendations in September and passed out information about current lot coverage on various zoning districts for both the entire Village and for recent new single family homes. Chair Gorman stated if a threshold wasn't put in place, for each 10% increase in impervious, a 6% increase in runoff and volume would be seen. This is per a study done for Downers Grove about ten years ago and the subject of a Stormwater Magazine article. Reasonable limits need to be established and we can start with what adjacent communities do. Existing properties would be grandfathered in.

For the next meeting Committee asked that staff bring lot sizes for each zoning district for discussion. Committee feels that lot coverage is important, but further research must be done to establish those limits.

Motion to **Recommend** the concept of establishing a maximum lot coverage and/or open space regulation for residential property within the Village that varies based upon lot size, considerations must be given to the definition of open space and pervious/impervious areas and how existing properties will be handled was made by Mr. Ruyle and seconded by Mr. Crilly. **Motion passed with a 5-0 vote with one member abstaining.**

Discussion Points/Reasons for recommendation:

- Definition of impervious must be established
- Definition of open space be established
- Majority of all existing residential development is between 20% and 50% impervious coverage
- Only 17% of residential development has impervious coverage of 50% or more
- Less than 3% of the 142 new homes competed since 2013 have impervious coverage of 50% or more

Considerations

- Definition of impervious must be established (does this include permeable pavers, etc.)
- Definition of open space be established
- Thresholds for each zoning district must be established for open space/maximum impervious
- Regulating existing non-conforming properties

Mr. Wicklander made a motion, seconded by Mr. Crillly to adjourn the meeting at 8:54 p.m.
Motion carried by voice vote of 5-0.