



# Village of Winnetka

## Stormwater Utility Feasibility Study



### Workshop #3:

## Revised Stormwater Fee Analysis and Implementation Considerations

March 12, 2013



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# Agenda

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- ❑ Key Policy Issue Review
  - ❑ Level of Service / Stormwater Funding
  - ❑ Stormwater Fees
  - ❑ Property Owner Impact
  - ❑ Credits and Incentives/Rebates
  - ❑ Implementation Considerations
  - ❑ Recommendations
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# Policy Issue Summary

**Issue 1: What Level of Service Should the Village Provide?**  
**- Current Planned Capital Without Refunding Reserves**



**Issue 2: How Should the Level of Service Be Funded?**

**Property Taxes**

**Stormwater Fee**

**Combination**



**Issue 3: What Rate Base Should Be Used?**  
**- Impervious Area or Other Proxy**



**Issue 4: How Should the Fee Be Structured?**  
**- Uniform or Location Based**

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# Level of Service / Stormwater Funding



# Stormwater Operating Expenses

	2013	2014	2015	2016	2017	2018
Public Works Administration	\$103,000	\$106,000	\$109,000	\$112,000	\$116,000	\$119,000
Training	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
Engineering	\$35,000	\$36,000	\$37,000	\$39,000	\$40,000	\$41,000
Drainage Operations	\$270,000	\$278,000	\$287,000	\$295,000	\$304,000	\$313,000
<b>Total</b>	<b>\$410,000</b>	<b>\$422,000</b>	<b>\$435,000</b>	<b>\$448,000</b>	<b>\$462,000</b>	<b>\$476,000</b>

- Forecast assumes operating costs increase annually at 3% due to inflation
- Continue to fund in General Fund

# Capital Projects - Current Planned

Project	2013 <sup>(1)</sup>	2014 <sup>(2)</sup>	2015 <sup>(2)</sup>	2016 <sup>(2)</sup>	Total
Winnetka Avenue Pump Station	\$750,000				\$750,000
Tower Road / Foxdale	\$1,050,000				\$1,050,000
Lloyd Park / Spruce Street	\$364,000				\$364,000
Northwest Winnetka Greenwood / Forest Glen	\$4,040,000				\$4,040,000
Willow Road Tunnel	\$800,000	\$800,000	\$16,900,000	\$16,000,000	\$34,500,000
Stormwater Master Plan	\$70,000				\$70,000
Elm St. Storm Sewer Outfall Replacement	\$250,000				\$250,000
<b>Total</b>	<b>\$7,324,000</b>	<b>\$800,000</b>	<b>\$16,900,000</b>	<b>\$16,000,000</b>	<b>\$41,024,000</b>

(1) Funded with General Fund reserves

(2) Funded with debt

# Capital Project - Financing

Bond Issue	Bond Issue Amount <sup>(1)</sup>	Year of Issue	Interest Rate
2014 Bonds	\$17,965,500	2014	3.5%
2015 Bonds	\$16,240,000	2015	4.0%
Total	\$34,205,500		

*(1) Includes 1.5% for bond issuances costs*

Projected Debt Service Payments	2014	2015	2016	2017	2018
20 year Bonds (Principal & Interest)	\$314,396	\$1,588,872	\$2,459,040	\$2,459,040	\$2,459,040
30 year Bonds (Principal & Interest)	\$314,396	\$1,301,608	\$1,915,969	\$1,915,969	\$1,915,969

# Level of Service Funding - 20 Year Bonds

20 year Bond Maturity	2014	2015	2016	2017	2018
<b>Stormwater Expenses</b>					
Operating Costs	422,572	435,249	448,307	461,756	475,609
Projected Debt Service (20 year bonds)	314,396	1,588,872	2,459,040	2,459,040	2,459,040
<b>Revenues</b>					
Current General Fund Revenues <sup>(1)</sup>	422,572	435,249	448,307	461,756	475,609
Additional Funds Available within General Fund <sup>(2)</sup>	200,000	700,000	700,000	700,000	700,000
<b>Unfunded Stormwater Revenue Requirements</b>	<b>\$114,396</b>	<b>\$888,872</b>	<b>\$1,759,040</b>	<b>\$1,759,040</b>	<b>\$1,759,040</b>

(1) Operating costs are funded through the General Fund.

(2) Funds available due to retirement of debt (\$500k in FY15) and reallocation of street repair funds (\$200k in FY14).



# Level of Service Funding - 30 Year Bonds

30 year Bond Maturity	2014	2015	2016	2017	2018
<b>Stormwater Expenses</b>					
Operating Costs	422,572	435,249	448,307	461,756	475,609
Projected Debt Service (30year bonds)	314,396	1,301,608	1,915,969	1,915,969	1,915,969
<b>Revenues</b>					
Current General Fund Revenues <sup>(1)</sup>	422,572	435,249	448,307	461,756	475,609
Additional Funds Available within General Fund <sup>(2)</sup>	200,000	700,000	700,000	700,000	700,000
<b>Unfunded Stormwater Revenue Requirements</b>	<b>\$114,396</b>	<b>\$601,608</b>	<b>\$1,215,969</b>	<b>\$1,215,969</b>	<b>\$1,215,969</b>

(1) Operating costs are funded through the General Fund.

(2) Funds available due to retirement of debt (\$500k in FY15) and reallocation of street repair funds (\$200k in FY14).

# Stormwater Funding Scenarios

<b>100% Stormwater Fee Funding</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Revenue Requirements (20 year Bonds)</b>	\$114,396	\$888,872	\$1,759,040	\$1,759,040	\$1,759,040
<b>Revenue Requirements (30 year Bonds)</b>	\$114,396	\$601,608	\$1,215,969	\$1,215,969	\$1,215,969

<b>50% Stormwater Fee Funding</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Revenue Requirements (20 year Bonds)</b>	\$57,198	\$444,436	\$879,520	\$879,520	\$879,520
<b>Revenue Requirements (30 year Bonds)</b>	\$57,198	\$300,804	\$607,985	\$607,985	\$607,985

  

<b>50% Property Tax Funding</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Revenue Requirements (20 year Bonds)</b>	\$57,198	\$444,436	\$879,520	\$879,520	\$879,520
<b>Revenue Requirements (30 year Bonds)</b>	\$57,198	\$300,804	\$607,985	\$607,985	\$607,985

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# Stormwater Fees

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# Stormwater Fee Approach

**Level of Service**

**Key Consideration:  
What Should the Village Fund?**

**Rate Base**

**Key Consideration:  
What Unit of Measure is Used  
to Account for Stormwater  
Contribution?**

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**Stormwater Fee**

**Key Consideration:  
How Should the Stormwater  
Fee be Structured?**

# Recommended Equivalent Runoff Unit (ERU)

Average Single Family Impervious Area

= 1 Equivalent Runoff Unit (ERU)



**= 3,400 square feet**

# ERU's by Use Category

Land Use	ERUs (rounded to 10 <sup>th</sup> )
Single Family Residential	5,270.2
Multi-Family Residential	233.2
Commercial	204.3
Industrial	11.6
Tax Exempt	919.6
<b>Total ERU's</b>	<b>6,638.9</b>

# Alternative Methods – ID Approach

- Intensity of Development (ID) - A rate is selected based on ratio of impervious area to pervious area. Rate times area of entire parcel results in stormwater bill. Provides benefit for having more pervious area in comparison to impervious.
- Approach has not been used in Illinois

*Example ID Table*

Category (Impervious percentage range)	Annual Rate per 1,000 square fee of total property size
Vacant (0%)	\$0.50
Light Development (1% to 20%)	\$1.50
Moderate Development (21% to 40%)	\$2.00
Heavy Development (41% to 70%)	\$3.00
Intense Development (71% to 100%)	\$4.00

# Alternative Methods – ID Approach

## ❑ Disadvantages:

- Lack of direct correlation between stormwater bill and stormwater discharge
- Difficult to determine and justify rates in sliding scale
- Limited benefits to reducing impervious area
- Difficult for public to understand basis for stormwater bill



# Alternative Methods – EHA Approach

- ❑ Equivalent Hydraulic Acreage (EHA) - Impervious area times a runoff coefficient (typically 0.85 to 0.95) plus pervious area times runoff coefficient (typically 0.10 to 0.15) results in number of EHA's on property (similar to ERU's). EHA times stormwater fee results in stormwater bill.
- ❑ EHA approach is currently used by the City of Moline

# Alternative Methods – EHA Approach

## ❑ Disadvantages:

- Shift of costs to parcels with significant amounts of pervious area and resulting equity associated with the shift
- Requirements to manage pervious and impervious area on each parcel
- Limited benefits to reducing impervious area
- Difficult for public to understand basis

**We recommend the Village use the ERU approach based on disadvantages associated with using the ID and EHA methods.**

# Stormwater Fee Approach

## Level of Service

Key Consideration:  
What Does the Village Fund?

## Rate Base

Key Consideration:  
What Unit of Measure is Used  
to Evaluate Stormwater  
Contribution?

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## Stormwater Fee

Key Consideration:  
How should the stormwater  
fee be structured?

# 100% Stormwater Fee Funding - Annual Stormwater Fee per ERU

20 - Year Bonds	FY 14	FY 15	FY 16	FY 17	FY 18
<i>Collected via Stormwater Fees</i>	\$114,396	\$888,872	\$1,759,040	\$1,759,040	\$1,759,040
<b>Annual Stormwater Fee per ERU*</b>	<b>\$17.23</b>	<b>\$133.89</b>	<b>\$264.96</b>	<b>\$264.96</b>	<b>\$264.96</b>

30 - Year Bonds	FY 14	FY 15	FY 16	FY 17	FY 18
<i>Collected via Stormwater Fees</i>	\$114,396	\$601,608	\$1,215,969	\$1,215,969	\$1,215,969
<b>Annual Stormwater Fee per ERU*</b>	<b>\$17.23</b>	<b>\$90.62</b>	<b>\$183.16</b>	<b>\$183.16</b>	<b>\$183.16</b>

\*Based on 6,638.9 ERU's as shown on slide 14.

## Combined Funding – Annual Stormwater Fee per ERU and Incremental Annual Tax Bill (20-Year Bonds)

20 - Year Bonds	FY 14	FY 15	FY 16	FY 17	FY 18
<i>Collected via Stormwater Fee (50%)</i>	\$57,198	\$444,436	\$879,520	\$879,520	\$879,520
<i>Collected via Tax Bill (50%)</i>	\$57,198	\$444,436	\$879,520	\$879,520	\$879,520
<b>Stormwater Fee Per ERU <sup>(1)</sup></b>	<b>\$8.62</b>	<b>\$66.94</b>	<b>\$132.48</b>	<b>\$132.48</b>	<b>\$132.48</b>
<b>Incremental Property Tax Bill <sup>(2)</sup></b>	<b>\$14.25</b>	<b>\$110.74</b>	<b>\$219.15</b>	<b>\$219.15</b>	<b>\$219.15</b>
Tax Deduction <sup>(3)</sup>	(\$5.42)	(\$42.08)	(\$83.28)	(\$83.28)	(\$83.28)
<b>Resulting Total After Deduction</b>	<b>\$8.84</b>	<b>\$68.66</b>	<b>\$135.88</b>	<b>\$135.88</b>	<b>\$135.88</b>

(1) Assumes home with 3,400 sq ft of impervious area

(2) Assumes home with equalized assessed value (EAV) of \$400,000

(3) Assumes household with income of \$275,000 (33% federal tax bracket plus 5% state) and that individual is not subject to Alternative Minimum Tax (AMT)

# Combined Funding – Annual Stormwater Fee per ERU and Incremental Annual Tax Bill (30-Year Bonds)

<b>30 - Year Bonds</b>	<b>FY 14</b>	<b>FY 15</b>	<b>FY 16</b>	<b>FY 17</b>	<b>FY 18</b>
<i>Collected via Stormwater Fee (50%)</i>	\$57,198	\$300,804	\$607,985	\$607,985	\$607,985
<i>Collected via Tax Bill (50%)</i>	\$57,198	\$300,804	\$607,985	\$607,985	\$607,985
<b>Stormwater Fee Per ERU <sup>(1)</sup></b>	<b>\$8.62</b>	<b>\$45.31</b>	<b>\$91.58</b>	<b>\$91.58</b>	<b>\$91.58</b>
<b>Incremental Property Tax Bill <sup>(2)</sup></b>	<b>\$14.25</b>	<b>\$74.95</b>	<b>\$151.49</b>	<b>\$151.49</b>	<b>\$151.49</b>
Tax Deduction <sup>(3)</sup>	(\$5.42)	(\$28.48)	(\$57.57)	(\$57.57)	(\$57.57)
<b>Resulting Total After Deduction</b>	<b>\$8.84</b>	<b>\$46.47</b>	<b>\$93.93</b>	<b>\$93.93</b>	<b>\$93.93</b>

(1) Assumes home with 3,400 sq ft of impervious area

(2) Assumes home with equalized assessed value (EAV) of \$400,000

(3) Assumes individual filing with income of \$275,000 (33% federal tax bracket plus 5% state) and that individual is not subject to Alternative Minimum Tax (AMT)

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## Property Owner Impact

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# Single Family Residential Parcel #1

Impervious Area	EAV	ERU's
3,000 sq ft	\$325,000	0.9

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$16	\$121	\$238	\$238	\$238
100% SW Fee (30-year bonds)	\$16	\$82	\$165	\$165	\$165
50% SW Fee (20-year bonds)	\$8	\$60	\$119	\$119	\$119
50% Property Taxes <sup>(1)</sup> (20-year bonds)	\$7	\$56	\$110	\$110	\$110
50% SW Fee (30-year bonds)	\$8	\$41	\$82	\$82	\$82
50% Property Taxes <sup>(1)</sup> (30-year bonds)	\$7	\$38	\$76	\$76	\$76

(1) After tax deduction: assumes individual filing with income of \$275,000 (33% federal tax bracket plus 5% state) and that individual is not subject to Alternative Minimum Tax (AMT)



# Single Family Residential Parcel #2

Impervious Area	EAV	ERU's
5,330 sq ft	\$464,000	1.6

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$28	\$214	\$424	\$424	\$424
100% SW Fee (30-year bonds)	\$28	\$145	\$293	\$293	\$293
50% SW Fee (20-year bonds)	\$14	\$107	\$212	\$212	\$212
50% Property Taxes <sup>(1)</sup> (20-year bonds)	\$10	\$80	\$157	\$157	\$157
50% SW Fee (30-year bonds)	\$14	\$72	\$147	\$147	\$147
50% Property Taxes <sup>(1)</sup> (30-year bonds)	\$10	\$54	\$109	\$109	\$109

(1) After tax deduction: assumes individual filing with income of \$275,000 (33% federal tax bracket plus 5% state) and that individual is not subject to Alternative Minimum Tax (AMT)

# Single Family Residential Parcel #3

Impervious Area	EAV	ERU's
8,600 sq ft	\$656,000	2.5

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$43	\$335	\$662	\$662	\$662
100% SW Fee (30-year bonds)	\$43	\$227	\$458	\$458	\$458
50% SW Fee (20-year bonds)	\$22	\$167	\$331	\$331	\$331
50% Property Taxes <sup>(1)</sup> (20-year bonds)	\$14	\$113	\$223	\$223	\$223
50% SW Fee (30-year bonds)	\$22	\$113	\$229	\$229	\$229
50% Property Taxes <sup>(1)</sup> (30-year bonds)	\$14	\$76	\$154	\$154	\$154

(1) After tax deduction: assumes individual filing with income of \$275,000 (33% federal tax bracket plus 5% state) and that individual is not subject to Alternative Minimum Tax (AMT)

# Commercial Parcel #1

Impervious Area	EAV	ERU's
6,800 sq ft	\$823,000	2

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$34	\$268	\$530	\$530	\$530
100% SW Fee (30-year bonds)	\$34	\$181	\$366	\$366	\$366
50% SW Fee (20-year bonds)	\$17	\$134	\$265	\$265	\$265
50% Property Taxes (20-year bonds)	\$29	\$228	\$451	\$451	\$451
50% SW Fee (30-year bonds)	\$17	\$91	\$183	\$183	\$183
50% Property Taxes (30-year bonds)	\$29	\$154	\$312	\$312	\$312

# Commercial Parcel #2

Impervious Area	EAV	ERU's
2,900 sq ft	\$218,000	0.9

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$16	\$121	\$238	\$238	\$238
100% SW Fee (30-year bonds)	\$16	\$82	\$165	\$165	\$165
50% SW Fee (20-year bonds)	\$8	\$60	\$119	\$119	\$119
50% Property Taxes (20-year bonds)	\$8	\$60	\$120	\$120	\$120
50% SW Fee (30-year bonds)	\$8	\$41	\$82	\$82	\$82
50% Property Taxes (30-year bonds)	\$8	\$41	\$83	\$83	\$83

# Tax-Exempt Parcel #1

Impervious Area	EAV	ERU's
200,000 sq ft	\$-	58.8

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$1,013	\$7,873	\$15,580	\$15,580	\$15,580
100% SW Fee (30-year bonds)	\$1,013	\$5,328	\$10,770	\$10,770	\$10,770
50% SW Fee (20-year bonds)	\$507	\$3,936	\$7,790	\$7,790	\$7,790
50% Property Taxes (20-year bonds)	-	-	-	-	-
50% SW Fee (30-year bonds)	\$507	\$2,664	\$5,385	\$5,385	\$5,385
50% Property Taxes (30-year bonds)	-	-	-	-	-

# Tax-Exempt Parcel #2

Impervious Area	EAV	ERU's
40,600 sq ft	\$-	11.9

Bill Comparison	FY 14	FY 15	FY 16	FY 17	FY 18
100% SW Fee (20-year bonds)	\$205	\$1,593	\$3,153	\$3,153	\$3,153
100% SW Fee (30-year bonds)	\$205	\$1,078	\$2,180	\$2,180	\$2,180
50% SW Fee (20-year bonds)	\$103	\$797	\$1,577	\$1,577	\$1,577
50% Property Taxes (20-year bonds)	-	-	-	-	-
50% SW Fee (30-year bonds)	\$103	\$539	\$1,090	\$1,090	\$1,090
50% Property Taxes (30-year bonds)	-	-	-	-	-

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# Credits and Incentives

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# Credits

- ❑ Stormwater fee credit is a reduction in the fee charged to a qualifying property in return for on-site qualifying stormwater management.
- ❑ Credit is recognition that on-site stormwater management may reduce the Village's stormwater expenditures.
- ❑ Credits encourage property owners to proactively manage their stormwater impact.



# Credit Program Structure

- Who is eligible to receive a stormwater fee credits? All parcel owners or only non-residential?
- What stormwater management control facilities / activities qualify for credits?
- Do properties that meet local standards get credit(s), or only properties that exceed standards?
- How much of a fee reduction is offered with each control activity?
- Is there a maximum credit that is offered?

# Control Activity Examples



# Example Credit Program

Control Activities	Examples	Range of Credits
Peak Rate Reduction	Detention Basin	Up to 10%
Volume Reduction	Retention Basin, Rainwater Harvesting, Green Roof	Up to 10%
Water Quality Control	Rain Garden, Permeable Pavement, BMPs	Up to 5%
Direct Discharge	Discharge Outside Village System	Up to 25%
Education	K-12 Education Program	Dollar value per student taught per year

- Typically only available for non-residential parcels
- Program limits maximum credit to 25%
- Credits offered for stormwater controls that exceed local standards
- Credit application required -Typical application fee (\$50 - \$200)

# Incentives

- ❑ Incentives are one-time reimbursements/rebates for the installation of stormwater controls.
- ❑ Typically offered when credits are not available to residential properties.
- ❑ Goal is to encourage participation in stormwater management within the Village.

# Typical Incentive Program

Control Activity	Incentive Amount	Requirements	Maximum Incentive
Rain Barrels	\$1 per gallon of capacity	Minimum of 50 gallons	\$50
Rain Gardens	\$5 per square feet of garden	Minimum of 100 square foot of garden	\$1,000
Other Facilities (Green roofs, permeable pavement, cistern)	30% of cost of materials, construction and installation		\$1,200

- Available for all property owners (excluding those that receive credits)
- First come, first service basis with annual budget for incentives

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# Implementation Considerations

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# Administration

- ❑ How should the stormwater fee be billed?
  - On utility “water” bill, property tax bill or separate bill?
- ❑ Management of the stormwater fee database
  - How will the stormwater fee database be managed to account for changes in impervious area?
- ❑ How will the Village handle property owner appeals?
  - Who can appeal the stormwater bill?
  - What is the process to initiate an appeal?
  - What corrective actions should be taken if appeal is valid?

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# Recommendations

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# Stormwater Utility Feasibility

**A stormwater utility is a feasible option for the Village to fund at least a portion its stormwater expenditures.**

- ❑ A stormwater utility and fee will provide:
  - Improved Equity
  - Fiscal Accountability
  - Dependable Revenue Stream
  - Increased Public Awareness

# Recommendation: Level of Service and Funding

**The Village should provide a level of service that will fund the operations and maintenance of the stormwater system and the current planned capital.**

- To fund the level of service the Village should:
  - Utilize existing General Fund revenues to assist in funding a portion of the level of service.
  - Consider using 30-year debt to fund the capital projects.
  - Fund all unfunded revenue requirements with stormwater fees.

# Recommendation: Fee Structure

**The Village should implement a uniform stormwater fee for all parcels in the Village.**

- ❑ The stormwater fee should be:
  - Based on each parcels actual impervious area
  - Calculated on number of ERUs based on multiples of 3,400 square fee of impervious area
  - Be phased in over time based on revenue needs

# Recommendation: Magnitude of Fee

The magnitude of the fee to be considered by the Village (subject to changes in capital costs and credit program)

<b>30 - Year Bonds</b>	<b>FY 14</b>	<b>FY 15</b>	<b>FY 16</b>	<b>FY 17</b>	<b>FY 18</b>
Stormwater Fee Revenues	\$114,396	\$601,608	\$1,215,969	\$1,215,969	\$1,215,969
<b>Annual Stormwater Fee per ERU</b>	<b>\$17.23</b>	<b>\$90.62</b>	<b>\$183.16</b>	<b>\$183.16</b>	<b>\$183.16</b>
<b>Bi-Monthly* Stormwater Fee per ERU</b>	<b>\$2.87</b>	<b>\$15.10</b>	<b>\$30.53</b>	<b>\$30.53</b>	<b>\$30.53</b>

\*Consistent with Village current utility billing cycle

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## Questions / Discussion

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# Stormwater Spending Totals

Workshop #2 Full Spending Capital Projects <sup>(1)</sup>	30 Years (2014 - 2043)	
	Present Value <sup>(3)</sup>	Total
Debt Service (Principal)	\$34,323,157	\$50,735,635
Debt Service (Interest) <sup>(2)</sup>	\$18,041,272	\$23,660,726
<b>Total</b>	<b>\$52,364,429</b>	<b>\$74,396,361</b>

*(1) Assumes all capital projects funded totaling \$48.2 million plus 1.5% for bond issuance costs*

*(2) 20 year bond maturity within 30 year period*

*(3) Assuming a 3% discount rate*

Workshop #3 Full Spending Capital Projects <sup>(1)</sup>	30 Years (2014 - 2043)	
	Present Value <sup>(3)</sup>	Total
Debt Service (Principal)	\$24,208,395	\$34,205,500
Debt Service (Interest) <sup>(2)</sup>	\$12,124,108	\$15,614,487
<b>Total</b>	<b>\$36,332,503</b>	<b>\$49,819,987</b>

*(1) Assumes all capital projects funded totaling \$33.7 million plus 1.5% for bond issuance costs*

*(2) 20 year bond maturity within 30 year period*

*(3) Assuming a 3% discount rate*