



Slide #	Voiceover Text	Slide
1	Welcome to the City of Windsor's community engagement presentation on the Stormwater Financing Study.	Watson
	In this short video, you will learn about the City's current stormwater management program, the gaps that the City is looking to address and some possible ways to fund the modernization of the program.	WOOO. & Associates ECONOMISTS LTD
	This study is supported by a large City committee with representatives from Engineering, Finance and other departments. An external consultant team composed of Wood Environment and Infrastructure Solutions and Watson and Associates Economists are also involved in the study.	Stormwater Financing Study Community Engagement Presentation September 2020
		woodplc.com





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2	 The City of Windsor has invested in an extensive public stormwater management system. The estimated replacement value of the system is approximately 1.8 billion dollars. To preserve the aging infrastructure and avoid costly emergency repairs, the City is proactively investing in ongoing maintenance. The purpose of the Stormwater Financing Study is to better understand the City's current stormwater management program, to identify what stormwater requirements the City will have in the future and to investigate funding alternatives for these requirements. We will evaluate the potential costs and funding impacts of a new stormwater management program so we can make informed recommendations about what to prioritize, how much to invest, and how to fund these investments. Engaging the community as we conduct this study will help us better understand how to serve the City's stormwater needs. 	<section-header><section-header> Background and Study Goals Develop and the increasing frequency and the increasing frequency and the increasing frequency and the increasing frequency. Develop a better understancy infrastructure and the increasing frequency. Develop a better understancy infrastructure. </section-header></section-header>	ading of ement inderstand inderst





Slide #	Voiceover Text	Slide
Slide # 3	Voiceover Text Here are a few basics to help you understand stormwater management and why the City is investing in it.	Slide Stormwater Management 101





Slide # Voiceover Text	Slide
 Stormwater is rainwater and melted snow that run off lawns, streets and other surfaces. Hard surfaces like pavement and roofs prevent stormwater from soaking into the ground, increasing run off. If is not managed in built environments, stormwater runoff can flood roads, homes and businesses In the natural environment, failing to manage or treat stormwater runoff can contribute to creek erosion and may carry harmful pollutants to local bodies of water. To learn more about stormwater and how it affects you and your community, visit the City's Stormwater Financing Study website. 	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></section-header></section-header></section-header></section-header></section-header></section-header></section-header>





Slide #	Voiceover Text		Slide
5	Over the past decade, there have been shifts in the way we think about stormwater management, as shown in this table.		
For example, we have moved fro be removed as quickly as possibl existing infrastructure and handli as climate change and improving	For example, we have moved from seeing stormwater as a nuisance to be removed as guickly as possible to a focus on better managing	Stormwater Manage	ment 101
	existing infrastructure and handling stormwater on-site. Factors such as climate change and improving transportation safety have also	How has thinking about stormwater management changed?	
	influenced how we think about stormwater management.	Past:	Now:
	Stormwater as a nuisance – flood control through rapid removal	Focus on protecting infrastructure assets - aging systems require maintenance and replacement/ retrofits, with a continued focus on separation of the stormwater and wastewater systems	
	Transportation safety – ditches, ponds and road drainage	More emphasis on source controls and retaining stormwater on-site, plus investigating alternate technology for water quality and quantity controls	
	Quality control incorporated in new development	Climate change requires hazard mitigation – increased design standards and adaptation planning	
	Protect private property – upstream stormwater quantity controls (ponds)	Stream restoration and habitat protection are more of a priority	
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Slide #	Voiceover Text	Slide	
Slide # 6	Voiceover Text The City has experienced stormwater management challenges in five general areas: Aging Infrastructure and Growing Communities, Legislated and Proactive Maintenance, Flood Safety and Mitigation, Regulatory Requirements and Water Quality Protection. In addition, the City has experienced significant rainfall and runoff events that have exceeded the capacity of our sewers. These events have caused localized flooding and damage.	Slide Stormwater Management 101 - Challenges Aging Infrastructure and Growing Co Legislated and Proactive Maintenand Flood Safety and Mitigation Regulatory Requirements Water Quality Protection	ommunities e
			•••





Slide #	Voiceover Text	SI	ide
7	The purpose of this study is to help the City meet stormwater management challenges by developing a comprehensive stormwater management program and determining how the program will be funded. The program must protect public health and safety, stakeholder investments and the City's valuable man-made and natural resources. It will do this with proactive maintenance and operation requirements for existing assets and well-considered investments in system ungrades and expansions	Purpose of the Study Proactively understand and address stor through the development of a compreh program and by determining how that p	rmwater management challenges ensive stormwater management program will be funded.
	Funding for the stormwater management program needs to be sustainable and equitable. One idea is to shift from the current funding model, which is based on sewer surcharges related to water usage, to a model based on how much stormwater runoff comes from a property.	 New Program Requirements Protect public health, safety and assets Minimize impacts of run off Proactive maintenance of current infrastructure Thoughtful investments in new infrastructure 	 Funding for the New Program Sustainable Equitable Sewer surcharge related to water usage (current funding model) Runoff water generated (potential new funding model)
		WINDSOR	• • •





Slide #	Voiceover Text	Sli	ide
8	To improve the City's stormwater management, it is crucial to understand its current program. The public portions of the City's stormwater system include over 1025 kilometers of sewers, approximately 15,300 manholes, over 22,600 catch basins, 29 stormwater ponds, 39 pumping stations, 124 kilometers of Municipal Drains and 254 kilometers of road ditches. Replacing this infrastructure would cost approximately 1.8 billion dollars.	Current Stormwater Mana The public portions of the City's stormwater system include: • Over 1,025 km of sewers • Approx. 15,300 manholes • Over 22,600 catch basins • 29 stormwater ponds • 39 pumping stations • 124 km of Municipal Drains • 254 km of road ditches	genent ProgramImage: A state of the





Full-time City Staff performing stor Stormwater services are primarily managed by: Engineering (Design & Development, Geomatics, Right- of-way, Corporate Projects and Administration) Pollution Control Public Works (Contracts, Field Services, Infrastructure Management, Maintenance & Environmental Services)	 gement Program rmwater-related services: 40 - 45 Additional City support as needed from: Financial Planning; Asset Planning; Legal; Planning and Development; Parks; Purchasing; HR; Communications Plus external Contracted maintenance and capital works
	 Full-time City Staff performing sto Stormwater services are primarily managed by: Engineering (Design & Development, Geomatics, Right- of-way, Corporate Projects and Administration) Pollution Control Public Works (Contracts, Field Services, Infrastructure Management, Maintenance & Environmental Services)





Slide #	Voiceover Text	Slide
Slide # 10	Voiceover Text The City currently spends about 9 million dollars on operations and 23.3 million dollars on capital costs. This means that the City's current stormwater program costs about 32.3 million dollars each year.	Slide Estimated Cost of Program Services in 2020 S0.18M, Roadside Ditching S0.31M, Public Works Administration S0.31M, Drainage S0.42M, Impection & Permits S0.48M, Yand Mainterance Utilises & Insurance S0.66M, Sewer & Catch Basin Cleaning S1.03M, Pump Station Operation
		S1.34 M, Street Sweeping S1.84 M, Catch Basin Manhole & Sewer Repar S2.35 M, Engineering & Field Services Capital S2.35 M, Engineering & Field Services S2.35 M, Enginee





Slide #	Voiceover Text	Slide	
Slide # 11	 Voiceover Text The current stormwater program is funded in three ways: Through sewer surcharge rates, which include charges for the recovery of sanitary sewer and stormwater services; fixed wastewater charges based on meter size; and consumption charges based on water usage; Through Development Charges, which can help recover costs associated with new and expanded infrastructure resulting from new development; and Through grants, like Infrastructure Canada's Disaster Mitigation and Adaptation Fund, which help municipalities develop flood mitigation projects that aim to improve infrastructure like sewers, sewer lines, pumping stations and storage areas. 	Slide Current Funding Model Sewer Surcharge Rates • Recovery of sanitary sewer and stormwater • Wastewater Fixed Charge (meter size) • Consumption Charge based (water usage)	 Grants Infrastructure Canada's Disaster Mitigation and Adaptation Fund Helps cities develop flood mitigation projects
			•••





Slide #	Voiceover Text	Slide	
12	So, how does the City currently pay for the stormwater management program?	Funding Supported by Current Stormwater Surcharge Rates	
	The current program is primarily funded through sewer surcharge rates paid by residents and businesses. This funding supports both wastewater and stormwater services, with forty two percent going to stormwater. This means, based on the 2020 budget, that approximately 32.3 million dollars is available for the stormwater	2020 budgeted sewer surcharge revenue:	
	management program from these sewer surcharges.	Customer Type Stormwater Wastewater Total	
	This table presents the typical annual sewer surcharge bills for three	Residential A \$330 \$453 \$783	
	in stormwater services and the portion of their annual bill that is invested in stormwater services and the portion that is invested wastewater services.	\$76.8 million 58% (Small) Commercial (Small) \$1,261 \$1,735 \$2,996	
		Commercial (Large) ^C \$5,406 \$7,440 \$12,846	
		A Residential assumes ⁵ /4" service and 200 m ³ annual water consumption Commercial (Small) assumes a 1" service and 1,000 m ³ annual water consumption Commercial (Large) assumes a 2" service and 4,706 m ³ annual water consumption NOTIFIESTING	ion tion





Slide #	Voiceover Text		Slide
13	The City's stormwater management program requires a funding boost to modernize and reach recommended levels of service. In 2020, 32.3 million dollars was directed toward the program. The preliminary cost estimate to get the City up to recommended levels of service is 46.4 million dollars annually. This is a 44 percent increase, and the amount does not include billing administrative charges, program support from other departments and any additional infrastructure costs that result from new developments. The City is proposing that the needed funding increase be phased in over the course of 5 years. The preliminary cost estimate does not include the works recommended in the recently approved Sewer Master Plan which will also inform future stormwater costs. This Plan will be reviewed annually during budgeting and may be adjusted in future years.	Future Program – Es	stimated Cost of Services 2020: \$32.3 million directed to stormwater program Preliminary cost estimate of recommended levels of service: \$46 million annually





e City operate and maintain existing eps the system in good repair. In support upgrades and retrofits that slative requirements, and incorporate low en infrastructure solutions into new upport a more sustainable long-term gram.	 Future Program – Areas of Focus Increased funding will help the City accomplish several future program goals in the follow areas: Operation and maintenance Upgrades and retrofits New infrastructure that incorporates more low impact development best management practices and green infrastructure solutions Overall, these measures will support a more sustainable long-term stormwater management program. 	
	Iong-term stormwater management program.	• •
	he City operate and maintain existing eeps the system in good repair. In support upgrades and retrofits that islative requirements, and incorporate low een infrastructure solutions into new support a more sustainable long-term ogram.	 Future Program – Areas of Focus Future Program – Areas of Focus Future Program – Areas of Focus





Slide #	Voiceover Text	Slide
15	 The City is assessing different frameworks to support the funding of the future program. Some options being discussed include: Property Taxes Uniform Flat Rates Utility Rate Variable Flat Rate based on property class/category Variable Rate applied to property land area Rate applied to Actual Impervious Area of Each Property 	<section-header><section-header><text><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></text></section-header></section-header>





Slide #	Voiceover Text		SI	ide	
Slide # 16	Voiceover Text The City is also exploring how funds are acquired in other municipalities. In general, municipalities in Ontario tend to fund stormwater programs from the general tax levy. There is a recent trend toward more dedicated funding sources. Some advantages to this model include: Dedicated and stable funding sources, which allow for better long-term planning Segregation of revenue directly aligned with service provision Increased equity as properly designed stormwater fees follow a user pay principle 	Slide Funding Trends Recent trend towards dedicated funding sources rather than traditional models that draw on the general tax levy. This has several advantages. Dedicated and stable funding Segregation of Increase equity as property			
	Increased awareness of the importance of stormwater management, and associated costs, which can increase public support	sources which allow for better long-term planning	revenue directly aligned with service provision	designed stormwater fees follow a user pay principle	stormwater management and associated costs which can increase public support





Funding Tr	ends – Example: Type of Rate Beeed Structure	Rate Categories
Municipality Marisham	Type of Rate Based Structure	Rote Categories
Markham		
Markham	and the second	
	Fail Rate Charge per Property	Readertal
	Current you'r Asbetorrent Danidaethy, Chr Data yw Dranath (Burninget)	N/1-/05400000
Ottawa	Runali	Readential (RS) and Illuli-Realdential (RA) - UrbaryRunal
and the second sec	Non-Residental - Tered Flate Fee (based on CVA, UrbanRural)	D - 8 CVA ranges/categories - Urban and Rarai
Aurora	Flat Rate Citiange per Unit	Residential and condominant properties
	2010/01/2010/02/2010	Non-residential and sulf-residential properties
Richmond thill	Fiel Rafe Charge per Property	noseenaa ana rara projertes
Service of the servic		nouscrat, commercial, multi-anit, and condominian properties
Hamilton	Utility Rale (based on srater consumption)	NERGEREN - 4 DER (LINDER DE DEDDY CORELITER)
	A STATE AND A STAT	And Area Williams to here
(and an	Plat Rate Charge per Property	Land area 0.4 his clarate at mass
London.	Date for Bertain	And see above 0.4 features of electrons
	Plat Date / Second Set Drove for	Land area 0.4 he chose or lease
Middlesex Centre	Bate ow tectare	Nos residential and area above 0 4 hertares
PROTOCOL STATE	East Date per Broperty	Desidential & representationality family order 1 (20) or last area
St. Thomas	Date nar Hertens	Compared Statistics of a second statistics of the second statistics
	a contraction of the contraction	Besidential opteopoies
Vaughan	Flat Rate Charge per Property	Apricultural/vecant
		1 Non-Residential categories
		3 residential cate suries & 3 multi-residential consorres
Watertoo	Flat Rate per Property (by property type & size)	3 institutional categorius 3-4 industrial commencial categorius
100.0	Terred Flat Fee (based all property type and size of impervious	18 residential categories
Kitchener	ares)	5 rice-residential categories
Newmarket	Tared charge per and of land area	3 tiera by numoff level group
Station	Flat Rate Charge	Residential - applied to every detached home, townhouse, apartment, and
Guelph	Role per Equivalent Randovrhal Unti (ERU) based on Impervious and (ERU) in definition impervious standard Randov	industrial, commercial, and institutional properties
	There (LTO A Mappel + High 1900 Bits/105/142)	E matematica Der Sporte Derstembel instantion
Brampton	Rate per nil of impervious area (impervious area individually	Multi-residential & non-residential properties
	assesses for each property)	
References on the second	reres rist ree (based as rearginit area)	o caregories far skyle veskendal brasefiles
Masasage	assessed for each property (regentions area individually	Multi-residential & con-residential properties
	Aurora Richmond Hill Hamilton Löndon Middlesex Centro St. Thomas Vaughan Vädanloo Kächener Neemmölet Goelph Brampton Mississauga	Aurora Pair Rive Charge per live Richmond Hill Tai Rive Charge per Property Hamilton Milly Salu (Sease Canage per Property London Thi Rive Charge per Property Modelesson Contre Tair Rive Charge per Property Middlesson Contre Tair Rive Charge per Property Middlesson Contre Tair Rive Charge per Property St. Thomas Sale per Interture Vaughan Fair Rive Charge per Property Witabaloa Fair Rive Charge per Property hote and size of Impervious area Newminket Tweet Sharge per addition (SU) is based on Impervious area (RIV ontphine' impervious area (SU) ontphine' impervious area Base per Davider Rised area (SU) is based on Impervious area (RIV ontphine' impervious area Base per of Impervious area Basesseet for each pragerty





Slide #	Voiceover Text	Slide	
18	Through consultation with City Staff and a dedicated stakeholder committee, this proposed rate structure was developed to provide an equitable and sustainable funding source for the future stormwater program.	Proposed Rate Structure	
	Under this new funding model, residential properties will be tiered and charged a flat rate. The residential tiers will be based on density. Non-residential properties will pay a rate per hard surface (or impervious surface) hectare which will be based on a measured impervious area.	Residential Properties • Tiered flat rate • Residential tiers based on density (e.g. low, medium, high) • Goal Provide an equitable and sustainable funding source following the user-pay principle.	rties
		WINDSOR	





Slide #	Voiceover Text	Slide		
Slide # 19	Voiceover TextThis bar graph illustrates what residential and non-residential property owners currently pay and what they would pay under the proposed rate structure.The City's sewer surcharge model currently allocates 60 percent of the cost of stormwater and wastewater services to residential customers 	Slide Stormwater Services Cost Share between Residential and Non-residential Properties RESIDENTIAL VS. NON-RESIDENTIAL COST SHARE UNDER DIFFERENT CHARGING MECHANISMS Presidential Cost Share Providential Cost Share		
		PROPERTY TAKES SEWER SUBCHARGE SEWER SURCHARGE (AND AREA)		





Slide #	Voiceover Text	Slide
20	This graph compares the annual stormwater and wastewater bills from Ontario municipalities that have established dedicated funding mechanisms for stormwater services. Detroit has also been included because of its proximity to Windsor.	Annual Wastewater & Stormwater Bills Average Single Detached House
	Combined stormwater and wastewater bills are compared because there is sometimes overlap between these two services, for example, due to combined sewers, so it can be hard to separate out the costs.	\$1.200 \$1.125 \$1.000 \$8000 \$8000 \$3016 \$783 \$707 \$574
	The black arrow indicates the estimated 2020 sewer surcharge bill for an average single detached house. The orange arrow indicates the estimated cost of stormwater and wastewater services for a single detached house in the first year of the proposed stormwater management program.	\$600 \$615 \$615 \$595 \$586 \$595 \$570 \$554 \$600 \$400 \$400 \$400 \$5
	As the graph shows, considering the 5-year phase-in to the recommended stormwater program, and with a shift in cost recovery model away from the sewer surcharge, the average single detached house would likely pay less for stormwater and wastewater services in the first year of the program. The estimated charge for a single detached house is well within the range of charges seen in other municipalities included in the comparison	* Based on 2019 rates. All other bill amounts estimated based on 2020 rates.
	municipalities included in the comparison.	





Slide # Voiceover Text	Slide
 Let's shift to looking at a small non-residential property, such as a fast-food restaurant with a parking lot. Based on preliminary estimates, this type of property would potentially see a reduction in its annual stormwater and wastewater bill in the first year of the proposed program. Furthermore, the estimated bill would be well within the range of charges seen in other municipalities included in the comparison. 	<section-header><text><text><text><text><text><text><text></text></text></text></text></text></text></text></section-header>





Slide # Voiceover Text	Slide
 Finally, let's look at a large non-residential property, such as a commercial plaza with a large parking space. Based on the preliminary estimates, this type of property would likely see an increase in its annual stormwater and wastewater bill, largely because of the shift to an impervious area-based funding model. Although at the higher end, the estimated bill for this type of propert would still be within the range of charges seen in other municipalities included in the comparison. 	<section-header><section-header></section-header></section-header>





Slide #	Voiceover Text		Slide	
23	Considering municipalities that impose stormwater charges based on a measured impervious area for non-residential properties, the stormwater charges are relatively higher in these municipalities. This is because with the measured impervious area rate structure, the cost of	Annual Wastewater & Stormwater Bills Large Non-residential Property		
	service is directly linked to the amount of stormwater runoff that a property generates. This is called the "user-pay" principle.	\$35,000 532,454 \$31,897 \$31,413	ng indicates municipalities where stormwater charges for ential properties are based on measured impervious area.	Wastewater
The chan dependir how muc commerc water, so current r stormwa property the amou would po currently	The changes to non-residential properties could vary widely depending on how much impervious surface is on the property and how much water consumption occurs on the property. For example, a commercial parking lot or parking structure typically doesn't consume water, so it doesn't receive a sewer surcharge bill. Therefore, under the current rate structure, this sort of property doesn't contribute to stormwater services funding. Under the proposed rate structure, the property would be subject to a stormwater bill in direct proportion to the amount of paved areas on the property. So, this type of property would potentially feel the largest change, as they pay nothing currently.	\$25,000 \$20,000 \$15,000 \$10,000 \$5,0000 \$5,0000 \$5,0000\$5,0000\$5,0000\$5,0000\$5,0000\$5,	Stormwork 356 520,863 120,277 121206 519,994 519,910 14,823 513,220 442,846 172,254 511,250 4 14,823 513,220 442,846 172,254 511,250 4 14,823 51,220 442,846 172,254 511,250 4 14,825 51,250 51,25	
	On the other hand, there are examples of large non-residential properties that consume a lot of water and therefore contribute to stormwater services through the sewer surcharge. In some cases, the net change of shifting to the proposed rate structure could be negligible, or even favourable, for the property owner. As part of a future implementation phase, the City will consider options for a credit program to recognize investments made to better manage stormwater on properties thereby giving property owners	 * Based on 2019 rates. All other bill amounts estimated based on 2020 rates * Based on Sanitary Sewage Rate for Commercial. 	Windsor (2021 - calculated) - reflects year 1 of phase-into proposed 3formwater program and an impervious Area-bo rate structure, "Lorge Non-residentia" has been defined using the totowing impervious area: 38,283 m ² Current value assessment: \$36 million Arnual water consumption: 4,706 m ² Watermeter stat: 50 million	ased Ipprometers:





Slide #	Voiceover Text	Slide	
<u>Slide #</u> 24	Voiceover Text To move forward with the new stormwater management program, the City needs to hear from you! We are seeking your feedback to better inform the proposed program. In addition, the City is exploring exemption policies, credits and incentive programs, such as credits for rain barrels or on-site stormwater controls. If a decision is made by Council to move ahead with the new stormwater management program and rate structure, an implementation phase will follow this Study. This implementation phase would include detailed calculations of impervious areas of all non-residential properties, a sampling of residential properties and details of a billing structure. This implementation phase would be expected to take approximately one year. Please be sure to complete the survey related to this Study. You can find a link to the survey online on the same webpage where you accessed this presentation. There is a PDF of the survey available for	 Next Steps Feedback received from the public will be incorporated into the proposed program Exemption policies, credits and incentive programs are being explored Fill out the comment form on the webpage where 	Provide feedback: <u>sfs@citywindsor.ca</u> Learn more: https://weatheringthesto
	download on the same webpage that can be printed and submitted via mail by October 26, 2020. To provide additional feedback or to learn more about the program,	on the webpage where you accessed this video presentation	rm.ca/stormwater- financing-study
	please visit the webpage or send an email to <u>sfs@citywindsor.ca</u> .		
	Thank you for your time and we look forward to hearing itom you:		• • •