

STAKEHOLDER REVIEW COMMENTS ON THE MARCH 7, 2019 DISCUSSION DRAFT OF THE
CITY OF HOUSTON'S GREEN STORMWATER INFRASTRUCTURE INCENTIVES STUDY
Response Document Prepared and Finalized April 29, 2019



No.	Source	Document Reference ⁽¹⁾	Comment	Response
1	Participating Developers	General	Various comments were received throughout the interview and project review process leading up to the completion of the March 27, 2019 discussion draft.	All comments addressed in the March 27, 2019 discussion draft.
2	City Departments	General	Various comments were received during internal coordination meetings leading up to the completion of the March 27, 2019 discussion draft.	All comments addressed in the March 27, 2019 discussion draft.
3	Robert Adair Chair, Houston Land and Water Sustainability Forum	General	The only comments I have are that this is an outstanding document. I can't imagine a better, more well researched and well thought out set of proposals. Thanks to you and all those whose time, energy and effort went into creating this. I look forward to the HLWSF Steering Committee meeting next week, where I expect that we'll be unanimous in our support of your conclusions. I'm also confident that we'll be ready, willing and able to assist in any way we can to get your plan implemented.	Acknowledged. No report revision required.
4	John Blount, Harris County Engineer	General	It should be noted several of the discussion points focus around greater density, currently regulated by Chapter 42. The new County Planning criteria will be allowing smaller lot sizes, reduced setbacks, as well as other incentives for Green Infrastructure, Multimodal Transportation options, Community Geothermal Heating and Cooling etc. Expedited plan reviews, reduced or eliminated permit fees, etc. are all up for consideration. This will be an alternative to following Chapter 42 outside the City limits. Binkley and Barfield will be scheduling a workshop on behalf of the County in the near future to discuss the path forward on this initiative.	Acknowledged. No report revision required.

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5	Walter P. Moore, Inc. (WPM)	General	There can be more elaboration on the benefits of green infrastructure and why green infrastructure needs to be incentivized by the COH. It appears that many of the benefits of GSI to both the developer and to public are inherent properties of GSI (cost savings, property value increase, water quality, flow attenuation, etc.) and therefore would not need additional incentive from the city to be implemented. It may be useful to include some evaluation for the need to incentivize the use of GSI.	The GSI fact sheets will be updated to include information on both developer benefits and public benefits. GSI proponents have been advocating since 1998 for developers to utilize GSI because of the project benefits without much success. The city's program will help further stimulate the use of GSI through knowledge, education, recognition, facilitated permitting, and aligned development rules.
6	WPM	General	There can be better definition of what specific criteria must be met for a feature to qualify as GSI in the COH, and specific requirements for minimum site implementation. The criteria itself does not necessarily need to be included as part of this study, but the study should mention that specific criteria must be generated and adopted by the COH as part of the incentive implementation. This will help avoid subjective distribution of incentives. This will also help avoid a scenario where a developer implements insufficient or under designed GSI to engage the incentives, and designs and develops the rest of a project using conventional methods, but with reduced requirements.	This will be added to the implementation portion of the recommendations.

(1) Document References: D1: *Results of Task 001: Research and Benchmarking*; D2: *Results of Task 002: Work with Private Developers*; D3: *Legal and Policy Issues, Financial Performance, Barriers, and Challenges*; D4: *GSI Study Report*. "P" followed by a numeral refers to the page number of the corresponding document. "L" followed by a numeral refers to the line of text appearing on the page, not including headings and subheadings.

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7	WPM	General	Under current regulations, there is cost incentive to develop a greenfield site as opposed to redevelop a currently developed site. However, redevelopment with GSI would have a greater and more positive impact on the system at large than new development on a greenfield with GSI. Green infrastructure incentives can be used to promote redevelopment by providing more or better incentives than would be provided for greenfield development. Our recommendation is that the tax abatement incentive only be eligible for redevelopment projects. This may also help to maintain cost/revenue neutrality.	The details of the tax abatement program will be defined during implementation; however, this suggestion will be included in the recommendation.
8	WPM	D1, P3, L4	Those incentives don't relate to stormwater impacts from development; same impervious footprint.	The listed incentives from other cities help to incentivize GSI while complying with other stormwater management rules. These programs don't allow the developer to build projects without mitigation. No report revision required.
9	WPM	D1, P3, L22	Increased density tends to decrease[d public benefits].	The report indicates that the incentives offered must ensure that desired public benefits are still achieved. No report revision required.
10	WPM	D2, P2, L26	Which studies? Can these studies be referenced?	References to prior studies showing the decreased costs for drainage infrastructure for single-family residential subdivisions in the Houston area will be added.
11	WPM	D3, P4, L5 + L20	What about combination of detention and water reuse volume? Allow for [real-time weather controlled system] that would drain vaults prior to storm events. Was this evaluated?	Real time controls were not explicitly evaluated, however, provisions to allow their use should be included in the recommended integrated GSI development rules. This will be added to the recommendation.
12	WPM	D3, P6, TABLE	Is there documentation for the reasoning behind these scores for those eliminated from further evaluation? It's not evident why some are so low.	Scoring is explained in the main text of the report. No report revision required.

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13	WPM	D3, P9, L1	Seems like this is a City issue that needs to be addressed regardless of GSI implementation.	Acknowledged. No report revision required.
14	WPM	D3, P12, L11	So we're talking actually talking about expedited permitting here.	Acknowledged. No report revision required.
15	WPM	D3, P12, L24	City will need a strong, CLEAR definition of GSI in order for this to work. Additionally, some minimum threshold of GSI implementation will need to be set.	Agreed. Report to include these details in the implementation recommendation.
16	WPM	D3, P16, L16	Program would work better for larger, high value properties.	Analysis suggested that tax abatements for both small and large projects would be successful, because the tax abatement value and the cost of GSI are both directly proportional to project scale. No report revision required.
17	WPM	D3, P16, L23	Where does this [smaller projects need less costly GSI] assumption come from?	This is not an assumption, it is based on engineering cost estimates of projects of various scales. No report revision required.
18	WPM	D3, P19, L22	A small residential developer putting in small bioswales would be hard-pressed to compete with a large campus with many GSI features/elements [to obtain any award or recognition.]	Recommendations to provide awards and recognition to the entire range of project scales and types will be added to the report.
19	WPM	D3, P20, L8	The City would need to show value of this program over other third-party recognition programs such as Envision, SITES, Greenroads, etc. City award would likely need to be more easily attainable, otherwise projects already implementing GSI for other sustainability recognition entities will be the ones winning, this providing no incentive for developers new to GSI to compete.	Acknowledged. Will include consideration of this in the recommendations portion of the report.
20	WPM	D3, P22, L6	Would be helpful to determine how often developers opt for [open space] fee in lieu of open space requirement; is fee enough disincentive as-is?	Anecdotally developers use it a lot. This, coupled with the other elements of the integrated GSI rules should help to motivate developers to utilize GSI. The project team did not believe that \$700 per dwelling unit would be sufficient alone. No report revision required.

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21	WPM	D3, P23, L32	[The stormwater quality annual fee] varies by year.	Acknowledged. No report revision required.
22	WPM	D3, P24, L13	[Does a bioswale meet open space requirements now?]	No. No report revision required.
23	WPM	D3, P24, L14	I believe [no end of pipe treatment device is required if] LID is used.	Acknowledged. The introductory text is merely setting the stage for how the proposed integrated GSI rules would work together to incentivize GSI. No report revision required.
24	WPM	D3, P24, L20	Verify [that a bioswale meets open space requirements now].	It does not. No report revision required.
25	WPM	D3, P31, L13	Include design storm and IDF curves used for this analysis.	The design method will be defined in the updated Infrastructure Design Manual during the implementation of this recommendation. The consulting team would expect that the Atlas 14, Volume 11, Version 2.0 100-year event would be used for design. No report revision required.
26	WPM	D4, P5, L25	Are there any studies to back up and explain these benefits? Can they be referenced?	Yes. Supporting studies will be referenced in the final report.
27	WPM	D4, P6, L1	Have these 5 projects been selected, or is this an opportunity for developers?	The vision is to recognize five future projects. No report revision required.
28	WPM	D4, P11	[For a green roof] what are the minimum requirements for soil depth/porosity, storage in drainage layer, etc.?	Design details will be determined during implementation of the recommended incentive. No report revision required.
29	WPM	D4, P25, L4	[Property tax abatements] should only be available to redevelop[ment] sites.	Acknowledged. Report will be revised to make this recommendation if policy consensus is reached by senior directors.
30	WPM	D4, P26, L23	[Hydrological analysis should only be allowed if] GSI is implemented. Would this encourage a developer to implement very small, under-designed GSI systems to engage this incentive?	The text requires the analysis to technically demonstrate adequacy, therefore, under-designed systems would not be approved. No report revision required.
31	WPM	D4, P26, L23	Would green roofs be considered impervious? Specific criteria for GSI imperviousness should be treated in hydrologic analysis needs to be included.	This is an important consideration. Report will be revised to include explicit discussion of whether each GSI features is considered permeable or impermeable for the purposes to detention calculations.

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32	WPM	D4, P27, L5	[Add] opportunity to include combined detention/rainwater reuse system verification of functionality through this program.	Real time controls were not explicitly evaluated, however, provisions to allow their use should be included in the recommended integrated GSI development rules. This will be added to the recommendation.
33	WPM	D4, P29, L30	Specify a certain level of plan completeness [for plans being reviewed in the team review permitting incentive]. Maybe this becomes second round of review if the plans met a certain standard in the first round of review.	Will add some discussion about a completeness review step prior to scheduling the team review to the recommendations.
34	Houston Advanced Research Center (HARC)	General	We suggest that retrofits should be specifically called out in this document to underline the importance of not only greenfield but also existing projects implement GSI.	Private property GSI retrofits are largely driven by court orders as part of combined sewer system overflow consent orders and would not be applicable to Houston. Private sector-initiated retrofits would typically be considered as part of a larger redevelopment project, which is already addressed in the report. No report revision required.
35	Houston Advanced Research Center (HARC)	General	There is an opportunity to make enhanced public benefits a more robust part of the incentives program and place more focus on building infrastructure that has larger public benefits.	The report is designed to articulate the developer benefits of GSI implementation to help motivate a voluntary change in behavior. No report revision required.
36	Houston Advanced Research Center (HARC)	General	It is understood that this document is aimed for commercial developments. Will there be consideration to offering private homeowners incentives in the same vein? These types of residential incentives have shown to be very successful in other municipalities.	Residential development and redevelopment is covered in the proposed GSI development rules. Retrofits are not a focus of the programs, as discussed in response to Comment No. 34. The proposed programs ger commercial projects to avoid the large administrative burden of a program involving small-scale residential projects. The city could, if desired, expand the programs to target residential property at a later date. No report revision required.

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37	Houston Advanced Research Center (HARC)	General	The fact sheets are well designed, clear and concise. We recommend that they are one component of a broader outreach strategy to the public and developers that will help educate and explain the incentives, how to access information on implementation, benefits, etc.	Acknowledged.
38	Houston Advanced Research Center (HARC)	General	We urge the City to increase its use of GSI in public projects, to "lead by example" as a way to showcase this project type and the public benefits concept to the broader community.	Acknowledged. Public GSI has been implemented in certain projects such as Alemeda Road, Memorial Park, Cottage Grove, and Bagby Street in midtown. Additional public GSI will be evaluated as part of the development of a broader GSI strategy and also as part of the city's Resilience Plan and Climate Action Plan.
39	Houston Advanced Research Center (HARC)	General	We are highlighting the strategic overlap with several the items outlined in the GSI report and the City's Climate Action Plan (CAP), which is currently under development: Types of GSI that reduce urban heat island through trees, grasses, and plants (i.e. Urban forests, Bioretention, and Green Roofs) also lower carbon emissions by reducing the electrical demand to cool buildings in addition to sequestering carbon through photosynthesis.	Acknowledged. Comment will be shared with the City's Chief Sustainability Officer.
40	Houston Advanced Research Center (HARC)	General	We are highlighting the strategic overlap with several the items outlined in the GSI report and the City's Climate Action Plan (CAP), which is currently under development. Reduced parking requirements (help implement the) CAP transportation strategy to reduce vehicle miles travelled.	Acknowledged. Comment will be shared with the City's Chief Sustainability Officer.
41	Houston Advanced Research Center (HARC)	General	We are highlighting the strategic overlap with several the items outlined in the GSI report and the City's Climate Action Plan (CAP), which is currently under development. Water conservation (through controlled	Acknowledged. Comment will be shared with the City's Chief Sustainability Officer.

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			"smart" stormwater systems) overlaps with the CAP wastewater strategy to reduce electricity demand.	
42	Houston Advanced Research Center (HARC)	General	We are highlighting the strategic overlap with several the items outlined in the GSI report and the City's Climate Action Plan (CAP), which is currently under development. "The city should consider the policy implications of restricting the tax abatement incentive to projects that redevelop properties and excluding properties that develop previously undeveloped land." overlaps with CAP Land Conservation - Crosscutting CAP strategy to support both infrastructure densification (Building Optimization, and Transportation focus areas) and natural carbon sequestration (Decarbonization focus area).	Acknowledged. Comment will be shared with the City's Chief Sustainability Officer.

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