

Accepted Manuscript

Title: How does climate change affect combined sewer overflow in a system benefiting from rainwater harvesting systems?

Authors: Hessam Tavakol-Davani Graduate student Erfan Goharian Postdoctoral researcher Carly H. Hansen PhD Candidate Hassan Tavakol-Davani PhD Candidate Defne Apul Associate Professor Steven J. Burian Associate Professor, Associate Director



PII: S2210-6707(16)30149-4
DOI: <http://dx.doi.org/doi:10.1016/j.scs.2016.07.003>
Reference: SCS 465

To appear in:

Received date: 30-1-2016
Revised date: 2-7-2016
Accepted date: 11-7-2016

Please cite this article as: Tavakol-Davani, Hessam., Goharian, Erfan., Hansen, Carly H., Tavakol-Davani, Hassan., Apul, Defne., & Burian, Steven J., How does climate change affect combined sewer overflow in a system benefiting from rainwater harvesting systems?. *Sustainable Cities and Society* <http://dx.doi.org/10.1016/j.scs.2016.07.003>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

How does climate change affect combined sewer overflow in a system benefiting from rainwater harvesting systems?

Hessam Tavakol-Davani¹, Erfan Goharian², Carly H. Hansen³, Hassan Tavakol-Davani^{*3}, Defne Apul⁴,
Steven J. Burian⁵

^{1*}**Corresponding author.** E-mail: hassan.tavakol@utah.edu

Graduate student, Department of Civil and Environmental Engineering, University of Utah, 110 Central Campus drive, Suite 2000, Salt Lake City, Utah 84112

² Postdoctoral researcher, Department of Land, Air & Water Resources, University of California Davis, 138 Veihmeyer Hall, One Shields Avenue, Davis, CA 95616

²³ PhD Candidate, Department of Civil and Environmental Engineering, University of Utah, 110 Central Campus drive, Suite 2000, Salt Lake City, Utah 84112

⁴ Associate Professor, Department of Civil Engineering, University of Toledo, 2801 W. Bancroft St., MS 307, Toledo, Ohio 43606

⁵ Associate Professor, Department of Civil and Environmental Engineering; Associate Director, Global Change and Sustainability Center; University of Utah, 110 Central Campus drive, Suite 2000, Salt Lake City, Utah 84112

Highlights:

- CSOs are one of the greatest challenges to meet sustainability standards.
- Climate change may cause 12-18% increase in CSOs characteristics in Toledo.
- Rainwater Harvesting (RWH) was able to mitigate the climate change impacts.
- RWH could supply indoor toilet flushing demands in buildings in Toledo.
- RWH indicated a satisfactory performance in the peak flow events.

Download English Version:

<https://daneshyari.com/en/article/4928317>

Download Persian Version:

<https://daneshyari.com/article/4928317>

[Daneshyari.com](https://daneshyari.com)