



WILDWOOD

November 30, 2022

MEMORANDUM

To: Watershed Erosion Task Force Members

From: Department of Planning and Parks

Re: Updates on Projects (**Wards – All**)

Cc: The Honorable James R. Bowlin, Mayor
Steve Cross, City Administrator
John A. Young, City Attorney
Joe Vujnich, Director of Planning and Parks
Rick Brown, P.E. and P.T.O.E., Director of Public Works
Melanie Rippetoe, Assistant Director of Planning and Parks
Travis Newberry, Senior Planner

UPDATE ON ITEMS >>> The task force has many projects underway at this time, but several are ongoing and do have certain updates to them, over the course of the last two months. These projects include the USGS Study of the Caulks Creek Watershed, the submittal of permits to the U.S. Army Corps of Engineers, and a future stormwater management plan for the City. These projects will also be the focus of the task force in 2023.

USGS STUDY >>> The USGS study remains a primary function of the City and its task force members and will continue through all of the upcoming year – 2023 (part of the two (2) year timeframe). The Department has attached the recently received update from the principal scientist from this federal agency, Dr. Jessica LeRoy. Dr. LeRoy has provided past updates to the task force in this same regard.

PERMIT PROGRAM UNDER CWA SECTION 404 >>> The Departments of Planning and Public Works continue to complete their parts of the process for the filing of these permits with this federal agency, but would still state that, even without readily available funds at this time, the submittal of them remains prudent action on the part of Wildwood. Although the grant funding effort did not produce the desired outcome, funding opportunities do present themselves at all times and with these specific permits issued or ready for issuance, such would position the City in the best possible place for the future. Therefore, the Department of Planning is recommending the task force stay committed to this permitting process.

STORMWATER MASTER PLAN >>> The City Council, at its October meeting, added the development of a stormwater management plan for the City as a subgoal of the major goal 'Public Works.' With the addition of this master plan to the strategic planning processes, the Departments of Planning and Public Works would note it is now part of a five (5) year program that has regular and frequent reviews by the City Council and incumbent of the task force to begin it as soon as possible. Therefore, the Department would seek permission to place this item on future agendas and retain it there until the project is completed.

OTHER AND CONTACT INFORMATION >>> If any of the Task Force Members should have any questions or comments regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. A presentation is planned on these items at tonight's meeting. Thank you for your review of this information and input on the same.

From: LeRoy, Jessica Z jleroy@usgs.gov
Subject: RE: [EXTERNAL] Update
Date: Nov 29, 2022 at 8:58:05 AM
To: Joe Vujnich joe@cityofwildwood.com
Cc: Travis Newberry travis@cityofwildwood.com, Melanie Rippetoe MRippetoe@cityofwildwood.com, Dan Rahn dan@cityofwildwood.com

Hi Joe,

Thanks, I had a very nice Thanksgiving and hope you did as well.

I copied one of my previous updates below and added what's new since we last emailed (highlighted in yellow). I believe we owe you a preliminary look at the comparison between the first two terrestrial lidar scans so I have asked the person processing that data for an estimate on when that will be ready. I'll let you know when I hear back.

- Field data collection
 - Terrestrial Lidar monitoring – The two 2022 scans have been completed. The individual scans have been stitched together and points are currently being classified to make georeferencing (assigning real-world coordinates) go more smoothly. Filtering, georeferencing, and comparison between the two scan dates are the next steps. The two 2023 scans are planned for Feb/Mar and July/Aug.
 - Water level sensor installation – COMPLETE (and data pull done in May 2022, Oct 2022)
 - Erosion pin installation – COMPLETE (pins were re-measured in May 2022, July 2022, Oct 2022. Some pins were not found and were assumed to be completely eroded out)
 - GPS/GNSS surveying – COMPLETE
 - Sediment sampling – Samples have been collected and are in the queue at our sediment lab but have not yet been processed
- Hydrologic modeling to assess basin-response characteristics (flood peak, volume, and timing) to design storms
 - current climate conditions – COMPLETE
 - future climate-changed conditions – COMPLETE
 - effect of additional storage – COMPLETE
- Hydraulic modeling of the mainstem of Caulks Creek to identify the spatial distribution of velocity, shear stress, and stream power for current and future hydrology and to determine the effect of additional storage – Completed incorporating surveyed bathymetry into the aerial lidar terrain. Currently working on

building the model with this new terrain and incorporating the water level data for calibration/validation purposes.

- BSTEM (Bank stability and toe erosion modeling) – *Dependent on hydraulic model results, sediment samples, and t-lidar data. Intend to begin in early 2023.*

Please let me know if you have any questions or concerns.

Best,
Jess LeRoy

Jessica Z. LeRoy, Ph.D.
(she/her/hers)
Hydrologist
USGS Central Midwest Water Science Center
405 N. Goodwin Ave.
Urbana, IL 61801
(217) 328-9765 (office)
(217) 372-9121 (cell)
jleroy@usgs.gov

I am working from home during the COVID pandemic and can be reached through Teams or on my cell phone.

CDI Geomorphology Focus Group webpage:
<https://doimspp.sharepoint.com/sites/usgs-CDI-Geomorphology-Focus-Group>

From: Joe Vujnich <joe@cityofwildwood.com>
Sent: Monday, November 28, 2022 10:21 AM
To: LeRoy, Jessica Z <jleroy@usgs.gov>
Cc: Travis Newberry <travis@cityofwildwood.com>; Melanie Rippetoe <MRippetoe@cityofwildwood.com>; Dan Rahn <dan@cityofwildwood.com>
Subject: [EXTERNAL] Update

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Dr. LeRoy:

I hope you had a very nice holiday.

The task force is meeting one last time this year, on Wednesday, and I was hoping you could provide an update regarding the study for its members. It would be much appreciated.

Thank you,
Joe Vujnich