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AGENDA

Highlands Stormwater Management Program for Plan Conformance Municipalities March 8, 2016

- I. Welcome – Margaret Nordstrom, Executive Director, Highlands Council
- II. Introduction and Overview of session – Christine Danis, Director of Planning and Science, Highlands Council
- III. Overview of Highlands Stormwater Management Program components
 - GIS mapping of stormwater structures and conditions assessment
 - Highlands Area Stormwater Control Ordinance Amendments
 - Stormwater Mitigation Plan Updates
 - Training for municipal stormwater representatives
- IV. Details of Stormwater Mobile Application
- V. Field test using Highlands Mobile Application on Highlands Council property
- VI. Review of field test data in desktop application
- VII. Discussion and Q&A
- VIII. Wrap-Up



Highlands Council

Stormwater Management Mobile Application Training

Tuesday, March 8, 2016 – 10:00 a.m. - 12 noon
Tuesday, March 8, 2016 - 2:00 p.m. - 4:00 p.m.

Highlands Council, 100 North Road, Chester, NJ 07930



Agenda

- Welcome
- Introduction & Overview of Session
- Overview of Highlands Stormwater Management Program
- Stormwater Mobile Application Overview, Field Test
- Discussion & Q&A



Highlands Stormwater Management Program

- Funded as part of Plan Conformance (with an approved Scope of Work)
- Supports existing NJDEP 7:8 Municipal Stormwater Regulations (MS4 Permit)
- Highlands Region Stormwater Management Program Guidance
 - www.nj.gov/njhighlands/planconformance/#storm



Highlands Stormwater Management Program Components

1. GIS Mapping of Stormwater Structure Locations and Conditions Assessment
2. Adoption of Highlands Stormwater Control Ordinance Amendments
3. Review and Update of Stormwater Mitigation Plan
4. Stormwater Management Training



1. GIS Mapping of Structures

- Conduct an assessment of existing stormwater structure locations and conditions and submit digital GIS data for each structure in the municipality (outfall structures required).
 - *See Appendix B of “Highlands Region Stormwater Management Program Guidance”*
- Municipality may use Highlands Mobile Stormwater Mapping Application to assist in the collection of outfall data (optional).
 - *See Appendix C of “Highlands Region Stormwater Management Program Guidance”*



GIS Mapping of Structures and Conditions Assessment Goals & Requirements

- The creation of a region-wide GIS database of stormwater structures
 - Municipality will collect and field-verify location & conditions data (outfalls required)
 - Data collected must align with NJDEP stormwater data dictionary (MS4 permit requirements)
 - Data collected must align with NJDEP digital data standards (within 5 meters).
 - Photographic data must be submitted for each outfall location and include coordinates



2. Stormwater Control Ordinance

- Revise existing Stormwater Control Ordinance to reflect requirements of Highlands RMP.
 - *See Appendix D of “Highlands Region Stormwater Management Program Guidance”*
- Submit document for review; revise, finalize.
- Receive Highlands Council approval prior to local adoption.
- Provide electronic copy of adopted document to Highlands Council.



3. Stormwater Mitigation Plan

- Revise or develop municipal Stormwater Mitigation Plan.
 - *See Appendix E of “Highlands Region Stormwater Management Program Guidance” for Highlands-specific requirements*
- Submit document for review; revise, finalize.
- Receive Highlands Council approval prior to local adoption.
- Provide electronic copy of adopted document to Highlands Council.



4. Stormwater Management Training

- Funding available through Plan Conformance process.
- Municipal officials and/or designees eligible.
- Highlands-sponsored or other stormwater training programs.
- Prior Highlands Council approval required.
- All funding is reimbursement-based.



Mobile App Overview

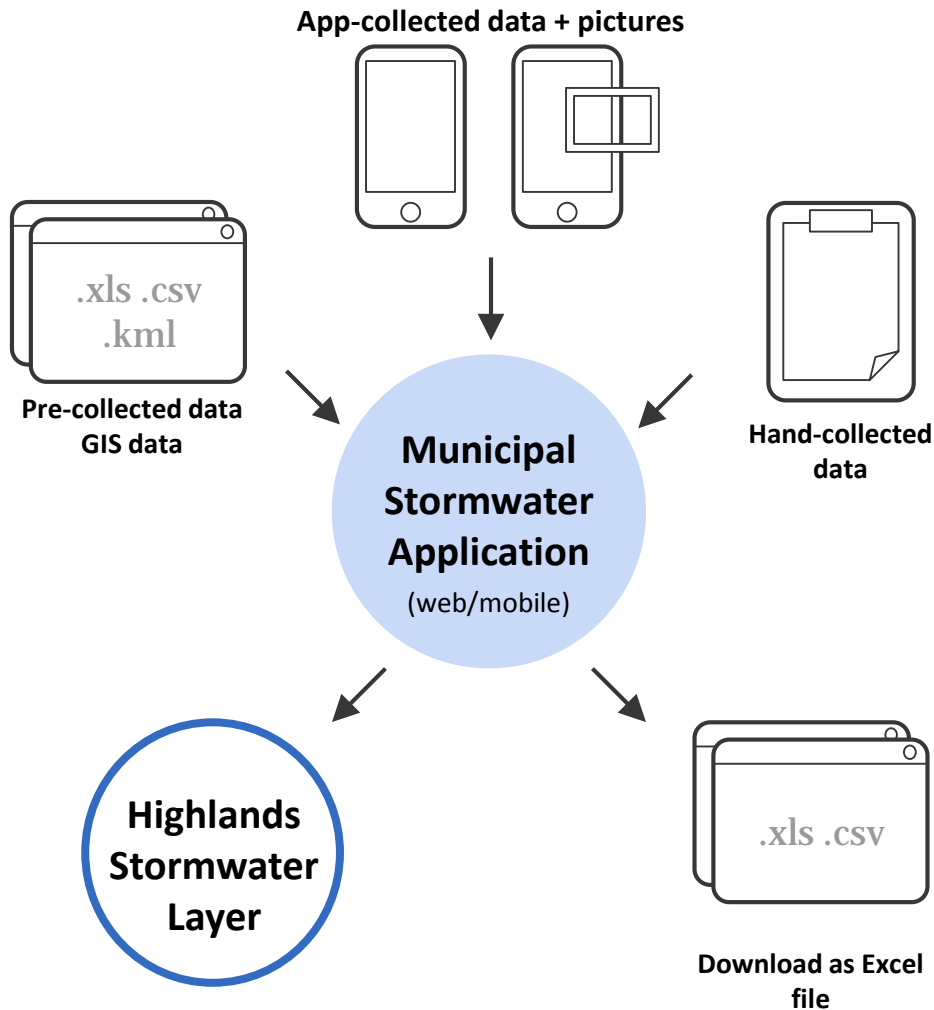


Highlands Mobile App Licensing

- For municipalities that choose to use the Highlands Stormwater Mobile Application and supporting website:
 - Licensing fee for use of the mobile application and supporting website available for reimbursement through Plan Conformance grant program.
 - Grant includes the use of mobile application for data collection & editing for up to 1 year.
 - External GPS receiver required to enhance accuracy is available for reimbursement through Plan Conformance grant program.



Highlands Mobile App Overview

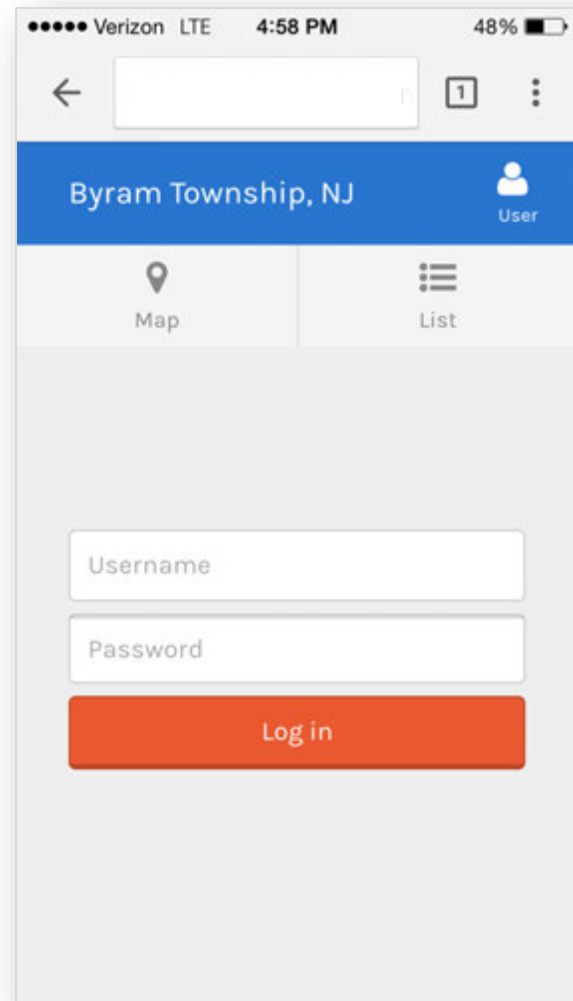


- **A mobile application** developed by Vertices and provided by the Highlands Council to municipalities
- Allows municipalities to **capture stormwater data in the field** including locations, conditions, and photographs
- Collected data is transferred to a centralized Highlands GIS database



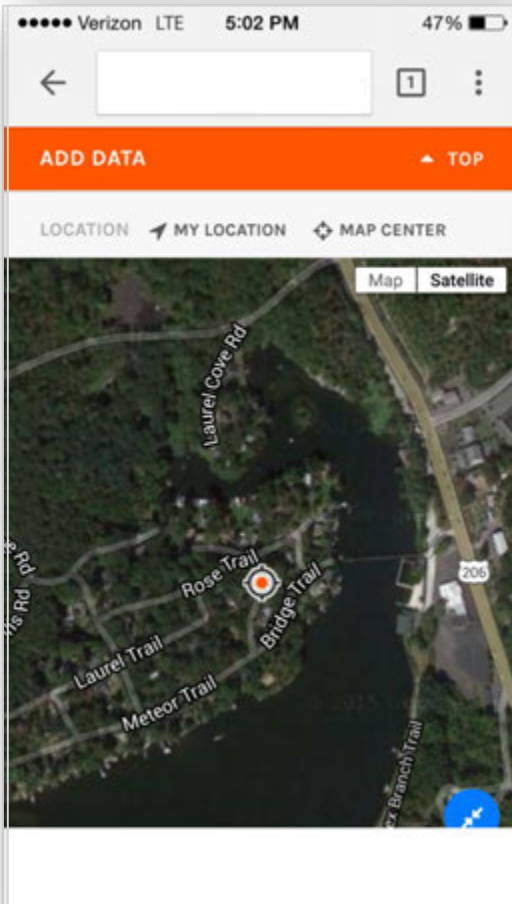
Technical specifications

- Mobile app is browser-based.
- Compatible with most Apple and Android devices
- Municipalities will be given unique URL, usernames, and passwords upon approved scope of work and license payment to Vertices (reimbursable through Highlands grant funding)

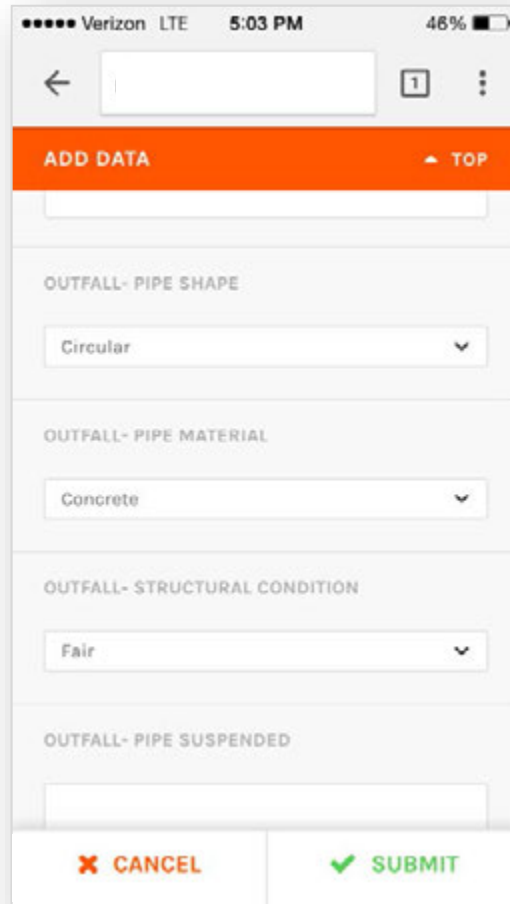




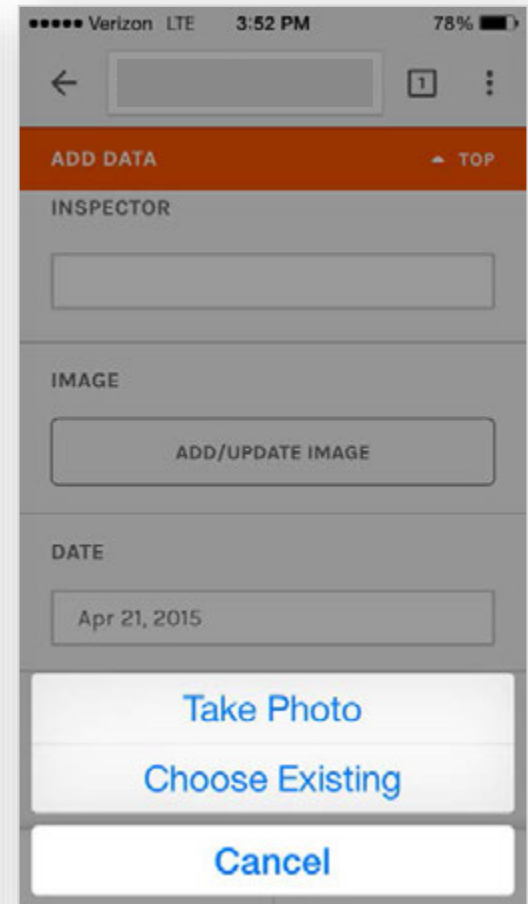
Application Features: Add Data



GPS and hybrid map view
*External GPS receiver improves accuracy and is required for Highlands Council Data (reimbursable through Highlands grant funding)

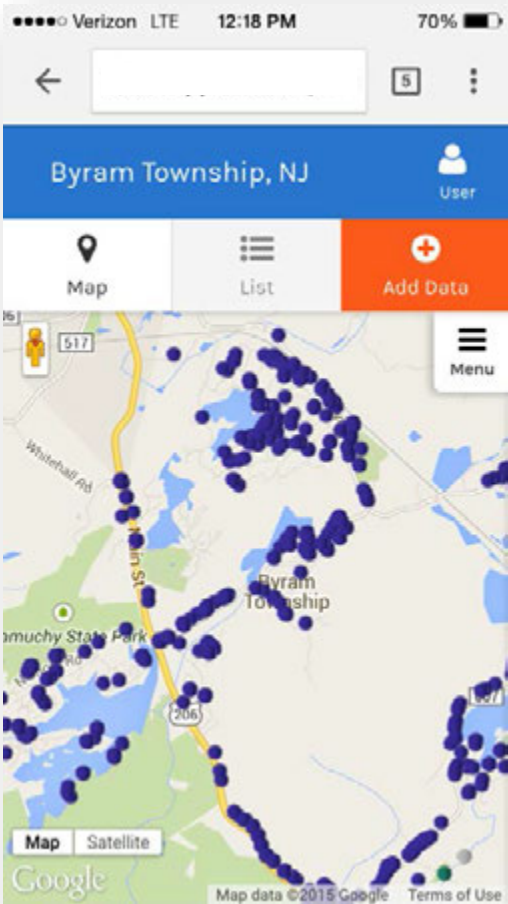


**Select types & conditions;
add comments**

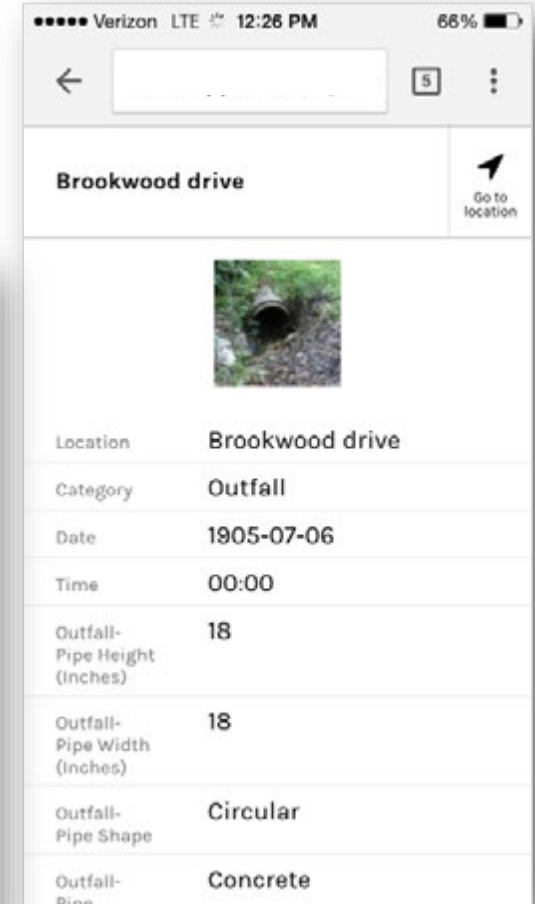
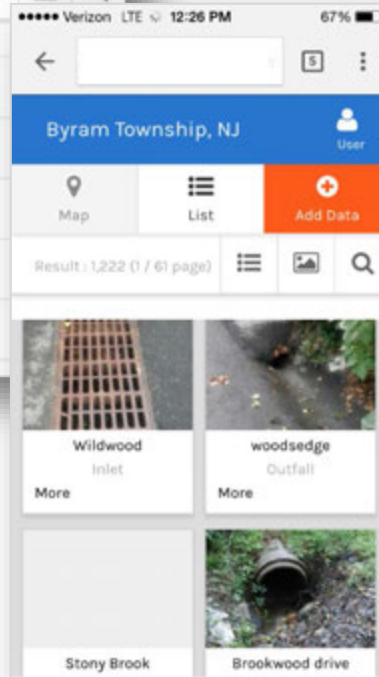
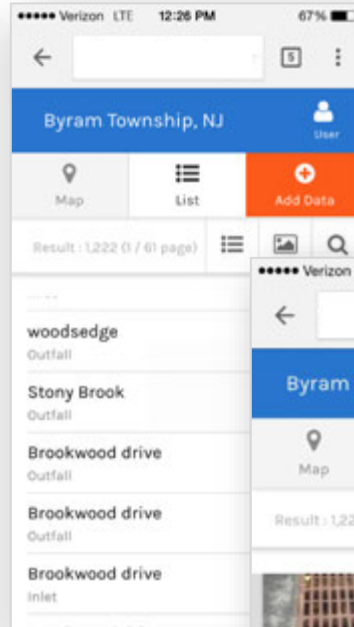


**Add photos from camera or
album**

Application Features: View/Edit Data



Click point on map or view by list, photos, or search

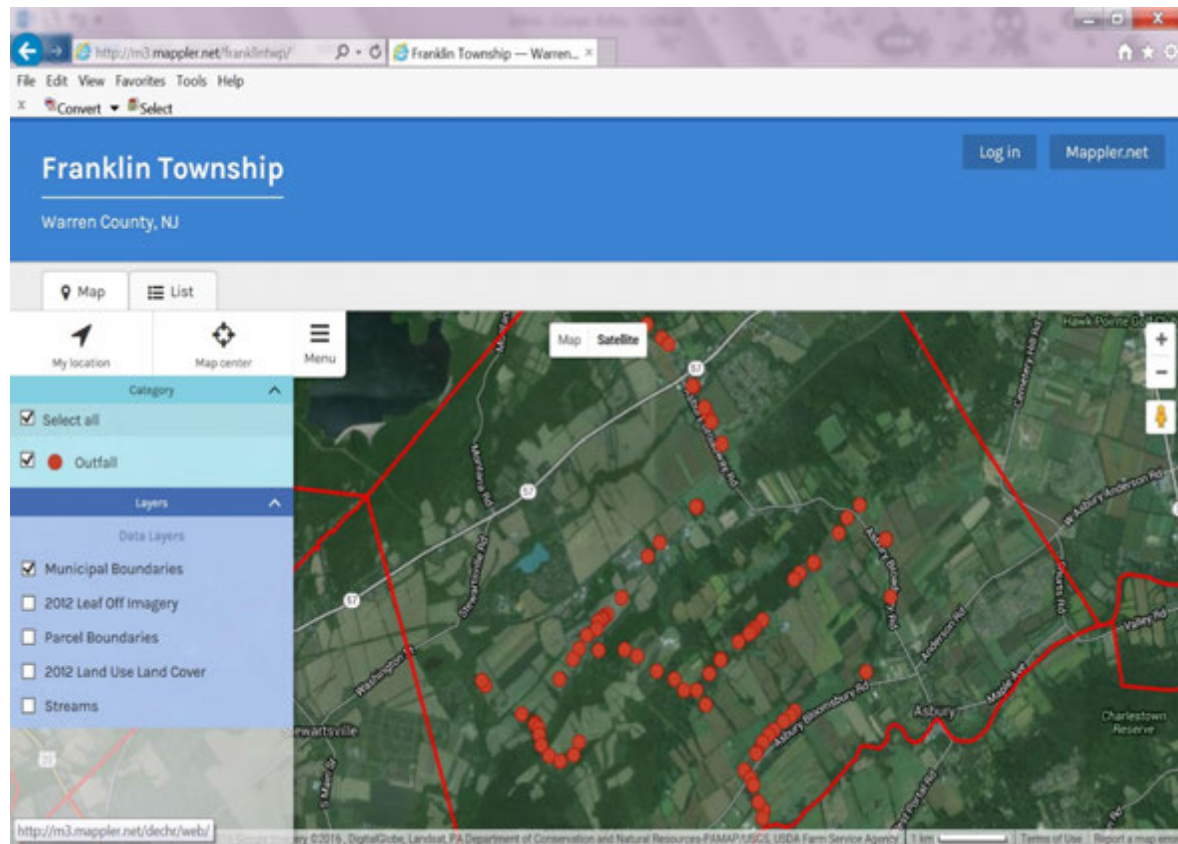


Individual record



Desktop Web Interface

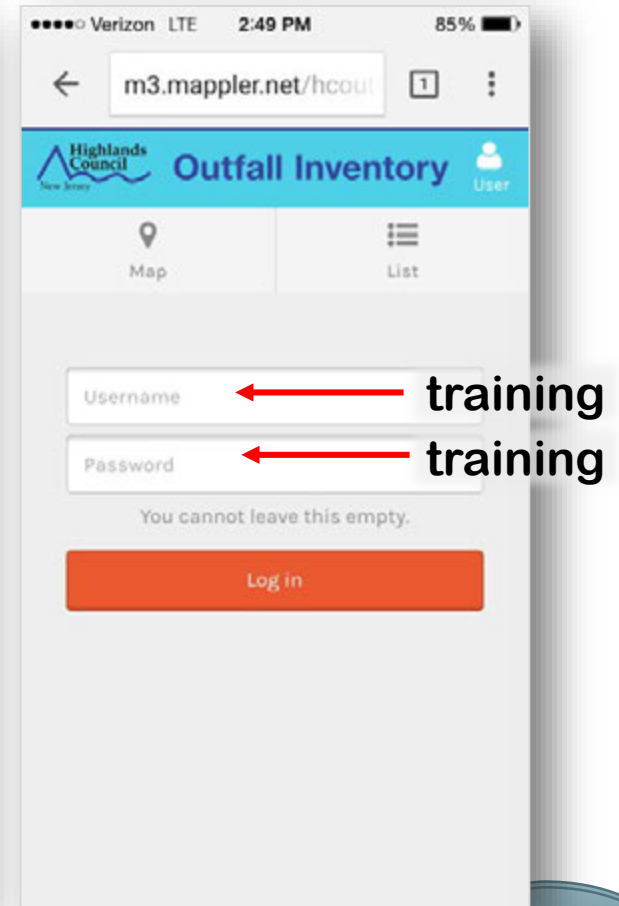
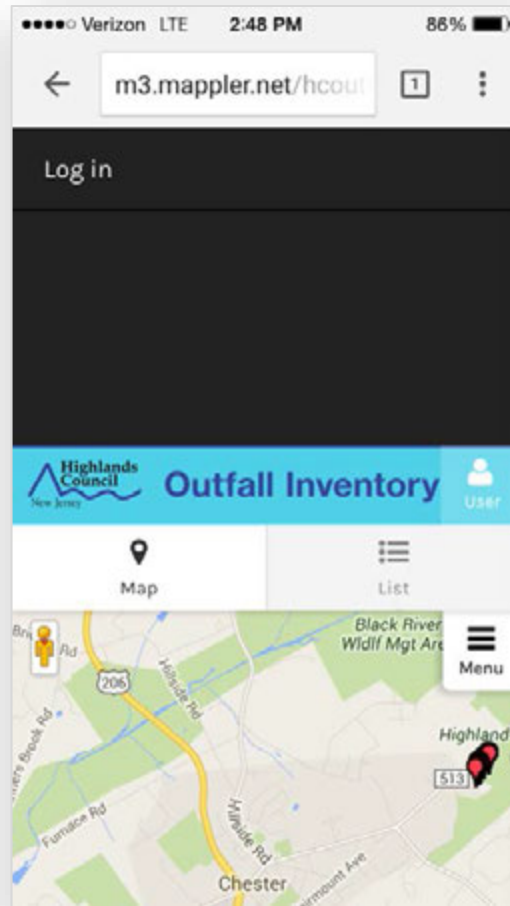
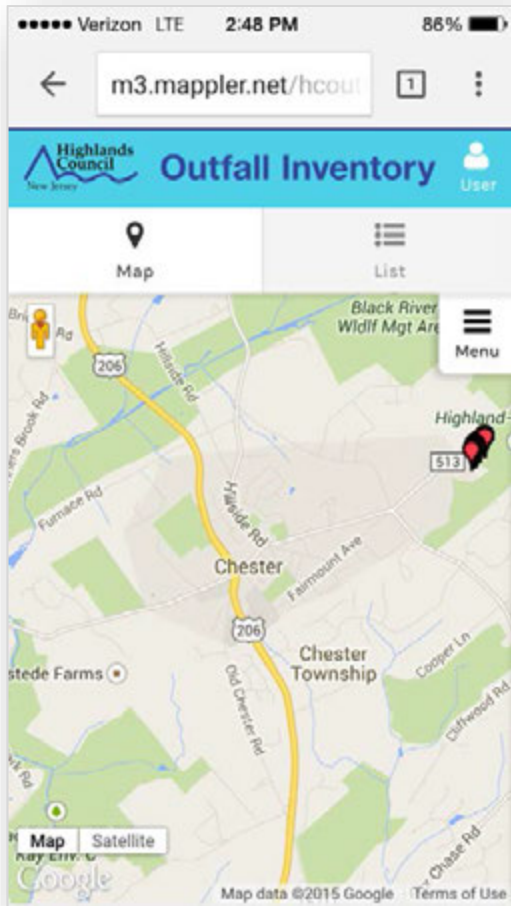
- Captured outfalls populate the map live through a browser
- Add, edit, delete any data
- Download data as Excel spreadsheet
- Web map will be pre-populated with five GIS layers





Group set-up for field test

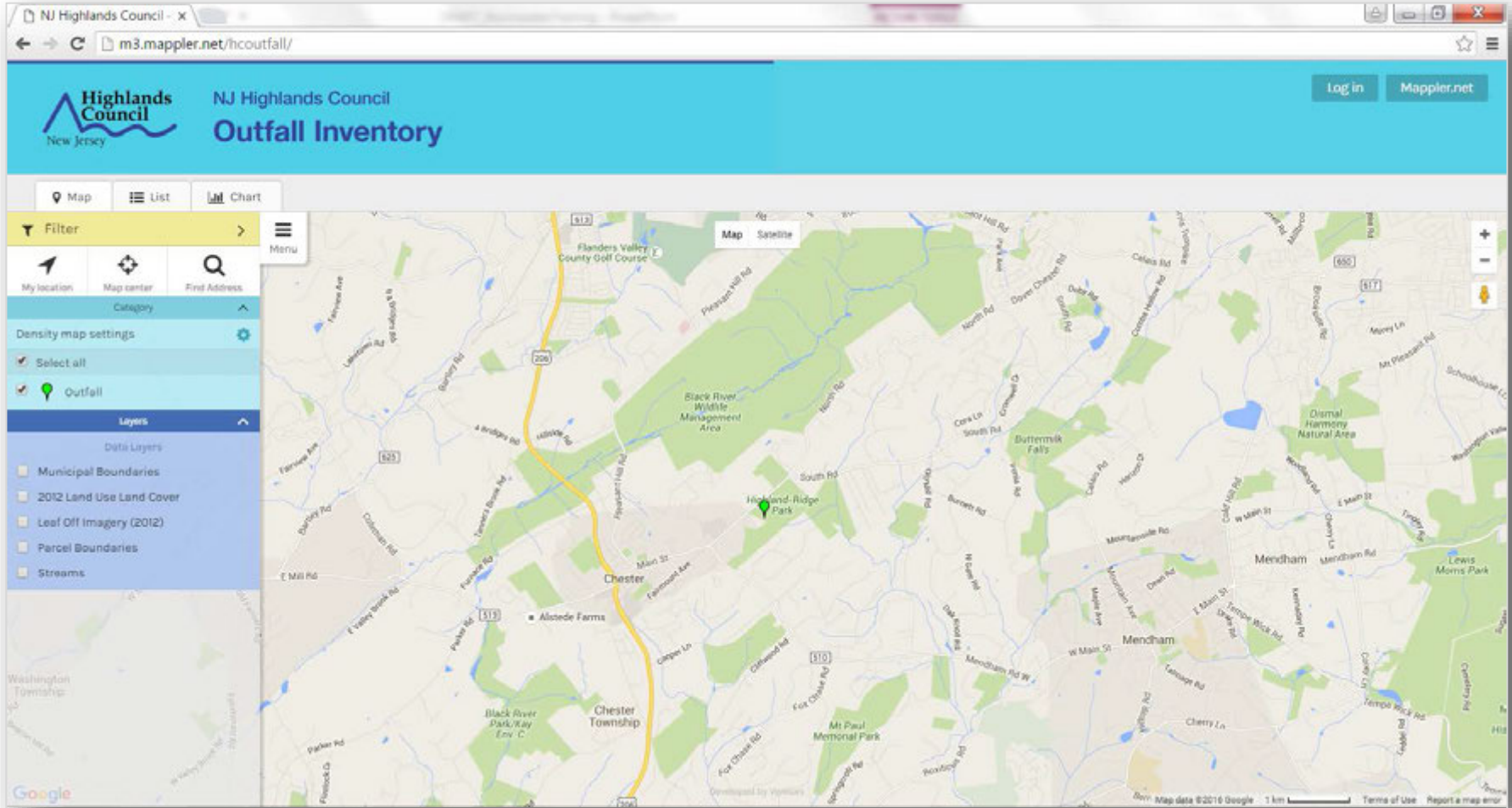
m3.mappler.net/hcoutfall





Field Test

Review of Field Test Data





Discussion with Municipal Partners

- Ease of use
- Ideas for enhancements
- Lessons learned
- Other?



Questions?



Next Steps



Contact Information

Highlands Council Municipal Liaisons

www.nj.gov/njhighlands/planconformance/liaisons.html



Final Thoughts

- Review Program Guidance Document in its entirety.
- Refer to the FAQ sheet.
- CEUs for today's training can be self-reported.
- Talk to your liaison.



Highlands Council

Stormwater Management Mobile Application Training

Thank you!

Highlands Council, 100 North Road, Chester, NJ 07930

Stormwater Mobile Application Training
Program Support Document

1. Am I required to use the mobile application?

No. If outfall data has been collected using another means, that is perfectly acceptable. However, all collected data must adhere to the NJDEP Mapping and Digital Data Standards (<http://www.state.nj.us/dep/gis/standard.htm>) and forwarded to the Highlands Council. The benefit of the application is it provides an exciting mobile- and web-based interactive mapping platform and real-time data collection and uploads.

2. Are there any hidden costs associated with the use of the mobile application?

Each municipality has the option to have their own interactive map with a mobile, data collection tool for a one-year software licensing fee. This first year, is funded through the Highlands Council's Plan Conformance Grant Program subject to an approved Scope of Work. Subsequent year's fees are subject to Highlands Council approval.

3. How do the Highlands Council Stormwater Program outfall inventory requirements differ from the NJDEP requirements?

They are the same for Tier A municipalities. The Highlands Council is providing an enhanced tool to the municipalities in support of the NJDEP Stormwater Program. The mobile application presents an easy, fun and accurate way to collect the data that is already required to be collected as per your Municipal Stormwater General Permit (Tier A municipalities only). Although Tier B municipalities are not required to collect outfall data by the NJDEP, the Highlands Council requires it for conformance with Highlands Regional Master Plan.

4. Will funding be available through the Plan Conformance grant program to purchase additional equipment needed to collect the outfall structure data?

No. Stormwater outfalls can be mapped in the field using iPhone or Android smart phones or similar device with secure access. However, a mapping grade GPS receiver will be **required** to collect data according to NJDEP requirements (routinely achieve 5 meter or better horizontal accuracy, using either real time or post processed differential corrections). The cost of this receiver is approximately \$100 and is reimbursable through the Highlands Council Plan Conformance Grant Program.

5. Who will be able to access the outfall data that is collected using the mobile application?

The designated municipal users (i.e. Stormwater Coordinator) will have access to the application as well as the Highlands Council GIS Manager. Security protection and access control measures will be established for individual users through the use of usernames and passwords.

6. What if I have already collected outfall structure data?

As long as the data conforms to the Highlands Council and NJDEP digital data standards and the MS4 Permit criteria, it will be acceptable to the Highlands Council. In this case, the municipal liaisons will assist municipalities to develop a tailored Scope of Work that will allow for reimbursement of stormwater management activities through the Plan Conformance Grant Program.