

Cornell University
Storm Water Utility

Presentation to the Water
Resources Council

November 17, 2014



Cornell University

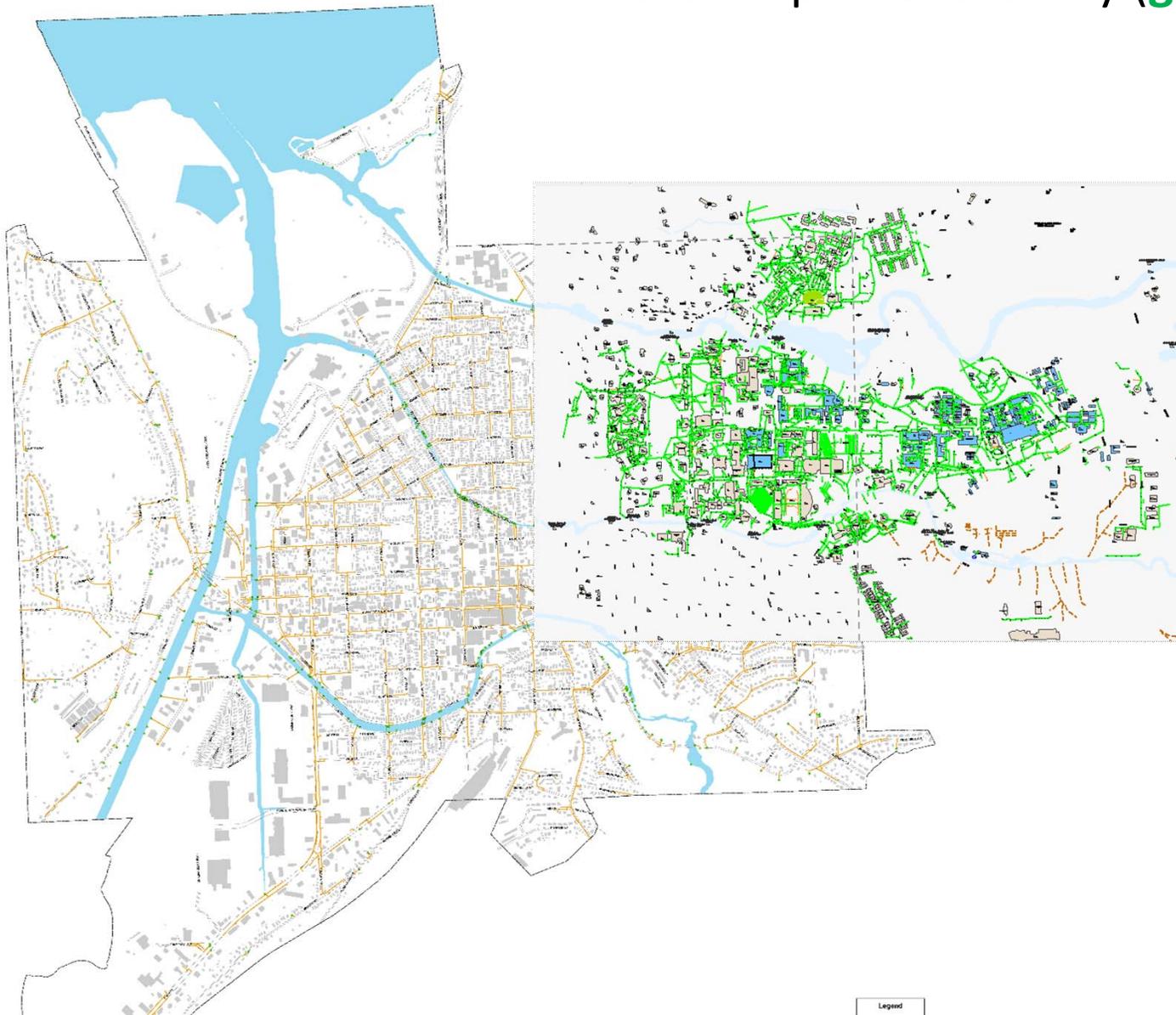
Storm Water Utility

-Request in July and August 2014

- Develop a rate structure and credit methodology that provides mitigation incentives to property owners. AND (!) that takes into account existing Storm Water Utilities consecutive to the City system that provide:
 - O&M Cost avoidance for a portion of the City
 - Reduction in Peak Flow
 - Improvement to Storm Water Quality
 - Removal of sediment, gravel and debris

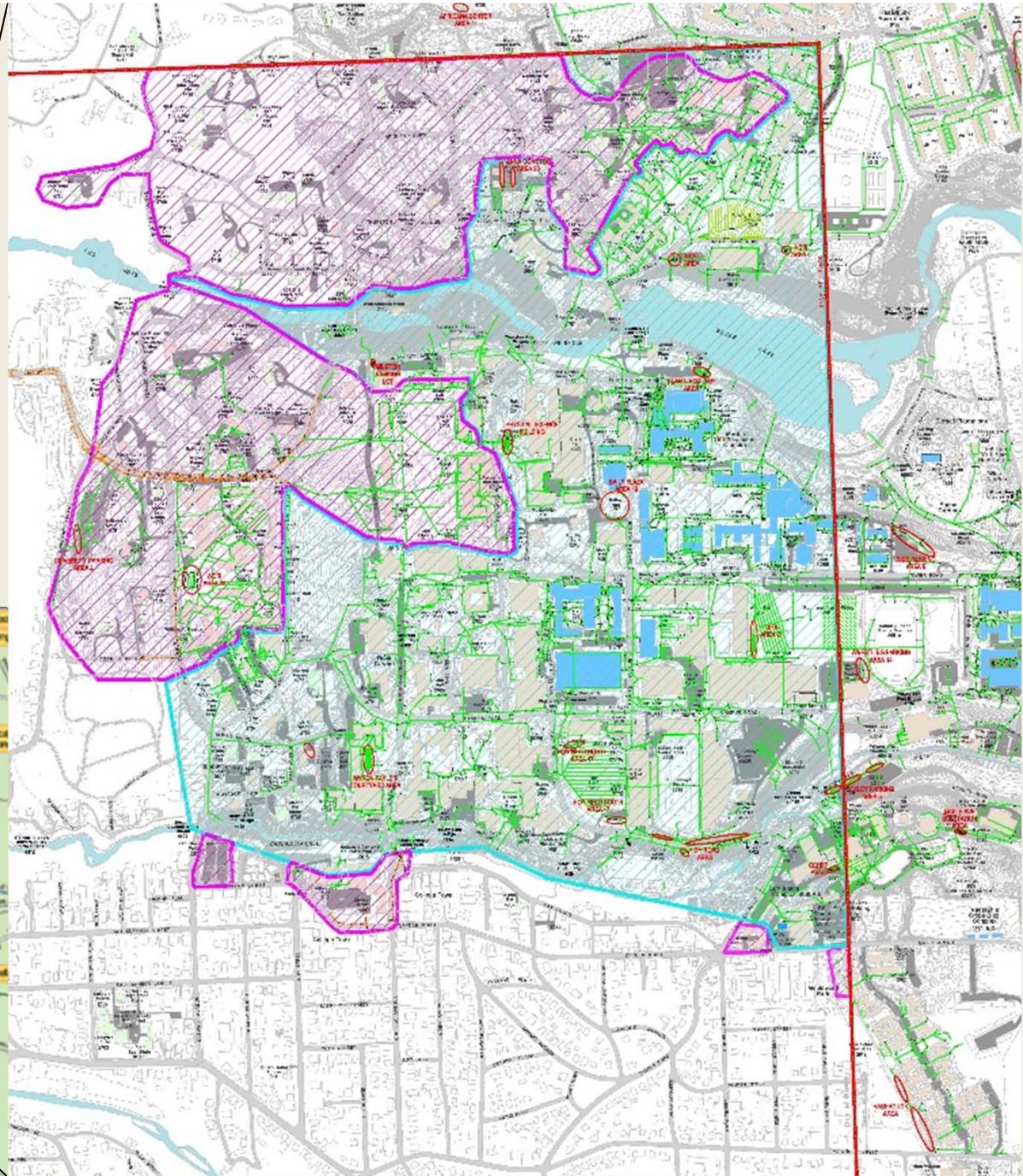
Cornell University Storm Water Utility

- City Storm Water Infrastructure
- Cornell Storm Water Infrastructure in the NE part of the City (**green** lines)



Cornell University Storm Water Utility

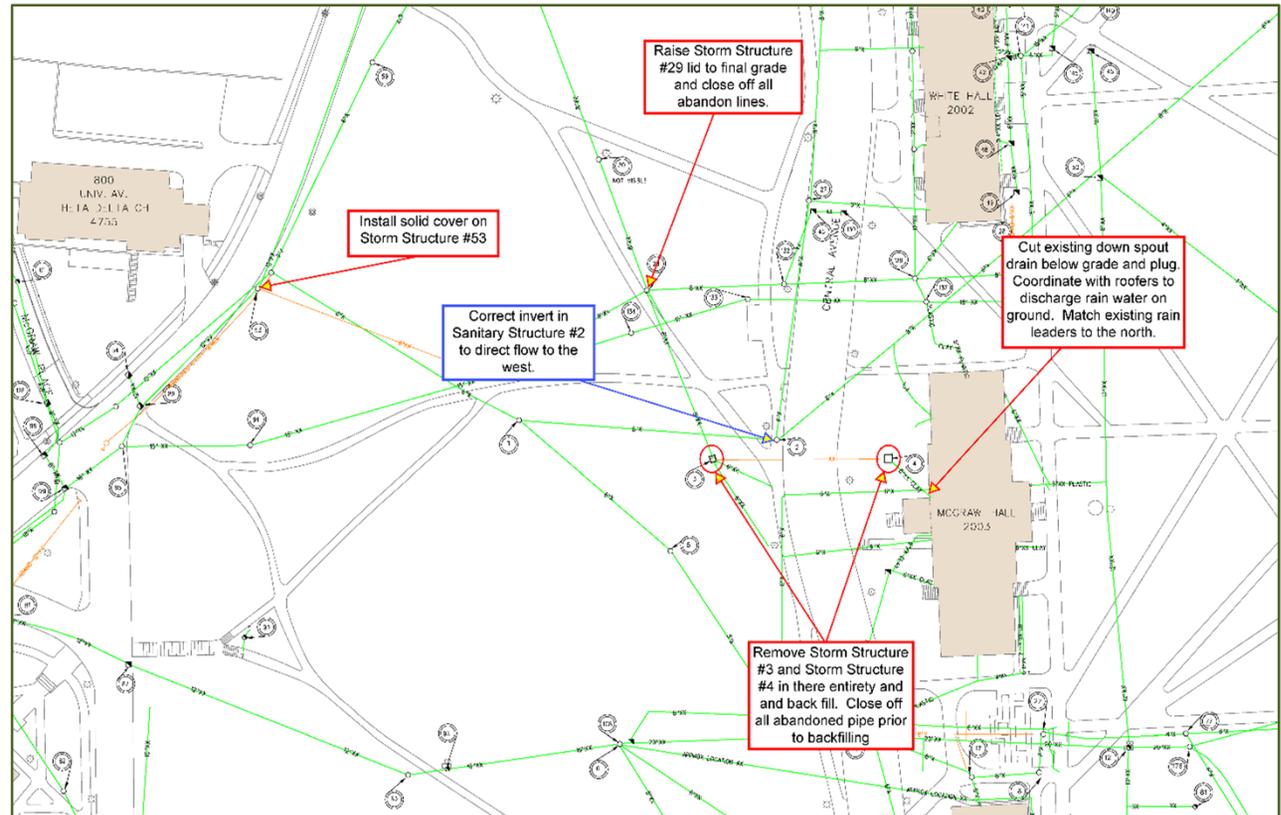
- **68% within City limits**
- **Of which 80.4% flows to the creeks. (Represented by the area cross-hatched in blue)**
- **And 19.6% flows into City piping. (Represented by the area cross-hatched in purple)**



Cornell University Storm Water Utility

- \$400,000 is budgeted for Storm water operations and maintenance
 - \$272k for infrastructure in the City
- Additional funds are budgeted for Capital Improvement Projects
- On a daily basis, our crews are working to maintain our system, make improvements to our system, and conduct Best Management Practices to reduce peak storm water flow and improve storm water quality.

Below is an example of work on Storm System – July 8th 2014 - preparing to re-line storm water lines on Libe Slope



**Cornell University
Storm Water Utility**

-City Storm Water Fee Uses:

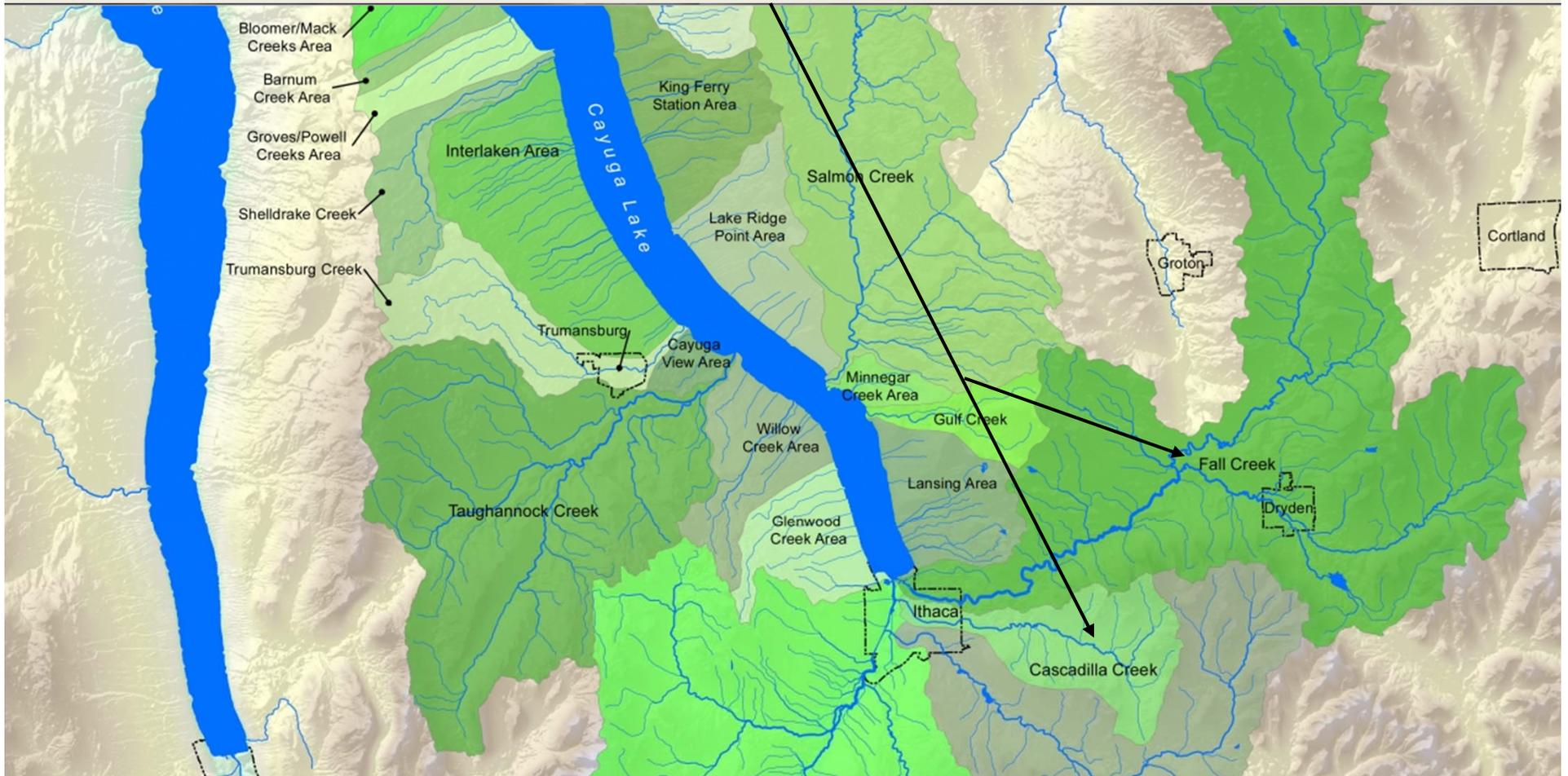
All expenses related
to storm water,
including:

- operations and maintenance activities
 - Piping
 - Catch basins and manholes
 - Channel maintenance
 - Banks maintenance
- infrastructure improvements
- portions of salaries, engineering, etc.



Cornell University Storm Water Utility Watersheds

Cornell's campus is 3.6 square miles of 136 square miles of upstream watershed (120 square miles in Fall Creek watershed and 16 square miles in Cascadilla Creek watershed), approximately 2.6% of the total. An estimated 1% of the watershed is Cornell's campus within the City limits.



**Cornell University
Storm Water Utility
-Creek maintenance**

- Fall Creek gravel, silt, and debris removal
- Beebe Dam dredging
- Material not making it to City Channels



Cornell University
Storm Water Utility
-Request for CREDIT

- Develop a CREDIT that takes into account existing Storm Water Utilities consecutive to the City system that provide the following benefits:
 - O&M Cost avoidance for a portion of the City
 - Reduction in Peak Flow
 - Improvement to Storm Water Quality
 - Removal of sediment, gravel and debris

Cornell University Storm Water Utility -Overview of Impervious Area

Information from City spreadsheets:

Row Labels	Count of PCC	Sum of Lot Sq Ft	Average Lot Sq Ft	Sum of Impervious Sq Ft	Average Impervious Sq Ft	Sum of ERU's (at 2,300)	Sum of ERU's (at 2,308.43)
Cornell University	103	16,967,124	164,729	6,406,214	62,196	2,796.75	2,786.00
City of Ithaca	98	20,845,733	212,712	2,182,007	22,265	962.00	958.50
Lower, William L	30	530,463	17,682	129,614	4,320	51.75	51.75
Cope, Edward A	28	190,534	6,805	88,390	3,157	37.50	37.50
INHS, Inc	23	236,776	10,295	94,688	4,117	44.75	44.75
Mazza and Amici, LLC	14	71,840	5,131	37,853	2,704	18.00	18.00
Grout, Brian H	13	75,809	5,831	42,280	3,252	18.25	18.25
County of Tompkins	13	1,008,633	77,587	501,856	38,604	219.75	218.75
Ledger, Orson R	12	47,407	3,951	24,939	2,078	11.75	11.75
Ithaca Urban Renewal Agen	12	403,488	33,624	268,429	22,369	117.75	117.50
Fane, Jason	12	226,234	18,853	107,885	8,990	48.50	48.25
MJM Properties	11	173,432	15,767	72,545	6,595	31.00	31.00
West Shore Apartments, LL	10	113,936	11,394	47,880	4,788	21.25	21.25
Ithaca City School Distri	10	2,179,311	217,931	847,360	84,736	369.75	368.00

TaxPar	Owner	PCC	Type	Lot Sq Ft	Impervious Sq	Actual ERU	ERU's (at 2,300)	ERU's (at 2,308.43)	Include?
				16,967,123.65	6,406,214.10	2,775.03	2,796.75	2786	48 \$ 133,728.00
2.-2-1	Cornell University	330	Vacant Land Located in Commer	513,113	6,983	3.02	3.25	3.25	Yes
9.-2-3	Cornell University	418	Inns, Lodges, Boarding and Roor	6,191	1,861	0.81	1.00	1.00	Yes
9.-4-4	Cornell University	418	Inns, Lodges, Boarding and Roor	19,713	5,886	2.55	2.75	2.75	Yes
9.-4-5	Cornell University	418	Inns, Lodges, Boarding and Roor	12,443	7,707	3.34	3.50	3.50	Yes
9.-4-10	Cornell University	418	Inns, Lodges, Boarding and Roor	11,287	3,607	1.56	1.75	1.75	Yes
9.-5-1	Cornell University	464	Office Building	45,738	18,304	7.93	8.00	8.00	Yes
9.-6-3	Cornell University	613	Colleges and Universities	18,116	13,700	5.93	6.00	6.00	Yes
9.-6-4	Cornell University	438	Parking Lot	17,190	13,522	5.86	6.00	6.00	Yes

...continued for [103 Cornell Properties...](#)

Cornell University Storm Water Utility

Cornell building projects are designed and certified in accordance with the LEED rating system. The LEED rating system promotes stormwater design that complements and extends the State regulations on stormwater management. The result is that our new developments are designed in such a way that the stormwater quality (sediment release) and quantity (peak rates) are no greater than the pre-development condition, even when we are adding some impervious area.

We also maintain these systems to continue performing over the years to these standards.



Cornell University
Storm Water Utility
-Creek maintenance

- Questions/Comments
- Thank you!

