ENTER FOR WATER QUALITY EXCELLENCE



Making Progress Together

CWQE Workshop – High Tunnels and Stormwater Management

Sally Holbert, RLA

Project Manager for the Center of Water Quality Excellence







# Aging Infrastructure - Residential

## Erosive energy of stormwater





#### UPSTREAM UNMANAGED STORMWATER –

Urbanized Area flowing downstream to tributary of Barshinger Creek









### Siting of High Tunnels







### Evaluation of Alternatives Stormwater Practices







## Stream Restoration Funding and Education

HOA and Developer Customers





# Aging Infrastructure - Agriculture

# Workshop Agenda Speakers & Panelists

High Tunnels	Ag Specialist Jeff Stolzfoos, Penn State Ext
HB 1478	Rep Dave Zimmerman, Lancaster County
ACRE	Atty Brook Duer, PSU





## High Tunnels, Drainage and Stormwater Management

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## Riparian Buffer

#### Stream Restoration



## Swales on Contour

#### Swales and Berms



## Swale and Berm

Low Impact Practices – Swale Berm and Plants

#### Evaluation of Alternatives Stormwater Practices



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- 16. THE STORMWATER MANAGEMENT DESIGN ASSUMES THE INSTALLATION OF 19,275 SQUARE FEET OF IMPERVIOUS SURFACES, ALL OF WHICH IS REQUIRED TO BE COLLECTED BY THE INFILTRATION BEDS. ANY ADDITIONAL IMPERVIOUS SURFACES BEYOND THESE AMOUNTS MUST FIRST BE APPROVED BY LEACOCK TOWNSHIP PRIOR TO INSTALLATION.
- 17. NO TREE OR SHRUB WHICH MAY OBTAIN A HEIGHT OF 20-FEET OR MORE SHALL BE PLANTED OR ALLOWED TO GROW WITHIN 10-FEET OF ANY LOT LINE WHICH ABUTS AN AREA WITHIN AN AGRICULTURAL ZONE.
- 18. LEACOCK TOWNSHIP SHALL BE CONTACTED SHOULD ANY CHANGES BE PROPOSED TO THE APPROVED PLANS, CONSTRUCTION SEQUENCE, OR IF SINKHOLES ARE ENCOUNTERED.





### Opportunity for Riparian Buffer





This image shows the previous season's tomato remnants (left) and a well-established cover crop. These tunnels will be flipped to cover the center areas that are currently not under cover.



## Cover Cropping between Tunnels

#### Cover Crops and Riparian Buffer



### Site Analysis for High Tunnels