Conservation Toolbox for Municipalities

A guide to developing and implementing land and water conservation programs.
Development of this toolbox would not have been possible without financial support from the National Fish and Wildlife Foundation through a Chesapeake Stewardship Fund grant to Penn State University, and the additional support of our many Conewago Creek Initiative partners, including Penn State University, Dauphin County Conservation District, Lancaster County Conservation District, Lebanon County Conservation District, USDA NRCS, USDA ARS, Tri-County Conewago Creek Association, PA DEP, PA DCNR, PA Department of Agriculture, USGS, US Fish and Wildlife Service, US Environmental Protection Agency, Chesapeake Bay Foundation, ZedX, Inc., LandStudies, Inc., Wild Resources, Inc., Elizabethtown College, and South Londonderry Township.

Thanks to the drafting team: Bridget Dougherty, Kristen Kyler, Matt Royer, Nate Straw, Jayne Ulrich, Penn State University and Rugh Henderson, South Londonderry Township. Thanks also to the members of the Conewago Non-Ag Team, John Theilacker, Brandywine Conservancy, and Joe Hebelka, PA DEP, who reviewed and provided comments on drafts of this document.

Finally, a special thanks to John Rogers, Keystone Conservation Trust, whose “Municipal Path to Success” program provided the inspiration for the development of this toolbox.

Photo and graphic credits:
Acknowledgements .................................................................................................................. 2

Introduction ............................................................................................................................. 4

How to Use this Toolbox ......................................................................................................... 5

The Conservation Toolbox

Strengthen Community ........................................................................................................ 6
  Tool 1: Conewago Creek Initiative Partner
  Tool 2: Watershed Education Program
  Tool 3: Conewago Stream Teams
  Tool 4: Farm Tours
  Tool 5: Environmental Advisory Council (EAC)
  Tool 6: Multi Municipal Watershed Workgroup

Preserve the Rural Landscape and Agriculture ..................................................................... 12
  Tool 7: Natural Resource Inventory
  Tool 8: Agricultural Security Area
  Tool 9: Agricultural Zoning
  Tool 10: Conservation and Agricultural Easements
  Tool 11: Land Acquisition

Establish Sustainable Land Use Principles and Practices .................................................. 17
  Tool 12: Comprehensive Plan
  Tool 13: Official Map
  Tool 14: Green Ordinances
  Tool 15: Conservation By Design
  Tool 16: Transfer of Development Rights (TDR)

Enhance Recreational Opportunities .................................................................................. 22
  Tool 17: Municipal Parks, Trails, and Preserves
  Tool 18: Parks and Recreation Committee

Restore and Protect Natural Resources .............................................................................. 24
  Tool 19: Agricultural Conservation Planning
  Tool 20: Watershed Assessment and Restoration
  Tool 21: Stormwater Management Program
  Tool 22: Source Water Protection
  Tool 23: Natural Areas Program
The Conewago Creek Initiative

The Conewago Creek Initiative is a locally-led, collaborative partnership effort in the Conewago Creek watershed in Dauphin, Lebanon, and Lancaster Counties of Pennsylvania that seeks to improve water quality in the Conewago Creek watershed. The Initiative works with local residents in the community to increase awareness of and interest in adopting land management practices that will improve water quality of local streams, ensure healthy farms, forests, and communities, and protect and maintain quality of life.

A Vision for the Conewago

In 2010, the Initiative sponsored a “visioning process” for the Conewago Creek watershed. More than 100 stakeholders of the Conewago Creek watershed community provided input over a 3 month period, creating a vision for their home, community, and watershed. The consensus building approach used in this visioning process established multiple priorities aimed to achieve and maintain a healthy Conewago Creek watershed. These priorities include clean water, viable and productive agriculture, green open spaces, vibrant and well planned communities, and enhanced outdoor recreational opportunities. Each priority is interrelated to the other priorities and reflects the connectivity between the community and the watershed. The Vision for the Conewago is the product of a constructive, inclusive process that identified unique opportunities in the watershed to be valued and protected and issues that need to be addressed:

The Conewago watershed community has envisioned a future that establishes the restored Conewago and its tributaries as a centerpiece of pride and a treasured asset in a rural landscape. This vision includes a strong agricultural community and productive farmland, community recreation areas and vibrant, well-planned communities. Pristine landscapes will be protected while providing sustainable uses of natural resources, clean water and streams, and educational opportunities for generations to come.

Implementing the Vision: The Municipal Toolbox

Municipalities are leaders in shaping local communities and implementing the visions of their residents. By embracing watershed management approaches to decision making and program development, municipalities of the Conewago can help make the watershed one that their residents desire and deserve.

The Conewago Initiative has put together this toolbox to provide ideas and guidance on how to make improvements to your community and the Conewago Creek. The tools are organized by the five key goals developed to meet the vision for the Conewago watershed. For each tool, three tiers are provided, each describing various levels of municipal involvement and investment needed. Links to resources, suggestions on possible partners, and contact information for someone who can help you get started is provided for each tool.

Municipalities can play a key role in protecting watersheds and water resources. This guide can help you get started. For more information, questions, or to start building a partnership, visit the Conewago Creek Initiative’s website at www.conewagoinitiative.net or email us at conewagocreekinitiative@gmail.com.
Meet with Conewago Creek Initiative Representatives

The Conewago Creek Initiative representatives will be glad to meet with you to discuss the Initiative’s goals and objectives and determine where mutual interests exist within your municipality.

Review Toolbox and Select Tools to Implement

Initiative representatives will review the Toolbox with you, and determine which tools you may be interested in implementing, and what tiers match your desired goals for implementation.

Develop Your Customized Toolbox

Based on these conversations, Initiative representatives will develop your own customized toolbox, and a pathway for moving forward to implement the priority conservation tools in your community.

Develop Implementation Plan and Implement Tools

To implement one or more of the tools you have selected, you will need to develop a plan for implementation and take ownership of the tools you have committed to implementing. Implementation steps may be rather simple for certain tools, while others will be more complex and involve consideration of the following steps:*

**Step 1: Develop your implementation plan.** There are several considerations in developing your plan, including:

- Identifying the objectives you wish to accomplish
- Determining municipal support needed and who will provide it (such as the municipal manager)
- Assessing personnel needs
- Establishing the priority of desired programs

**Step 2: Formulate and pass resolutions if needed.** Resolutions may be necessary to formally indicate municipal support.

**Step 3: Cultivate volunteers.** Advertise the need for volunteers and appoint interested volunteers to serve. Once volunteers are in place, provide guidance on how to function as a municipal committee.

**Step 4: Support volunteers in implementing tools successfully.** The municipal manager, staff and/or elected officials should constantly support group meetings and functions to ensure successful program accomplishments and continued growth of the volunteer committee.

*These steps were shared by Rugh Henderson, Township Supervisor, South Londonderry Township, based on the township’s experiences in successfully establishing an Environmental Advisory Council (EAC) and volunteer natural areas program.
Tool 1: Conewago Creek Initiative Partner

A member organization of the Conewago Creek Initiative, a collaborative partnership of organizations working together to pool resources and work with Conewago residents, farmers and businesses to increase adoption of practices that will improve and protect water quality. Partners include representatives from the local, state, national, and private organizations, agencies, and businesses.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact the Initiative and determine a partner role for your municipality. Determine teams on which you may be interested in serving.</td>
<td>Attend Initiative meetings and share your input. Promote the Initiative on your website and municipal newsletters.</td>
<td>Actively promote Initiative programs to residents. Encourage participation by advertising and taking an active role.</td>
</tr>
</tbody>
</table>

**RESOURCES**

Conewago Creek Initiative (www.conewagoinitiative.net)

**PARTNERS**

<table>
<thead>
<tr>
<th>Penn State Extension</th>
<th>PA DEP</th>
<th>LandStudies, Inc</th>
</tr>
</thead>
<tbody>
<tr>
<td>USDA NRCS</td>
<td>US Fish and Wildlife Service</td>
<td>Elizabethtown College</td>
</tr>
<tr>
<td>Tri-County Conewago Creek Association</td>
<td>Environmental Protection Agency</td>
<td>PA Department of Agriculture</td>
</tr>
<tr>
<td></td>
<td>Chesapeake Bay Foundation</td>
<td>USDA Agricultural Research Service</td>
</tr>
<tr>
<td></td>
<td>ZedX, Inc.</td>
<td>PA DCNR</td>
</tr>
</tbody>
</table>

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

**Notes:**
Tool 2: Watershed Education Program

A program to educate municipal residents on voluntary actions they can take in their own backyards to improve water quality. The program could involve regular speakers, educational events and activities, and volunteer tree plantings and clean ups.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner with other groups engaged in watershed education programs and co-sponsor events.</td>
<td>Host events to promote watershed education within your municipality. Organize a tree planting, bring in speakers to discuss natural resource related topics, or have a rain barrel workshop.</td>
<td>Survey residents and tailor programs to meet needs and interests. Develop onsite programs with landowners interested in hosting events.</td>
</tr>
</tbody>
</table>

**RESOURCES**

Land Choices (www.conservationtools.org/guides/show/18-PA-Land-Choices)
The EAC Network (www.eacnetwork.org)

**PARTNERS**

Conewago Creek Initiative  
County Conservation Districts  
Governor Dick Env’tl Center  
Lancaster County Conservancy  
Manada Conservancy  
Penn State Cooperative Extension  
South Londonderry Twp EAC  
Tri-County Conewago Creek Assoc.

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu
Tool 3: Conewago Stream Teams

A 4-H youth watershed education program for K-12 with a focus on the Conewago watershed. Education topics include water conservation, water properties, and water quality. New teams can be formed or programs can be developed for existing youth groups.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote Conewago Stream Teams by displaying brochures at municipal buildings and other public places and providing information on municipal website. Run article in municipal newsletter.</td>
<td>Invite program director and existing Stream Teams in municipality to municipal community events, such as annual meetings, National Night Out, community fairs, etc.</td>
<td>Actively promote Stream Teams with existing youth organizations in municipality. Sponsor a municipal Stream Team.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- [4-H Stream Teams](http://ecosystems.psu.edu/youth/4-h-stream-teams)
- [Conewago Creek Initiative website: Youth Education Page](www.conewagoinitiative.net/?page_id=79)

**PARTNERS**

- Penn State Extension
- Conewago Creek Initiative

**CONTACT**

- Jennifer Fetter  Penn State Extension, (717) 921-8803, jrf21@psu.edu

**Notes:**
**Tool 4: Farm Tours**

Public tours of area farms that give community neighbors a chance to learn about the dynamics of a farm and see how farmers sustain a farming operation on a daily basis. Farm tours help build community, promote agriculture and conservation and serve as an educational tool for youth and adults.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend a farm tour led by a neighboring community to learn the benefits a farm tour can provide.</td>
<td>Organize area farm tour or work with interested partners to promote one.</td>
<td>Organize regular farm tours, putting emphasis on farm management practices that improve the health of waters downstream.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- *The Joy of Farm Watching: A Roadside Guide to PA Agriculture* ([http://pubs.cas.psu.edu/freepubs/pdfs/ue010.pdf](http://pubs.cas.psu.edu/freepubs/pdfs/ue010.pdf))
- *Finding the Common Ground* ([www.pubs.cas.psu.edu/FreePubs/pdfs/ua309.pdf](http://www.pubs.cas.psu.edu/FreePubs/pdfs/ua309.pdf))

**PARTNERS**

- *Conewago Creek Initiative*
  - County Conservation Districts
  - Penn State Extension

**CONTACT**

*Kristen Kyler* Penn State Extension, (717) 948-6609, klk343@psu.edu
Tool 5: Environmental Advisory Council (EAC)

A group of 3-7 community residents, appointed by local elected officials, that advises the local planning commission, park and recreation board and elected officials on the protection, conservation, management, promotion and use of natural resources within its territorial limits.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet with peers and partners to form an EAC and appoint members.</td>
<td>Work proactively with EAC to develop a plan of action related to sustainable use and management of natural resources.</td>
<td>Work with EAC to fulfill the plan of action and promote conservation and protection of natural resources within the municipality</td>
</tr>
</tbody>
</table>

**RESOURCES**

- EAC Network (http://eacnetwork.org/about-eacs/)
- Conservation Tools (http://conservationtools.org/guides/show/1-Environmental-Advisory-Council)
- The EAC Handbook (http://handbook.eacnetwork.org/)
- Pennsylvania Environmental Council (http://www.pecpa.org/about_us)

**PARTNERS**

- PA Environmental Council
  - Conewago Creek Initiative
  - South Londonderry Township

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 6: Multi Municipal Watershed Workgroup

A workgroup of municipal officials from municipalities within the Conewago Creek Watershed. The workgroup's purpose is to exchange information and facilitate cooperation on projects, programs, and activities related to land and water conservation.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reach out to neighboring municipalities to develop partnerships and share ideas about land and water conservation.</td>
<td>Form a workgroup of interested municipalities and hold a kickoff meeting.</td>
<td>Meet on a regular basis to exchange information and collaborate. Work with the Conewago Creek Initiative to leverage other resources and partners.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- [Conewago Creek Initiative](http://www.conewagoinitiative.net/)
- [Lancaster County Clean Water Consortium](http://www.lccwc.com/)
- [Conservation Tools](http://conservationtools.org/guides/show/90)

**PARTNERS**

- Conewago Creek Initiative
- County Conservation Districts
- Lebanon County Clean Water Alliance
- Lancaster County Clean Water Consortium

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

**Notes:**
**Tool 7: Natural Resource Inventory**

The mapping and description of natural resources and sensitive areas within a municipality that can facilitate the proper use of resources and guide future land development and redevelopment.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work with partners such as County Planners to discuss and develop methodology for conducting, prioritizing and mapping the inventory.</td>
<td>Conduct, prioritize, and map Natural Resources Inventory.</td>
<td>Create a final report and maps that can be referenced when creating a plan for development. Use the inventory when making decisions.</td>
</tr>
</tbody>
</table>

**RESOURCES**

Conservation Tools (http://conservationtools.org/guides/show/61)

SmartConservation (http://www.natlands.org/services/for-municipalities/smartconservation/)

New Jersey Guide on ERI (http://www.anjec.org/pdfs/EnvironmentalResource04.pdf)

Hellam Township Example ERI (http://bit.ly/12yLrTs)

**PARTNERS**

- County Planning Offices
  - Conewago Creek Initiative
  - Natural Lands Trust
- Manada Conservancy
- Lebanon Valley Conservancy
- Lancaster County Conservancy

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu
Tool 8: Agricultural Security Area

An area where agriculture is the primary activity and farmers are entitled to special protection from condemnation, laws and ordinances that would unreasonably restrict farming operations.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote Agricultural Security Areas (ASA) and work with willing landowners who would be interested in securing a minimum of 250 acres on their combined properties to create an ASA.</td>
<td>Create an ASA Advisory Committee to review applications. Accept, modify, or reject the proposal made by interested landowners.</td>
<td>Expand the amount of land placed in an ASA within the municipality by reaching out to landowners who have larger operations. Review current ASAs every 7 years.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- Conservation Tools (http://conservationtools.org/guides/show/49)

**PARTNERS**

- **County Conservation Districts**
  - County Ag Preserve Boards
- South Londonderry Township
- Conewago Creek Initiative

**CONTACT**

- **Gil Hirschel** Dauphin County Conservation District, (717) 921-8100, ghirschel@dauphinc.org
- **Chuck Wertz** Lebanon County Conservation District, (717) 272-3908 ext 4, charles.wertz@lccd.org

**Notes:**
Tool 9: Agricultural Zoning

Agricultural zoning preserves the availability of agricultural lands for farming and thus the agricultural base of the community by steering nonagricultural development and land uses to designated areas.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate current zoning ordinances and determine whether they are adequately preserving agriculture within the municipality.</td>
<td>Revise the ordinances that need to be changed to better preserve farmland and the agricultural base of the community. Determine if any new ordinances or zoning districts should be created to further achieve agricultural goals.</td>
<td>Adopt new or revised agricultural zoning ordinances. Enforce and promote these ordinances in your municipality.</td>
</tr>
</tbody>
</table>

RESOURCES


PARTNERS

County Planning Commissions
Conewago Creek Initiative

PA Land Trust Association
Brandywine Conservancy

CONTACT

Dean Severson Lancaster County Planning Commission, (717) 299-8333, serversod@co.lancaster.pa.us

Notes:
Tool 10: Conservation and Agricultural Easements

Voluntary, recorded agreements that limit the type or amount of development on a property while allowing the landowner to retain private ownership of the land. Conservation easements preserve a natural resource while agricultural easements preserve active farmland.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promote conservation and agricultural easements and the benefits that may come from preserving a plot of land.</td>
<td>Develop relationship with local land trust to hold educational workshops on the benefits of easements.</td>
<td>Develop municipal program to hold conservation and agricultural easements.</td>
</tr>
</tbody>
</table>

RESOURCES

Conservation Tools (http://conservationtools.org/guides/show/19-Conservation-Easement)
Conservation Tools Library (http://conservationtools.org/libraries/1/topics/77)
The National Conservation Easement Database (NCED) (http://nced.conservationregistry.org/)

PARTNERS

Connewago Creek Initiative
County Conservation Districts
County Ag Preservation Boards
Lancaster County Conservancy
Lebanon Valley Conservancy
Manada Conservancy
Lancaster Farmland Trust

CONTACT

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 11: Land Acquisition

The purchase of land for purposes of recreation, conservation, and preservation of open space. Land acquisition provides open space and precludes development of environmentally sensitive land.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a relationship with local land conservancy and work with them to acquire priority property.</td>
<td>Develop a strategic plan for open space protection in municipality.</td>
<td>Finance land acquisition through issuance of open space bonds and/or pursuit of land acquisition grants.</td>
</tr>
</tbody>
</table>

RESOURCES

Conservation Tools (http://conservationtools.org/libraries/1/topics/76)

PARTNERS

<table>
<thead>
<tr>
<th>PA Land Trust Association</th>
<th>Manada Conservancy</th>
<th>Conewago Creek Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lancaster County Conservancy</td>
<td>Lebanon Valley Conservancy</td>
<td></td>
</tr>
</tbody>
</table>

CONTACT

Kate Gonick Lancaster County Conservancy, (717) 392-7891, kgonick@lancasterconservancy.org
Sheila Wartluft Lebanon Valley Conservancy, (717) 273-6400, lvconserve@lebanonvalleyconservancy.org
Sally Zaino Manada Conservancy, (717) 566-4122, szaino@manada.org

Notes:
**Tool 12: Comprehensive Plan**

A written document that identifies the goals, objectives, principles, guidelines, policies, standards, and strategies for the growth and development of the community.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile the municipality. This involves conducting community surveys and public meetings to analyze culture, population, transportation, housing, environment and other resources.</td>
<td>Develop the plan and include a vision statement and a set of goals based on the characteristics of the municipality. Include strategies, policies and programs to reach the future goal of the community.</td>
<td>Review plan and hold another public meeting for additional comment. Adopt and begin working to implement the Comprehensive Plan.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- [The Comprehensive Plan in Pennsylvania](http://www.adamswatersheds.org/images/comp_plan.pdf)
- [Pennsylvania Municipalities Planning Code](http://www.dep.state.pa.us/hosting/growingsmarter/MPCode%5B1%5D.pdf)
- [Conservation Tools](http://conservationtools.org/guides/show/58-Planning-Land-Use-Ordinance-Basics)

**PARTNERS**

- **Conewago Creek Initiative**
  - South Londonderry Township

- **County Planning Offices**
  - Manada Conservancy

- **Lancaster County Conservancy**
  - Lebanon Valley Conservancy

**CONTACT**

- **Kristen Kyler** Penn State Extension, (717) 948-6609, klk343@psu.edu

**Notes:**
Tool 13: Official Map

A combined map and ordinance designating locations of planned future public lands and facilities such as streets, trails, parks and open space. Used to help implement the Comprehensive Plan and to give the municipality the right to negotiate for property they have interest in using for public purposes.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt or update the Comprehensive Plan for the municipality (Tool 11). Begin outreach to the public about the municipality’s plan to create an Official Map.</td>
<td>Create an Official Map that identifies areas of high priority in at least one section of the municipality.</td>
<td>Expand the Official Map to include other priority goals and locations within the municipality. Update ordinances to reference and support the Official Map.</td>
</tr>
</tbody>
</table>

RESOURCES

What is an Official Map? (http://conservationtools.org/guides/show/60-Official-Map)
The Official Map Handbook (http://conservationtools.org/libraries/1/library_items/931)

PARTNERS

Conewago Creek Initiative  Manada Conservancy  Lebanon Valley Conservancy
County Planning Offices  Lancaster County Conservancy  PA Land Trust Association

CONTACT

Kristen Kyler  Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 14: Green Ordinances

Any ordinances that are revised or adopted to better manage and protect natural resources while encouraging more sustainable land use.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the current ordinances in place and determine which ones will need to be changed to allow and/or ensure that stormwater and natural resources are managed correctly.</td>
<td>Revise the ordinances that need to be changed to better manage stormwater runoff. Determine if any new ordinances should be created to further achieve the goal of stormwater management.</td>
<td>Adopt new or revised stormwater and land use ordinances. Enforce and promote these green ordinances in your municipality.</td>
</tr>
</tbody>
</table>

**RESOURCES**

Lancaster County Smart Growth Toolbox (http://www.co.lancaster.pa.us/toolbox/site/default.asp)


Conservation Tools: Steep Slope Ordinances (http://conservationtools.org/libraries/1/topics/110)

Conservation Tools: Other Green Ordinances (http://conservationtools.org/libraries/1/topics/46)

Brandywine Conservancy Municipal Assistance Program (http://www.brandywineconservancy.org/map.html)

**PARTNERS**

Conewago Creek Initiative  PA Land Trust Association  County Planning Offices  Brandywine Conservancy

**CONTACT**

Kristen Kyler  Penn State Extension, (717) 948-6609, klk343@psu.edu

**Notes:**
Tool 15: Conservation By Design

“Conservation subdivision” ordinances that plan development around natural resources and set aside at least half of every development parcel as open space, accelerating land conservation in growing communities at little public cost.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn the benefits of Conservation by Design. Perform a community assessment to evaluate current land use regulations and identify strengths and weaknesses regarding open space protection.</td>
<td>Pull information from Open Space and Comprehensive Plans to create a composite map of potential conservation lands. Within this map, identify Primary and Secondary Conservation Areas.</td>
<td>Change land-use regulations to require conservation of open space. Work with developers to make sure Conservation by Design is being used.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- Conservation by Design: How it Works (http://www.natlands.org/services/for-municipalities/conservation-through-zoning/how-it-works/)

**PARTNERS**

- Natural Lands Trust
- Conewago Creek Initiative
- PA Land Trust Association
- Manada Conservancy
- Lancaster County Conservancy
- Lebanon Valley Conservancy

**CONTACT**

Ann Hutchinson Natural Lands Trust, (610) 353-5587, info@natlands.org

**Notes:**
**Tool 16: Transfer of Development Rights (TDR)**

A program for selling and buying development rights of a property to encourage population growth in more appropriate locations based on the needs of the community.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate community plans for future development and conservation and determine which agricultural, natural, or historic resources should be included in TDR “sending” areas and which planned growth areas should be TDR “receiving” areas.</td>
<td>Amend municipal zoning ordinance to establish the TDR option and develop a market for TDRs. Educate landowners, realtors, developers on the advantages of TDR programs.</td>
<td>Partner with local land trusts and the County to promote use of the TDR tool and help with program administration. Consider establishing a TDR bank for holding municipally-acquired TDRs for future sale.”</td>
</tr>
</tbody>
</table>

**RESOURCES**

- Conservation Tools: Transfer of Development Rights (http://conservationtools.org/guides/show/12)

**PARTNERS**

- Brandywine Conservancy
  - PA Land Trust Association
  - Lancaster Co. Planning Comm.

**CONTACT**

John Theilacker Brandywine Conservancy, (610) 388-8389, jtheilacker@brandywine.org

**Notes:**
Tool 17: Municipal Parks, Trails, Greenways, Preserves

Public space designed to offer recreation and green space to residents and visitors of the municipality.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess existing parks, trails and preserves. Develop a plan to link these open spaces to create additional greenways.</td>
<td>Work with local partners to develop programs and pull resources to improve existing parks, trails and preserves.</td>
<td>Pursue funding for improvements to park/trail/preserve network.</td>
</tr>
</tbody>
</table>

**RESOURCES**

- [Creating Connections](http://conservationtools.org/libraries/1/library_items/192)
- [Pennsylvania Greenways](http://www.dcnr.state.pa.us/brc/conservation/greenways/)

**PARTNERS**

- **Conewago Creek Initiative**
  - Dauphin, Lancaster, and Lebanon County Planning Commissions

- Manada Conservancy
- Lancaster County Conservancy
- Lebanon Valley Conservancy

- Lancaster County Department of Parks and Recreation
- Lebanon Valley Rails-to-Trails, Inc.

**CONTACT**

- **Kristen Kyler** Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 18: Parks and Recreation Committee

A committee consisting of volunteers appointed by the governing body that encourages the use and appreciation of open space resources and makes recommendations to the governing body concerning recreational programs and facilities.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach to the community to learn who might be interested in participating in this committee.</td>
<td>Form a Parks and Recreation Committee and establish regular meetings and goals.</td>
<td>Listen to the recommendations made by this committee and support the programs and events they run.</td>
</tr>
</tbody>
</table>

**RESOURCES**

Conservation Toolbox: Recreation and Community Development (http://conservationtools.org/guides/group/12)


**PARTNERS**

PA Department of Conservation and Natural Resources

Dauphin, Lancaster, and Lebanon County Planning Commissions

**CONTACT**

Lori Yeich PA DCNR, (717) 705-5956 lyeich@pa.gov

Notes:
Tool 19: Agricultural Conservation Planning

Conservation plans are farm specific plans that set forth conservation best management practices and a schedule for implementation of such practices to prevent soil loss and preserve and maintain healthy and productive soils and water resources.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help promote conservation planning throughout the community, more specifically to farmers.</td>
<td>Partner with agriculture partners, such as the Conservation District, to promote education and awareness of requirements to create and implement conservation plans.</td>
<td>Enact ordinances to require conservation plans prior to issuance of building permits or other municipal approvals.</td>
</tr>
</tbody>
</table>

RESOURCES

PA Ag Ombudsman: The Basics of Agricultural Erosion and Sedimentation Requirements (http://www.agombudsman.com/12compliance.pdf)


PARTNERS

County Conservation Districts
Warwick Township, Lancaster County
Conewago Creek Initiative

CONTACT

Jeff Hill Lancaster County Conservation District, (717) 299-5361 ext. 143, jeffhill@lancasterconservation.org

Notes:
Tool 20: Watershed Assessment and Restoration

An assessment of the watershed and the identification of potential watershed improvement projects, and the implementation of those projects working with willing landowners on a volunteer basis. Projects typically consist of agricultural best management practices, stormwater best management practices, or stream restoration practices (including riparian buffer restoration).

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet with the watershed group</td>
<td>Work with the Conewago Creek Initiative to help develop a</td>
<td>Actively participate in outreach to landowners to promote</td>
</tr>
<tr>
<td>and the Conewago Creek Initiative</td>
<td>plan for outreach to municipal landowners and encourage</td>
<td>watershed restoration. Provide funds to help fund restoration</td>
</tr>
<tr>
<td>to review Conewago watershed assessment</td>
<td>them to participate in watershed restoration projects.</td>
<td>projects and match grants. Apply for grants to fund</td>
</tr>
<tr>
<td>and restoration plan and evaluate high</td>
<td></td>
<td>restoration practices.</td>
</tr>
<tr>
<td>priority sites in the municipality.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RESOURCES**

Conewago Creek Restoration Plan (http://bit.ly/13QtrmZ)

Tri County Conewago Creek Association: Restoration Projects (www.conewagocreek.net)

**PARTNERS**

Tri-County Conewago Creek Association
Conewago Creek Initiative
Dauphin, Lancaster, and Lebanon County Conservation Districts
USDA NRCS

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 21: Stormwater Management Program

Develop programs to reduce the amount of stormwater runoff and pollutants that enter local waterways, as required by the municipal separate storm sewer (MS4) program. Education and outreach programs and incentives programs can be ways to encourage landowners to reduce the runoff from their properties.

**Tier One**

| Develop and implement a stormwater management program sufficient to meet the requirements of the municipal separate storm sewer system (MS4). |

**Tier Two**

| Work with Conewago Creek Initiative partners to develop educational materials, conduct outreach and provide opportunities to inform citizens about the impacts that stormwater runoff has on water quality. |

**Tier Three**

| Work with Conewago Creek Initiative partners to develop and implement an incentive program to encourage landowners to use green infrastructure to manage stormwater, as well as a plan for municipal sites. |

**RESOURCES**

PA DEP MS4 General Permit (PAG-13) (http://files.dep.state.pa.us/water/Watershed%20Management/WatershedPortalFiles/StormwaterManagement/PAG13/FinalPAG13.pdf)


Conewago Creek Initiative Stormwater Incentive Program (http://www.conewagoinitiative.net/practices/home/stormwater-incentives-program)

**PARTNERS**

- Conewago Creek Initiative
- County Conservation Districts
- County Planning Offices
- Lancaster County Clean Water Consortium
- Lebanon County Clean Water Alliance
- PA DEP

**CONTACT**

Kristen Kyler Penn State Extension, (717) 948-6609, klk343@psu.edu

Notes:
Tool 22: Source Water Protection Program

A program and ordinances that help safeguard community health and reduce the risk of contamination of water supplies. Reducing the amount of pollutants that enter groundwater aquifers will reduce the amount of treatment needed to meet drinking water standards.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a source water protection plan and allow for public comment.</td>
<td>Create a source water protection ordinance from the developed source water protection plan.</td>
<td>Enforce the source water protection ordinance and reevaluate to ensure that source water is being protected by this ordinance.</td>
</tr>
</tbody>
</table>

RESOURCES

- PRWA: Source Water Protection Program (http://www.sourcewaterprotection.org/)
- EPA Source Water Protection (http://water.epa.gov/infrastructure/drinkingwater/sourcewater/protection/index.cfm)
- Wellhead Protection Program in PA (http://bit.ly/16eQ00D)
- Water Resources Education Network (WREN) (http://wren.pahwv.org/)

PARTNERS

- PA DEP
- PA Rural Water Association
- Water Resources Education Network (WREN)
- US EPA
- Susquehanna River Basin Commission

CONTACT

Joe Hebelka PA DEP, (717) 772-4014, jhebelka@pa.gov

Notes:
Tool 23: Natural Areas Program

A program that encourages the restoration and protection of natural areas such as wetlands, forests, and native meadows on private property.

<table>
<thead>
<tr>
<th>Tier One</th>
<th>Tier Two</th>
<th>Tier Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a program guidance that establishes natural area qualifications and clarifies ordinance revisions necessary to allow native plant growth in residential areas.</td>
<td>Form a committee to review applications and designate natural areas. Approve changes to necessary ordinances.</td>
<td>Promote the program and encourage participation by residents. Encourage other municipalities to start their own Natural Areas Program.</td>
</tr>
</tbody>
</table>

**Resources**

South Londonderry Township Natural Areas Program (http://bit.ly/133MPHv)

Penn State Extension Forest Stewardship Program (http://extension.psu.edu/natural-resources/forests/private/stewardship/forest-stewardship-program)

**Partners**

**South Londonderry Township**

Conewago Creek Initiative

Penn State Extension

**Contact**

Tom Ernharth South Londonderry Township, (717) 838-5556, manager@slondtwp.com

Notes:
Conewago Creek Initiative
307 Church Hall
777 West Harrisburg Pike
Middletown, Pa 17057

Matt Royer
Penn State University
Director, Agriculture and Environment Center
(717) 948-6459
mroyer@psu.edu

Kristen Kyler
Penn State University
Project Coordinator, Lower Susquehanna Initiative
(717) 948-6609
klk343@psu.edu