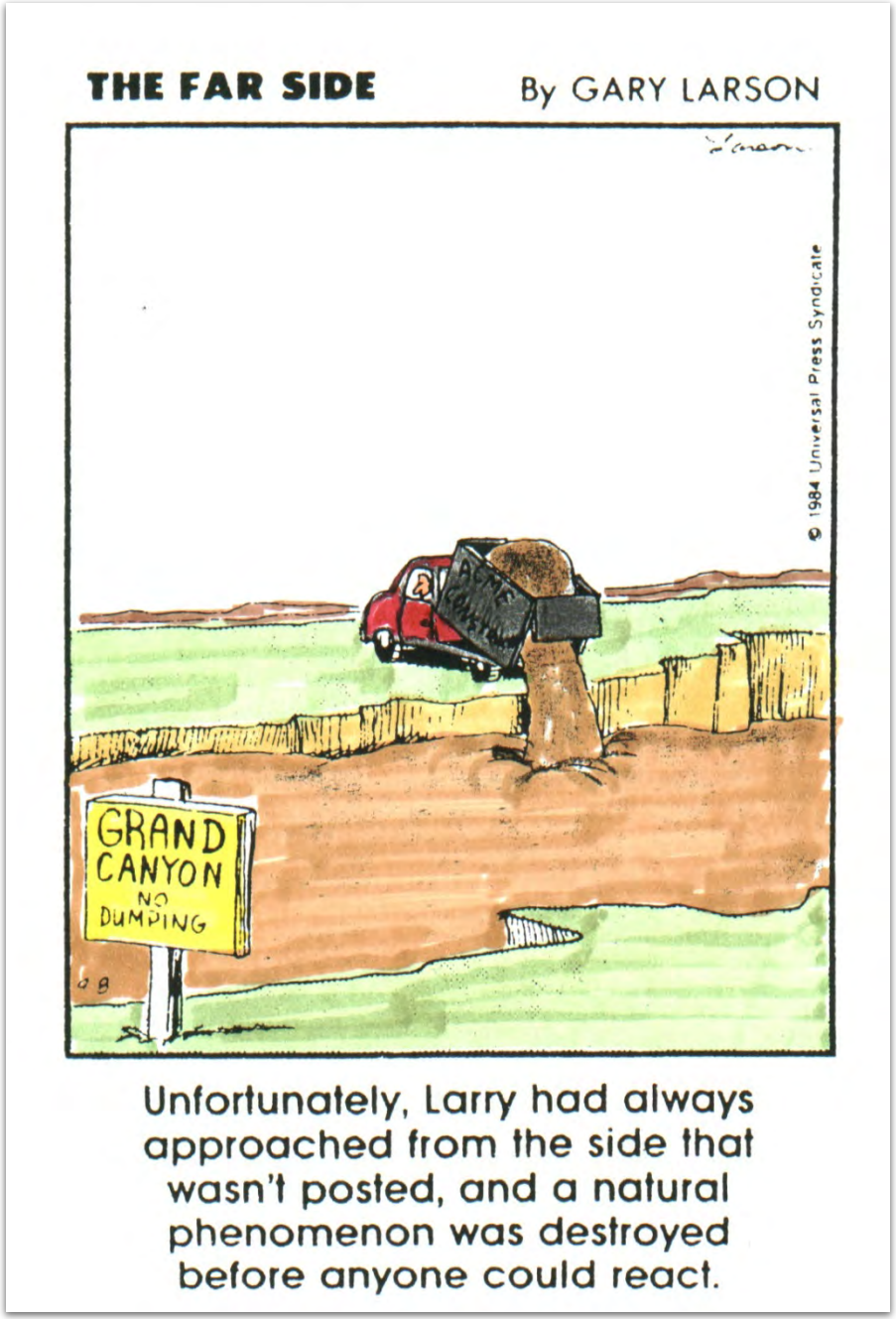

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RIPARIAN BUFFER PROTECTION USING MUNICIPAL ORDINANCES

Bernard Sweeney, Director, President, and Senior Research Scientist, Stroud Water Research Center

John Theilacker, AICP, and Dr. Seung Ah Byun, P.E., LEED AP, Brandywine Conservancy

Peter Williamson, Vice President, Conservation Services,

Natural Lands Trust

PALTA Conference 2015

Gettysburg, PA

May 2015

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Our Message to You Today:

- Trees are really important – valuable eco-services.
- Trees along streams are really really important – valuable eco-services are magnified in riparian areas.
- Enact forested riparian buffer regulations utilizing new model ordinance (ConservationTools.org) for maximum protection – and restoration.
- An ounce of prevention…a ton of cure.
- An MS4 action at minimal cost to municipalities.

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THE “STATE” OF PENNSYLVANIA’S STREAM BUFFER PROTECTIONS

PA Buffer Regulations (pre-2015)

- Chapter 102:
  - “no disturbance” buffer
  - For projects requiring PCSM permit
  - Only Special Protections Waters (HQ and EV)
    - About 30% of all PA streams
    - All perennial/intermittent streams, lakes, ponds, reservoirs
  - Zone 1 (first 50 ft) and Zone 2 (next 100 ft at minimum)
  - Maintain natives with 60% canopy
  - If Non-Attaining/Impaired, then must restore buffer as above.
  - Multiple Exceptions

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Act 162 reduced these requirements via the Clean Water Act

PA Buffer Regulations (current)

- For HQ/EV streams, riparian buffers and forested riparian buffers……
  - ***are now an option rather than a requirement***
  - ***have been reduced in width from 150’ to 100’***

- However - developers must
  - demonstrate “functional equivalency” for alternative BMPs
  - demonstrate offset buffers are as close as feasible to original site

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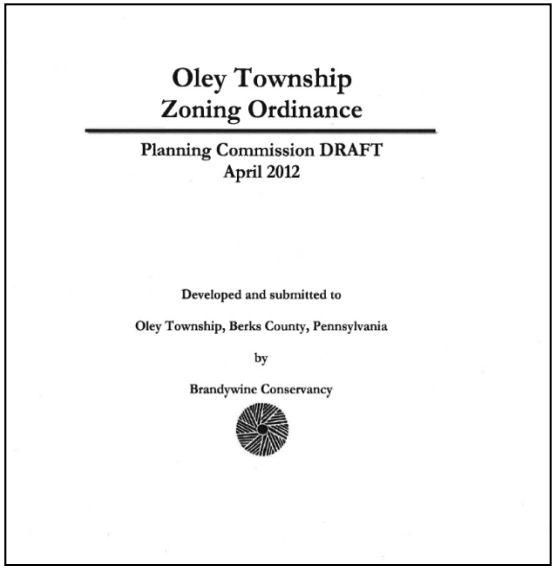
Act 162 did not "pre-empt" local regulatory authority!

So….municipalities can get tough on protection!

- Within a zoning ordinance
  - Overlay district
  - Protection standards
- Within a SALDO
  - Design standards
- Within a stormwater ordinance
  - Riparian buffer requirements


Oley Township
Zoning Ordinance

Planning Commission DRAFT
April 2012

Developed and submitted to

Oley Township, Berks County, Pennsylvania

by

Brandywine Conservancy

Capitalize on the "water quality" momentum!

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Reasonable restrictions need not fear regulatory takings!

- Legislative authorization through:
  - Pennsylvania Constitution
  - Municipalities Planning Code

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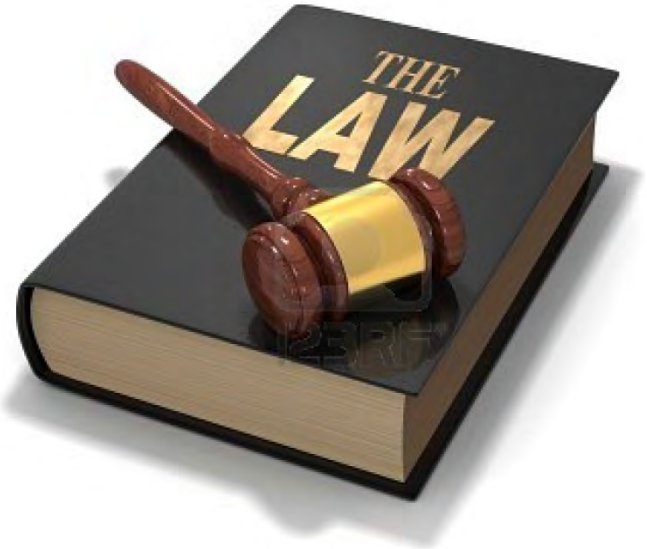
Pennsylvania's Constitution states…..

"The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations to come."



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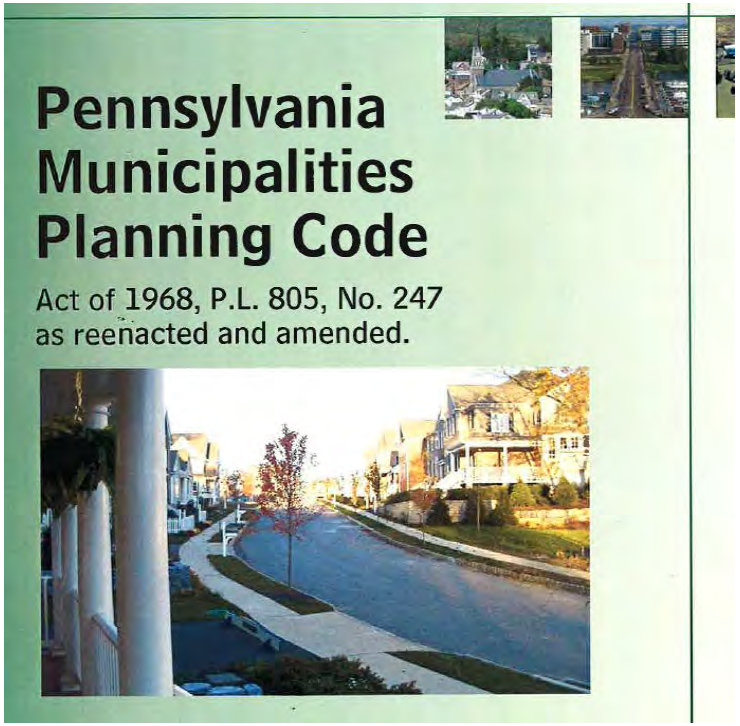
- PA MPC Article VI – Zoning; Section 603(b):

  "Zoning ordinances may permit, prohibit, regulate, restrict and determine…..

  (1) Uses of land, watercourses and other bodies of water;

  (2) Protection and preservation of natural and historic resources and prime agricultural land and activities.



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- PA MPC Article VI – Zoning; Section 603(c)(7):

  "Zoning ordinances may contain provisions to promote and preserve…..environmentally sensitive areas."

- PA MPC Article VI – Zoning; Section 603(d):

  "Zoning ordinances may include provisions regulating the siting, density, and design of residential, commercial, industrial and other developments in order to assure the availability of reliable, safe and adequate water supplies…"

- PA MPC Article VI – Zoning; Section 603(g)(2):

  "Zoning ordinances shall provide for the protection of natural….features and resources."

- PA MPC Article VI – Zoning; Section 604:

  "Zoning ordinances shall be designed to promote and facilitate the…….preservation of the natural, scenic and historic values in the environment and preservation of forests, wetlands, aquifers and floodplains."

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- PA MPC Article V – SALDO; Section 605:

  Municipalities are authorized to enact subdivision and land development ordinances which include:

  (2) Provisions for insuring that:

  (i) the layout or arrangement of the subdivision or land development shall conform to the comprehensive plan and to any regulations or maps adopted in furtherance thereof;

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Pennsylvania Case Law

- Good legal review of the issues in Lancaster County Planning Commission's Model Conservation Zoning District and Natural Resource Protection Standards, June, 2010 by Fronefield Crawford, Esq.
- "For municipalities to regulate sensitive natural features:
  - The PA legislature must have authorized such;
  - Regulations cannot be arbitrary or unreasonable;
  - Regulation cannot deprive the owner of all reasonable use of his property."

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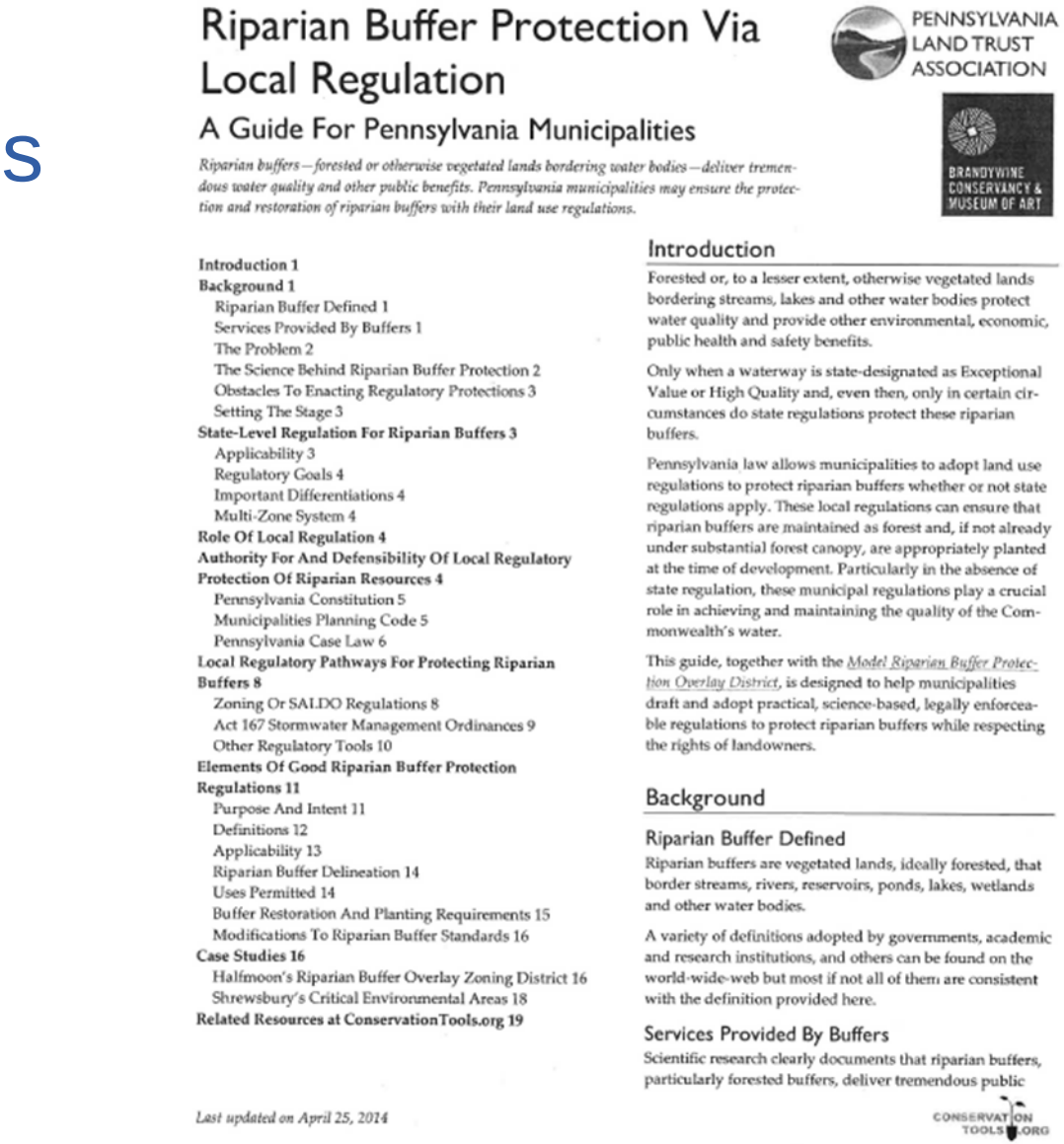
Pennsylvania Case Law

- Jones v. Zoning Hearing Board of the Town of McCandless…..Court upheld performance zoning that preserved steep slopes, forests, floodplains and streams;
- Chrin Brothers Inc. v. Williams Township Zoning Hearing Board….Court upheld ordinance provisions that prohibited clear-cutting on steep slope areas and floodway areas, and limited clear-cutting, so that substantial forest canopy will remain after logging activities.

Help for Pennsylvania's municipalities

Pennsylvania Land Trust Association (PALTA) and the Brandywine Conservancy



Riparian Buffer Protection Via Local Regulation

A Guide For Pennsylvania Municipalities

PENNSYLVANIA LAND TRUST ASSOCIATION

BRANDYWINE CONSERVANCY & MUSEUM OF ART

Riparian buffers—forested or otherwise vegetated lands bordering water bodies—deliver tremendous water quality and other public benefits. Pennsylvania municipalities may ensure the protection and restoration of riparian buffers with their land use regulations.

Last updated on April 25, 2014

Introduction

Forested or, to a lesser extent, otherwise vegetated lands bordering streams, lakes and other water bodies protect water quality and provide other environmental, economic, public health and safety benefits.

Only when a waterway is state-designated as Exceptional Value or High Quality and, even then, only in certain circumstances do state regulations protect these riparian buffers.

Pennsylvania law allows municipalities to adopt land use regulations to protect riparian buffers whether or not state regulations apply. These local regulations can ensure that riparian buffers are maintained as forest and, if not already under substantial forest canopy, are appropriately planted at the time of development. Particularly in the absence of state regulation, these municipal regulations play a crucial role in achieving and maintaining the quality of the Commonwealth's water.

This guide, together with the *Model Riparian Buffer Protection Overlay District*, is designed to help municipalities draft and adopt practical, science-based, legally enforceable regulations to protect riparian buffers while respecting the rights of landowners.

Background

Riparian Buffer Defined

Riparian buffers are vegetated lands, ideally forested, that border streams, rivers, reservoirs, ponds, lakes, wetlands and other water bodies.

A variety of definitions adopted by governments, academic and research institutions, and others can be found on the world-wide-web but most if not all of them are consistent with the definition provided here.

Services Provided By Buffers

Scientific research clearly documents that riparian buffers, particularly forested buffers, deliver tremendous public

CONSERVATION TOOLS.ORG

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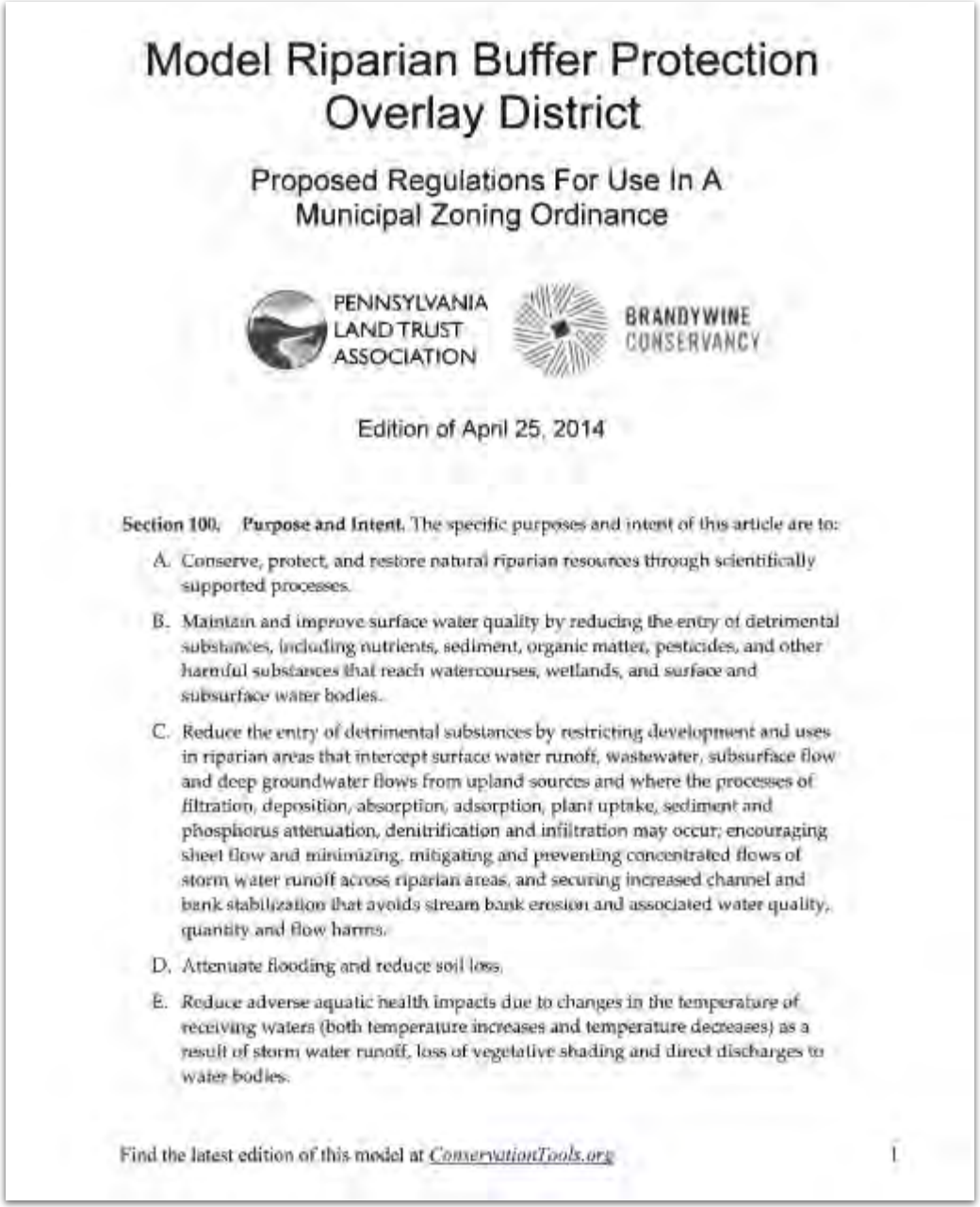
Contents

- Purpose and Intent
- Definitions
- Applicability
- Riparian Buffer Delineation
- Uses Permitted
- Buffer Restoration and Planting Requirements
- Modifications to Riparian Buffer Standards



Model Riparian Buffer Protection Overlay District

Proposed Regulations For Use In A Municipal Zoning Ordinance

PENNSYLVANIA LAND TRUST ASSOCIATION

BRANDYWINE CONSERVANCY

Edition of April 25, 2014

Section 100. Purpose and Intent. The specific purposes and intent of this article are to:

A. Conserve, protect, and restore natural riparian resources through scientifically supported processes.

B. Maintain and improve surface water quality by reducing the entry of detrimental substances, including nutrients, sediment, organic matter, pesticides, and other harmful substances that reach watercourses, wetlands, and surface and subsurface water bodies.

C. Reduce the entry of detrimental substances by restricting development and uses in riparian areas that intercept surface water runoff, wastewater, subsurface flow and deep groundwater flows from upland sources and where the processes of filtration, deposition, absorption, adsorption, plant uptake, sediment and phosphorus attenuation, denitrification and infiltration may occur; encouraging sheet flow and minimizing, mitigating and preventing concentrated flows of storm water runoff across riparian areas, and securing increased channel and bank stabilization that avoids stream bank erosion and associated water quality, quantity and flow harms.

D. Attenuate flooding and reduce soil loss.

E. Reduce adverse aquatic health impacts due to changes in the temperature of receiving waters (both temperature increases and temperature decreases) as a result of storm water runoff, loss of vegetative shading and direct discharges to water bodies.

Find the latest edition of this model at *ConservationTools.org*

1

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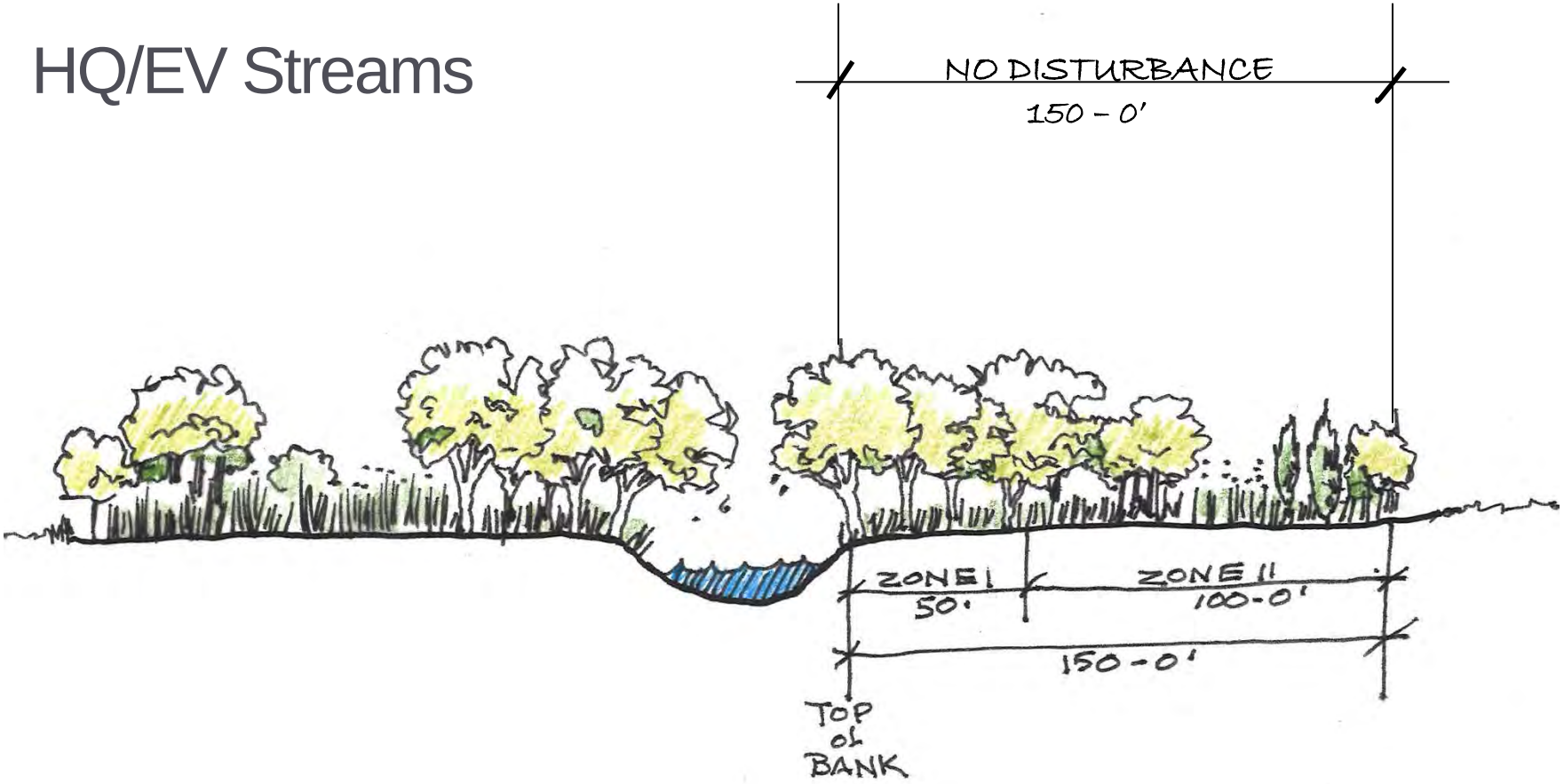
NEW MODEL ORDINANCE:

What Does It Do?

HQ/EV Streams



ALL H.Q. OR E.V. STREAMS

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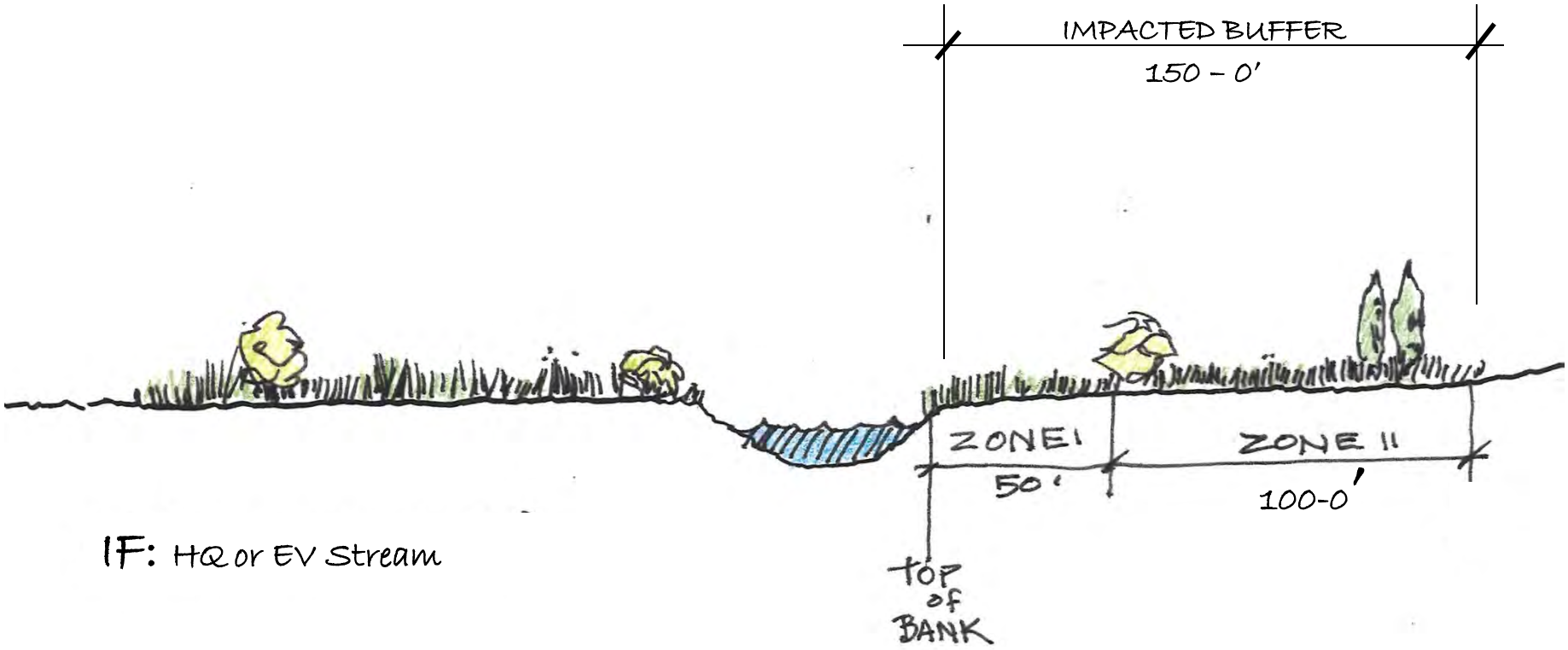
ALL H.Q. OR E.V. STREAMS



IF: HQ or EV Stream

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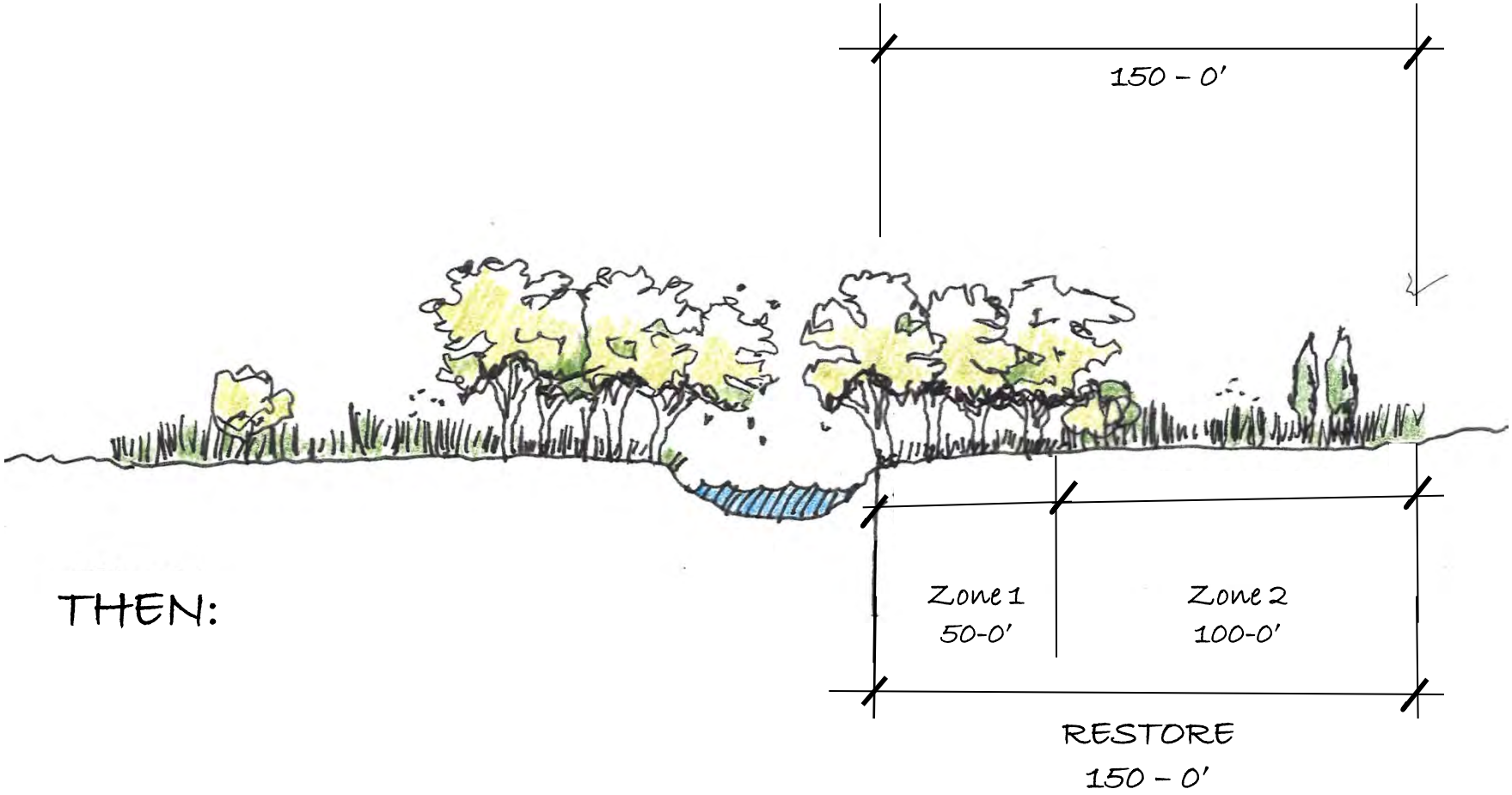
ALL H.Q. OR E.V. STREAMS



THEN:

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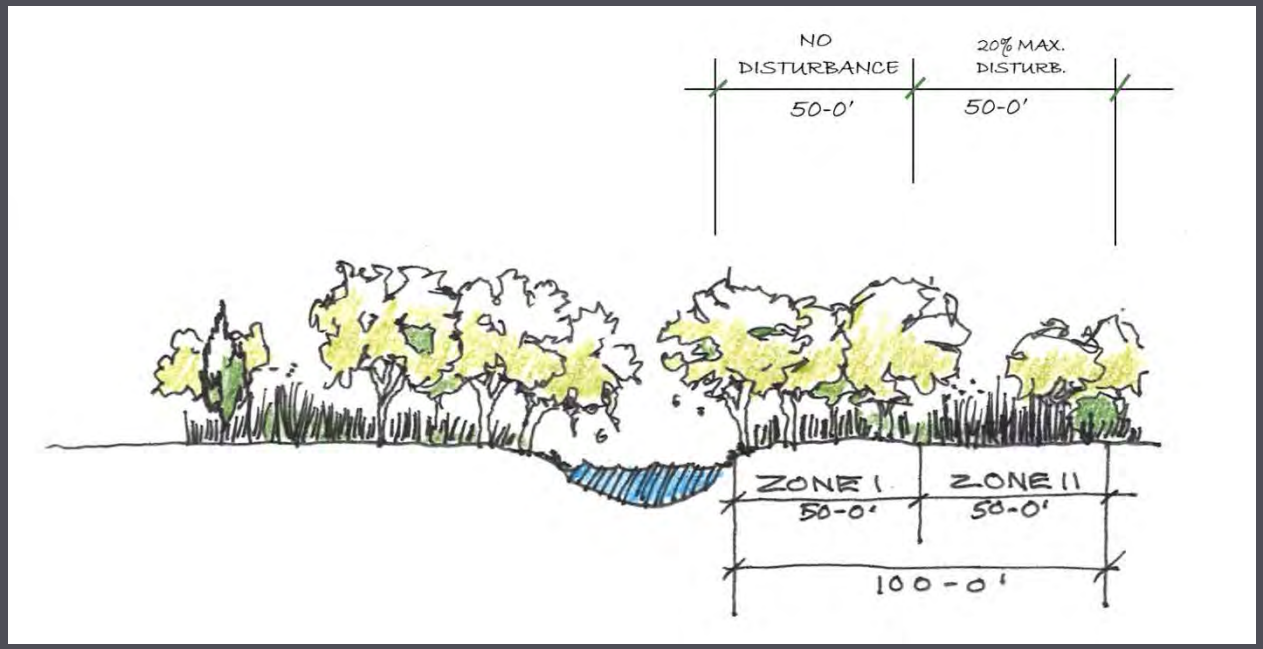
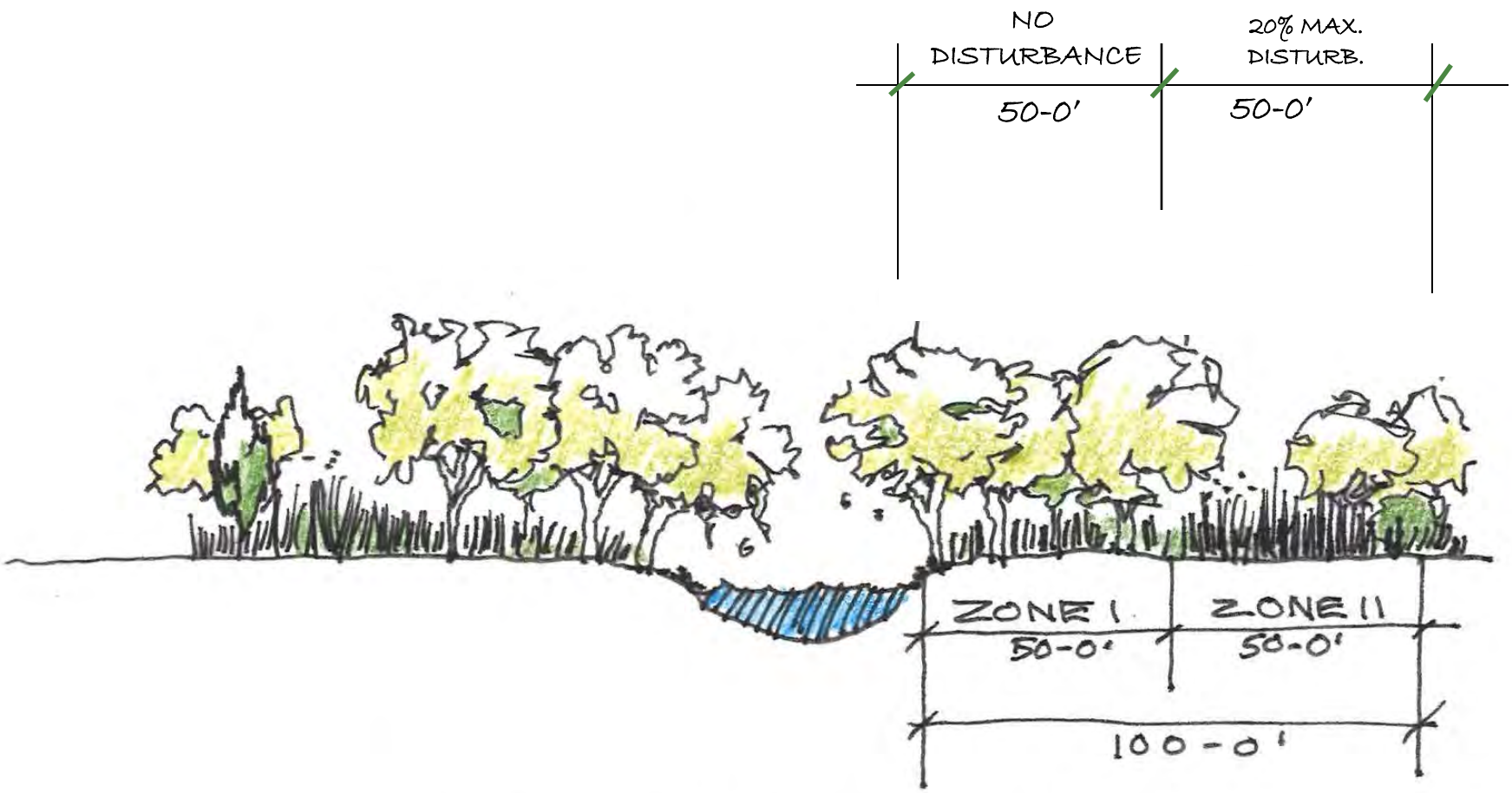


NEW CONSERVANCY MODEL FOR **UNIMPAIRED** STREAMS



NEW CONSERVANCY MODEL FOR UNIMPAIRED STREAMS WHERE FORESTED BUFFERS EXIST

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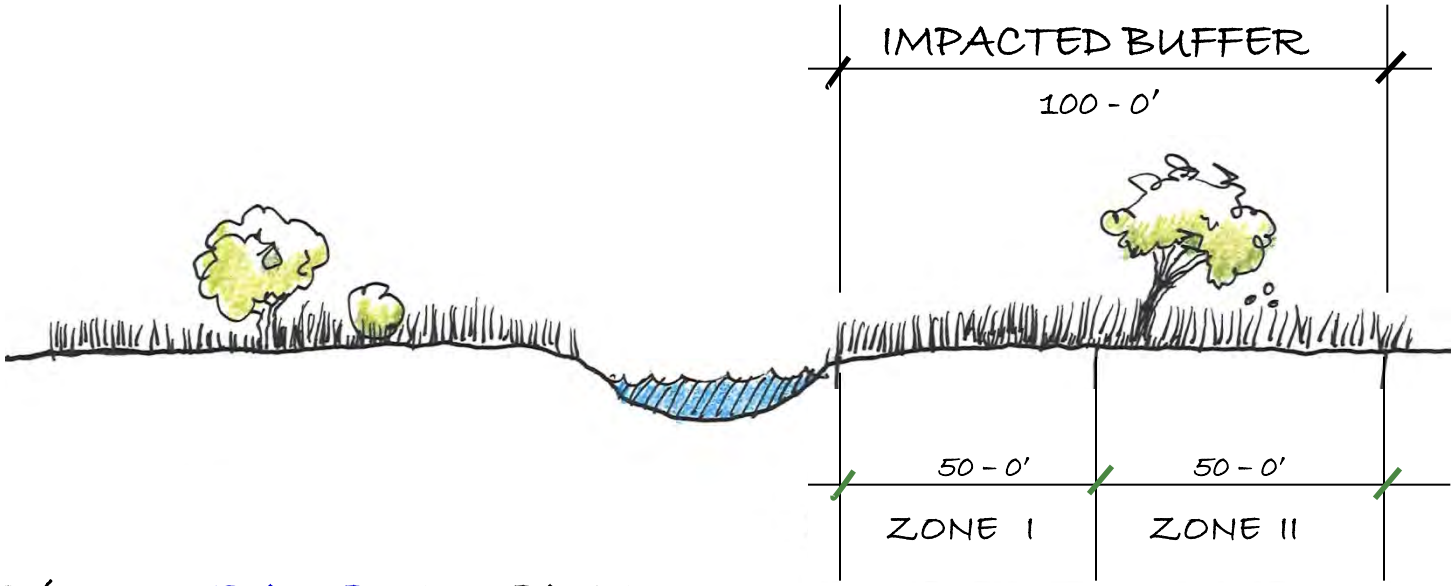

IF: in UNIMPAIRED STREAMS

NEW CONSERVANCY MODEL WHERE TREES ARE LACKING

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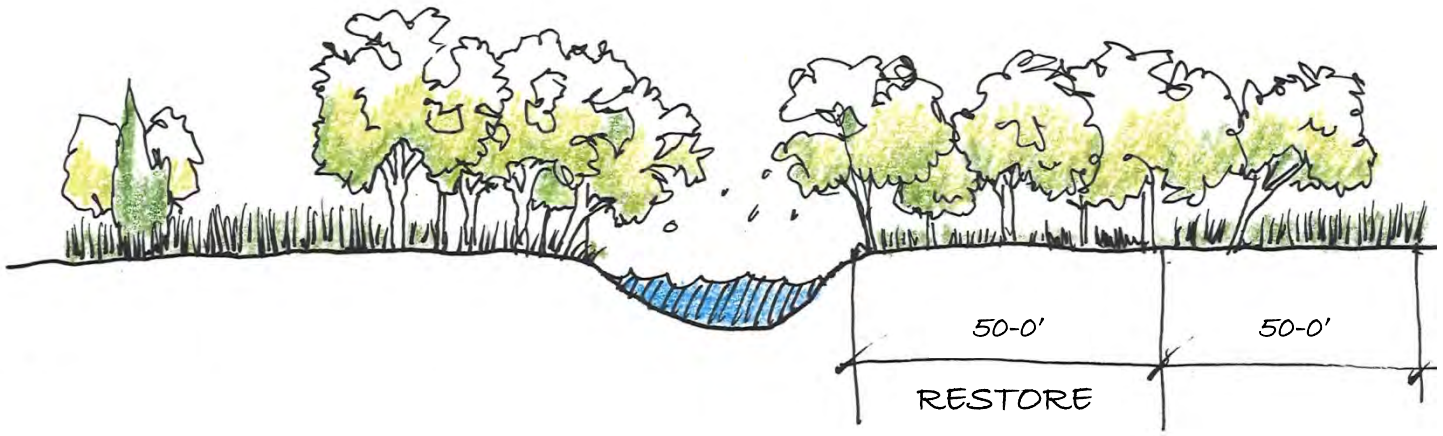

THEN: in UNIMPAIRED STREAMS

NEW CONSERVANCY MODEL WHERE TREES HAVE BEEN PLANTED

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NEW CONSERVANCY MODEL FOR **IMPAIRED** STREAMS

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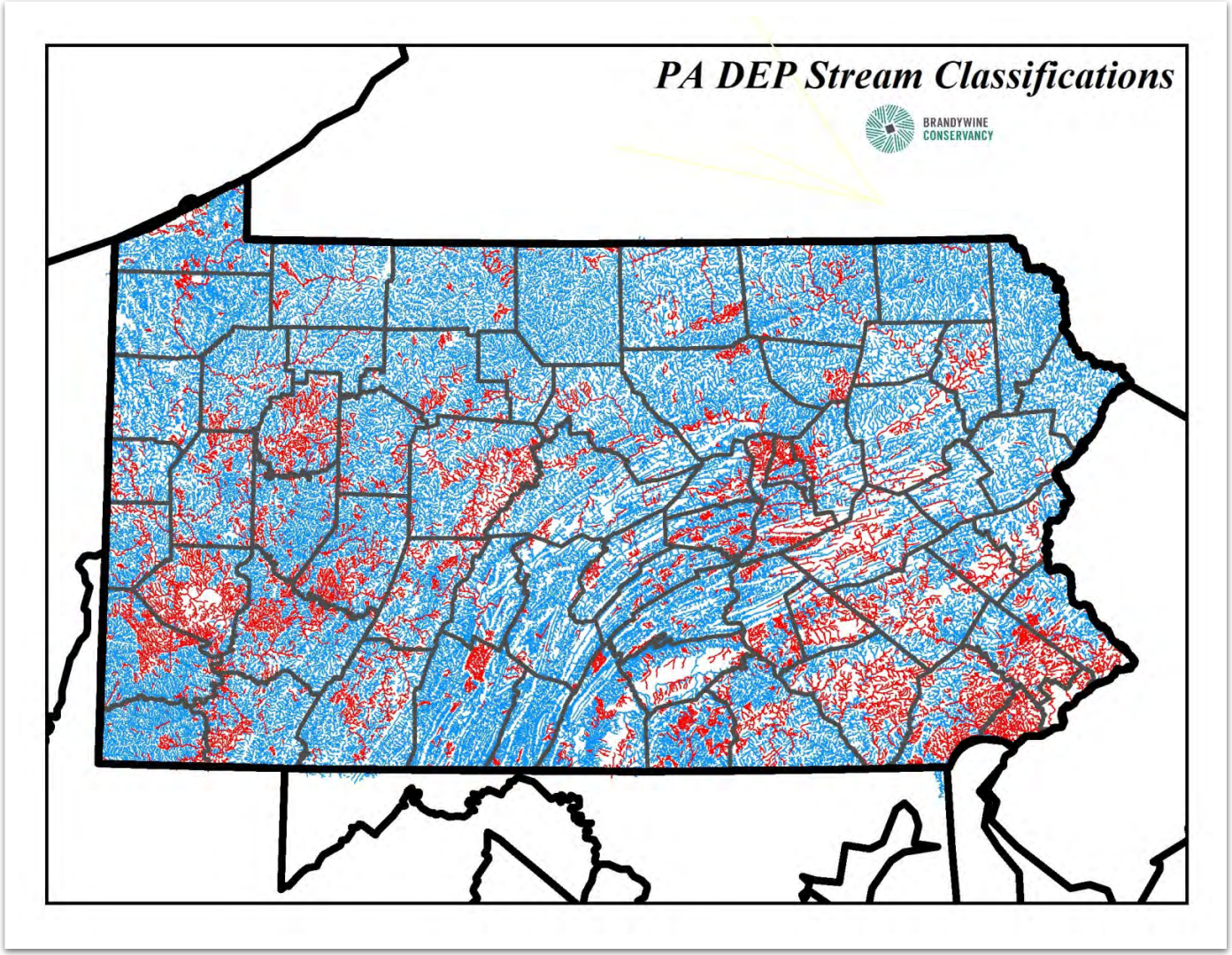
Impaired Streams in Pennsylvania

19% of assessed streams & rivers impaired



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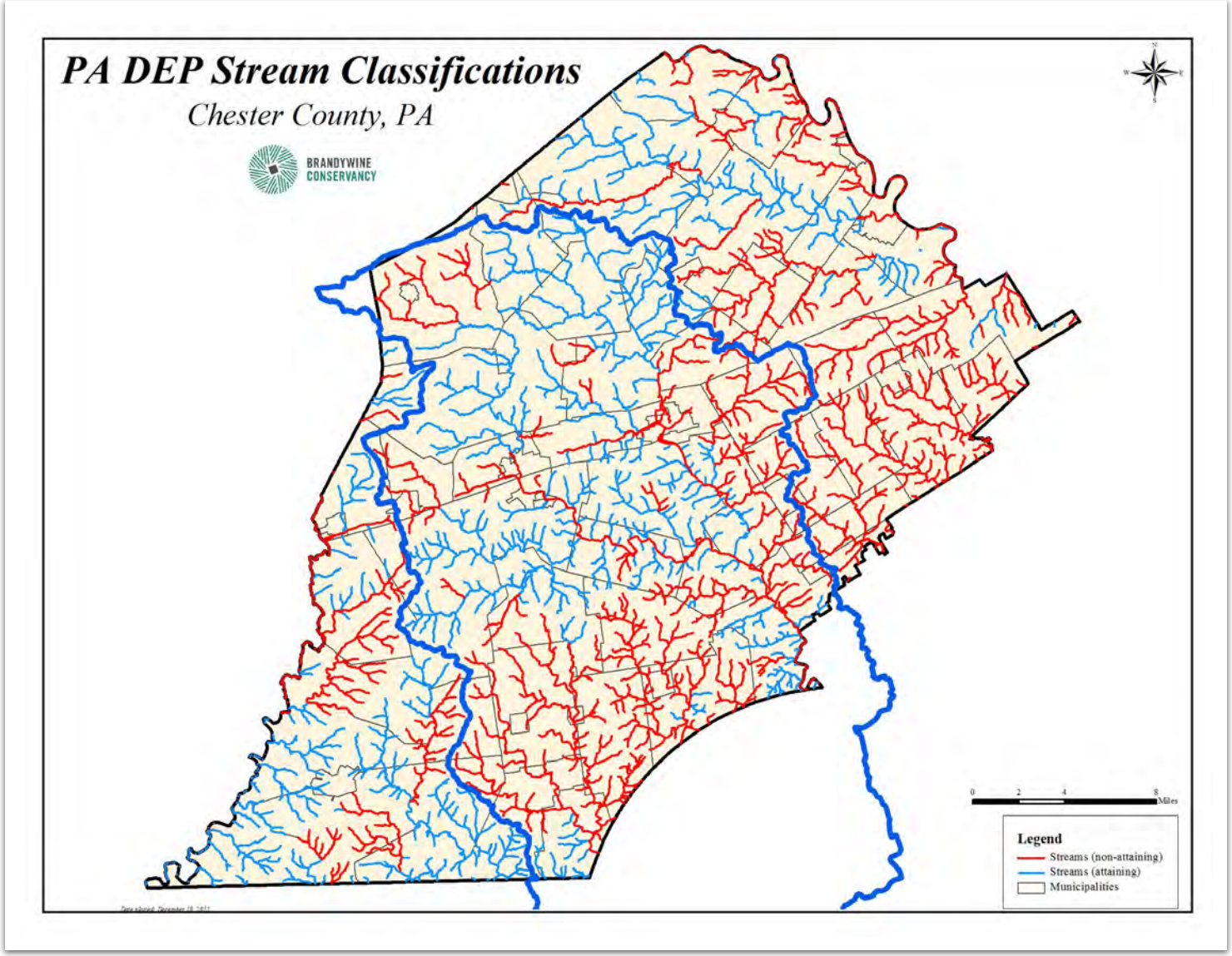
Impaired Streams in Chester County

55% impaired



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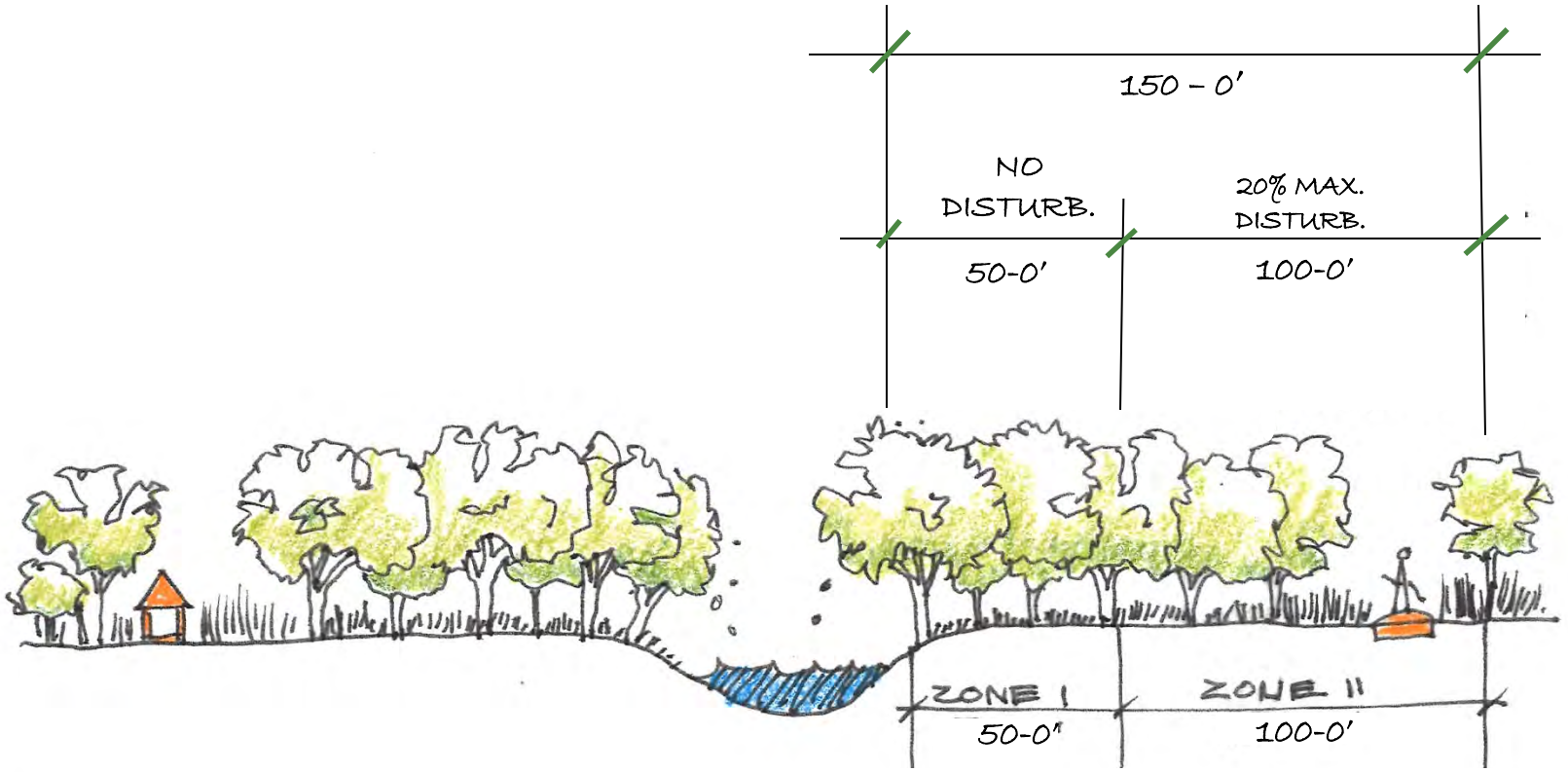

NEW CONSERVANCY MODEL FOR IMPAIRED STREAMS, WHERE FORESTED BUFFERS EXIST

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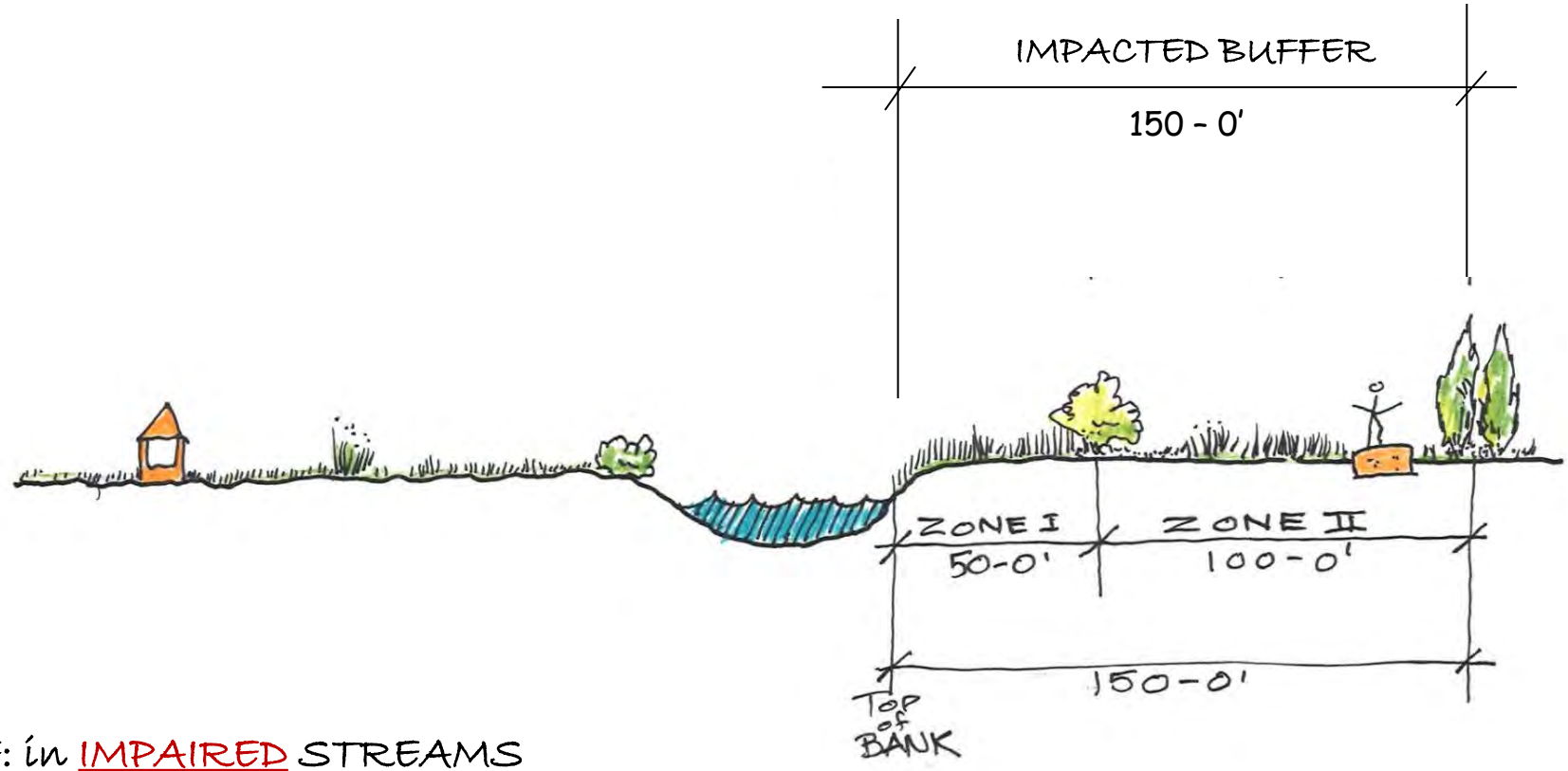

IF: in IMPAIRED STREAMS

NEW CONSERVANCY MODEL WHERE TREES ARE LACKING

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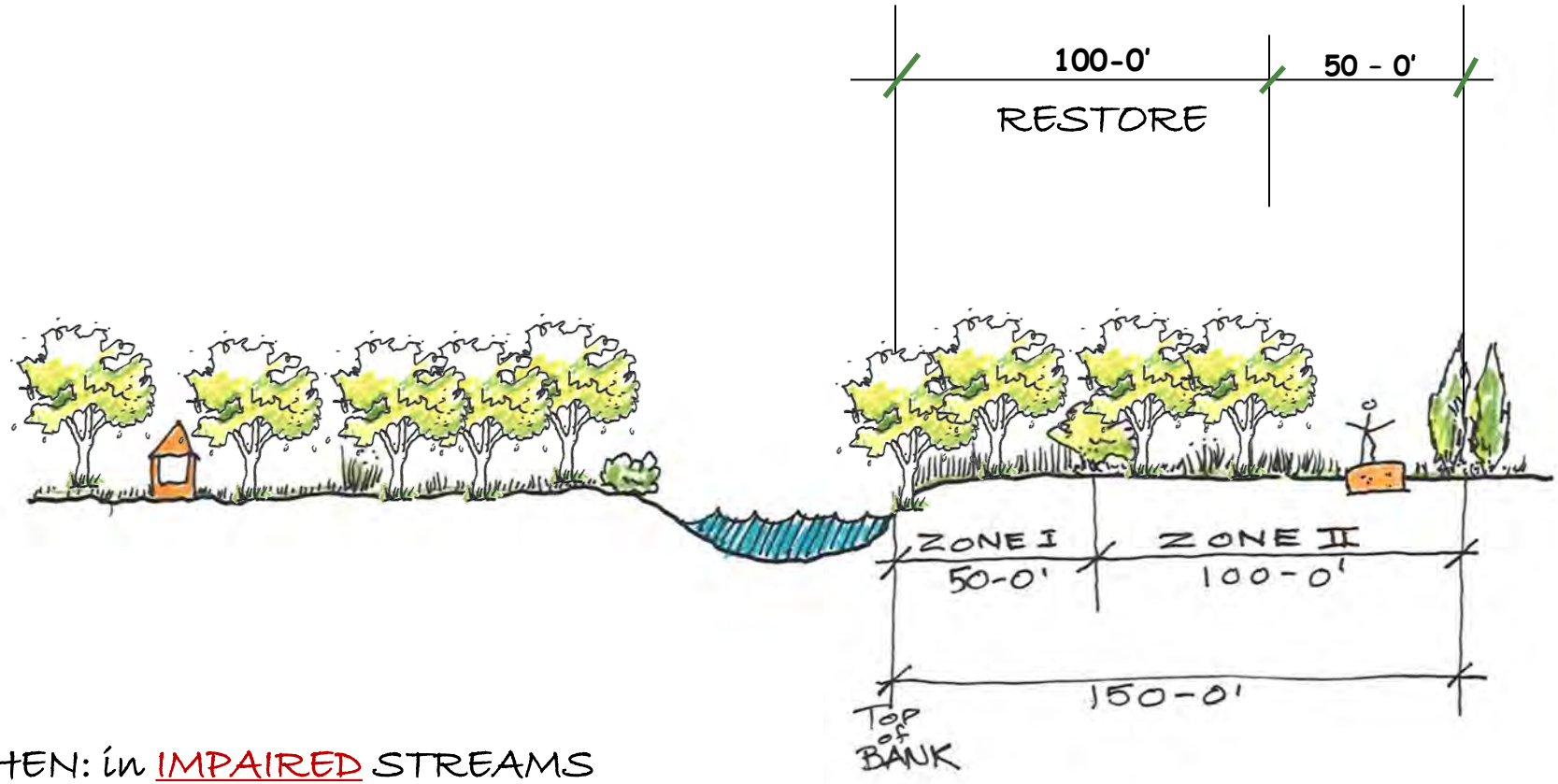

THEN: in IMPAIRED STREAMS

NEW CONSERVANCY MODEL WHERE TREES HAVE BEEN PLANTED

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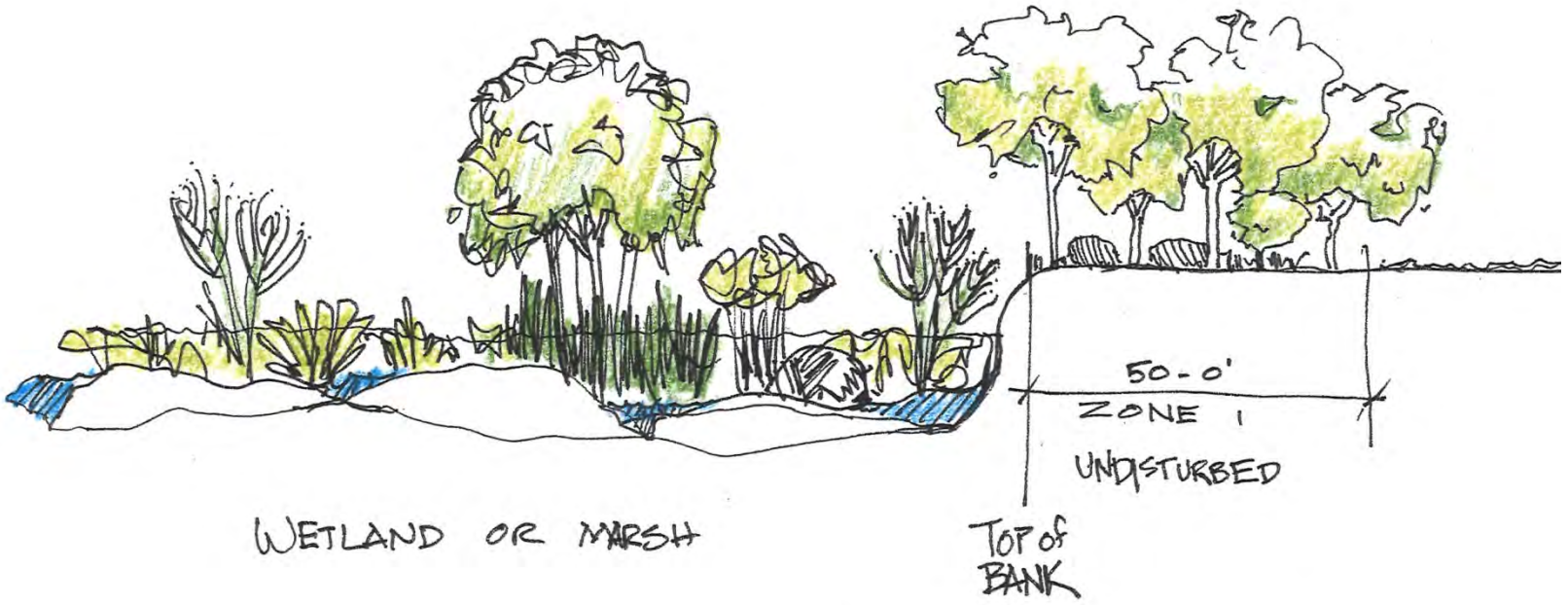
CONSERVANCY MODEL APPLIES TO WETLANDS



AND CAN BE MODIFIED FOR WIDE FLOODPLAINS AND STEEP SLOPES.

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Modifications to Buffer Requirements/Standards

Municipalities can get tough on protection provided……..

- A “safety valve” exists for unique/unforeseen circumstances
- Simpler modification process proposed
- Requested of elected officials as part of conditional use approval, subdivision or land development approval, or via Special Exception
- Limited to minimum adjustment necessary to allow relief while adhering to riparian buffer purposes

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RIPARIAN BUFFER ANALYSIS

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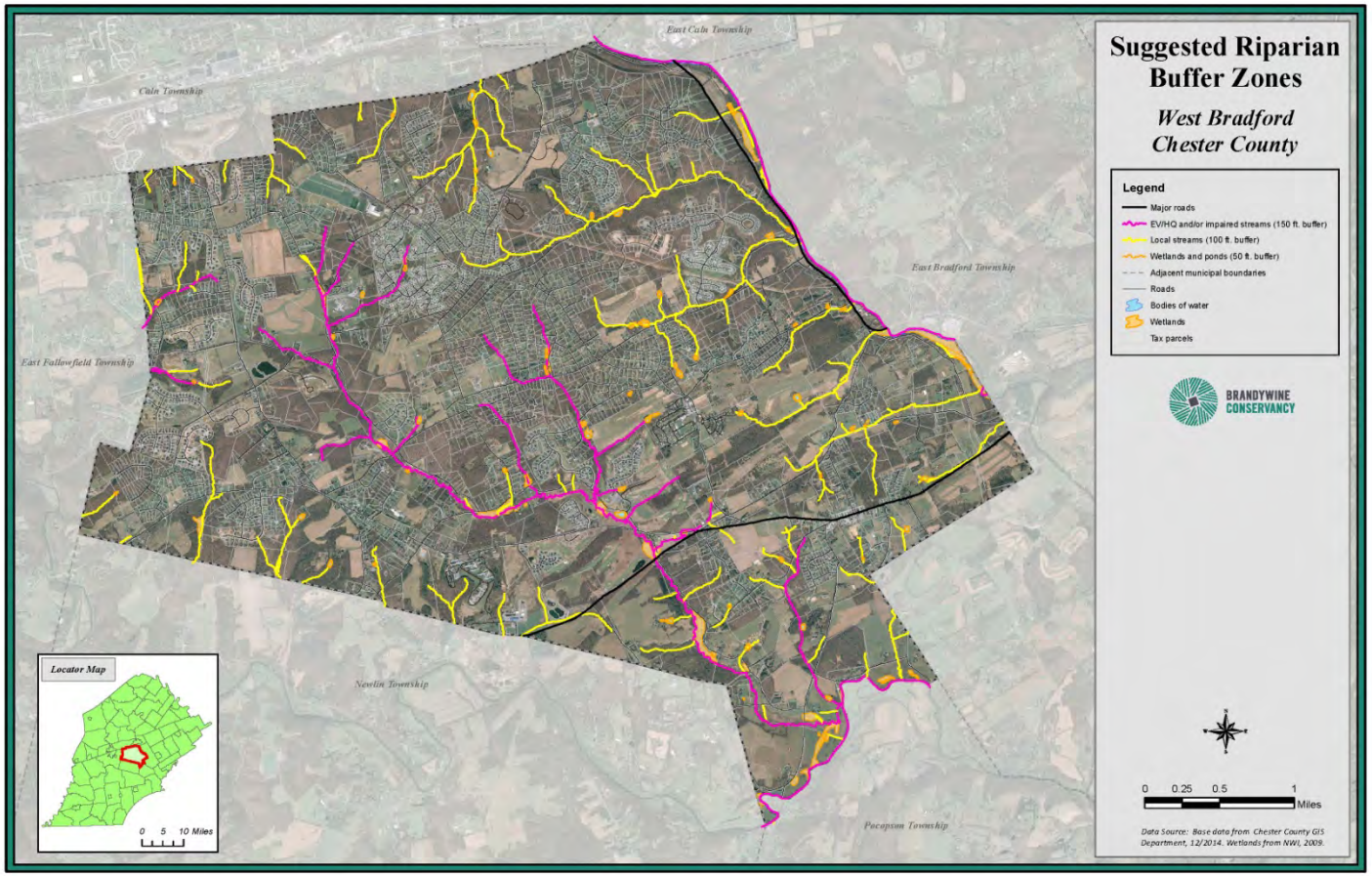
Riparian Buffer Zones



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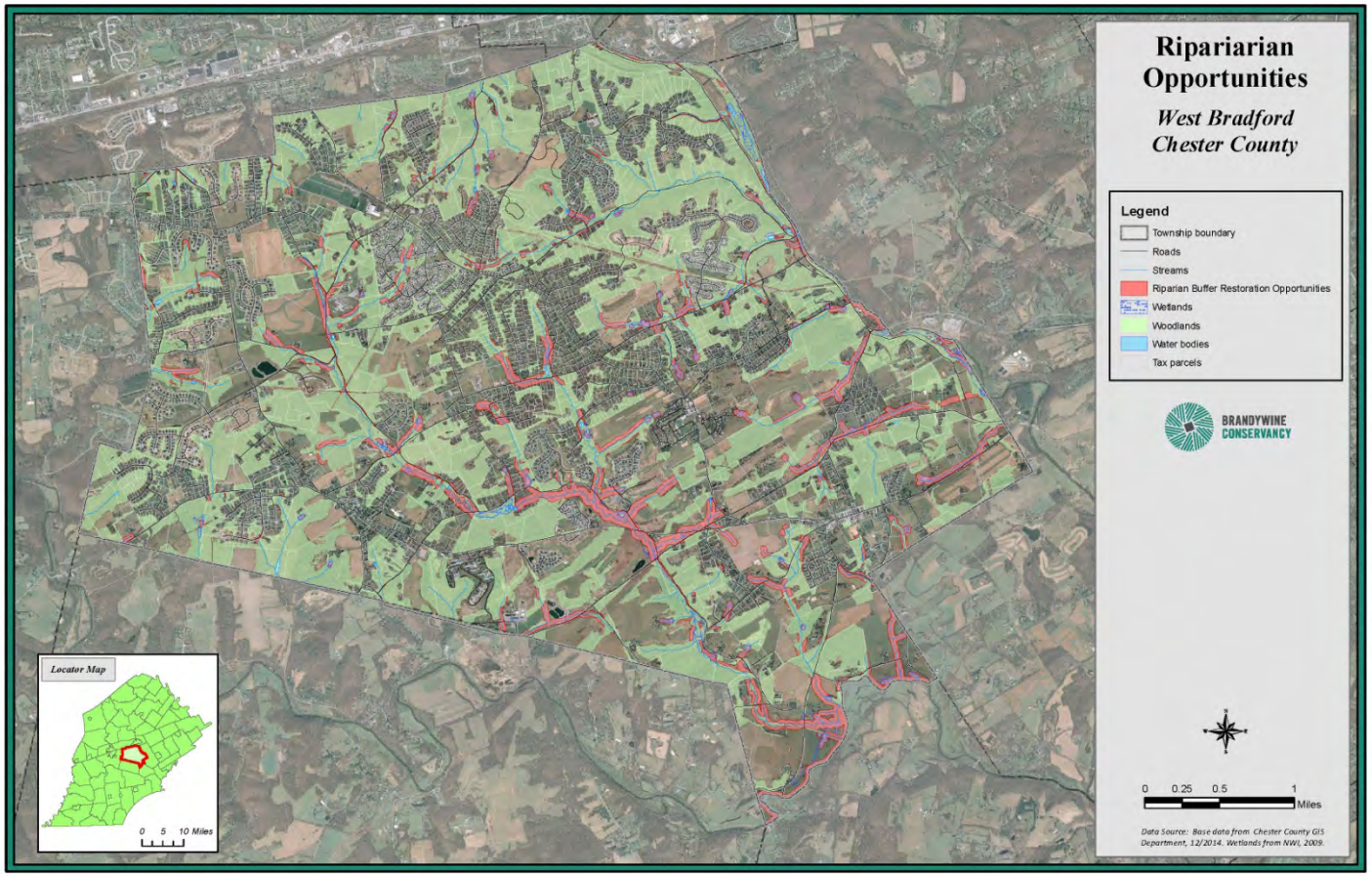
Riparian Restoration Opportunities



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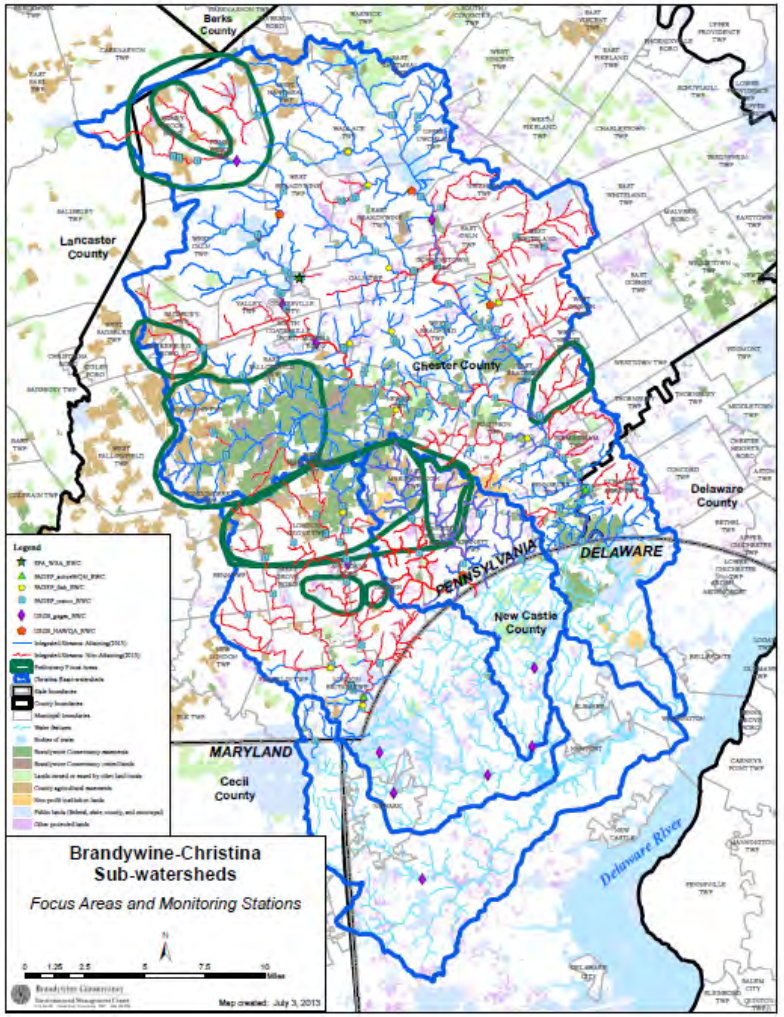
William Penn Foundation/Delaware River Watershed Project

- Brandywine/Christina basin
- Free technical assistance for riparian buffer implementation
- 10 municipal assessments
- 5 municipal ordinance updates
- MS4/TMDL credits



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William Penn Foundation Project Process

- Step 1
  - Audit/assess existing municipal buffer regulations: confirm need
- Step 2
  - BC and NLT work with Township to integrate new ordinance
- Step 3
  - Adopt new forested riparian buffer ordinance

NO COST TO MUNICIPALITIES!

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WPF CLUSTER GRANT: Selection Criteria

- Typology
  - Rural/urban continuum
  - Development pressure
  - Impaired streams
  - Special protection waters
  - MS4 permit obligations
  - TMDL requirements
- RECEPTIVITY

Category	Types	Data needed
Rural/Urban Continuum	Rural Low Intensity Developed High Intensity Developed	- % agriculture/forest - % residential - housing density - population density - household density - % impervious cover
Development Pressure	High development pressure Moderate development pressure	- Change in population from 2000 to 2010 - Land consumption
Impaired Streams	Change in impaired streams	- Miles of impaired streams from 2012 - Miles of impaired streams from 2014
Special Protection Waters	Has HQ/EV waters No HQ/EV waters	- Miles of HQ or EV waters
MS4	MS4 municipality Non-MS4 municipality	- Required to have MS4 permit? (Y/N)
TMDL Requirement	Subject to TMDL requirements Non Subject to TMDL requirements	- Required to implement TMDLs? (Y/N)

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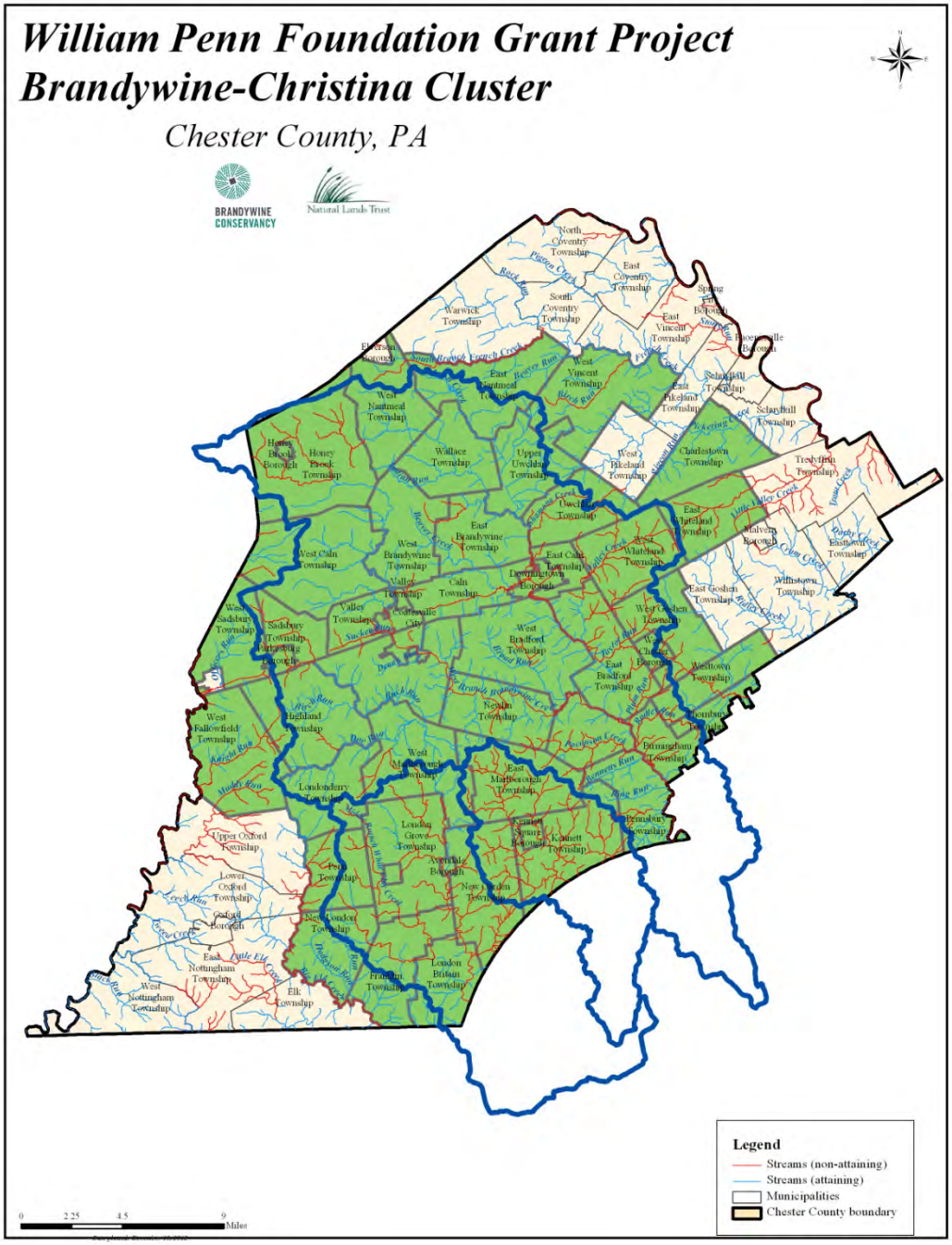
WPF Cluster Project Area

Initial Outreach:

- Breakfast meeting - all Chester County municipalities in the Brandywine Christina Cluster



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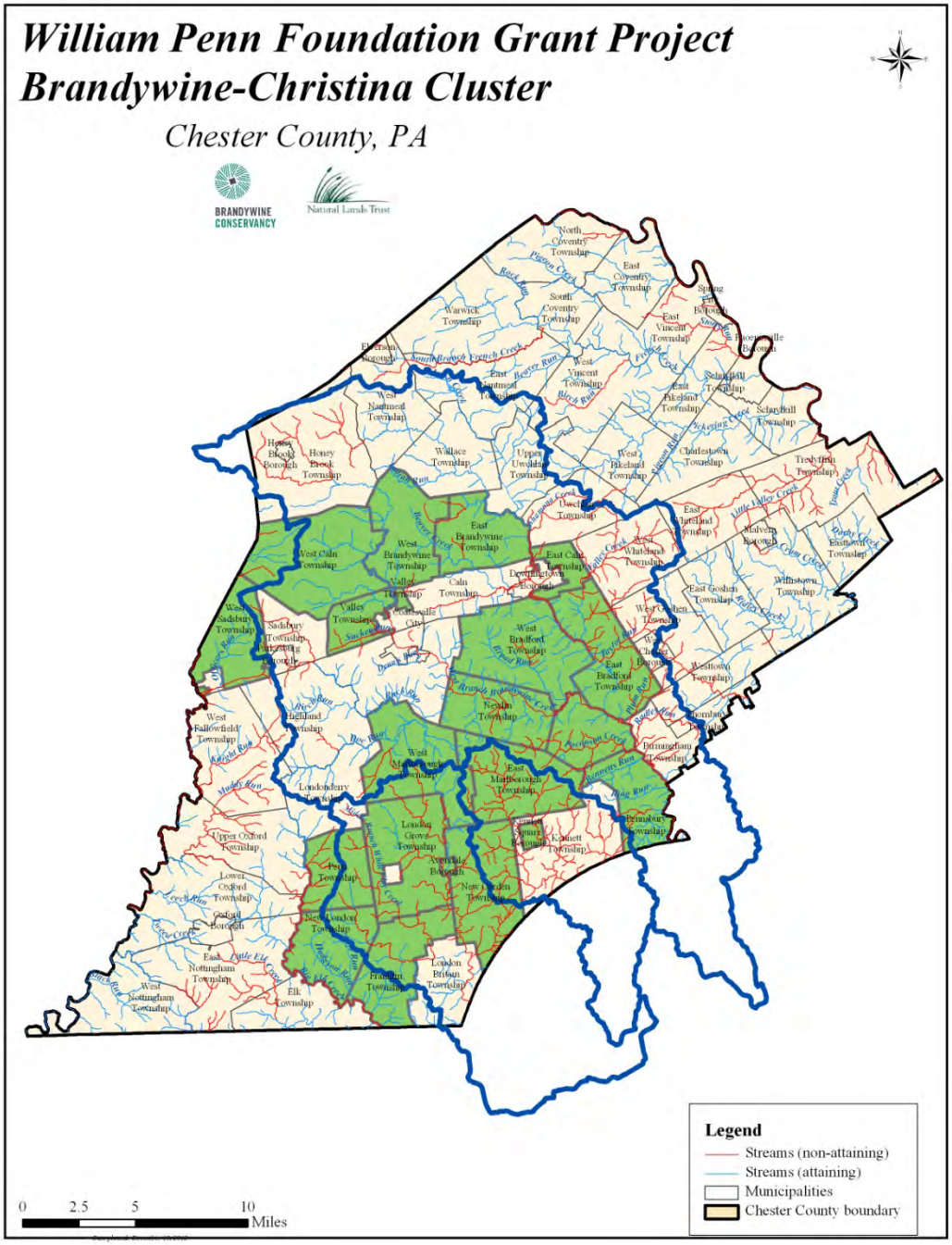
Additional Municipal Outreach

- Letters/mailings
- Info Flyers
- Phone calls
- Presentations
  - Board of Supervisors
  - Planning Commissions



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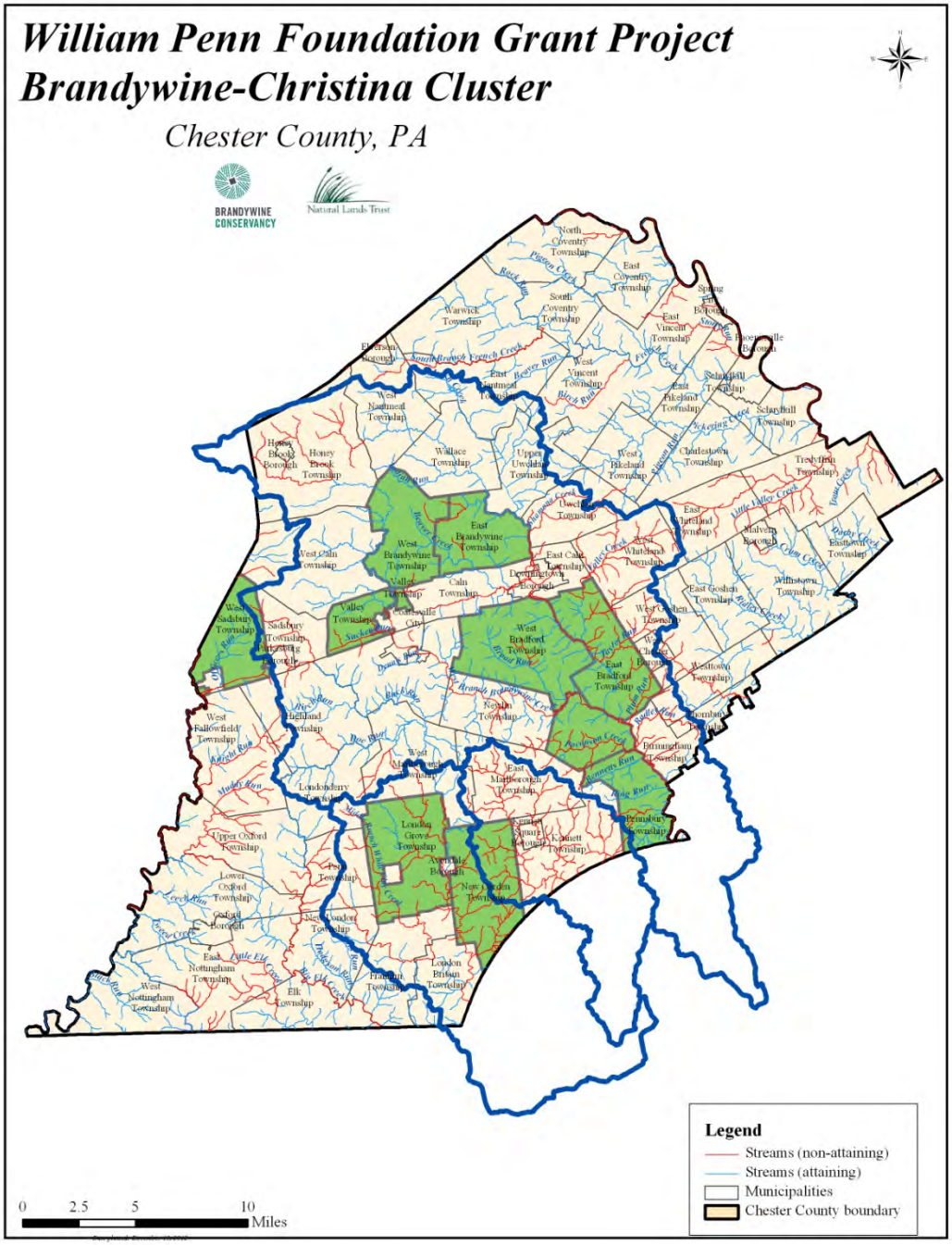
10 Municipalities for Assessments

- Evaluation of local codes
  - Zoning
  - SALDO
  - Stormwater Ordinance
- Summary of assessment in memo to Townships



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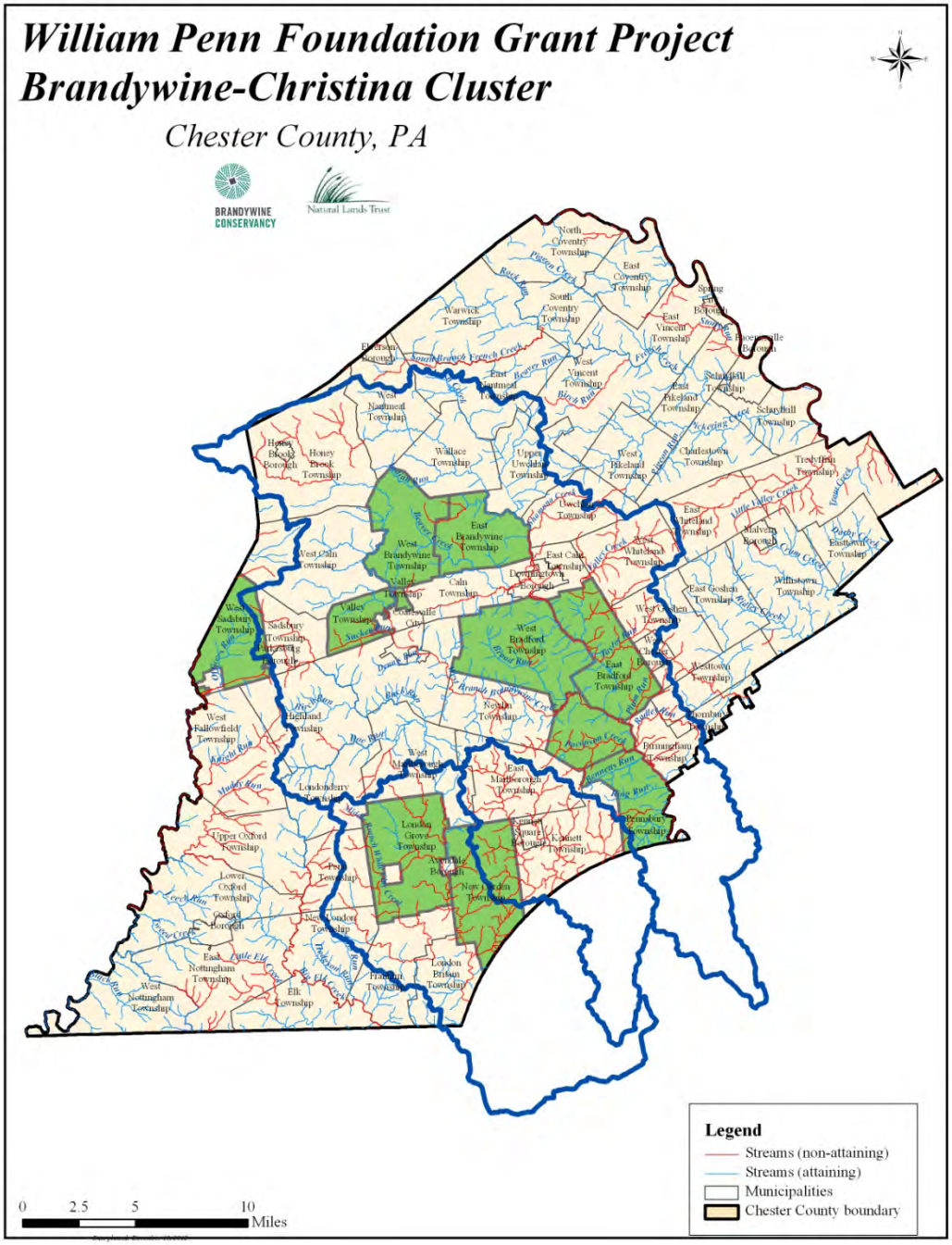
10 Municipalities for Assessments

Summary of Assessment Findings:

- General buffer widths
- Wetland margins
- Restoration requirements
- Covenants/ management plans



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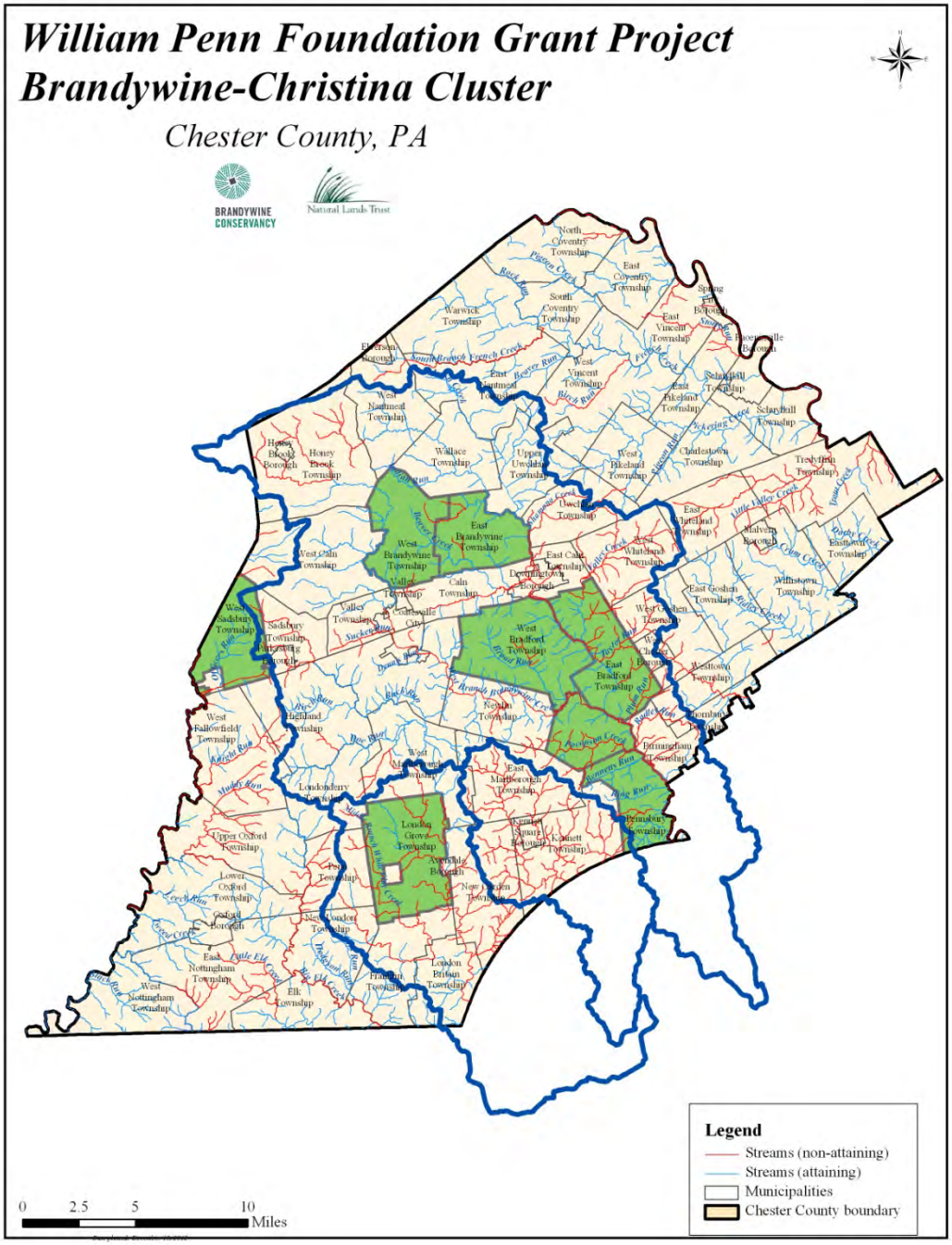
Potential Riparian Buffer Ordinance Adoption

7 potential adoptions



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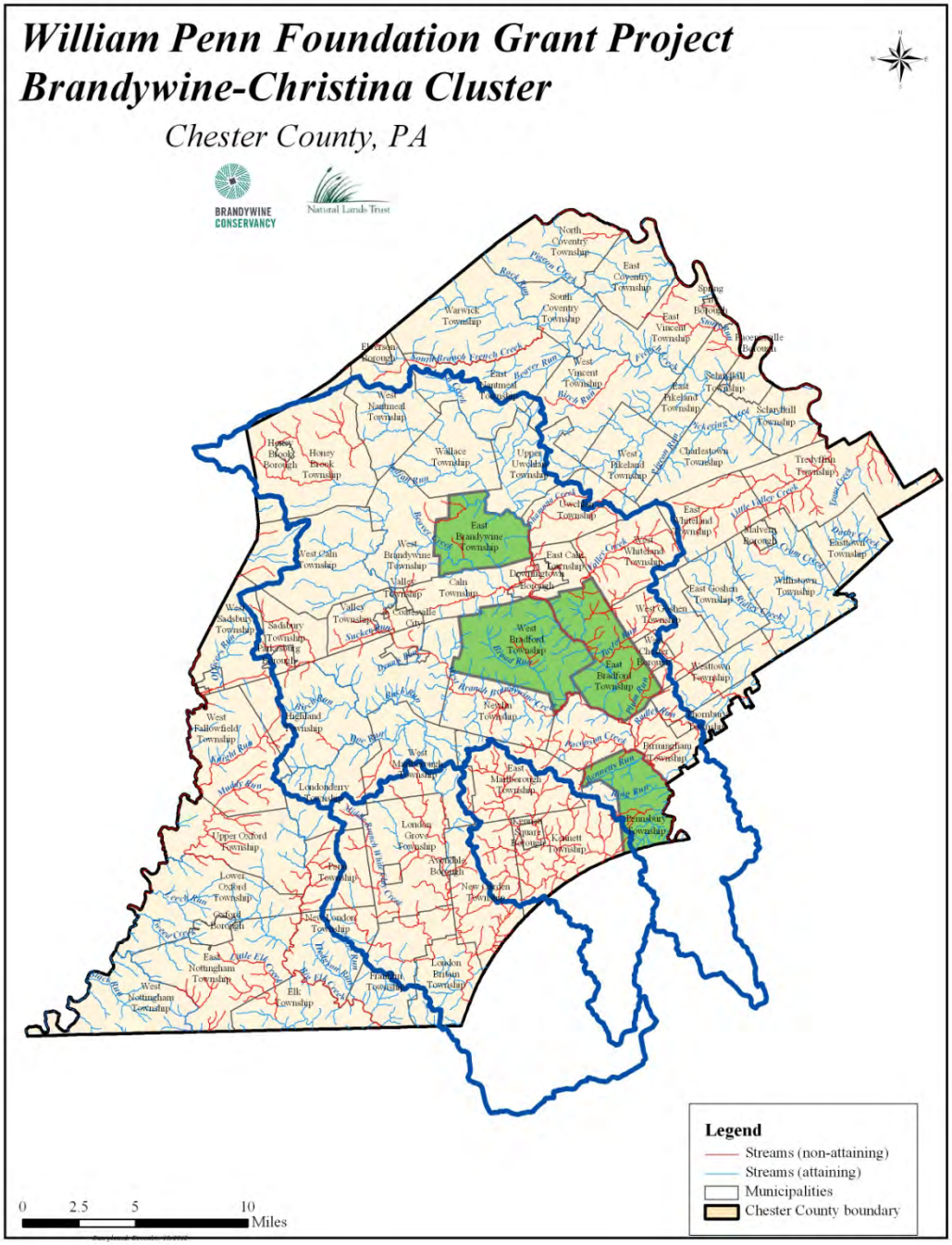
Riparian Buffer Ordinance Adoption

4 Confirmed



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Regulatory Drivers: MS4s/TMDLs

- 45 out of 50 Chester County municipalities in the Brandywine-Christina have MS4s.
- 43 out of the 45 are required to submit individual MS4 permits.
- Continuing to work with EPA and PADEP to allow municipalities to receive credits towards MS4 and TMDL requirements for adopting riparian buffer ordinances.

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Questions?

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(JTheilacker@brandywine.org)

Dr. Seung Ah Byun, P.E., LEED AP
(ByunS@brandywine.org)

RIPARIAN BUFFER PROTECTION USING MUNICIPAL ORDINANCES

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PALTA Conference 2015

Gettysburg, PA

May 2015

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