



CAPITAL REGIONTM

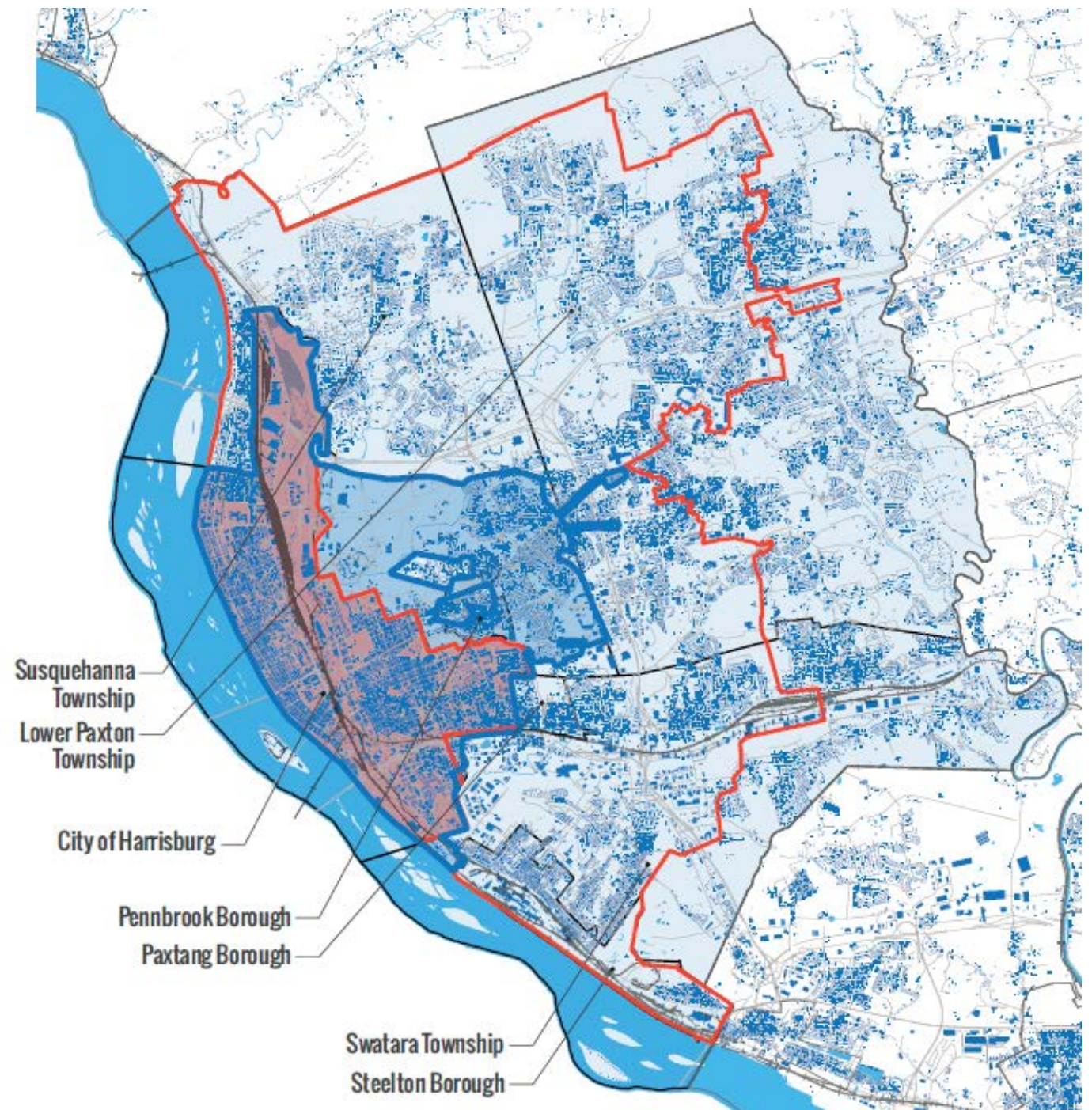
WATER

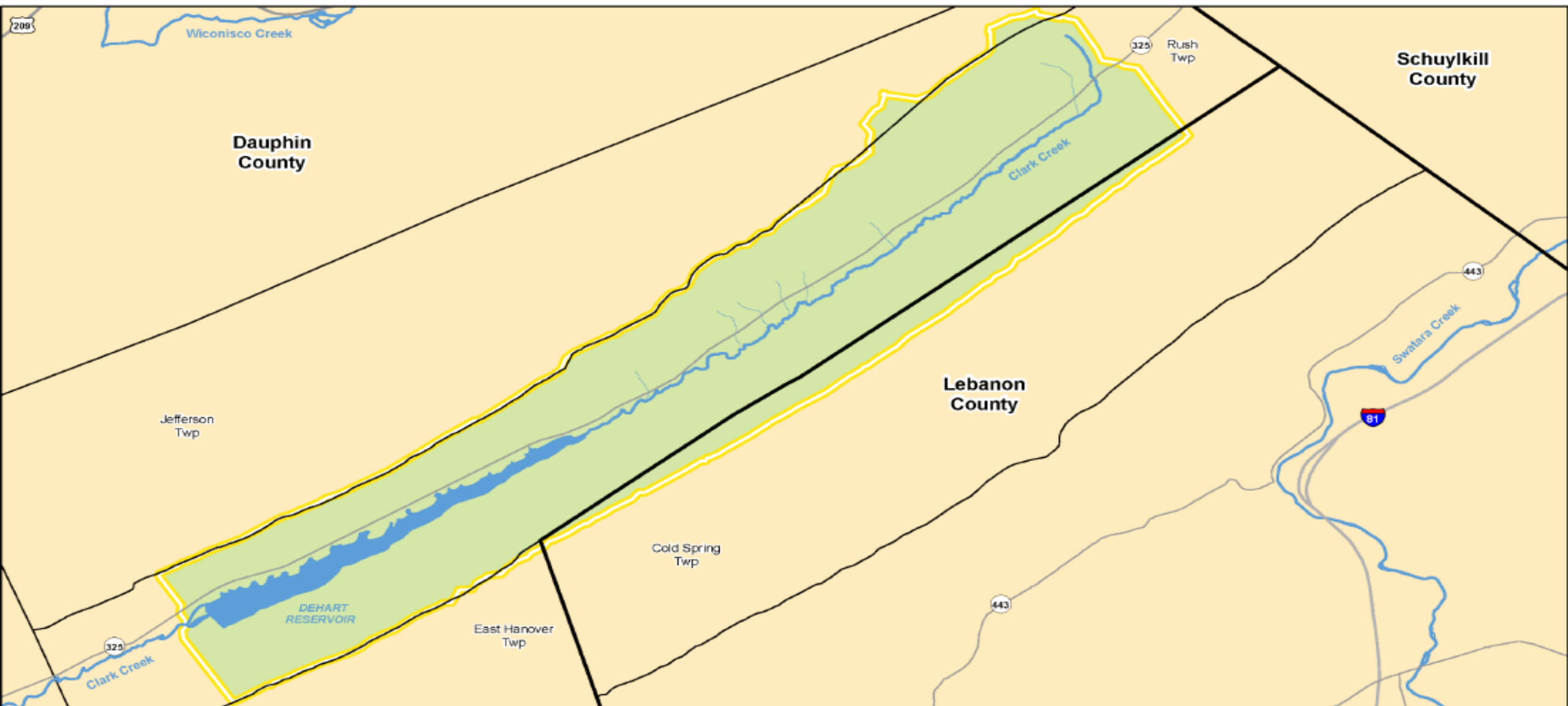
Conserving the DeHart Property

November 18, 2016

Primary source of drinking water for the City of Harrisburg and portions of Penbrook Borough and Susquehanna and Lower Paxton Townships

- Located in Rush, Jefferson, Middle Paxton Twps.
- Clarks Creek is the source
- Built in 1940s
- Holds 6 billion gallons
- 5-mile long reservoir
- Surrounded by forested property





Source Water Protection Program

DeHart Reservoir

Figure 1 - Location Map

1 inch = 1 mile

SOURCE OF STREAM IMPAIRMENT

- Abandoned Mine Drainage (AMD)
- Agriculture
- Urban/Suburban Development
- Other
- Unimpaired

SWP AREA

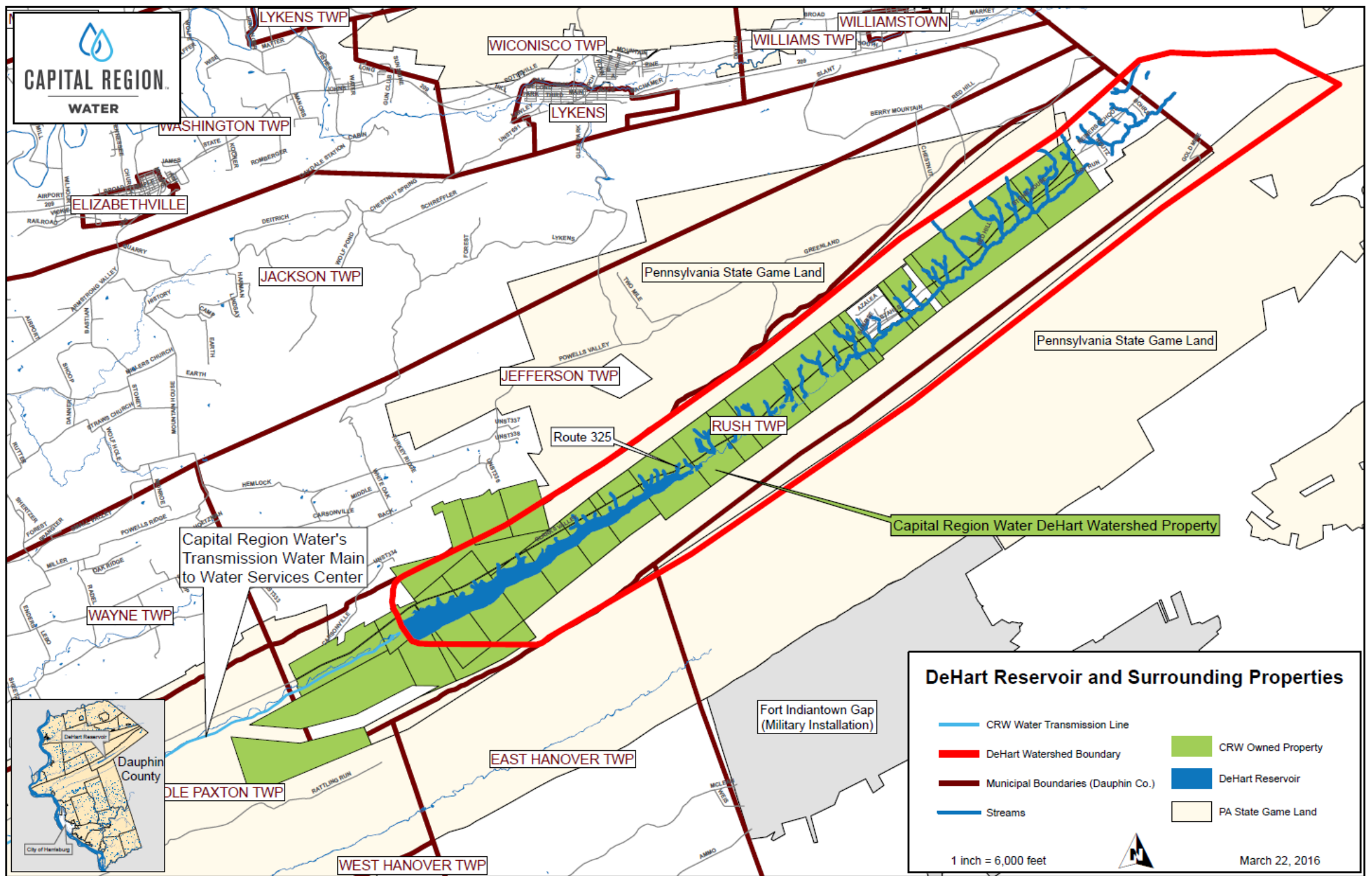
- Zone A SWP Area
- Zone B SWP Area
- Zone C SWP Area

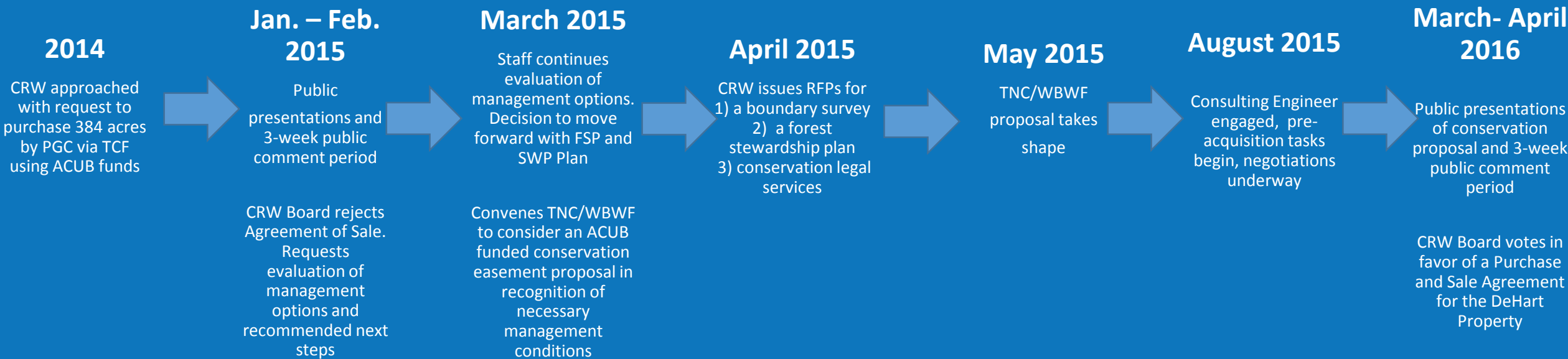
GENERAL

- Major Road
- County Boundary
- State Boundary
- Municipal Boundary



September 22, 2015







Army Compatible Use Buffer (ACUB)

What & Why

- Since 2002, The Department of Defense's **REPI (Readiness and Environmental Protection Integration) program** has authorized U.S. military installations to enter into agreements with State or Local governments or private conservation organizations to address development concerns and encroachment on lands neighboring the installation.
- The United States Army's version of this program, the **ACUB (Army Compatible Use Buffer)** program, has been used to protect multiple National Guard training Installations from encroachment.
- **Encroachment** is defined as urban development surrounding military installations that affects the ability of the military to train realistically. **Encroachment restricts the Army's ability to operate installations & training areas.** It changes the pattern of land use and habitat growth and impedes the Army's ability to train Soldiers.

The following conditions must be met :

- CRW retains property ownership, including oil/gas/mineral/timber rights
- Perpetual conservation agreement (ie. restriction or easement)
- Both CRW and third party maintain enforcement authority of conservation agreement
- Maintain hunting/hiking through the PA Game Commission Cooperative Game Agreement
- Respects Trust Indentures and efficient operation of the water system
- Minimal interference with CRW operations

Scenario	1	2	3	4
Approach	“Do Nothing”	“Deed Restriction”	“Sale”	“Conservation Easement”
Ownership	CRW	CRW	Other	CRW
Management / Enforcement	CRW	CRW	Other	CRW & Partner
Potential Revenue Source	Timbering & Carbon	Timbering & Carbon	One Time Payment	Timbering & Carbon & Compensation
Total Revenue – One timber cycle (timber, carbon, land sale values)	\$4 - \$12 Million	\$4 - \$12 Million	\$6-\$20 Million	\$4 - \$20 Million
Potential Revenue – Two Timber Cycles	\$8 - \$24 Million	\$8 - \$24 Million	\$6 - \$20 Million	\$8 - \$36 Million
Benefit/Cost Ratio	1/2 = 0.5	2/2 = 1	1/2 = 0.5	3/1 = 3
Rank	3	2	3	1



Utilizing Fort Indiantown Gap Army Compatible Use Buffer (ACUB) Program funds, Capital Region Water will partner with the Ward Burton Wildlife Foundation and The Nature Conservancy to grant a conservation easement on the 8,200-acre DeHart Watershed Property.

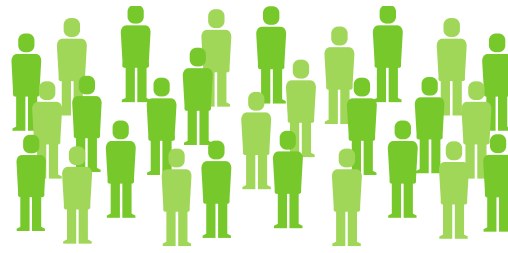
The conservation easement will protect the property's natural, scenic, forested and open space condition. Thereby, protecting water quality, regional conservation significance, and the military mission of FTIG.

Ward Burton Wildlife Foundation



50

U.S. state chapters



1mm+
active members



**3,700/
550**

employees/
scientists

35

countries



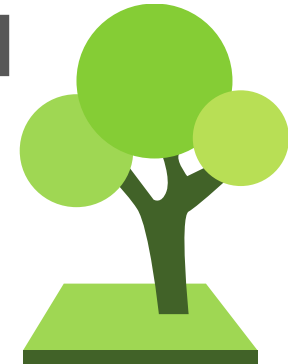
The Nature
Conservancy



Protecting nature. Preserving life.™

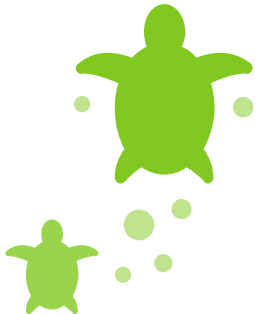
120MM

acres of land
protected



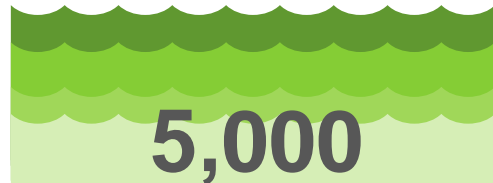
100

Marine conservation
projects
in 21 countries &
all U.S. coastal states



5,000

river miles
protected



1,400

preserves managed



WORKING WOODLANDS

HOW IT WORKS



Maintain working forest landscapes for the production of high quality ecologic and economic values.

LONG-TERM FOREST PROTECTION

- Working forest conservation easements

CERTIFIED FOREST MANAGEMENT

- Forest inventory
- 10 yr. Assessment and plan
- FSC certification

ECOSYSTEM VALUE ASSESSMENT

- Improved forest management carbon potential

Public Comment – by the numbers

- 2 public meetings/hearings as well as additional information discussions with critical stakeholders such as CRW's Community Ambassadors, Source Water Protection partners, and the PA Game Commission
- 8 media hits
- 8,400 reached on social media
- 1,500 via direct email, including previous commenters
- 62 comments received
 - 31 customers and 8 organizations
 - 46 comments were in support
 - 5 comments in opposition
 - 11 comments were without express support or opposition
 - All comments were made publically available



<http://capitalregionwater.com/dehartproposal>

Water: Preserve and/or enhance the high quality drinking water by improving the capacity of the system to produce the resource. Watershed security must also be maintained to insure the safety of the supply. Critical riparian buffer zones must be maintained and established as necessary. All water resources on the property must be recognized, including all springs, tributaries, and wetlands. Property management and forest stewardship must complement existing operations and source water protection efforts that provide drinking water to over 60,000 people.

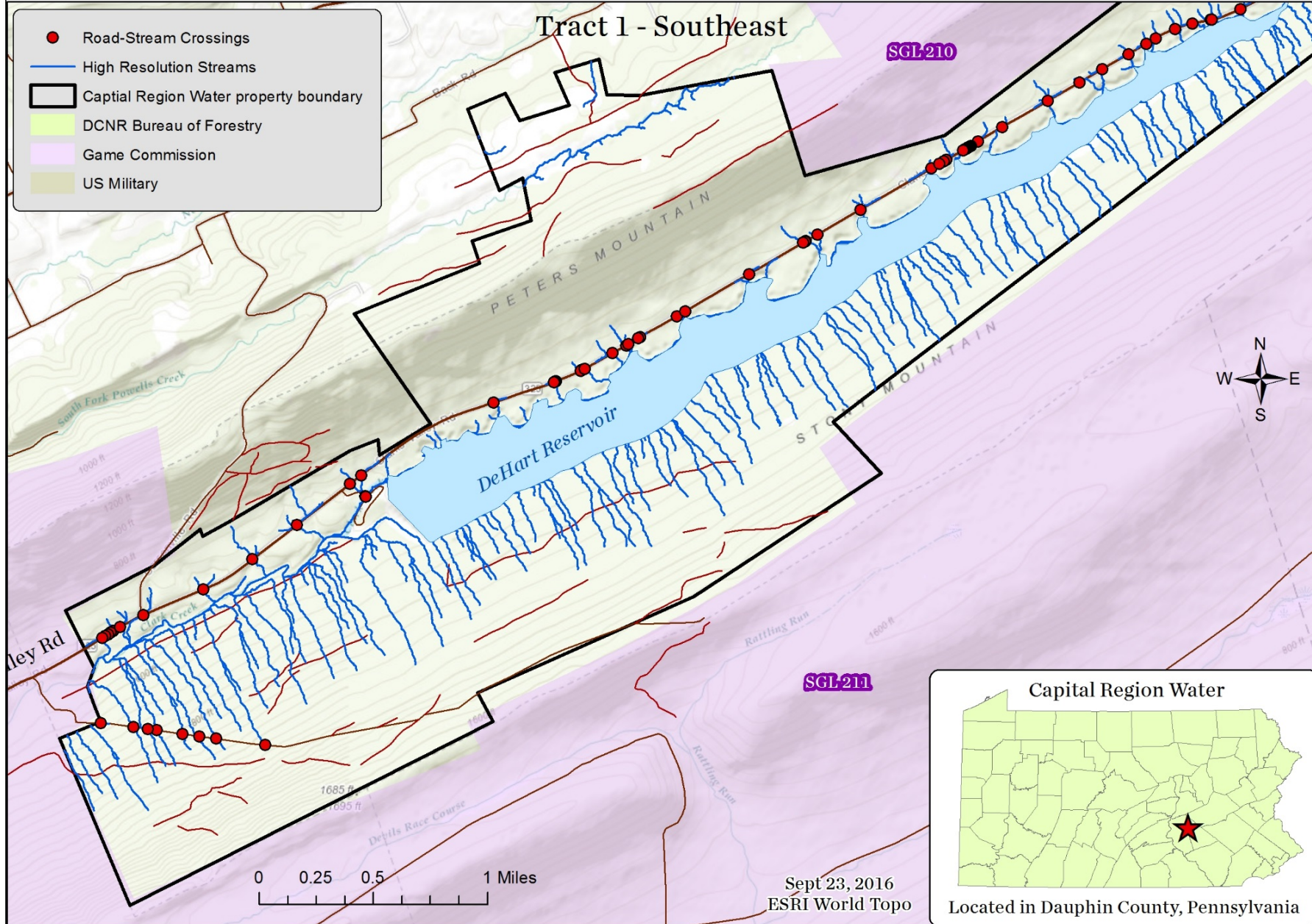
Revenue: Improve the capacity of the watershed and downstream properties to produce carbon-friendly revenue options. Revenue streams will allow CRW to enhance and protect the asset. This includes sustainable timber harvesting and monetizing of ecosystem services.

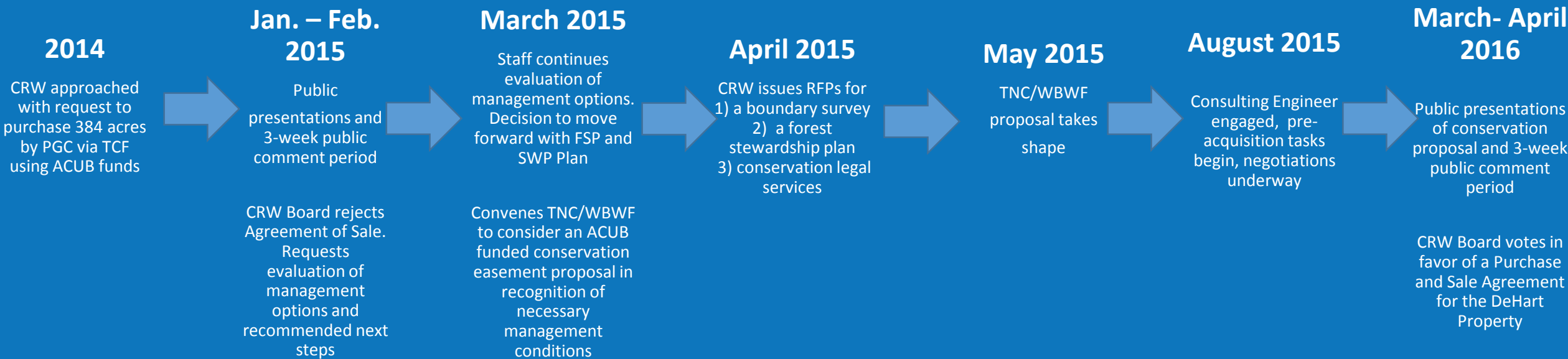
Ecosystem health: Maintain and enhance long-term ecosystem health and viability. Identify and conserve high priority conservation areas, contribute to the conservation of biological diversity and habitat, and actively manage the property for resiliency to withstand threats (invasive species, storms, insect invasions, changing climate).

Compliance and recordkeeping: Ensure any active management of the property exceeds any federal, state and local requirements and best practices. Implementation of the plan must be monitored and documented with incremental benchmarks.

Capital Region Water: Road-Stream Crossings

2101 N Front St
Building 1 Suite 200
Harrisburg, PA 17110
717-232-6001

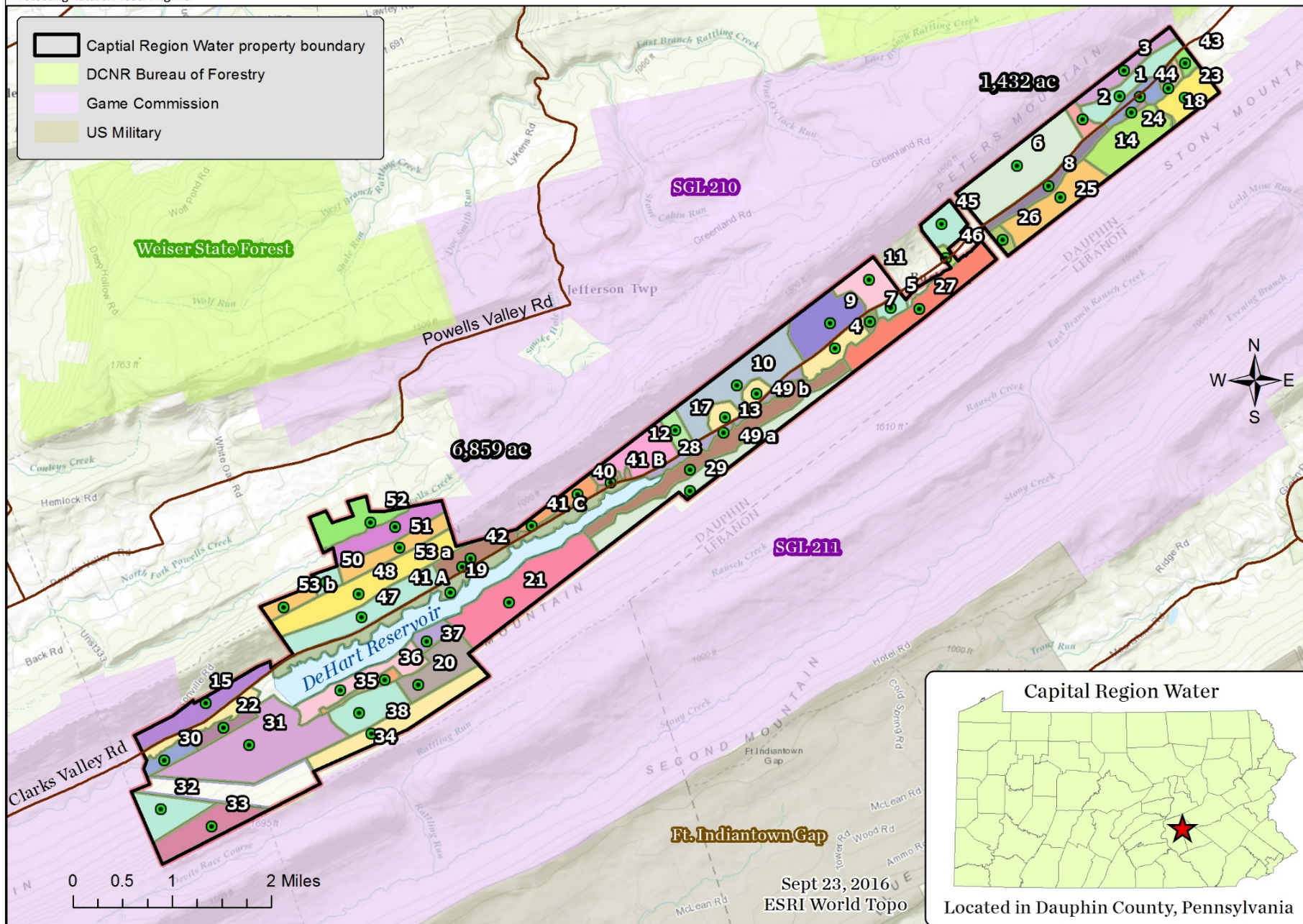








Next Steps





Questions/Comments

Tanya Dierolf

tanya.dierolf@capitalregionwater.com

717-216-5259

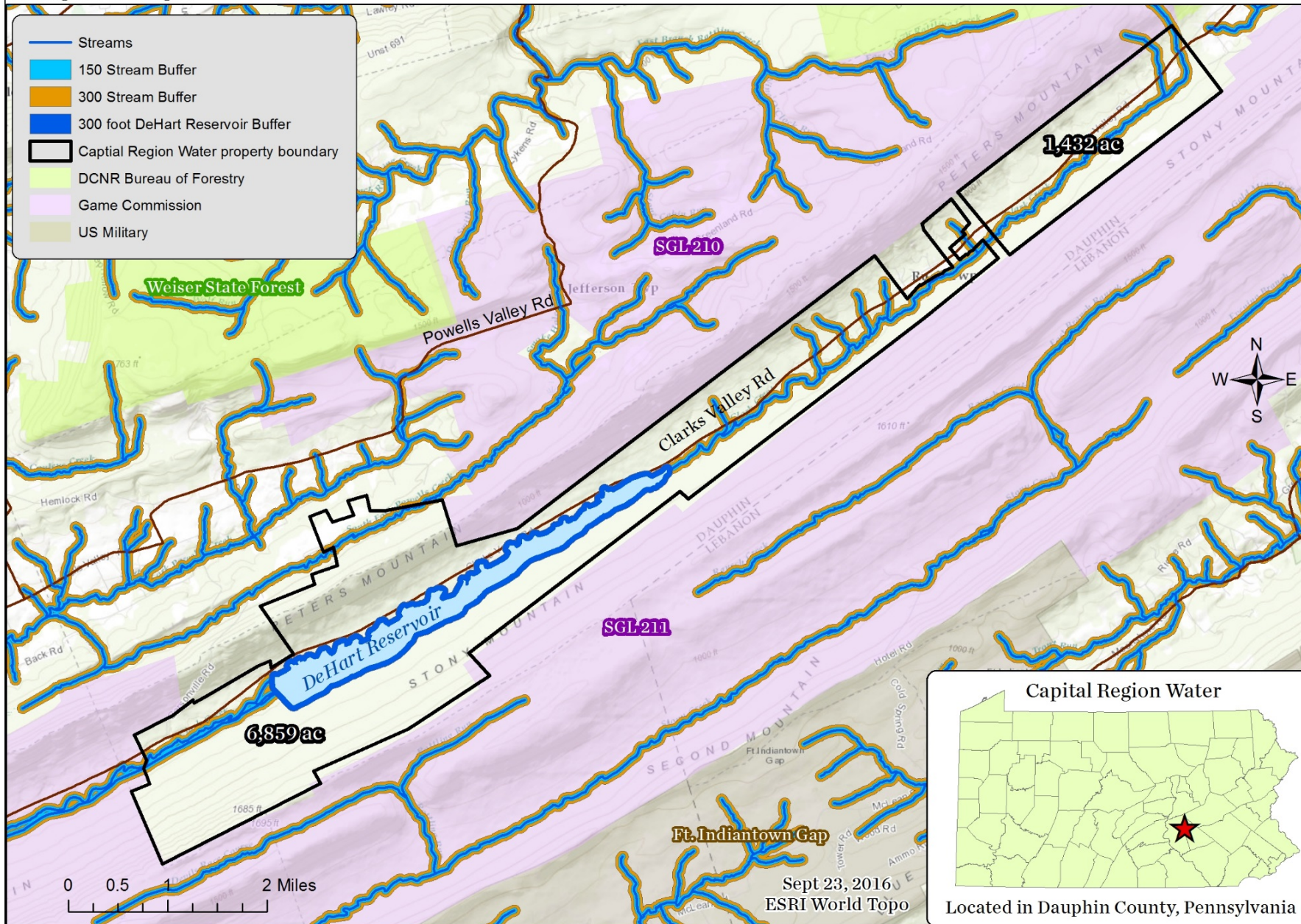


CAPITAL REGION™

WATER



Capital Region Water: Streamside Management Zones



Management Approach Evaluation and Benefits-Cost Analysis for the DeHart Watershed Property

Possible Management Approach	Property Ownership	Management/Enforcement Responsibility	CRW Revenue Potential (Please also see Financial Comparison below)	Ratio of Benefits/Costs ¹			
				Benefits High =3 Med=2 Low=1	Costs, also considers risk High =3 Med=2 Low=1	Ratio Benefits/ Costs	Rank
<i>Scenario 1 - Continuation of current approach</i>	CRW retains full ownership	CRW retains full management responsibility	Timbering potential at approximately \$500-\$1500/acre ^{II} every 20-30 years Carbon offset potential at approximately \$10-\$20/acre ^{III} per year	1 -CRW ownership -CRW retains oil/gas/mineral/timber rights -Ongoing revenue potential with active management -Environmental protection -Continuation of hunting/hiking access - No risk of operations interference	2 -Stewardship plan costs -Lack of long-term protection strategy and susceptibility to future mismanagement -Assumes CRW to police self	1/2 = 0.5	3
<i>Scenario 2 - Deed Restriction</i>	CRW retains full ownership; extinguishes some rights	CRW retains full management responsibility. Third party may provide enforcement authority if party to restriction, otherwise CRW has sole authority to also reverse restriction	Little or no revenue potential A percent of the land value could be determined for a one-time payment based on an appraisal and easement value; dependent on interested partner	2 -CRW ownership with legal restriction governing future land use -CRW may retain oil/gas/mineral/timber rights, may also restrict rights -Revenue dependent on partner interest, likely a percentage of land or easement value -Environmental protection -Continuation of hunting/hiking access - No/little risk of operations interference	2 -Legal and recording costs -Lack of long-term protection strategy and susceptibility to future CRW removal	2/2 = 1	2
<i>Scenario 3 - Fee simple sale of property</i>	CRW relinquishes surface rights; could consider retaining mineral rights	Transferred to potential buyer; highly variable based on land management of buyer	One-time payment at approximately \$800-2500/acre ^{IV}	1 -One-time payment -CRW may retain oil/gas/mineral/timber rights and price would reflect any restriction	2 -CRW relinquishes ownership and corresponding land use decisions, including public access -CRW likely to absorb some pre-acquisition costs, such as legal fees, although burden should be on buyer	1/2 = 0.5	3
<i>Scenario 4 - Conservation Easement</i>	CRW retains ownership; retires land development rights	CRW retains management responsibility; third party easement holder with enforcement authority	Ongoing timber and carbon offset potential in addition to the one-time easement payment at approximately \$1,000/acre for the full 8,000 acres ^V Alternatively, a donated easement could be considered, but obviously does not provide a revenue stream	3 -CRW ownership with extinguishment of development rights -CRW may retain oil/gas/mineral/timber rights, may also restrict -Ongoing revenue potential coupled with one-time easement payment -Environmental protection, with third party enforcement -Enrollment in TNC Working Woodland Program -Continuation of hunting/hiking access -Social/public perception benefits - No/little risk of operations interference -Multiple partners involved and subsequent transparency and accountability	1 -CRW relinquishes land development rights -CRW likely to absorb some pre-acquisition costs, such as legal fees, although burden primarily on partner -Stewardship plan costs	3/1 = 3	1