Cedar Run Watershed

Lower Allen, Upper Allen, Hampden, Monroe, and East Pennsboro Townships
Mechanicsburg, Shiremanstown, and Camp Hill Boroughs

Coldwater Conservation Plan

Funded by the Coldwater Heritage Partnership, National Fish and Wildlife Foundation, and the Greater Harrisburg Foundation
Prepared by Alliance for the Chesapeake Bay and Pennsylvania Environmental Council

INTRODUCTION

This Coldwater Conservation Plan was initiated by the Pennsylvania Environmental Council and the Alliance for the Chesapeake Bay to ultimately improve the health and restore the fisheries of the Cedar Run Watershed. Recommendations included at the back of the Plan are provided for municipalities and local organizations to take initiative in improving the health of the watershed.

The Coldwater Conservation Plan is designed to aid in conserving and protecting our coldwater streams by building local awareness and support. The Plan identifies potential problems and opportunities for stream conservation and may lead to many projects and a more detailed watershed study, ultimately improving the health of the coldwater ecosystem. This Plan is consistent with the goals and objectives of the DRAFT 2004 Cumberland County Open Space Preservation Plan and the 2003 Cumberland County Comprehensive Plan.

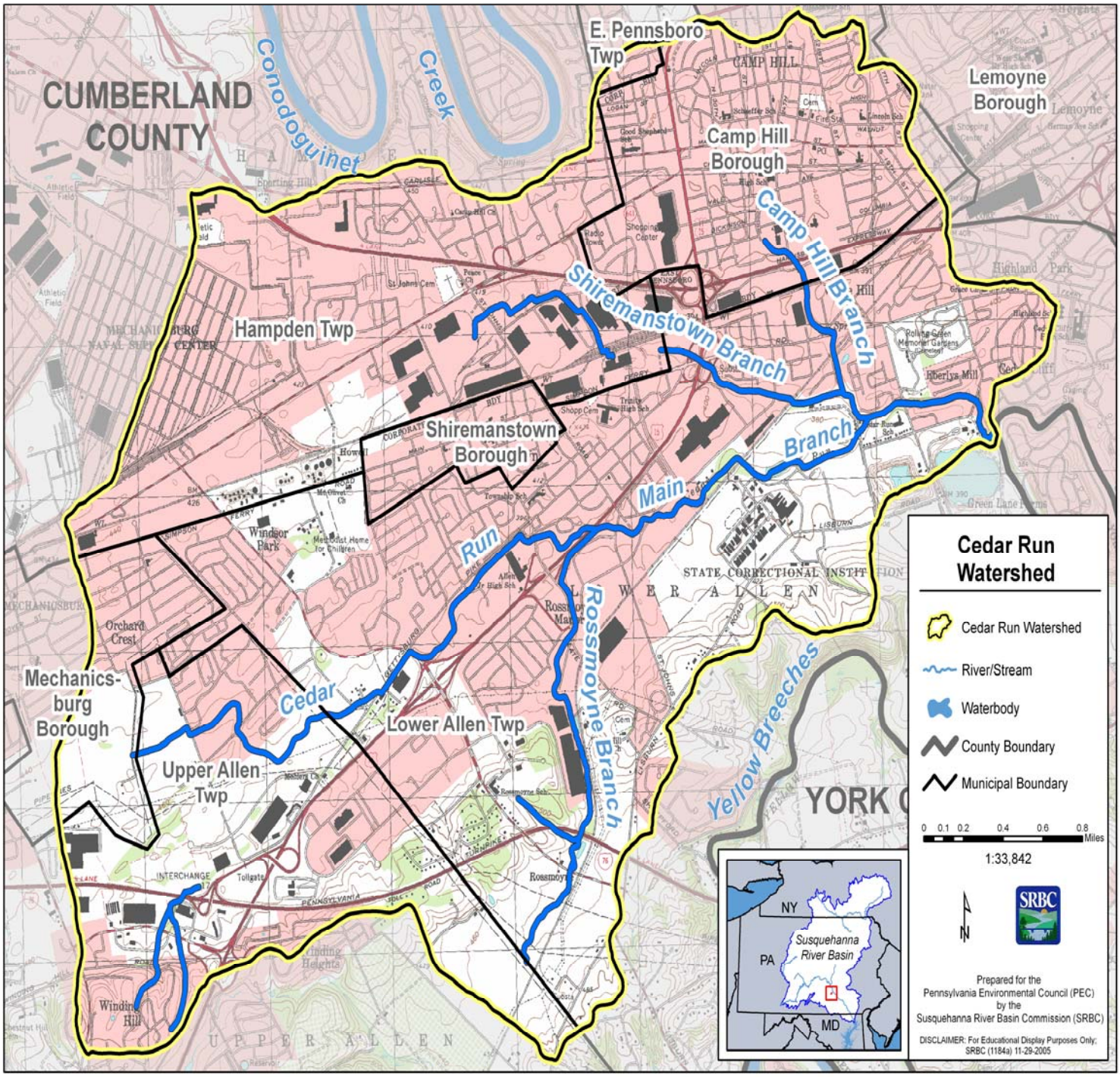
Vegetation chokes Cedar Run along Allen Middle School

This project was made possible through funding from the Coldwater Heritage Partnership, National Fish and Wildlife Foundation and the Greater Harrisburg Foundation. The text has been compiled by the Alliance for the Chesapeake Bay and the Pennsylvania Environmental Council.

Cedar Run flows near "The Woods", a local residential area

Cedar Run across from B.J.'s

Cedar Run Watershed



BACKGROUND/OVERVIEW

The Cedar Run Watershed is located in eastern Cumberland County within the Great Valley Section of the Ridge and Valley Province. It generally flows from the southwest to the northeast through mostly urban lands in Lower Allen, Upper Allen and Hampden townships; Mechanicsburg, Shiremanstown and Camp Hill boroughs and a small portion of Monroe and East Pennsboro townships. Eighty-five percent of Cedar Run's 13.86 square mile watershed is underlain with limestone, a water-soluble carbonate rock that acts as an acid buffer. The dissolving rock promotes the formation of underground caves, sink holes and aquifers. Limestone aquifers, and the underground springs that emanate from them, help keep water temperatures low and conducive to trout habitat.

Springs:

Many of the springs in the watershed are either questionable or unknown. Further assessment is needed in order to identify or confirm spring locations.

Spring Locations:

Main Branch
- Hartzdale Drive in front of B.J.'s
- Potential spring on St. Johns and Utley Drive

Camp Hill Branch
- Orchard Road behind Orchard Apartments
- Penn Avenue across from Spera Drive

Shiremanstown Branch
- Industrial Road between Terminal and Sterling Streets

Rossmoyne Branch
- Potential spring that feeds pond at headwaters

Cedar Run along Hartzdale Drive

Cedar Run has a rich history surrounding the brown trout population it supports. The Main and Shiremanstown Branches have maintained a well-buffered coldwater fishery, indicated by a naturally reproducing brown trout population and an associated healthy aquatic macroinvertebrate community. Beginning in the late 1800's Cedar Run produced some of the finest brown trout fishing in the state for sixty-five years. One of the state's first hatcheries was established in 1880 at the confluence of

Kids play in Cedar Run as they walk through Willow Park on their way home from school

the Shiremanstown Branch and the Camp Hill Branch, just north of their confluence with the Main Branch. A 1982 survey of Cedar Run found a healthy brown trout population, with a diverse age and size stratification of wild trout, suggesting that natural reproduction was taking place. In 1930, Loch Leven trout, a species of brown trout from Scotland, was stocked in Cedar Run. To this day, anglers are still catching 16-inch Lock Leven trout from Cedar Run.

Cedar Run holds additional key values within the community. Children enjoy the stream, which flows past several schools and parks. School aged children use the stream corridor at Willow Park as a path to get to and from school. They use the park as a source of recreation, enjoying the water on a hot summer day and exploring the habitat in the stream. Cedar Run is also the main water supply for the State Correctional Institute at Camp Hill and impacts residential drinking water as the stream empties near one of the Pennsylvania American Water Company's intake.

Downstream from Allen Middle School

Cedar Run has experienced impairing changes and, therefore, has been degraded. Suburban sprawl has been encroaching upon the Cedar Run Watershed since the early 1950's. Development began in the areas closest to Harrisburg and moved south to Lower Allen and Upper Allen townships where it continues to be developed today. Housing and a good highway system naturally led to commercial and industrial development. A 1982 study stated 75 percent of the stream is within 100 meters of a road and 89 percent within 300 meters of a road. According to the Cedar Run Watershed Act 167 Stormwater Management Plan, created in 2001, 50 percent of the watershed is covered by impervious surfaces. Since that report, the area has become more intensively developed. From this report it can be concluded that stormwater is the most prevalent water quality issue in the watershed. Non-point source

Blockages

There are several dams located along Cedar Run that alter the natural flow of the stream. These blockages lead to fish and wildlife impairments, elevated water temperatures, and degradation to water quality and water quantity.

Dam Locations:

- Two dams at Spera and Gettysburg Road
- Roadway Bridge Dam at 1131 Rana Villa Avenue
- Near Eberly's Mills, about ¼ mile from confluence with Yellow Breeches
- State Correctional Institution at Camp Hill
- Peters Dam on Peters Property
  - This dam is in the process of being removed

pollutants such as nutrients, sediments, various organic chemicals and petroleum products drain from the largely unbuffered land into the waters of Cedar Run. Poor agricultural practices, a lack of streamside buffers and the improper use of lawn care treatments also result in increased sedimentation and nutrient loads.

In addition to stormwater management, another concern is that much of Cedar Run is diverted underground. For this reason many individuals and communities are unaware of its existence. An expensive, yet beneficial option is to "daylight", or essentially "unbury" the stream. This would: enhance the public space, allowing room for a park or other amenity, increasing the value of neighboring properties; improve the water quality, allowing more diverse habitat and fish populations; and expand the stream channel capacity.

In the past, Cedar Run has been subject to toxic releases. Since 1989, the Pennsylvania Department of Environmental Protection (DEP) has required the reporting of all known releases from underground storage tanks. Between 1989 and 1993, 29 sites in the Cedar Run Watershed reported releases of Volatile Organic Compounds (VOC's) from underground storage tanks. Prior to 1989, the only significant known release to affect the basin was in 1974 when a large quantity of petroleum products was released west of Shiremanstown Borough. A total of 219,000 gallons of petroleum products were recovered from nearby surface pools, ditches, basements and wells. The extent of the contamination was never fully determined, (Occurrence and

Stormwater pipes flow directly into Cedar Run across from the Allen Middle School

Concentrations of Volatile Organic Compounds in Groundwater in the Lower Susquehanna River Basin, Pennsylvania and Maryland, U.S. Geologic Survey). Suffering from much impairment, Cedar Run is cited in the Yellow Breeches Creek Rivers Conservation Plan as one of the waterway's most impaired tributaries.

The Coldwater Conservation Plan acts as an aid to the identification of problems and solutions specific to Cedar Run. Assessment and protection of the stream is important in restoring the health of the stream and the contributions to the communities in the Cedar Run Watershed. It is up to local municipalities and organizations to take the lead in implementing projects and policies that will remedy problems.

WATERSHED DESCRIPTION

MAIN BRANCH

Headwaters of the main branch of Cedar Run are located east of Mechanicsburg Borough at what is known locally as the Hess Farm. The Hess Farm is currently being proposed for commercial and residential development. The developer will be providing a design for the public sometime in February 2006.

From the Hess Farm, the stream immediately flows into developed areas and is often routed through underground pipes, flowing northeast through some of the most populated areas west of Harrisburg. As of August 8, 2005, the development of 230 new townhouses on Allendale Road has been approved. This development will not disrupt the 100 year flood plain. From Allendale Road, the stream surfaces briefly from a culvert in a townhouse development on Paris Drive and flows through yet another development on Wilson Street. Here, Cedar Run flows underneath Webercroff Development.

The stream is channelized where it surfaces on the Allen Middle School property on Old Gettysburg Road. At this location the water level is low and the stream is being choked with excessive plant growth. Two pipes direct stormwater runoff from Old Gettysburg Road and an older housing development into the stream on the school property. Cedar Run leaves Allen Middle School and flows under Slate Hill Road past Yamaha, a Mobile Home Park, Ward Trucking Company and a residential neighborhood, where it passes under US 15 to the Rossmoyne

State Correctional Institution at Camp Hill grounds

Branch confluence. Cedar Run then flows past BJ's at Hartzdale Drive, under Norfolk Southern Railroad and onto the State Correctional Institution at Camp Hill (SCIC) grounds. The stream then passes under Lisburn and Creek Roads to confluence with the Yellow Breeches Creek at the old Hempt Bros Inc. quarry.

Hartzdale Drive is a retail center with the Capital City Mall on one side and various shopping centers and smaller retail stores on the other. This is one of the only portions of the creek with public fishing access via commercial business parking lots on or near Hartzdale Drive.

The Rossmoyne Business Park is a triangular shaped parcel wedged between Rossmoyne Road, Interstate 76 and Route 15. The development within this Park represents a high percentage of impervious cover from paved surfaces, such as parking areas and access roads and flat rooftops. Extensive drainage systems in this complex, such as detention basins, filter some of the stormwater runoff from the complex. Vegetation in the Business Park is

mainly turf grass and a small buffer of weeds bordering the stream. A railroad track is located near the business park, running parallel to the stream from the farm to the business park. The rail then veers northeast where the Rossmoyne and Main branches intersect near the SCIC.

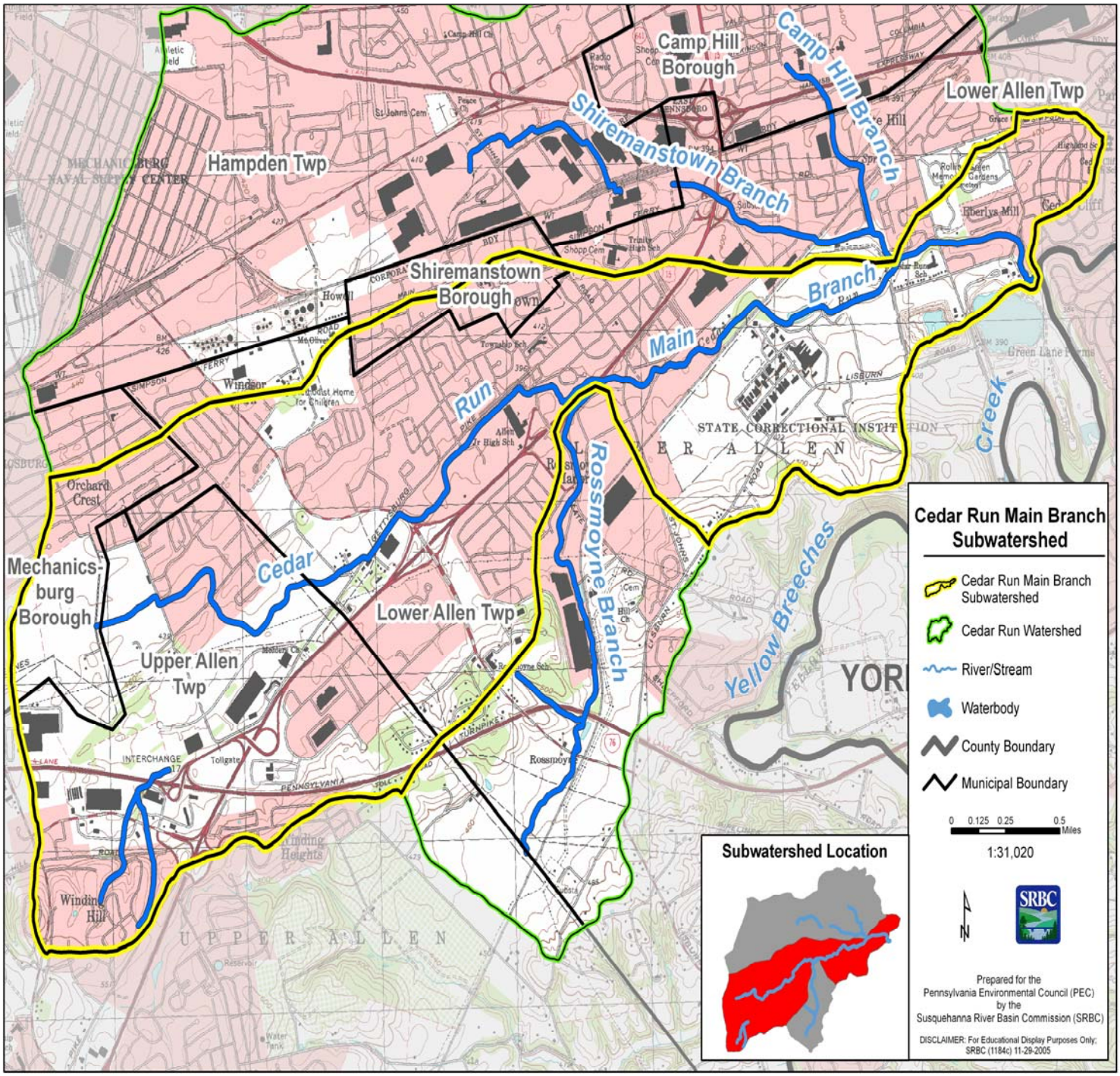
The stream encounters largely undeveloped land on SCIC grounds. The SCIC is the only known facility in the watershed that has its own water treatment plant, withdrawing up to one million gallons per day from an intake on Cedar Run. Due to the Institute's use of the stream for drinking water, a Source Water Assessment Program Report for SCIC was completed in June 2003.

There have been a number of impacts to Cedar Run near the SCIC location of the Main Branch. In the late 1980's, PA Department of Environmental Resources brought enforcement actions against the institution. The institution was in violation of the Clean Streams Law for discharging kitchen waste, coal pile runoff, water treatment filter backwash and occasional boiler blowdown, (DER Water Quality Standards Review, September 1989). The stream section from the pond on the SCIC grounds to approximately two miles upstream from Allen Middle School is recognized on DEP's list of impaired streams. Nutrients and sediments from storm sewers and urban runoff are listed as sources of pollution. In 1997 and 1998, the SCIC segment of the Main Branch was impacted by mining-related water loss. During that time 27 sinkholes developed on SCIC property, causing the water levels to drop severely. The sinkholes, which appeared on residential property in Lower Allen Township as well as on the grounds of SCIC consumed as much as 3,000 gallons of water per minute, (DEP Press Release, 1997.) A hydrogeologic analysis of the area showed quarry activities were a contributing factor to the formation of the sinkholes, some as large as small cars (DEP press release, Nov. 21, 1997). The mining practices are no longer occurring and the sinkhole problem has been eliminated and groundwater levels have returned to normal. Hempt Bros. Inc. is currently cooperating with the Pennsylvania Fish and Boat Commission on a restoration project that began in late September. A small section of stream enhancement was completed on the prison property. Due to high water and wild trout restrictions, this project has been put on hold. Restoration activities are expected to resume early January 2006. The restoration project includes the utilization of various in-stream habitat structures, bank stabilization, and the removal of a small dam structure.

Cedar Run flows through a cattle pasture

The SCIC grounds were considered to be one of the best places in Cedar Run to catch large trout. Years later, anglers report very few, if any, fish in this section. Potential causes for the reduced fish populations are increased water temperatures due to low water levels, the

Main Branch


Camp Hill Borough
Camp Hill Branch
Lower Allen Twp
Shiremanstown Branch
Hampden Twp
Shiremanstown Borough
Main Branch
Run
Creek
Rossmoyne Branch
Yellow Breeches
Cedar
Mechanics-burg Borough
Upper Allen Twp
Lower Allen Twp
Cedar Run Main Branch Subwatershed
Cedar Run Main Branch Subwatershed
Cedar Run Watershed
River/Stream
Waterbody
County Boundary
Municipal Boundary
0 0.125 0.25 0.5 Miles
1:31,020
Subwatershed Location
Prepared for the Pennsylvania Environmental Council (PEC) by the Susquehanna River Basin Commission (SRBC)
DISCLAIMER: For Educational Display Purposes Only; SRBC (1184c) 11-29-2005

high number of Canada Geese and a lack of riparian tree cover. Today, fishing is no longer permitted on the SCIC grounds.

ROSSMOYNE BRANCH

The headwater area of the Rossmoyne Branch is located near a large span of farmland. This area is identified as a hotspot primarily for riparian buffer restoration and stream bank fencing. The stream forks and the two segments meet near a farm pond just south of the PA Turnpike, relative to where the PA Turnpike crosses Norfolk Southern Railroad. It then empties into the Main Branch on the southeast side of US 15 between Slate Hill and St. Johns Road. This section of the watershed suffers from both agricultural and urban pollutants. Here, beef cattle have immediate access to the stream. Potential agricultural pollutants could consist of excess nutrients in this headwater, which is not buffered with native vegetation. According to the PA Department of Environmental Protection, agricultural pollutants as well as compounds associated with stormwater were detected in this section of stream. The majority of this subwatershed, despite its rural

Willow Park

Willow Park

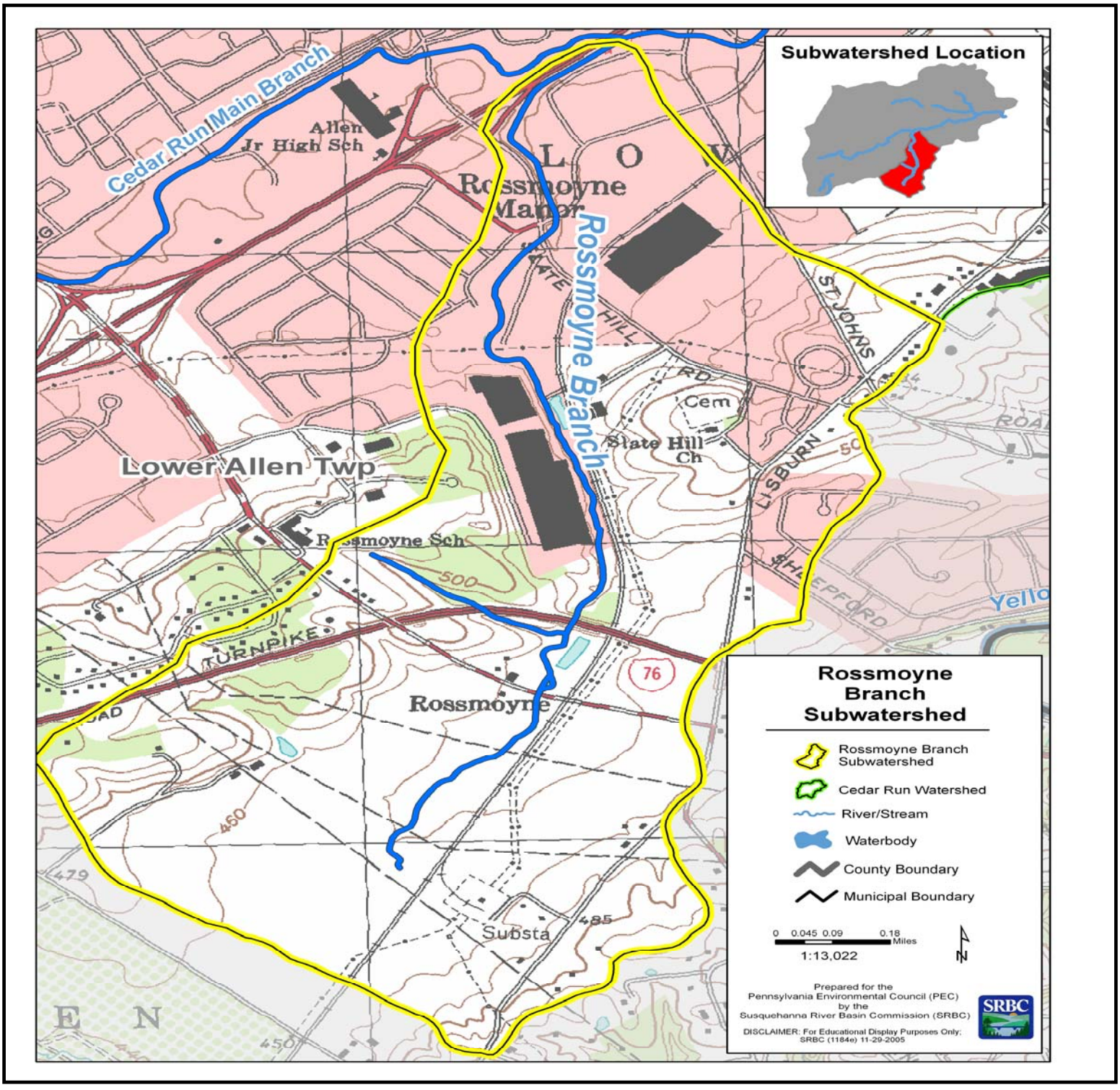
beginnings, consists of a vast expanse of blacktop parking lots interspersed with several major thoroughfares and few, if any, natural buffers.

Lower Allen Township is purchasing 4.46 acres with 600 feet of frontage on Cedar Run. The land sits along Gettysburg Road and Pennsylvania Avenue, adjacent to another parcel where the township has plans for a municipal building. Lower Allen Township envisions developing a small park for passive recreational use. The park will be the only true public fishing access on Cedar Run. The township also plans to install a riparian buffer strip along the stream.

WILLOW PARK/CAMP HILL BRANCH

The Willow Park branch bubbles up as a spring and flows downstream a short distance into and through Willow Park, a small urban park in Camp Hill borough. This branch is unofficially known as "Willow Run" or "Branch A-1," (Cedar Run Watershed Stormwater Management Plan, January 2001,) and is located near the watershed divide. The park and Cedar Run are sandwiched between 24th and 25th streets and has been a focal point of the community.

Rossmoyne Branch



Excessive stormwater flows, trampling of the stream banks from foot traffic, and mowing to the stream edge are the cause of major impairments to the water quality. The combination of these activities and the lack of vegetative buffers caused the erosion of the stream banks and the entrenchment of the streambed. As a result, fine soil particles are fed into 'Willow Run' and are swept downstream during major storm events. Cumulative impacts of increased siltation can cause a reduction in trout reproduction, trout food supply and aquatic insects.

Considered a jewel by Camp Hill Borough, this site has lost a great deal of aesthetic and recreational value. Without intervention, the park will continue to degrade in quality. Only one block from Camp Hill High School, the site has been used as an outdoor classroom for students; however, in its present condition, its use is limited to showing students how streams can degrade over time in the absence of proper riparian stewardship.

The stream exits the park via a concrete culvert buried under Market Street and flows 2,000 feet under the Camp Hill High School athletic fields, Yale and Dickinson Streets before surfacing just below the Hoover Elementary School, near Route 581. The stream travels another 2,000 feet, emptying into the Shiremanstown Branch just upstream from the confluence with the Main Branch of Cedar Run.

SHIREMANSTOWN BRANCH

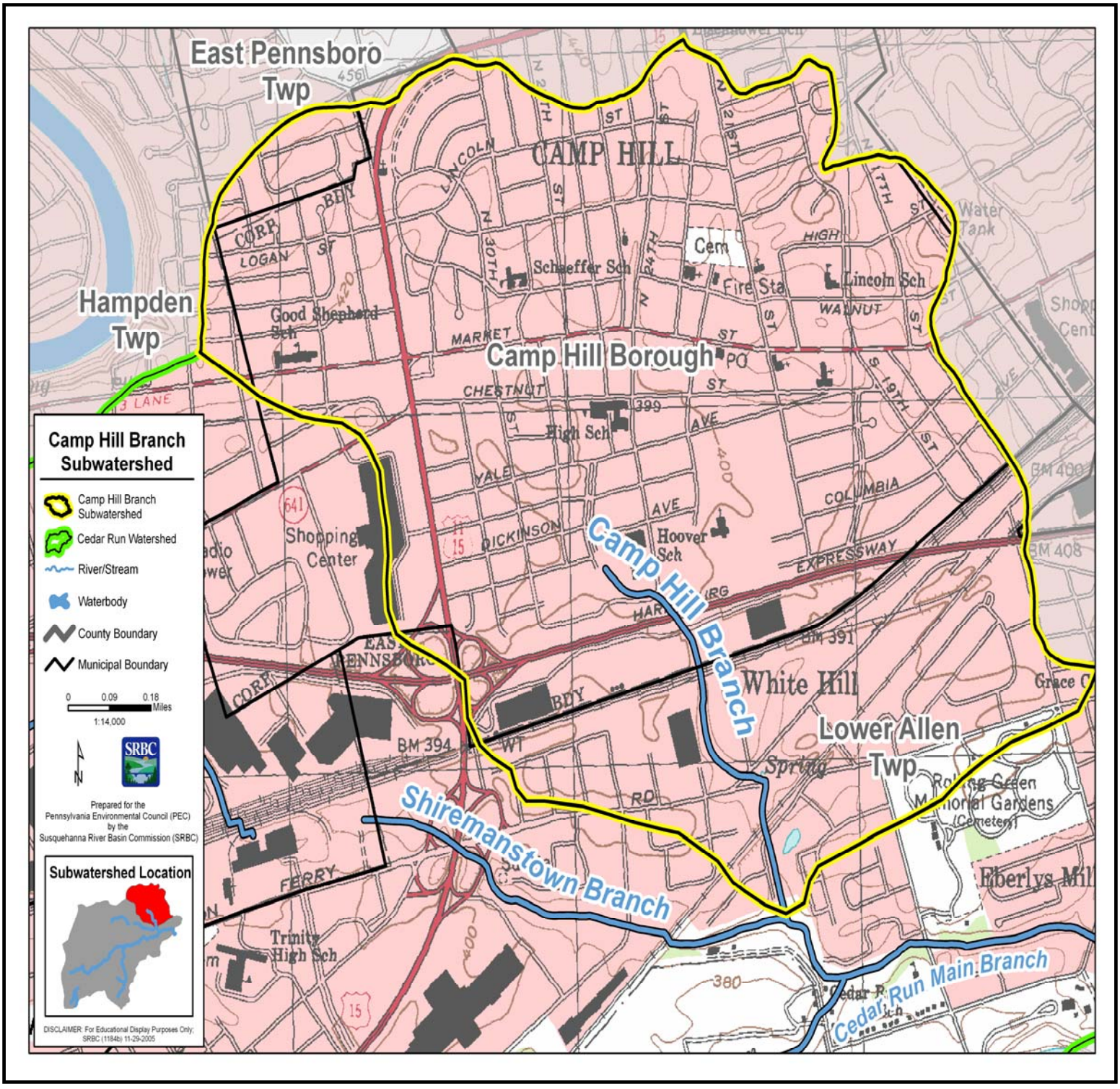
The Shiremanstown Branch, also referred to as the North Branch, begins at a storm water outfall from the Purina

Along Industrial Road

Corporation facilities, located on St. Johns Road. From there it flows past the Hampden Industrial Park along Industrial Road where it is fed by a spring bubbling up from an abandoned farmhouse along Route 581.

From the farmhouse, Cedar Run flows under the road into a channelized swale that borders a large parking area for a warehouse company. Here Canada geese make their home, nesting next to manhole covers. No buffer is present and the stream receives runoff directly from both the parking area as well as Industrial Road. Just below the warehouse, the original stream channel emerges with a well-established buffer on both sides of the stream. From there Cedar Run winds along Simpson Ferry Road, flowing behind the old Ames store, which is now a movie theatre. The Shiremanstown Branch joins the Willow Park Branch near Orchard Road in Lower Allen Township and the combined streams run together before joining the Main Branch near the Cedar Run Elementary School.

Camp Hill Branch



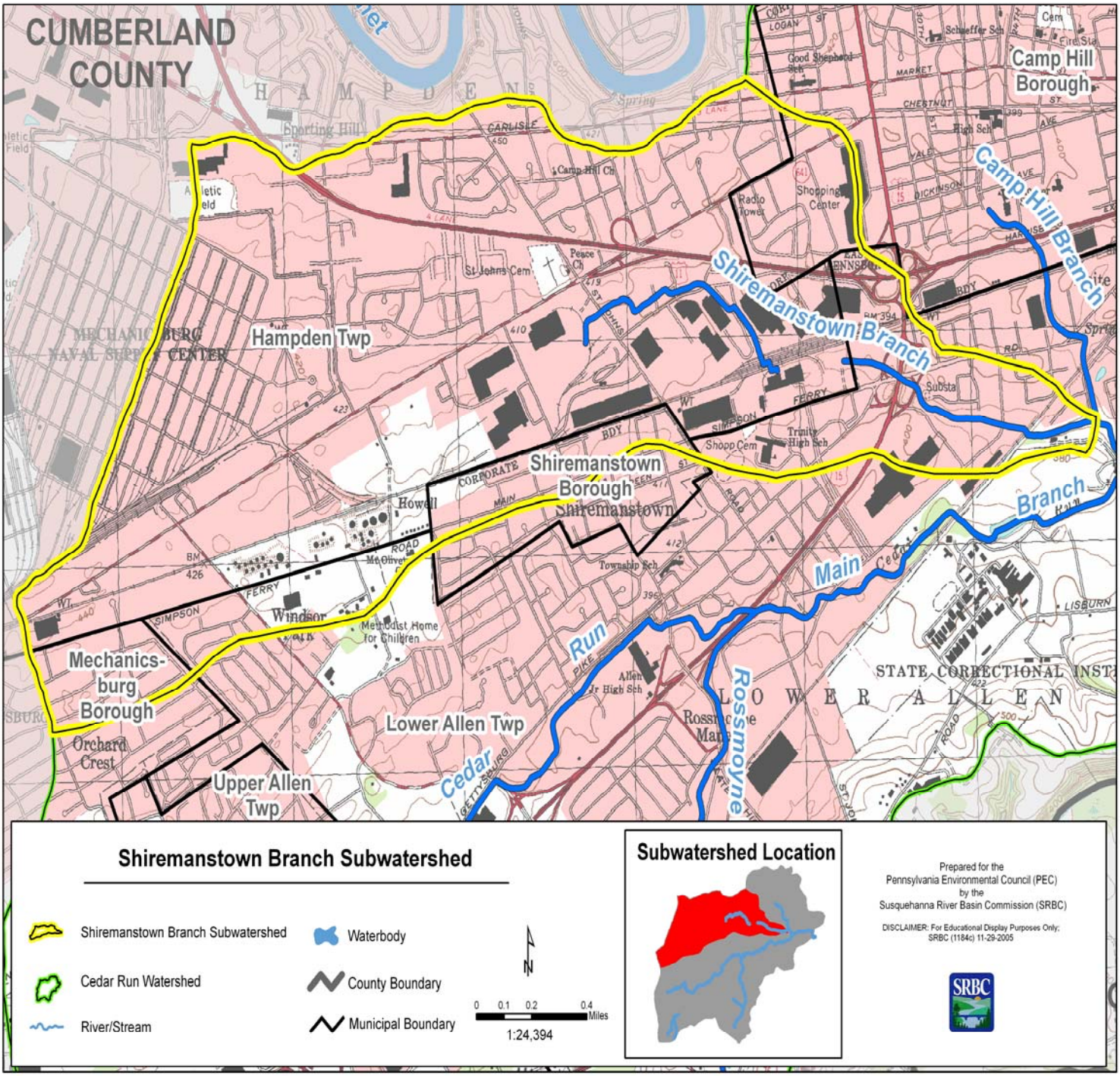
CONCLUSION

Cedar Run, once a high quality watershed, needs attention, to help correct the damage that has been done, and to prevent further damage. This unique watershed, valuable to many people in the seven municipalities it lies in, has the opportunity to be improved. Concerned citizens, municipalities, watershed organizations and Environmental Advisory Councils are encouraged to review the specific recommendations in the included chart to help make a difference.

Across from B.J.'s

State Correctional Institution at Camp Hill grounds

Shiremanstown Branch



Previous Studies and Analysis of the Cedar Run Watershed

Yellow Breeches Creek Rivers Conservation Plan

The Yellow Breeches Creek Rivers Conservation Plan was made possible with Growing Greener Grants provided by PA DEP and PA DCNR. The goal for this Plan is to prioritize projects that will result in the improvement of the Yellow Breeches Creek Watershed. A draft of the Plan was completed in April 2005. Cedar Run, a tributary to the Yellow Breeches, is noted in this Plan as a high priority stream with siltation and nutrient impairments.

Yellow Breeches Creek Watershed Assessment

This assessment was funded by Growing Greener Grants provided by PA DEP and PA DCNR. The goal of the Watershed Assessment was to collect technical data and use this data to prioritize projects in the Yellow Breeches Creek Rivers Conservation Plan. Cedar Run was identified with siltation and nutrient impairments from urban runoff/storm sewers, natural sources and unknown sources.

Occurrence and Concentrations of Volatile Organic Compounds in Shallow Ground Water in the Lower Susquehanna River Basin, Pennsylvania and Maryland

This study was performed by the U.S. Geologic Survey and includes information extracted from Cedar Run, as well as five other areas in the Lower Susquehanna River Basin. The purpose of the data collection was to determine the occurrence and concentrations of Volatile Organic Compounds (VOC's). Surface water from Cedar Run and ground water from springs feeding Cedar Run were sampled from 1994-1995. The study identified 23 VOC's in water samples from wells, springs, and stream sites in the Cedar Run Basin. Springs are discharging contaminated ground water into the northern tributaries of Cedar Run. Detectable concentrations of compounds are present in the stream above the confluence with the Yellow Breeches Creek.

Source Water Assessment Report

This assessment was completed by the Susquehanna River Basin Commission (SRBC) and the Watershed Assessment and Protection Program in June 2003. The report was produced for the Pennsylvania Department of Environmental Protection in accordance with the Source Water Assessment Program. This assessment was performed to inform water suppliers, municipalities, and the public of threats to public drinking water. An additional goal was to generate support for the voluntary development of local source water protection plans. Inventories of existing and potential sources of contaminants in most of the Cedar Run Watershed were provided. The assessment identified the primary contaminant issues to be associated with stormwater and urban/suburban runoff.

Stream Survey of Cedar Run

This Survey was completed in August, 1982 by Richard Pugh. The survey contains information on the trout supply of the stream. The fish populations and species were

examined in the stream as part of the PA Fish Commission's Stream Inventory Program. According to the data collected, there were several fish species and some macroinvertebrates present in the stream at the time and a stable Brown Trout population. A recommendation included in the survey was to request the stream be classified as a high quality cold water fishery.

Fish Communities and Their Relation to Physical and Chemical Characteristics of Streams from Selected Environmental Settings in the Lower Susquehanna River Basin, 1993-1995

Seven streams were selected for this study performed by the USGS. The streams were selected due to their abundance of agricultural land over carbonate bedrock. Locations on Cedar Run that were included in the study were Eberlys Mill and Shiremanstown. Information collected included habitat, hydrology, and water quality. The purpose of this study was to relate the fish community composition to physical and chemical gradients in the Lower Susquehanna River Basin. The results identified stream size gradient as the most influential variable to the fish communities studied. Other variables, such as temperature, bank stability, canopy angle, suspended sediment, and dissolved organic carbon, were also found to be associated with the fish communities.

Cedar Run Watershed Act 167 Stormwater Management Plan

Completed January 2001, this Plan was prepared by the Cumberland County Planning Commission. The Plan is designed to summarize the findings and recommendations of the Cedar Run Watershed Act 167 Study so that the final management plan can best meet the needs of the area. Detailed descriptions of stormwater impairments were listed for specific locations in Cedar Run. Most of the impairments included flooding, sinkholes, erosion and sedimentation.

Chemical Water Quality of Cedar Run, Lower Allen Township, Cumberland County, PA

This study was performed by Dennis W. Auker in June 1977 as a term research report for Regional Planning 597A, Dr. E. Drannon Buskirk. Five sites on the North Branch (Shiremanstown Branch) and one site on the South Branch (Rossmoyne Branch) of Cedar Run were monitored for water quality trends conducive to sustaining trout populations. The results showed that the site on the South Branch consistently had lower levels of chemical pollutants than the north branch sites, thus a higher trout population. The study recommended that biological studies were needed on both branches to better determine the source and long-term affects of pollution on Cedar Run, which could be limiting trout populations.

Cedar Run (707E) Management Report by Pennsylvania Fish and Boat Commission

Cedar Run was examined by Pugh, Roscinski and Jackson as part of the Pennsylvania Fish and Boat Commission "Stream Inventory and Classification of Unstocked Trout Waters." Two stations representative of the stream section were sampled on July 7 – 9, 1982 to characterize the social, physical, chemical, and biological resources of Cedar Run. Station 01 was located at St. Johns Road bridge and Station 02 was located upstream of the mouth where Cedar Run flows into the Yellow Breeches. The results show that the trout population at Station 01 differed markedly from the population downstream at Station 02. The total biomass and total estimated number of trout at Station 02 were 4.6 and 10.7 times greater than at Station 01. This is due to a limestone outcrop and enhanced with a small retaining wall, which prevents the further movement of fish upstream. The study determined that Section 01 of Cedar Run meets the criteria for a Class A wild brown trout water. Based on the overall results it recommends that the DER "Coldwater Fishery" protective use designation be upgraded to "High Quality-Coldwater Fishery."

Cedar Run Special Protection Evaluation Report, Water Quality Standards Review

This study was performed by Glen D. Johnson with the Department of Environmental Resources in September 1989. The Department conducts evaluations of streams nominated for Special Protection designation. The Cedar Run basin is presently afforded the protected use designation of Cold Water Fisheries (CWF). The Pennsylvania Fish Commission is requesting that Cedar Run be evaluated for upgrading to High Quality – Cold Water Fisheries because of the presence of a Wild Brown Trout population in the main stem and the lower northern tributary (Shiremanstown Branch.) Chemical and biological monitoring found the water quality of Cedar Run is not better than applicable water quality criteria and not in its natural state. The water body, therefore, does not qualify for the Special Protection program. Furthermore, current and projected land use is totally incompatible with a High Quality designation.

Index of Biological Integrity Survey by Pennsylvania Fish and Boat Commission

This study was performed by Jackson, Wilson, Kepler, and Frederick on July 13, 2000. The study took place at two locations on Cedar Run at St. John's Road Bridge and near the confluence of the Shiremanstown Branch and the Main Branch. Both locations analyzed consisted of 100 meters of stream length. Between 50 and 75 volts of AC current from backpack electrofishing units were used to collect the fish. The collectors attempted to collect all fish greater than 25 mm from each station. Four to six different species of fish were found at each station, including Brown Trout, Common Carp and White Sucker.

Cedar Run Sponsors as of August 1, 2005

This project was made possible by funding from:

- The Coldwater Heritage Partnership
- National Fish and Wildlife Foundation
- The Greater Harrisburg Foundation

Compilation of text and project research has been prepared by:

- Donna Morelli, Rebecca Wertime, and Pat Devlin, Alliance for the Chesapeake Bay
- Erin Albright and Leanne Beck, Pennsylvania Environmental Council

The following have assisted in gathering information in the Cedar Run watershed:

- Municipalities: Lower Allen, Upper Allen, Hampden, Mechanicsburg, Shiremanstown, Camp Hill, Monroe, and East Pennsboro
- Susquehanna River Basin Commission
- Yellow Breeches Watershed Association
- Cumberland Valley Trout Unlimited
- Those who provided public comments

The following are involved with the Willow Park Project:

- Skelly and Loy
- Alliance for the Chesapeake Bay
- Pennsylvania Environmental Council
- Camp Hill Borough
- National Fish and Wildlife Foundation
- Chesapeake Bay Small Watershed Grants Program
- Department of Environmental Protection's Growing Greener Program

The following are involved with the dam removal projects

- Alliance for the Chesapeake Bay
- Pennsylvania Environmental Council
- National Fish and Wildlife Foundation
- URS
- American Rivers
- Chesapeake Bay Small Watershed Grants Program
- Pennsylvania Fish and Boat Commission
- Pennsylvania Department of Environmental Protection
- Environmental Protection Agency Chesapeake Bay Program

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RECOMENDATION TABLE

A listing of problem areas in the watershed and possible solutions

Stream Segment Name	*Problem*	*Source of Impairment*	*Resource Impaired*	*Remediation Strategy*	*Possible Funding Sources*	*Lead Partners*
1. Main Stem a. Wesley Drive (development) b. Rossmoyne Business Park (detention basin) c. Allen Middle School (stormwater resulting in bank erosion and lack of buffers) d. Confluence where Main Stem and Camp Hill Branch meet (bank erosion, sedimentation) e. "The Woods" (bank erosion) f. Hempt Quarry (bank erosion) g. Eric Avenue (sinkhole) h. Route 114/Turnpike (flooding)* i. Georgetown Road/Elmwod Avenue (flooding)* j. Webercraft Development (flooding)* k. South York Street (flooding)* l. Miller Avenue (flooding)* m. Gettysburg Road (flooding)* n. Capitol City Mall (impervious surface) o. State Correctional Institution at Camp Hill (SCIC) (degraded stream banks, lack of tree cover) 2. Rossmoyne Branch a. Rossmoyne (agricultural) b. Rossmoyne (rooftops) c. Slate Hill Road (rooftops) d. Across from BJ's (bank erosion, poor stormwater infrastructure) e. Hartzdale Drive (stormwater resulting in bank erosion) f. Rockaway Drive (sinkhole) 3. Shiremanstown Branch a. Upstream from St. John's Church Road (impervious surface, polluted runoff, flooding)*	1. Stormwater Runoff a. Bank erosion b. Sedimentation c. Flooding d. Pollutants	1. Stormwater Runoff (2001 Act 167 Plan) 2. Impervious surfaces: roads, parking lots, roofs 3. Impervious surfaces: roads, parking lots, roofs 4. Lawn care 5. Construction sites 6. Commercial facilities 7. Agriculture 8. Loss of open space	1. Fish and wildlife habitat 2. Drinking water 3. Recreational uses 4. Groundwater recharge	1. Ordinance review 2. ACT 167 recommendations 3. Retrofits 4. Improved site design 5. Riparian buffers 6. Streambank stabilization 7. Streambank fencing 8. Landscaping 9. Installation of raingardens 10. Vegetated rooftops 11. Rain barrel program	1. WREN Grant 2. Chesapeake Bay Small Watershed Grants Program 3. National Fish and Wildlife Foundation a. Natural Resources Conservation Service: Conservation on Private Lands 4. 5 Star Challenge Grant	1. PA DEP 2. Alliance for the Chesapeake Bay 3. Counties, Conservation Districts ,municipalities, watershed organizations, Environmental Advisory Councils 4. Private Property Owners 5. Local schools

* represents sites listed in Act 167 plan

Stream Segment Name	*Problem*	*Source of Impairment*	*Resource Impaired*	*Remediation Strategy*	*Possible Funding Sources*	*Lead Partners*
b. Downstream from St. John's Church Road (bank erosion) c. Front Street, High Street, Stone Avenue (flooding)* d. Trindle Road (flooding)* e. Simpson Ferry Road (flooding) 4. Camp Hill Branch a. Willow Park (bank erosion)						
1. Camp Hill Branch a. Dam 1 & 2: Spera/Gettysburg Road b. Dam 3: Roadway Bridge Dam, 1131 Rana Villa Avenue (property of Penn Dot) 2. Main Branch a. Dam owned by Penn Dot near Eberly's Mills (approximately 1/4 mile from confluence with Yellow Breeches) 3. Rossmoyne Branch a. Blockage on State Correctional Institute at Camp Hill (SCIC) b. Peters Dam	Blockages	Not Applicable	1. Fish and wildlife habitat 2. Drinking Water 3. Recreational Uses 4. Groundwater Recharge	1. Restore Free-flowing Conditions 2. Citizen Monitoring	1. National Fish and Wildlife Foundation a. Natural Resources Conservation Service: Conservation on Private Lands 2. American Rivers b. NOAA Community Based Restoration Program Partnership 3. DEP a. Growing Greener	1. Associated Municipalities/Counties/ Conservation Districts 2. Private Property Owners 3. Local EAC 4. American Rivers 5. Pennsylvania Environmental Council 6. Local schools

* represents sites listed in Act 167 plan

Stream Segment Name	*Problem*	*Source of Impairment*	*Resource Impaired*	*Remediation Strategy*	*Possible Funding Sources*	*Lead Partners*
1. Shiremanstown Branch a. Behind the cinema 2. Main Stem a. Allen Middle School	Litter	1. Construction debris 2. Lack of appropriate areas to dispose of trash	1. Fish and wildlife habitat 2. Drinking water 3. Recreational uses 4. Groundwater recharge	1. Stream Clean ups 2. "Cedar Run Stewards" 3. Storm Drain Guards	1. Susquehanna River Basin Commission 2. National Fish and Wildlife Foundation a. Natural Resources Conservation Service: Conservation on Private Lands	1. Associated Municipalities/Counties/ Conservation Districts 2. Private property owners 3. Local EAC 4. Susquehanna River Basin Commission (SRBC)
1. Camp Hill Branch a. Willow Park b. Spera St./Gettysburg Rd. c. Orchard Rd./Nailor Dr. 2. Shiremanstown Branch a. Hartzdale Plaza b. Cinema Center (former Ames) c. Industrial Road area (Sterling St./Springhouse area/Waste Mgmt. to St. Johns Rd.) 3. Main Branch a. Utley Dr./St.Johns Church Rd. b. Allen Middle School 4. Rossmoyne Branch a. Lesher Farm	Invasive Species	1. Stormwater 2. Lack of public awareness 3. Development	1. Fish and wildlife habitat 2. Recreational Uses 3. Biodiversity degraded 4. Native plants	1. Identify species of concern 2. Remove invasives 3. Integrate with other projects 4. Educate residents and nurseries	1. National Fish and Wildlife Foundation 2. Natural Resources Conservation Service: Conservation on Private Lands	1. Associated Municipalities/Counties/ Conservation Districts 2. Local EAC 3. Private property owners 4. Alliance for the Chesapeake Bay (ACB) 5. Local schools
1. Camp Hill Branch a. Camp Hill High School – Hoover Elementary (Dickinson and Yale Avenues) 2. Branch a. Waste Management Parking Lot 3. Main Branch a. Between Allendale Road and Wesley Drive	Buried Streams	1. Developing on top of the Stream	1. Fish and wildlife habitat 2. Drinking water 3. Recreational uses 4. Groundwater recharge	1. Daylighting	1. National Fish and Wildlife Foundation a. Natural Resources Conservation Service: Conservation on Private Lands	1. Associated Municipalities/Counties/ Conservation Districts 2. Private property owners 3. Camp Hill School District

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Stream Segment Name	*Problem*	*Source of Impairment*	*Resource Impaired*	*Remediation Strategy*	*Possible Funding Sources*	*Lead Partners*
1. Work with private property owners to increase public access opportunities. 2. Upon additional public access request survey from PFBC to designate as a Class A stream 3. Potential access point on Hartzdale Drive 4. Potential access along Gettysburg Road and Pennsylvania Avenue 5. Explore public access opportunities on SCIC	Public Access	1. Much of Cedar Run is Private Property	1. Recreational Uses	1. Respect Private Property 2. Increase Public Access 3. Identify Recreational Opportunities	1. DCNR b. C2P2 2. PFBC	3. Private property owners 1. Pennsylvania Land Trust (A public access easement will be available in 2006. Visit conserveland.org for more information.) 2. Local schools
1. All of Cedar Run	Improve Awareness	1. Many People Do Not Realize: a. The Existence of Cedar Run b. The Extensive Impairment c. The Measures They Can Take To Help	1. Fish and wildlife habitat 2. Drinking Water 3. Recreational Uses 4. Groundwater Recharge	1. Environmental Advisory Councils 2. Naming Tributaries 3. Stream Signage 4. Maps in Schools 5. Storm Drainage Stenciling 6. “Cedar Run” Video 7. Citizen Monitoring	1. WREN Grant 2. National Fish and Wildlife Foundation a. Nature of Learning 3. The Foundation for Enhancing Communities a. Angino Fund for Horticulture and the Arts b. Angino Horticulture and Environmental Trust Fund 4. Chesapeake Bay Small Watershed Grants Program	1. Associated Municipalities/Counties/ Conservation Districts 2. SRBC 3. American Rivers 4. ACB 5. PEC 6. Local schools
1. All of Cedar Run	Data Collection	1. There has not been a recent assessment of the watershed since	Collecting data will better assist in the future needs of the watershed.	1. Volunteers and organized groups assisting in monitoring programs	1. Volunteers are an asset in performing data collection. Refer to lead partners.	1. Alliance for the Chesapeake Bay 2. Susquehanna River Basin Commission 3. Dickison’s ALLARM 4. EASI

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Stream Segment Name	*Problem*	*Source of Impairment*	*Resource Impaired*	*Remediation Strategy*	*Possible Funding Sources*	*Lead Partners*
1. All of Cedar Run	Monitoring	1. Lack of awareness/cooperation among local organizations working to improve the health of Cedar Run Watershed	1. Risk of duplication efforts or not being proactive in implementing recommended projects	1. Watershed Organization assume the responsibility of documenting all projects in watershed 2. Form multi municipal EAC to be proactive in implementing projects and monitoring projects	1. Varies depending on project. See above descriptions	1. Varies on project. All those involved with Cedar Run should be informed of project updates. This includes: a. PEC b. ACB c. YBWA d. EACs (if established) e. Municipalities f. Cumberland County Planning Commission

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