



NY RISING COMMUNITY RECONSTRUCTION PROGRAM

NYRCR SIDNEY

NY RISING COMMUNITY RECONSTRUCTION PLAN

MARCH 2014

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This document was developed by the NYRCR Sidney Planning Committee as part of the NY Rising Community Reconstruction (NYRCR) Program within the Governor's Office of Storm Recovery. The NYRCR Program is supported by NYS Homes and Community Renewal, NYS Department of State, and NYS Department of Transportation. The document was prepared by the following consulting firms: Parsons Transportation Group of New York, Inc.; River Street Planning & Development, LLC; M.J. Engineering and Land Surveying, PC; and PLACE alliance.

Foreword

Introduction

In the span of approximately one year, beginning in August 2011, the State of New York experienced three extreme weather events. Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy wreaked havoc on the lives of New Yorkers and their communities. These tragic disasters signaled that New Yorkers are living in a new reality defined by rising sea levels and extreme weather events that will occur with increased frequency and power. They also signaled that we need to rebuild our communities in a way that will mitigate against future risks and build increased resilience.

To meet these pressing needs, Governor Andrew M. Cuomo led the charge to develop an innovative, community-driven planning program on a scale unprecedented and with resources unparalleled. The NY Rising Community Reconstruction (NYRCR) Program empowers the State’s most impacted communities with the technical expertise needed to develop thorough and implementable reconstruction plans to build physically, socially, and economically resilient and sustainable communities.

Program Overview

The NYRCR Program, announced by Governor Cuomo in April of 2013, is a more than \$650 million planning and implementation process established to provide rebuilding and resiliency assistance to communities severely damaged by Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. Drawing on lessons learned from past recovery efforts, the NYRCR Program is a unique combination of bottom-up community participation and State-provided technical expertise. This powerful combination recognizes not only that community members are best positioned to assess the needs and opportunities of the places where they live and work, but also that decisions are best made

when they are grounded in rigorous analysis and informed by the latest innovative solutions.

One hundred and two storm-affected localities across the State were originally designated to participate in the NYRCR Program. The State has allocated each locality between \$3 million and \$25 million to implement eligible projects identified in the NYRCR Plan. The funding for these projects is provided through the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant – Disaster Recovery (CDBG-DR) program.^{F1}

Forty-five NYRCR Communities, each comprising one or more of the 102 localities, were created and led by a NYRCR Planning Committee composed of local residents, business owners, and civic leaders. Members of the Planning Committees were identified in consultation with established local leaders, community organizations, and in some cases municipalities. The NYRCR Program sets a new standard for community participation in recovery and resiliency planning, with community members leading the planning process. Across the State, more than 500 New Yorkers represent their communities by serving on Planning Committees. More than 400 Planning Committee Meetings have been held, during which Planning Committee members worked with the State’s NYRCR Program team to develop community reconstruction plans and identify opportunities to make their communities more resilient. All meetings were open to the public. An additional 125-plus Public Engagement Events attracted thousands of community members, who provided feedback on the NYRCR planning process and proposals. The NYRCR Program’s outreach has included communities that are traditionally underrepresented, such as immigrant populations and students. All planning

^{F1} Five of the 102 localities in the program—Niagara, Herkimer, Oneida, Madison, and Montgomery Counties—are not funded through the CDBG-DR program.

materials are posted on the NYRCR Program’s website (www.stormrecovery.ny.gov/nyrcr), providing several ways for community members and the public to submit feedback on materials in progress.

Throughout the planning process, Planning Committees were supported by staff from the Governor’s Office of Storm Recovery (GOSR), planners from New York State (NYS) Department of State (DOS) and NYS Department of Transportation (DOT), and consultants from world-class planning firms that specialize in engineering, flood mitigation solutions, green infrastructure, and more.

With the January 2014 announcement of the NYRCR Program’s expansion to include 22 new localities, the program comprises over 2.7 million New Yorkers and covers nearly 6,500 square miles, which is equivalent to 14% of the overall State population and 12% of the State’s overall geography.

The NYRCR Program does not end with this NYRCR Plan. Governor Cuomo has allocated over \$650 million of funding to the program for implementing projects identified in the NYRCR Plans. NYRCR Communities are also eligible for additional funds through the program’s NY Rising to the Top Competition, which evaluates NYRCR Communities across eight categories, including best use of technology in the planning process, best approach to resilient economic growth, and best use of green infrastructure to bolster resilience. The winning NYRCR Community in each category will be allocated an additional \$3 million of implementation funding. The NYRCR Program is also working with both private and public institutions to identify existing funding sources and create new funding opportunities where none existed before.

The NYRCR Program has successfully coordinated with State and Federal agencies to help guide the development of feasible projects. The program has leveraged the Regional Economic Development Council’s State Agency Review Teams (SARTs), composed of representatives from dozens of State agencies and authorities, for feedback on projects

proposed by NYRCR Communities. The SARTs review projects with an eye toward regulatory and permitting needs, policy objectives, and preexisting agency funding sources. The NYRCR Program is continuing to work with the SARTs to streamline the permitting process and ensure shovels are in the ground as quickly as possible.

On the pages that follow, you will see the results of months of thoughtful, diligent work by NYRCR Planning Committees, passionately committed to realizing brighter, more resilient futures for their communities.

The NYRCR Plan

This NYRCR Plan is an important step toward rebuilding a more resilient community. Each NYRCR Planning Committee began the planning process by defining the scope of its planning area, assessing storm damage, and identifying critical issues. Next, the Planning Committee inventoried critical assets in the community and assessed the assets’ exposure to risk. On the basis of this work, the Planning Committee described recovery and resiliency needs and identified opportunities. The Planning Committee then developed a series of comprehensive reconstruction and resiliency strategies, and identified projects and implementation actions to help fulfill those strategies.

The projects and actions set forth in this NYRCR Plan are divided into three categories. The order in which the projects and actions are listed in this NYRCR Plan does not necessarily indicate the NYRCR Community’s prioritization of these projects and actions. **Proposed Projects** are projects proposed for funding through a NYRCR Community’s allocation of CDBG-DR funding. **Featured Projects** are projects and actions that the Planning Committee has identified as important resiliency recommendations and has analyzed in depth, but has not proposed for funding through the NYRCR Program. **Additional Resiliency Recommendations** are projects and actions that the Planning Committee would like to highlight and that are not categorized as Proposed Projects or Featured Projects. The Proposed Projects and Featured Projects

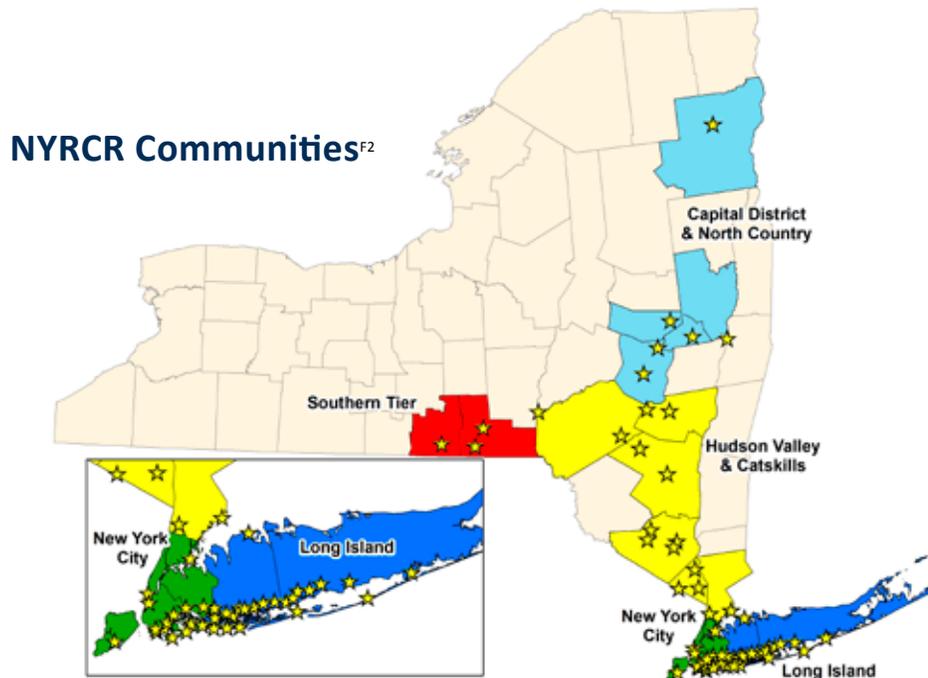
found in this NYRCR Plan were voted for inclusion by official voting members of the Planning Committee. Those voting members with conflicts of interest recused themselves from voting on any affected projects, as required by the NYRCR Ethics Handbook and Code of Conduct.

While developing projects for inclusion in this NYRCR Plan, Planning Committees took into account cost estimates, cost-benefit analyses, the effectiveness of each project in reducing risk to populations and critical assets, feasibility, and community support. Planning Committees also considered the potential likelihood that a project or action would be eligible for CDBG-DR funding. Projects and actions implemented with this source of Federal funding must fall into a Federally designated eligible activity category, fulfill a national objective (meeting an urgent need, removing slums and blight, or benefiting low to moderate income individuals), and have a tie to the natural disaster to which the funding is linked. These are among the factors that the Governor’s Office of Storm Recovery will consider, in consultation with local municipalities and nonprofit organizations, when determining

which projects and actions are best positioned for implementation.

The total cost of Proposed Projects in this NYRCR Plan exceeds the NYRCR Community’s CDBG-DR allocation to allow for flexibility if some Proposed Projects cannot be implemented due to environmental review, HUD eligibility, technical feasibility, or other factors. Implementation of the projects and actions found in this NYRCR Plan are subject to applicable Federal, State, and local laws and regulations, including the Americans with Disabilities Act (ADA). Inclusion of a project or action in this NYRCR Plan does not guarantee that a particular project or action will be eligible for CDBG-DR funding or that it will be implemented. The Governor’s Office of Storm Recovery will actively seek to match projects with funding sources.

In the months and years to follow, many of the projects and actions outlined in this NYRCR Plan will become a reality helping New York not only to rebuild, but also to build back better.



^{F2} Note: map includes those NYRCR Communities funded through the CDBG-DR program, including the NYRCR Communities announced in January 2014.

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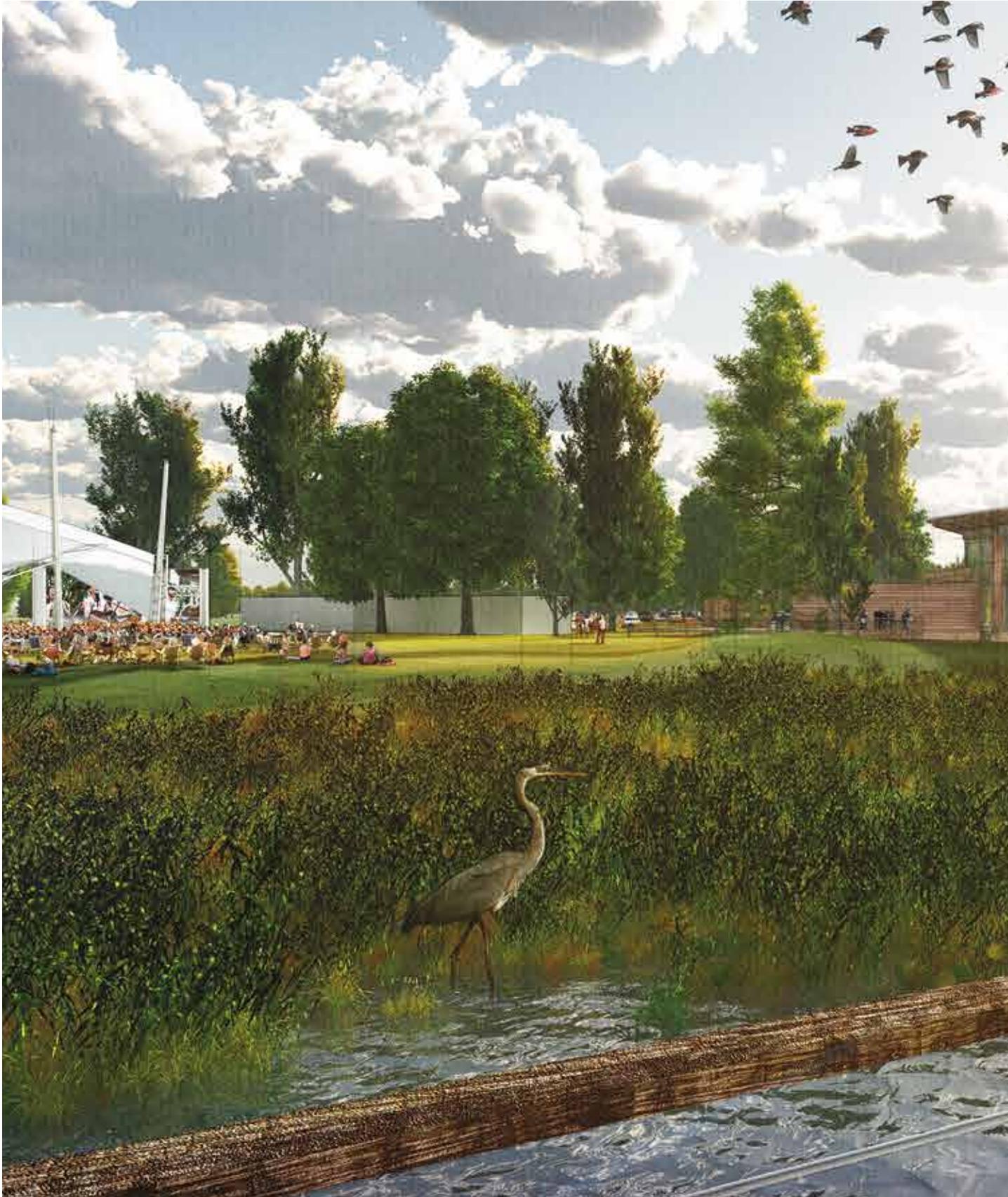
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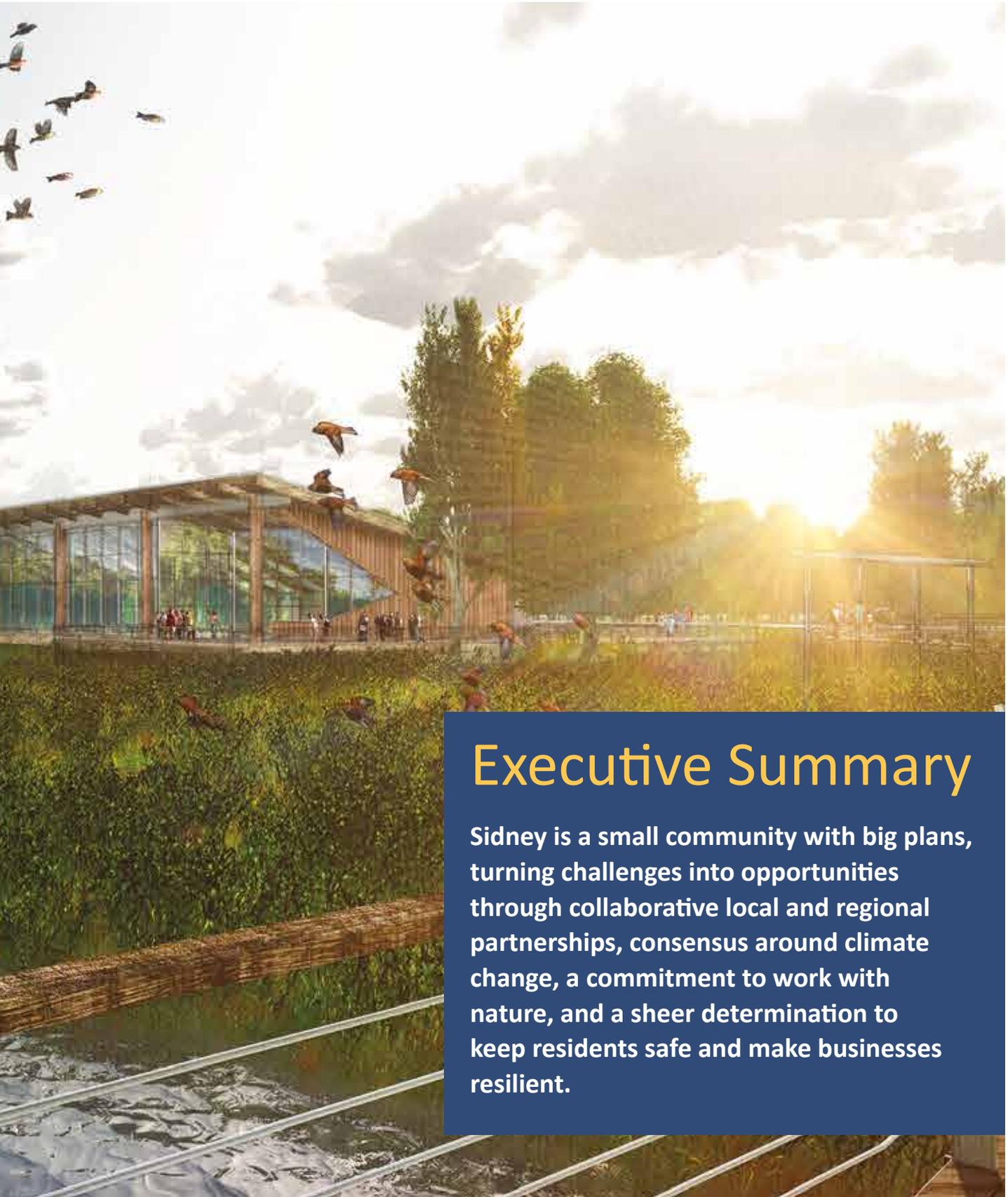
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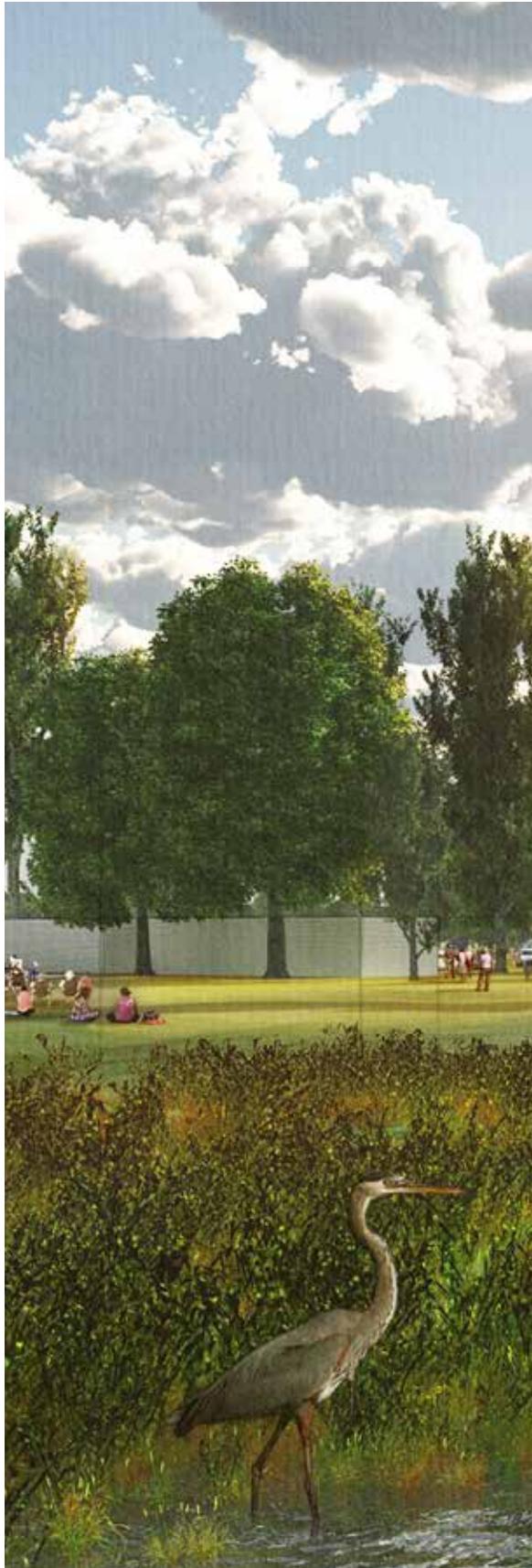


The Sidney GreenPlain was envisioned at a scale grand enough to make a meaningful difference to the community, the watershed, and the environment as a whole.



Executive Summary

Sidney is a small community with big plans, turning challenges into opportunities through collaborative local and regional partnerships, consensus around climate change, a commitment to work with nature, and a sheer determination to keep residents safe and make businesses resilient.



Executive Summary

Sidney is a small community with big plans, turning challenges into opportunities through collaborative local and regional partnerships, consensus around climate change, a commitment to work with nature, and its sheer determination to keep residents safe and make businesses resilient. Sidney's participation in the NY Rising Community Reconstruction Program (NYRCR) offers access to up to \$3 million in Community Development Block Grant Disaster Recovery funds to help implement its vision for a resilient future.

Sidney is a Delaware County village of 4,000 residents in the foothills of the Catskill Mountains that was devastated by flooding in 2006 and by Tropical Storm Lee in 2011. The entire Village is included in the geographic scope because over 40% of residents and most industrial and commercial partners are in extreme risk areas. The Riverlea Farm property on Plankenhorn Road in the Town of Sidney, a possible location for flood-safe replacement housing and the Peckham Brook Reservoir, a critical asset in need of repair located in the Town of Bainbridge, Chenango County are also included.

Sidney's Story of the Storm

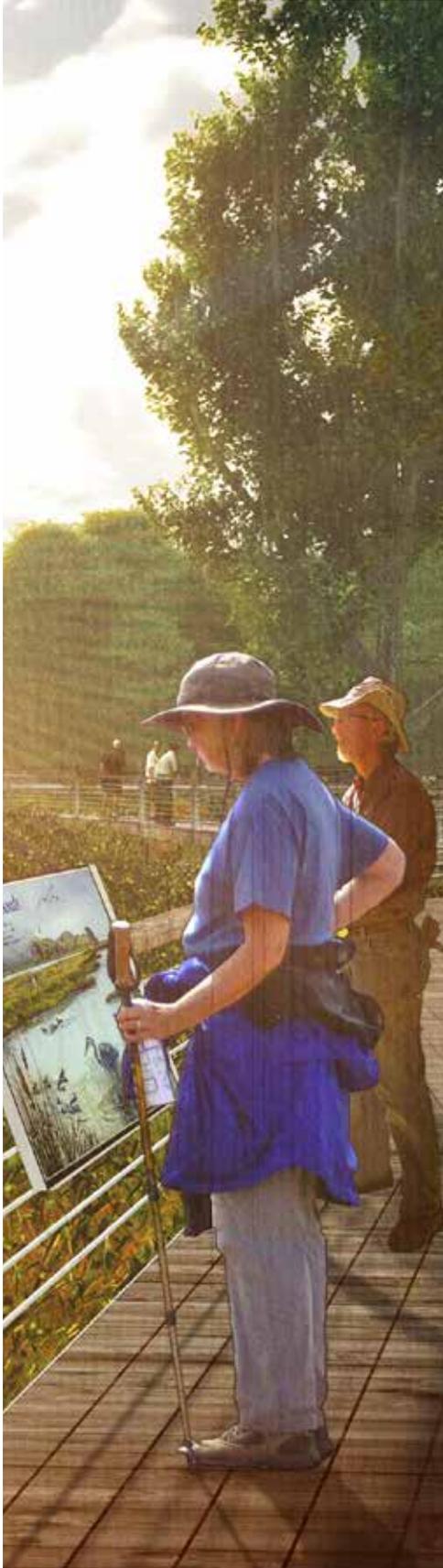
After 70 years with minimal flooding, Sidney was inundated by a serious flood in June 2006 when storms dropped close to 14 inches of rain over the upper Susquehanna Basin, setting new high-water levels. In 2011, before some businesses and residents fully recovered, Tropical Storm Lee dropped close to 12 inches of rain on Sidney. Flash flooding from the Weir Creek inundated Amphenol Aerospace, closing the plant for the second time in five years. The floodwaters spread over the downtown impacting over 420 buildings, including every structure in the 100 year floodplain. Worst hit were 100 properties west of Union Street and north of the railroad.

By mid-day on September 8th, neighborhoods near the river were evacuated. Hundreds of people spent the night in shelters. Electricity was cut off to flooded areas, including eight companies in Sidney's industrial park. The Main Fire Station took on four feet of floodwater. The secondary Fire House, closer to the Susquehanna River, was devastated. The emergency command relocated to higher ground. The Susquehanna finally crested on September 11, 2011. Floodwater did not recede in some parts of the Village for more than a week. Some businesses, including major employer ACCO Brands USA, that did not flood still took significant losses due to days without power.

The day after Tropical Storm Lee struck, Amphenol Aerospace officials told the Village they would be moving the plant to a flood-safe location, possibly out of the State. While still dealing with the state of emergency, Village officials began working to keep Amphenol's 1,000+ jobs in the Village. By the end of November, New York Governor Andrew M. Cuomo committed the State to providing \$20 million in business assistance, and Amphenol announced it would stay in Sidney.

Sidney's near complete devastation twice in five years' time underscored its vulnerabilities and identified urgent challenges. The most critical issue could not be simpler: too many vulnerable residents live in the extreme risk areas adjacent to the Susquehanna River and the Weir Creek. Other areas of concern include the lack of land for relocation, the need for a clear regional strategy for watershed management and lack of capacity to implement necessary resiliency recommendations.





Moving Ahead with a Bold Vision

The NYRCR Planning Committee engaged the public through open Committee Meetings, public workshops, open houses and neighborhood workshops. The outreach approach included posters, flyers, advertising and announcements as well as social media. The process built on the overlapping NYS Long Term Community Recovery Plan (LTCR Plan), which included a 3-day design workshop, multiple public events, interviews, and focus groups. Community members participated in the NYRCR Southern Tier Susquehanna River planning effort with Tioga and Broome County communities and sponsored a Regional Resiliency Summit. The daylong event, built regional cooperation and brought together experts to discuss flood control, reinforcing Sidney’s sustainable approach. In January, a public outreach event in support of the NYRCR Plan gathered over 150 residents from the most vulnerable riverfront neighborhood. The Village met with more than 60 families, confirming their interest in relocation to a safe new neighborhood. Working with the Governor’s Office of Storm Recovery, the Village hosted an open house and over 50 families applied for housing assistance or buyouts. Building on its successful community engagement strategy, the Committee prepared a vision statement to guide implementation of the NYRCR Plan. Sidney’s vision for a resilient future is:

Sidney is a progressive, dynamic and resilient place with the friendly feel of an historic, close-knit community. We embrace our waterways and make sustainable choices that protect our Village residents, our neighboring communities, and our region. Our green waterfront reduces future risks while offering entertainment, culture, arts, and recreation. The Village’s vibrant downtown, flood-safe neighborhoods, and social support systems appeal to everyone, young and old. Sidney is a strong community devoted to family, fostering businesses large and small, and working together to face any obstacle.

Blueprint for Recovery

Building on a wealth of public input since the floods, the Planning Committee enjoys strong support for all projects in the NYRCR Plan and broad consensus that the Village is on a path to continued success. During the NYRCR process, the Committee identified and ranked economic, health and social services, housing, infrastructure, and natural and cultural assets. They evaluated and scored each asset based on the level of hazard, exposure, and vulnerability each faces in extreme weather. Many were found to be at extreme risk. The Committee then identified six overarching strategies to guide them in developing projects that would address the risks to their assets. Twenty projects, including 12 with regional impact were identified and classified as proposed, featured or additional resiliency recommendations. Proposed projects are proposed for funding through the NYRCR program. Featured projects are important recommendations that are not proposed for NYRCR funding. Additional Resiliency Recommendations are projects and actions that are highlighted. Once the proposed and featured projects were identified, the Committee used the scores, cost estimates, market analyses, and identified community benefits to evaluate how feasible the projects are and how effectively they reduce risks. These projects, highlighted below and linked to the strategies have not been ranked or listed in priority order.

1

Riverlea Farm Neighborhood

Strategy: Create a vital new neighborhood where relocated residents, businesses, and community organizations can enjoy a remarkable quality of life.

Proposed Projects:

- Acquire the 165-acre Riverlea property for a new floodsafe neighborhood and extend infrastructure;
- Launch the Village of Sidney Home at Riverlea Program (HARP) to provide relocation incentives.

Featured Projects:

- Develop affordable and moderate priced single family and senior housing;
- Plan and construct a new civic commons with a community center, municipal office and police station;
- Make Riverlea resilient using green building, energy and infrastructure.





2

Sidney GreenPlain

Strategy: Use sustainable green infrastructure to mitigate flooding along the Susquehanna River and Weir Creek for the Village and its neighbors.

Featured Projects:

- Design, assemble and construct the 140 acre Sidney GreenPlain – a high capacity floodplain;
- Make the GreenPlain a community and regional asset offering lifelong recreation;
- Develop the Sidney Waterfront Entertainment, History, and Environmental Education Center.

3

Sidney Works!

Strategy: Protect the Village’s manufacturing and Main Street commercial base by making businesses resilient.

Proposed Projects:

- Evaluate reuse strategies for the current Amphenol Aerospace plant;
- Provide secondary access for ACCO Brands USA to reduce business disruption.

Featured Project:

- Design and Construct Sidney Green Streets using green infrastructure to reduce flood impacts.

4

Sidney Safe Neighborhoods

Strategy: Offer safe and resilient neighborhoods, with housing for people of all ages, abilities, and incomes.

Proposed Project:

- Evaluate the feasibility of constructing a berm to protect the Village’s Historic North End Neighborhood.

Featured Project:

- Launch the Sidney Safe Neighborhoods Grant Program to restore homes, create housing and encourage workers to live locally.

5

Sidney's Ready!

Strategy: Prepare for climate change by educating, alerting, and protecting Village residents.

Featured Project:

- Develop an emergency preparedness plan integrating the Sidney High School Flood Monitoring Program.

6

Delaware Susquehanna Compact

Strategy: Become a leader in watershed-wide planning for the Susquehanna Corridor and model sustainable mitigation measures locally.

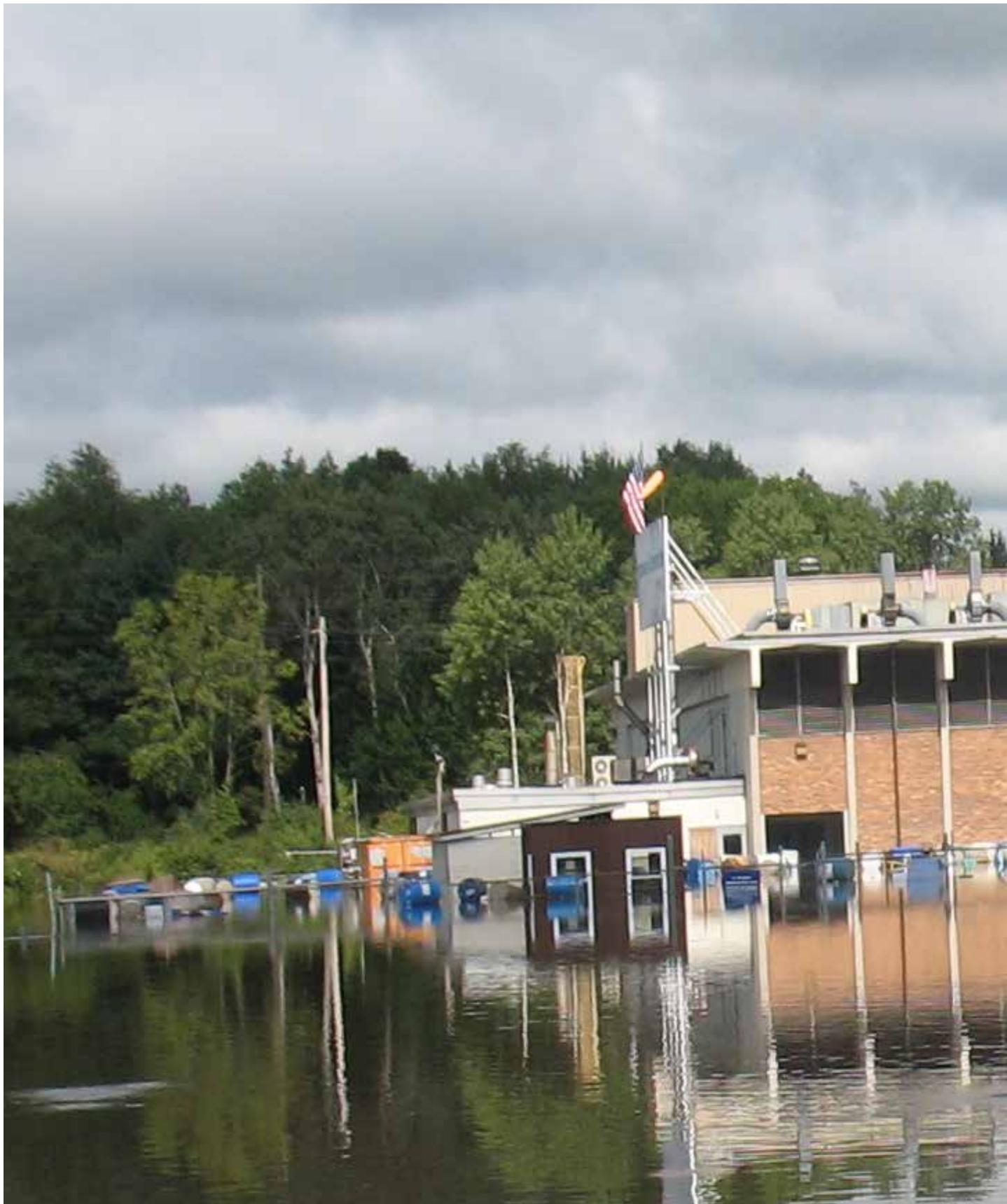
Proposed Projects:

- Collaborate with Tioga, and Broome Counties in the Regional River Initiative advance resilience projects;
- Provide capacity to guide implementation and advocate for Susquehanna River initiatives.

Featured Projects:

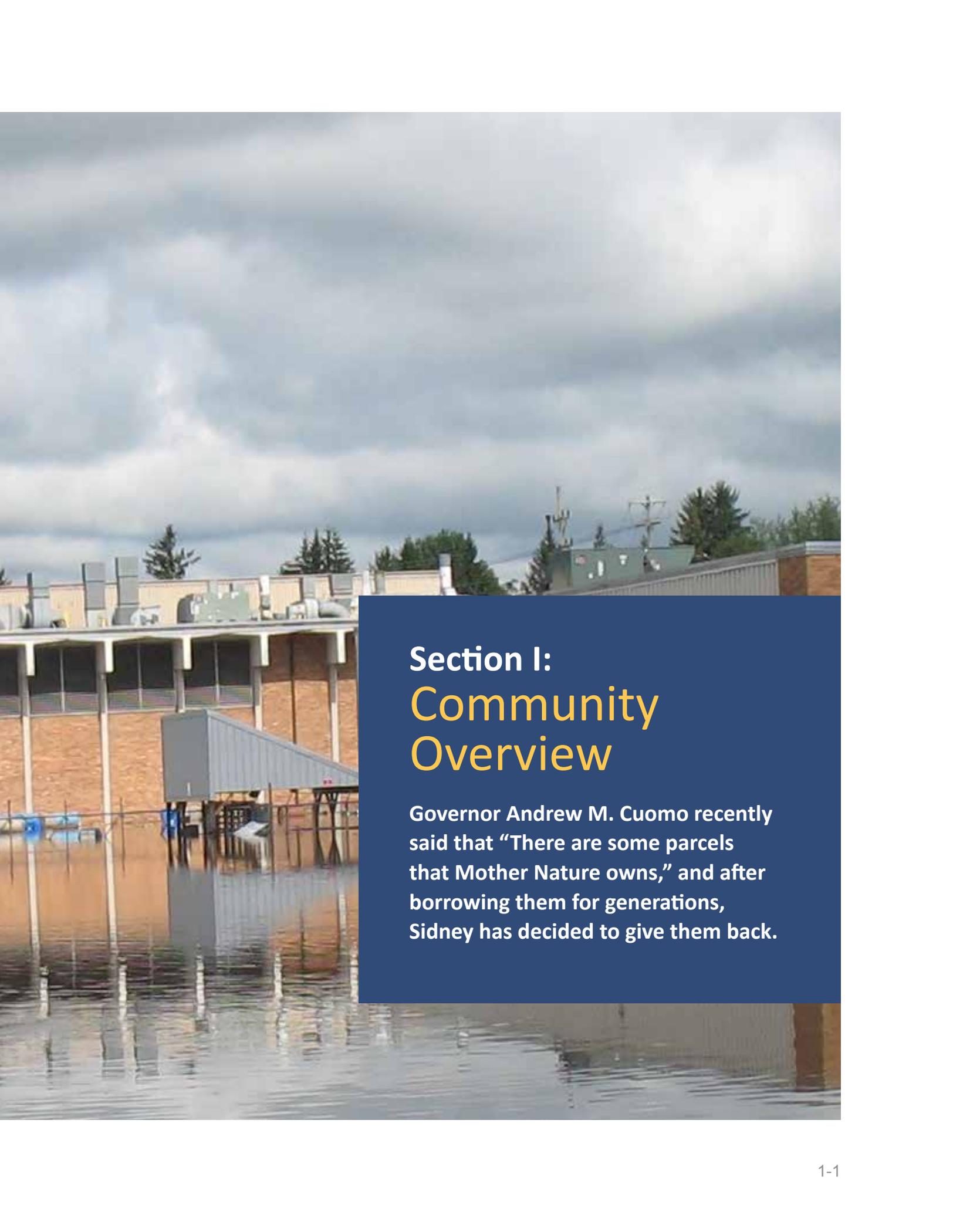
- Develop a resilient land management framework;
- Advance infrastructure improvements necessary to mitigate flooding and protect critical facilities;
- Develop a tributary improvement plan for Weir Creek and other waterways.





Andrew Gates

The Amphenol Aerospace facility under water.



Section I: Community Overview

Governor Andrew M. Cuomo recently said that “There are some parcels that Mother Nature owns,” and after borrowing them for generations, Sidney has decided to give them back.

A. Geographic Scope of NY Rising Community Reconstruction Plan

From its origin at Otsego Lake in Cooperstown, NY, the Susquehanna River flows for over 440 miles. It is the longest river on the East Coast, the 16th longest in the U.S., and the longest river in the country that is not commercially navigable. With an average daily discharge of 22 billion gallons, the Susquehanna River is the largest contributor of fresh water to the Chesapeake Bay. The river's watershed drains water from 27,500 square miles, including nearly half of the land area of central Pennsylvania. While in New York, it is the outlet for most of the rivers and streams in the Southern Tier, where its watershed extends 4,500 square miles. Tributaries flowing into the Susquehanna in Sidney, including Weir Creek, are steep. In flood events, they carry a high volume of water at significant velocity, creating the potential for life-threatening flash flooding. The Susquehanna River Basin Commission calls the Susquehanna "one of the most flood-prone watersheds in the nation."¹

Many American villages were founded at the confluence of two waterways, which provided early settlers a path through the surrounding forests, some level land among the hills, and a source of water and food. In the case of Sidney, early villagers built on the south side of the Susquehanna River, opposite the mouth of the Unadilla River, on the wide flat lands then called the Sidney Plains. The area was a floodplain, composed of rich deep soil deposited by the rivers. By the time there were enough buildings clustered there to make a village, locals had observed years of high water on the river and located their structures out of the area that tended to flood. A widespread flood occurred in 1936, causing extensive damage and hardship, but the village recovered. Eventually, most residents ceased to worry about the darker consequences of their location by the scenic river.

Today, Sidney is a small village located on approximately two square miles in the foothills of the

Catskill Mountains, occupying the northwest corner of Delaware County, and abutting both Chenango and Otsego Counties. Settled at the junction of Interstate 88 and State Route 8, Sidney enjoys ready access to the city markets, diverse housing and jobs of Oneonta and Binghamton.

In defining the geographic scope, the NYRCR Planning Committee (Committee) included the entire Village of Sidney because 42% of residents and most of the Villages industrial and commercial partners are located in extreme or high risk areas, and others are located near tributaries prone to flash flooding.² The Committee decided to include two additional parcels, because they represent a risk to local residents or redevelopment opportunities. The boundary was confirmed by the public at community meetings.

The geographic study area of this NY Rising Community Reconstruction (NYRCR) Sidney Plan is shown in Figure 1.1. It includes the Village and two nearby properties:

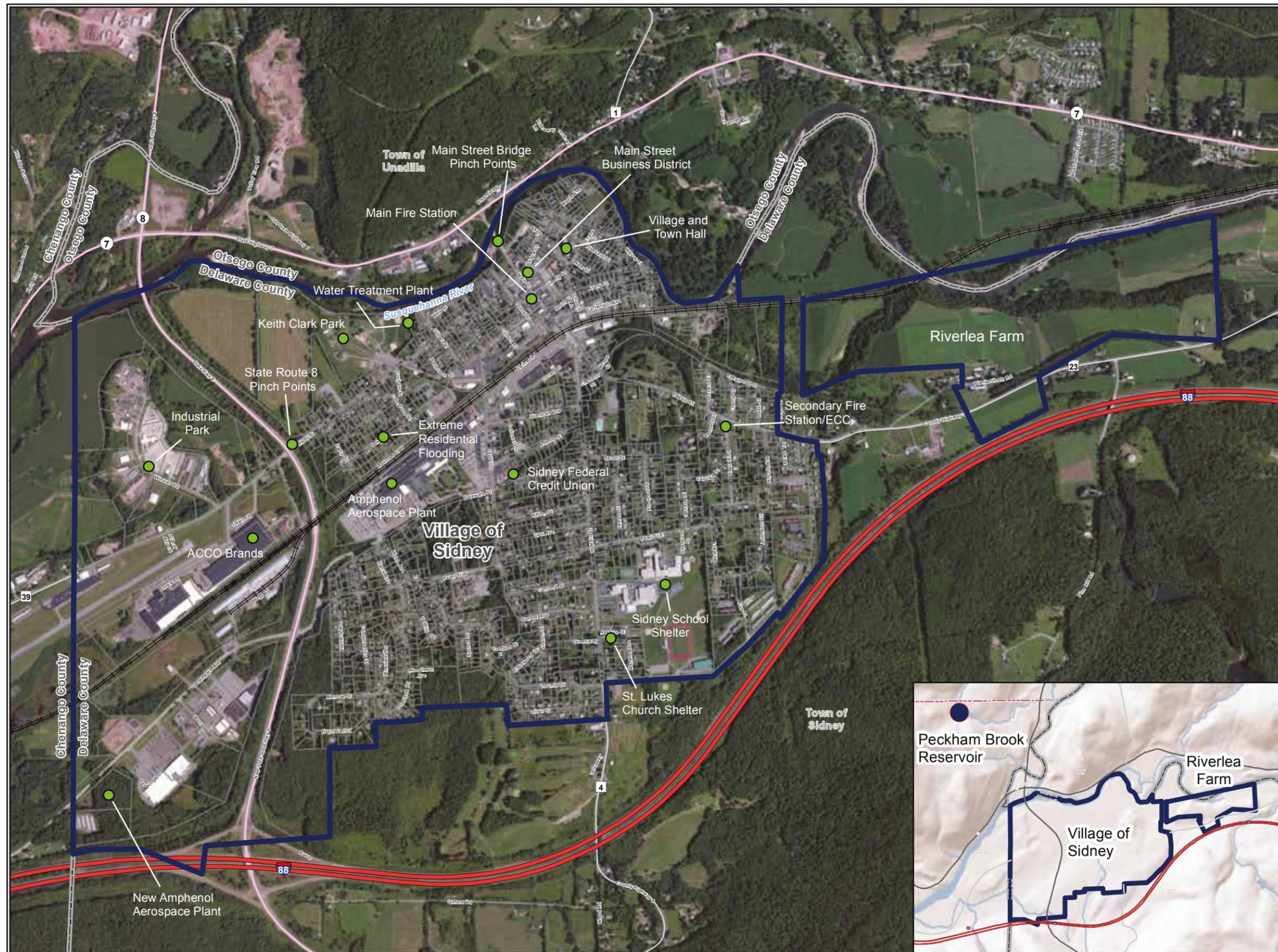
- The Riverlea Farm property on Plankenhorn Road in the Town of Sidney, a possible location for flood-safe replacement housing; and
- The Peckham Brook Reservoir (also known as the Sidney Reservoir), a critical asset in need of repair that is owned by the Village of Sidney and located in the Town of Bainbridge in Chenango County.

B. Description of Storm Damage

i. The Flood of 2006

After 70 years with minimal flooding, Sidney was inundated by a serious flood in 2006. The area was in near-drought conditions prior to June 2006. A series of 1-inch rains during early and mid-June 2006 saturated the soil and brought water levels up to bank-full conditions. In the last week of June, a storm front stalled over the region for a week. The storm dropped a record-breaking 8 to 14 inches of rain

Figure 1.1: Planning Area



Legend

- Planning Area Boundary
- Municipal Boundary
- County Boundary
- Tax Parcels
- Railroad

Data Sources:
 Base Imagery – ESRI ArcGIS Online Server; Delaware County.
 Planimetric Features – CIRIS.

NORTH

Feet



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over the upper Susquehanna Basin, and the runoff set new records for high-water levels. The nearest United States Geological Survey (USGS) stream gauges on the Susquehanna River were at Unadilla (4 miles upstream of Sidney) and Bainbridge (5 miles downstream). Both gauges recorded river levels that exceeded previous records, surpassing the 1936 record crest at Unadilla by more than 1 foot and the 1914 Bainbridge record crest by just under 4 feet.³

The Susquehanna's flow joined the flooded Unadilla River, and the combined waters spread over the Village. Downtown Sidney between the railroad tracks and the river, a low and moderate income neighborhood, was evacuated as the waters rose. Flooding was deepest and most damaging on Willow, Maple, Oak, Winegard, Bridge, and River Streets. Many commercial buildings in the Main Street business district were flooded to three feet above the ground floor elevation. Much of the Sidney Industrial Park was under water in 2006, as was the Village's largest employer, Amphenol Aerospace, which was closed for months. Emergency response was complicated by flooding of the main fire station, police station, and emergency medical technician (EMT) headquarters.

ii. Hurricane Irene

Just five years later, before some businesses and residents fully recovered from the 2006 flood, and before the proposed mitigation strategies that were developed after the 2006 flood were permitted or implemented, the area flooded again. In late August 2011, Hurricane Irene brought four to six inches of rain down on to the Village. On August 28, 2011, a county-wide state of emergency was declared, but the serious flooding occurred in other parts of Delaware County, not in Sidney.

Two days after Delaware County closed the Emergency Operations Center set up to handle Hurricane Irene, it was reopened as Tropical Storm Lee headed for the area. Rainfall in western Delaware County that

started the night of September 6, 2011, totaled 8 to 12 inches. The Tri-Town News banner headline for its September 15, 2011, issue was "Flood Makes Its Return in 2011" and their lead was "It couldn't happen again – but it did."⁴

iii. Tropical Storm Lee Hits

The initial flooding in Sidney came on September 7, 2011 in the form of flash flooding of the smaller streams and tributaries. Flooding was especially severe along Weir Creek, which runs steeply down



Floodwater from Tropical Storm Lee on River Street in Sidney.

through the hillside neighborhoods south of the railroad and flows under Delaware Avenue, just east of the Amphenol Aerospace plant. Weir Creek's natural channel had previously been altered to make a 90-degree turn west along the edge of the

Michael Forster Rothbart

Amphenol site, which occupies its former floodplain. Flash flooding overwhelmed the channel and quickly flooded Amphenol Aerospace's parking lot. Operations were shut down as the plant filled with four feet of water. Shelters were opened at Sidney Middle School and St. Luke's Church, where evacuees spent the night on September 7. As Weir Creek and other tributaries overflowed their banks, they washed out roads and culverts and flooded over 400 homes and businesses.

continued to rise and was predicted to pass flood stage by mid-day, neighborhoods near the river were evacuated. Hundreds of people spent the night in shelters at the Moose Lodge, Sidney Middle School, and St. Luke's Church. The Red Cross brought in supplies and water. Electricity was cut off to flooded areas, which included much of the Sidney Industrial Park across State Route 8 to the west, which is home to eight companies and employs over 300 workers. Areas unaffected by the floodwaters were without power due to flooding of the substations.



Andrew Gates

Amphenol Aerospace, the Village's employer, was closed for months following Tropical Storm Lee.

The Susquehanna River eventually flooded its banks again when the tributaries began to drain and overwhelmed the Susquehanna's main stem. This occurred in part because of a narrowing of the river over time, with more than 50% of the river's conveyance capacity lost because of sediment and deposited debris.⁵ Once again, the quantity of water overwhelmed the valleys and infrastructure, creating a series of pinch points at NY State Route 8 and the Main Street Bridge that did not allow the water to drain through to the river's flood plain.

A county-wide state of emergency and curfew were declared overnight. Sidney schools did not open on September 8, 2011. As the Susquehanna River

iv. Hurricane Irene and Tropical Storm Lee's Impact on Municipal Services

Fire, police, and EMT services were hindered by flooding in their facilities. The Main Fire Station and Fire Training Center on Main Street had four feet of floodwater in the facility. The secondary Fire House on River Street, closer to the Susquehanna River, was devastated. All fire services, as well as the emergency command center for the relief and recovery efforts relocated to higher ground and operated from the very small station at East Main Street and Beale Boulevard. By September 9, local emergency services began getting much needed support and relief from other parts of the County less affected by the storms.

The Susquehanna crested on September 11, 2011. However, because Tropical Storm Lee affected a large area and downstream flooding was heavy, the river was slow to recede and floodwaters sat in some areas for as much as a week. Emergency services turned to de-watering and damage assessment.

Village officials estimated that at least 422 buildings were flooded. One-hundred percent of the buildings in the 100-year floodplain (262 properties, housing approximately 1,200 residents) and 60% of the properties in the 500-year floodplain flooded (167 properties and approximately 900 residents).⁶ Worst hit were nearly 100% (100 properties) in the neighborhood west of Union Street and north of the railroad, although many properties east of Union Street also were flooded. Both areas are now targets for relocation. Basements of Main Street businesses were also flooded.

v. Early Recovery

Electrical service was restored to most areas by September 12, when the Village's state of emergency was lifted, but a few areas remained without power for a week. Some businesses that did not flood still took significant losses due to days without power. The school and hospital were not flooded but were affected by loss of power and use of the school as an evacuation center. The Village Hall and library had water in the basement. The bridge on State Route 8 washed out, limiting access to and from the Village. Many churches had water in the basement. The wastewater treatment plant flooding caused overtopping and some damage to the holding tanks. A major employer with over 800 employees, ACCO Brands USA, was not directly affected by the floodwaters but, because its driveway was flooded, it was inaccessible, causing a loss of production lasting many days.

vi. Saving Amphenol

Amphenol Aerospace, a key industrial anchor, did not resume full operations in Sidney for two months after



Michael Forster Rothbart

Emergency service providers were trapped by flash flooding.

the 2006 flood. The company calculated it took a loss of \$20 million in damages and lost revenues. After 2006, Amphenol worked with local and State officials to secure funding for flood prevention measures, but the intense rainfall of September 2011 overwhelmed mitigation measures, and Amphenol again sustained losses of around \$20 million. The day after the 2011 flood, while much of the Village was still under water, Amphenol officials told the Mayor they would be moving the plant to a flood-safe location, possibly out of the State. While still dealing with the state of emergency, Village officials began working with County, State, and Federal representatives in trying to keep Amphenol's 1,000+ jobs in Sidney.

Local officials and citizens worked to find a "high and dry" site for a new Amphenol plant in Sidney, while State representatives worked to secure incentive funds to encourage Amphenol to stay. By the end of November, New York Governor Andrew M. Cuomo committed the State to providing a \$20 million business assistance and retention package⁷ and Amphenol announced it would stay in Sidney. The assistance package was designed to help offset costs associated with site acquisition, building construction, construction of a levee around the plating facility at the existing plant, and extension of a



Piles of debris line Sidney streets.

natural gas line to both the existing plant and the new facility. Following that announcement, Amphenol constructed a temporary berm around the parking lot area at its existing plant.

vii. Business Response

Although only a few businesses failed to recover and reopen after the 2006 and 2011 floods, losses were sustained and continue to affect the local economy. For example, flooding in the Industrial Park had a detrimental effect on prospective new investment. Developable lots remain vacant and existing industrial property owners report they need to be confident that an effective flood mitigation plan is in place before they commit funds to maintain or expand their investments. This 20-acre park, which is on Winkler Road near the airport and on the rail line, has excellent transportation access but it is vulnerable to flooding from both the Susquehanna River and Weir Creek. Of the seven tenants employing a total of 300 people, Huff's Ice Cream and Tri Town News flooded. The others, including USA Custom Pad, Cobalt Packaging, Sidney Printing, Mirabito, and American Trusts, did not flood but lost



Volunteers work to clean out a flooded home.

electrical power and access from State Route 8. Huffs Ice Cream distributor, employing 35 people, was the heaviest hit with massive losses from flooding and the subsequent extended power shutdowns in both 2006 and 2011. Since then, the company rebuilt with redundant power and waterproof, mold-proof plastic infrastructure. Some downtown businesses, including the corporate headquarters of the Sidney Federal Credit Union (employing 60 people), rebuilt resiliently. However, other property owners on Main Street say they are reluctant to spend money to maintain and upgrade buildings that have flooded twice. As a result, Sidney's downtown is in limbo and tipping toward disinvestment rather than revitalization.

C. Critical Issues

The most critical issue facing Sidney could not be simpler: it is too dangerous for so many people to live in the extreme risk areas along the Susquehanna River and Weir Creek.

To come to that determination, the NYRCR Planning Committee and the Village carefully considered many

studies, evaluations of risk, the pattern of property buyouts (over 70 buyouts complete or pending), and climate change projections. They made the tough decision that the highest-risk neighborhoods, north of the railroad track between Route 8 and Union Street, cannot be protected from extreme flooding. The Village is willing to commit considerable resources to creating replacement housing where families and seniors feel safe and can rebuild lost equity. Given the built-out nature of the Village, sites for neighborhood relocation out of the high risk areas are hard to find. After considering all available options, the Village is optioning the 165-acre Riverlea Farm on Plankenhorn Road in the Town of Sidney, and is preparing to annex the property into the Village and then extend the water and sewer infrastructure.

i. Building Capacity to Support Relocations

Residents would require assistance through public/private financial subsidies to move away from vulnerable neighborhoods. Many residents are “upside down” in their mortgages (owing more than the property is worth). A variety of housing types for families, seniors, owners, and renters are required. This strategy allows the Village to restore its lost tax base and keep life-long residents in the Village, but would require capacity to implement, which the Village currently lacks.

ii. Basing Decisions on Science

In 2008⁸, 2009⁹, and 2010¹⁰ the U.S. Army Corps of Engineers (USACE) evaluated water flows and stream conditions to predict how the waterways perform in an extreme flood event (100-year flood) using a computer modeling program called the Hydrologic Engineering Center’s River Analysis System (HEC-RAS) to evaluate measures to protect the Village as a whole. Thirteen mitigation measures were evaluated, and though various combinations of measures showed promise, the Village decided to support construction of a floodwall to protect the entire Village. Since the

USACE studies were completed, numerous buyouts have occurred and Amphenol Aerospace decided to relocate its main plant to higher ground. In light of these changes in land use, the Village asked USACE to evaluate construction of a shorter floodwall and lower berm to protect the Village’s historic North End, the area east of Union Street. The outcomes of earlier studies by the ACE to determine how best to protect Sidney must be reconsidered due to significant changes in land use; additional studies are needed.



ACCO Brands USA

The clean up continued for weeks in Sidney’s neighborhoods.

iii. Giving Mother Nature Back Her Floodplain

In an effort to maximize the hazard mitigation impact in Sidney and potentially help downstream neighbors, the Village also would pursue restoration and creation of the floodplain using green infrastructure along the Susquehanna River and Weir Creek. This mitigation system would provide additional flood storage with release of water over time as the creeks

and river recedes and are able to carry additional volume. Floodwater carries debris, eroded soil (sediments), and contaminants like fertilizers, road salt, oil, and sewage. Green infrastructure allows the contaminants to settle and releases cleaner water that protects water quality along the Susquehanna Corridor. Reducing buildings and their driveways and parking lots reduces hard surfaces (impervious materials) and allows storm water to be absorbed where it falls, reducing runoff. Using natural materials to restore the edge of the waterway where the river naturally rises and falls (the riparian corridor) helps floodwater to move more easily.

iv. Protecting Critical Facilities

Many of the Village's public facilities are in the 100-year floodplain, including the Village and Town Hall, the much used Boys and Girls Club, the main police station, fire station, and water treatment plant. The Village would explore construction of a new civic center, including shared services and offices for the Village and Town, police services, and a safe site for the Boys and Girls Club/community center, potentially at Riverlea Farm. The fire station, which flooded badly in the 2006 and 2011 floods, may also be relocated, but a site closer to the Village core would be identified to maintain excellent response time.

D. Community Vision

Building on its successful community engagement strategy and the NYRCR, the Committee prepared a vision statement to guide implementation of the NYRCR Plan. The vision statement was reviewed at community workshops and confirmed by the Committee. To further confirm the vision statement, the Village recently conducted 70 individual interviews with property owners in the extreme risk area (the 100-year floodplain). The vision statement also builds on the overlapping *Long Term Community Recovery Plan*¹¹ (LTCR Plan), developed with State funding during the months immediately after Irene

SIDNEY'S VISION

Sidney is a progressive, dynamic and resilient place with the friendly feel of an historic, close-knit community. We embrace our waterways and make sustainable choices that protect our Village residents, our neighboring communities, and our region. Our green waterfront reduces future risks while offering entertainment, culture, arts, and recreation. The Village's vibrant downtown, flood-safe neighborhoods, and social support systems appeal to everyone, young and old. Sidney is a strong community devoted to family, fostering businesses large and small, and working together to face any obstacle.

and Lee, which included a 3-day design workshop, multiple public events, interviews, and focus groups, and provided a strong foundation of community support for this planning process.

E. Relationship to Regional Plans

Sidney's exposure to regional planning had been modest before the floods of 2006 and 2011. Following these floods however, shared adversity and the hope to build back better reinforced existing



Sheena Felzak

Residents attend a visioning workshop as part of the NYRCR processes.

relationships with neighbors introduced the Village to larger regional efforts to manage and conserve the Susquehanna corridor.

i. Tri-Towns Planning Efforts

The Village of Sidney is part of a multi-jurisdictional planning area called the Tri-Towns and has regularly undertaken multi-municipal assessment and planning with the Towns of Sidney, Unadilla, and Bainbridge. This partnership is long-standing and resulted in development of the *Tri-Town Area Economic Development Region Plan*¹² (2001) for the communities, which has guided planning and development in the area for more than a dozen years. *The Susquehanna River Valley Economic Development Strategic Plan*¹³ (SRVEDSP) represents Phase II of that effort. Both strategies introduce a range of branding and economic development, but neither address the economic impact of flooding, showing what a significant sea-change has occurred after the floods of 2006 and 2011 for businesses small and large in the Village. The NYRCR Plan is a foundation for joint planning with neighboring municipalities and a way

to introduce smart growth and resiliency measures into future intermunicipal planning efforts.

ii. Delaware-Susquehanna Compact

The Village is actively involved in discussions with Bainbridge, Afton, and Unadilla about interdependent needs for flood hazard mitigation, though coordination across multiple counties has been challenging. As a result, Sidney is considering the new initiative through the NYRCR plan called the Delaware-Susquehanna Compact, which would be an opportunity to plan with the communities that have the greatest impact on flooding in the Village. Together this group can be a strong voice for watershed protection, storm water pollution prevention, habitat protection, and floodplain and stream management goals outlined in the NYRCR plan. Eventually, the Village would like to work with additional Susquehanna corridor communities to expand the framework for resiliency education and planning.

iii. Delaware County All Hazard Mitigation Plan

With its neighbors, the Village participates in county-level planning and is working to implement recommendations from the *Delaware County All Hazard Mitigation Plan*¹⁴ (2013). The Plan suggested that Sidney:

- Evaluate alternatives for strengthening the back-up water supply system.
- Repair, upgrade, and prevent further damage to Peckham Reservoir Dam.
- Improvement to Peckham Supply line.
- Work with NYS Electric and Gas to address vulnerability to power outages.
- Work with Delaware County Soil and Water Conservation District (DCSWCD) to coordinate stream management alternatives for the Susquehanna River and Weir Creek:

- With DCSWCD, address areas of streambank erosion, especially where it threatens property and/or infrastructure as described in the All Hazard Mitigation Plan.
- With DCSWCD and New York State Department of Environmental Conservation (NYS DEC), work to demonstrate a scientific rationale for stream management activities in order to facilitate permitting of appropriate projects.

iv. NYRCR Southern Tier Regional Resiliency Effort and River Initiative

Sidney is a participant in the Southern Tier Susquehanna River planning effort with Tioga and Broome County communities. On November 18, 2013, many representatives from the Village joined with communities from Broome County and Tioga County to host the Regional Resiliency Summit. The daylong event, held at the Binghamton University Innovation Innovative Technologies Complex, attracted over 120



On November 18, 2013, many representatives from the Village joined with communities from Broome County and Tioga County to host the Regional Resiliency Summit.

participants. Experts from government, academia, and the private sector discussed the viability of various approaches to flood control, reinforcing Sidney’s sustainable approach and empowering community leaders. In addition the Village is planning to participate in a two year regional river system initiative in Delaware, Tioga, and Broome Counties (estimated cost \$3 million) to build resilience. It would include watershed modeling to identify and implement cost effective floodplain and stream channel improvements to reduce flood impacts through natural measures at the headwaters, across the landscape, and finally at the stream edge. Wetland creation and restoration with flood attenuation, green infrastructure, natural stream rehabilitation, and floodplain enhancement through berm removal may be piloted at the local level. An environmentally sensitive stream management program would train Department of Public Works (DPW) and Highway Superintendents in best practices to restore stream transport of water and sediment after major storm events. The final component of the initiative would train municipal officials and staff, County legislatures, and residents about the function of floodplains and establish a network of community storm water/floodplain outreach volunteers. The initiative would reduce the effects of floodwaters using natural means, restore floodplains, create wetlands, and employ various green infrastructure techniques.

v. Action Plan for the Chemung and Susquehanna Basins

*The Action Plan for the Chemung and Susquehanna Basins in New York*¹⁵ (2012) was funded by NYC DEC and implemented by the Southern Tier Central Regional Planning and Development Board (STC RPDB). It used an ecosystem based management approach which integrates human, economic, and environmental concerns to “improve the way that natural and human systems work.” The plan focuses on the upper Susquehanna and Chemung watersheds as the headwaters of the Chesapeake



Mayor Andy Matviak at the Regional Resiliency Summit.

Bay and recommends the actions communities must take to reduce “impairment” in the watershed. An “impaired” watershed or river has excess levels of nutrients (nitrates and phosphates that come from development impacts or agricultural runoff) that reduce water quality. This approach is very consistent with the NYRCR process and Sidney’s concern about using green infrastructure to improve water quality.

vi. Envision the Susquehanna and Other Collaborations

A new initiative called “Envision the Susquehanna,”¹⁶ led by the Chesapeake Conservancy, also holds much promise to develop a watershed and corridor wide vision for management and conservation of the Susquehanna and the Chesapeake Bay. Sidney has been working with the Chesapeake Conservancy to identify best practices in resilient floodplain management. Other partnerships with the Susquehanna Greenway Partnership (SGP) and the



Mayor Andy Matviak and NYS DOS Planner John Wimbush. Susquehanna Conservation Alliance (SCA) are just being formed. In large part the Village is reaching out to these organizations because of the knowledge the Village leaders have gained through the NYRCR and LTRC programs. Sidney is also approaching a number of environmental groups and land trusts to help it to develop a plan to conserve, restore, and expand its floodplains. The Village is also anxious to work with USACE, Susquehanna River Basin Commission (SRBC), and the NYSDEC on the Upper Susquehanna Basic Watershed Assessment and Hazard Mitigation Assessment.

vii. Southern Tier Regional Economic Development Council (STREDC)

In 2013, Sidney secured almost \$675,000 from the New York State Consolidated Funding Application (NYS CFA) competition for three projects. The New York State Department of State (NYS DOS) funded the Village's request for phase one of the Main Street Green Streetscape Initiative. They also supported a green infrastructure feasibility study in advance of a planned 2014 application for Green Infrastructure Grant Program (GHIG) funds from New York State Environmental Facilities Corporation (NYS EFC). New York State Empire State Development (NYS ESD) funded the Village's request for \$20,000 to support

evaluation of a Main Street Business Improvement District (BID).

Sidney is interested in strengthening its relationship with the Southern Tier Regional Economic Development Council (STREDC). *The Southern Tier Regional Economic Development Plan*¹⁷ addresses a number of the Council's core initiatives, which include the following:

- **Council Strategy: Advance Cleaner/Greener Initiatives.** Sidney's floodplain expansion and restoration approach could be a model for other communities at risk of flooding. The Village recently presented its idea for floodplain expansion to New York State Energy Research and Development Authority (NYS ERDA), numerous State agencies, and local partners at the Environmental Clearinghouse (ECOS) Conference and at the annual conference of the New York Upstate American Planning Association (APA) and American Society for Landscape Architecture (ASLA) as model smart growth initiatives and to the New York State Floodplain and Stormwater Managers Association (NYS FSMA) annual conference.
- **Council Strategy: Strengthen the Economic Backbone of the Region and Public/private Partnerships.** Sidney would continue to serve as a regional industrial center capable of strengthening the region's economic backbone with strategic public/private partnerships. The Village is working with its major employers, Amphenol Aerospace and ACCO, to develop innovative programs to train younger, local workers to address these industries' projected high retirement rates over the next five years. These partners are also considering a down-payment matching program to encourage workers to buy homes in Sidney.
- **Council Strategy: Implement the Regional Incubator Program.** Sidney would focus on expanding the Village's business base and workforce using a \$200,000 grant from New York

State Empire State Development (NYS ESD) to develop an incubator, potentially in the former Amphenol Aerospace plant, as part of a facility reuse strategy.

- **Council Strategy: Create Jobs, Transform Communities, and Advance Tourism.** Sidney would support the creation of jobs that are accessible to low- and moderate-income people. Support for development of a Delaware County Convention/Conference Center and Hotel would be a major job generator, advance the region’s opportunity agenda, and anchor tourism expansion in Delaware County.

- **Council Strategy: Advance the Opportunity Agenda.** Sidney would develop a plan to make a major contribution to development of affordable workforce housing, senior housing and supportive services in demand across the region.



The Regional Resiliency Summit: Left to right, Ian Law (PLACE alliance), Shelly Johnson Bennett (Delaware County Planning), Co-Chair John Redente, Jillian Young (Sidney High School graduate), Clyde Birch (NBT Bank), Co-Chair Dennis Porter, Mayor Andy Matviak, John Wimbush (NYS DOS Planner).

Elan.3 Consulting



Michael Forster Rothbart

A fireman paddles past a car in four feet of water on River Street in Sidney, NY.



Section II: Assessment of Risk and Needs

Sidney accepts that flooding is inevitable, but devastation is not. This plan works with nature, giving the river and streams space to spread out into areas where people, infrastructure, and community investments are not in danger and giving residents new choices.

A. Introduction

Since the flooding in 2006, residents have grappled with the decision to stay or go: to leave a place they know and love and move toward a future they did not imagine. For the next six years, residents saw flooding as a rare event; after all it had been 70 years since the last major flood, in 1936. Tropical Storm Lee shook many from the comfortable sense that they survived a “once in a lifetime” event. Throughout the NYRCR process the Planning Committee tried to come to grips with the frequency of extreme flooding. How could a so-called 100-year flood have happened twice in five years?

An accurate and realistic understanding of risk is critical to developing the Village wisely and, more importantly, keeping people safe. The commonly used phrase, the “100-year flood” can offer a false sense of confidence among vulnerable residents and leave them unprepared. In 1936 villagers likely described the flood by its height (the river rose by 10

feet), which was probably easier to relate to than by its frequency (100-year or 1% chance) or its velocity (cubic feet per second.) When the National Flood Insurance Program was introduced in the 1970’s and the USACE mapped the floodplains, the 100-year flood became the national standard to ensure that insurance rate payers, wherever they lived across the country, were treated equally.

The 100-year flood (the 1% annual chance of flooding) can be explained by thinking of a jar filled with 100 marbles, where 99 marbles are white and 1 marble is red. The odds, in a blindfold test, of picking the red marble is 1 out of 100 or 1%. In the analogy to flooding, every time the red marble is picked, there is a 100-year flood. In Sidney’s case, the red marble was picked twice in five tries, when two extreme floods happened in 2006 and again in 2011, but that was statistically unlikely.¹⁸

In reality, while the risk of flooding is driven by climate patterns, it is also significantly influenced by



Some downtown buildings had three feet of water on their main floors.



Tropical Storm Lee is near record breaker as shown on Main Street.

local and regional conditions like the movement of water (hydrology), underlying structure (geology), or natural features (topography.) Floods are also made worse by other factors that can change over time: the amount of hard development that cannot absorb rainfall like green fields or woodlands do; filling in floodplain and wetland areas that formerly were available to retain spreading floodwaters; sediment from unprotected farm fields and stripped slopes clogging stream channels; and bridges or culverts that create pinch points on a stream channel. All of these factors are at work in the watershed Sidney shares.

In Sidney, people report little difference between the 10-year, 50-year or the 100-year flood, especially if the tributaries contribute to the event. This increased likelihood of damage and risk pertains to a large part of the Village, so Sidney chose to designate the 100-year floodplain as its extreme risk area.

i. Description of Community Assets

After two floods in five years Sidney has done a lot of thinking about its at-risk assets, which are impacted by modest floods as well as extreme events. With input from the public at engagement events, the Committee used digital geographic data provided by the New York State Department of State to identify and evaluate 80 important assets in the 100- and 500-year floodplain and grouped them in asset classes that include economic, health and social services, housing, infrastructure, natural and cultural resources, and vulnerable populations. These assets included major employers like Amphenol Aerospace and ACCO Brands USA and Main Street merchants. Residential assets include neighborhoods at risk and housing for vulnerable residents, especially seniors. Other assets included public infrastructure, human service, and cultural assets.

In ranking assets, the Committee considered the following:

- Assets were ranked high if they are “Federal Emergency Management Agency (FEMA) critical” (e.g., Town Hall, fire or emergency services, police protection, treatment plants, water supplies, telecommunication facilities or flood mitigation structures like berms or levees). They are also ranked high if they are required for an immediate relief function for a large part of the population (hospital, drug store, grocery store and hardware supplies, for example).
- Assets were ranked medium if they impact recovery after the initial relief phase has passed or represent an important community interest, including assets like churches, or community centers not used for shelter.
- Assets ranked low if they do not have a direct effect on relief or recovery, but help restore the sense of normalcy and quality of life.

Once the choices were finalized tables and maps were prepared that show the assets and estimate the level of risk they face in extreme weather. Risk areas were also defined by Committee members based on their experience with recurring flooding. A map was prepared to illustrate the areas. In Sidney all assets in the 100-year floodplain were designated as being at extreme risk.

Figure 2.1 and Figure 2.2 illustrate the location of Sidney’s risk areas and its high value assets in relation to these risk areas, respectively. The inventory of assets and risk assessment is included in Section V, Additional Materials.

ii. Assessment of Risk to Assets and Systems

The 39 assets that ranked high were evaluated to understand the hazard, exposure, and vulnerability each faces during and after a storm event, using the New York State Risk Assessment Tool for Riverine Communities, developed by the NYS Department of State. The scores are defined as follows:

- The hazard score is based on the chance that a storm event would occur and the magnitude (destructive capacity) of the event.
- The exposure score is based on weights assigned to certain environmental features that may impact how severe the risk of flooding is.
- The vulnerability score addresses the speed with which an asset can be returned to service after the storm.

Once the assets were evaluated, risk scores were identified in four categories:

- Assets at severe risk could be in a dangerous situation, and relocation of the asset may be a priority option (Risk Score >53 for a 100-year event, >70 for a 500-year event.)
- Assets at high risk face significant negative outcomes from a storm, which may include the loss of service for an extended period of time. (Risk Score 24-53 for a 100-year event, 32-70 for a 500-year event.)
- Assets at moderate risk are likely to suffer moderate to serious consequences. (Risk Score 6-23 for a 100-year event, 8-31 for a 500-year event.)
- Assets at residual risk are at minor risk or likely to suffer infrequent consequences. (Risk score less than 6 for the 100-year event, and under 8 for a 500-year event.)

The findings of the risk assessment are summarized in Table 2.1.



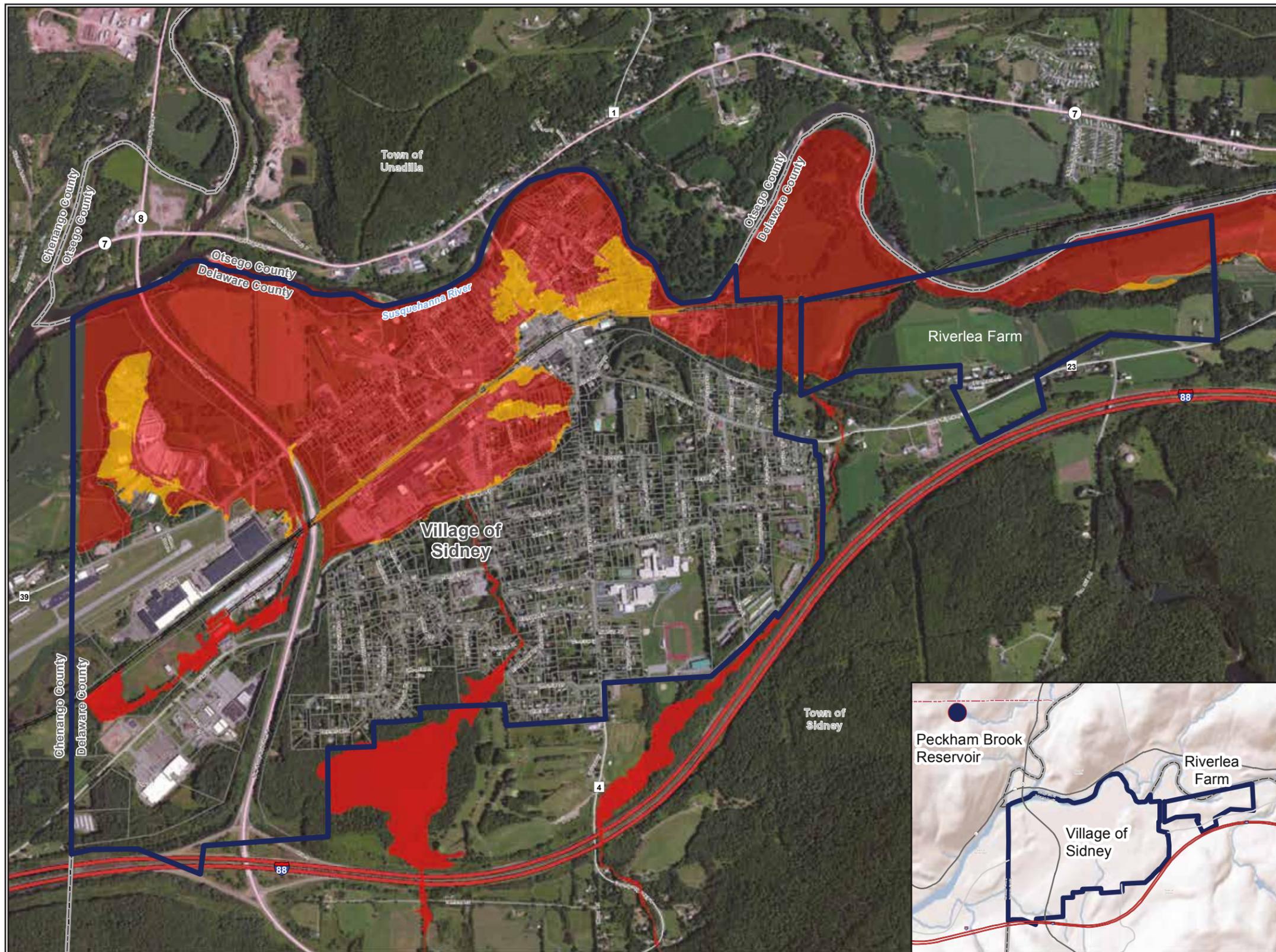
ACCO Brands USA

ACCO Brands staff volunteer in the cleanup.

Table 2.1 Risk Assessment Findings

Asset Class	Asset Name	Asset Rank (Community Value)	Risk Area (Risk Level)	Risk Score
Economic	ACCO Brands USA, LLC	High	High	High
	Amphenol Corp.	High	High	High
	Main Street Business District	High	High	High
	Price Chopper	High	N/A	Residual
	Rite Aid	High	Moderate	Moderate
	Winkler Road Business Park	High	High	High
Health and Social Services	Bassett Healthcare	High	N/A	Residual
	Delaware Opportunities	High	High	Moderate
	Delaware Valley Humane Soc.	High	High	High
	Planned Parenthood	High	Moderate	Moderate
	Sidney Ambulance Squad	High	High	High
	Sidney Civic Center	High	High	Moderate
	Sidney Fire Station 1	High	High	High
	Sidney Fire Station 2	High	N/A	Residual
	Sidney High School	High	N/A	Residual
	Sidney Highway Garage	High	Moderate	Moderate
	St. Luke’s Church	High	Moderate	Residual
	Tri Town Regional Hospital	High	N/A	Residual
Housing	River St / Division St Neighborhood	High	High	High
	River St / Oak Ave Neighborhood	High	High	High
	Sherman Ave / Adams St Neighborhood	High	High	High
	Willow St / Liberty St Neighborhood	High	High	High
	Riverlea Farm	High	N/A	Residual
	Sidney Senior Village	High	N/A	Residual
Infrastructure Systems	Citizens Tele Co. (Grand St)	High	N/A	Residual
	Citizens Tele Co. (Winegard St)	High	High	High
	Drinking Water Well 1-46	High	High	Moderate
	Drinking Water Well 2-88	High	High	Moderate
	Interstate 88/Exit 9 Interchange	High	N/A	Residual
	Main Street Bridge	High	High	Moderate
	Mead Substation	High	High	Moderate
	NYS Electric and Gas Corp. Substation	High	High	Moderate
	Pump Station	High	High	High
	Radio WCDO	High	Moderate	Moderate
	Rail System	High	Moderate	Moderate
	Sidney Municipal Airport	High	N/A	Residual
	Sidney Wastewater Plant	High	High	High
	State Route 8 Bridge	High	High	High
Natural and Cultural Resources	Community Foundation Lands	High	High	Moderate

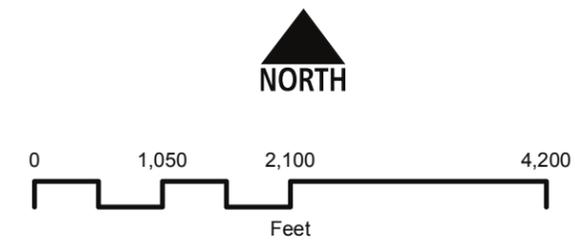
Figure 2.1: Risk Areas



Legend

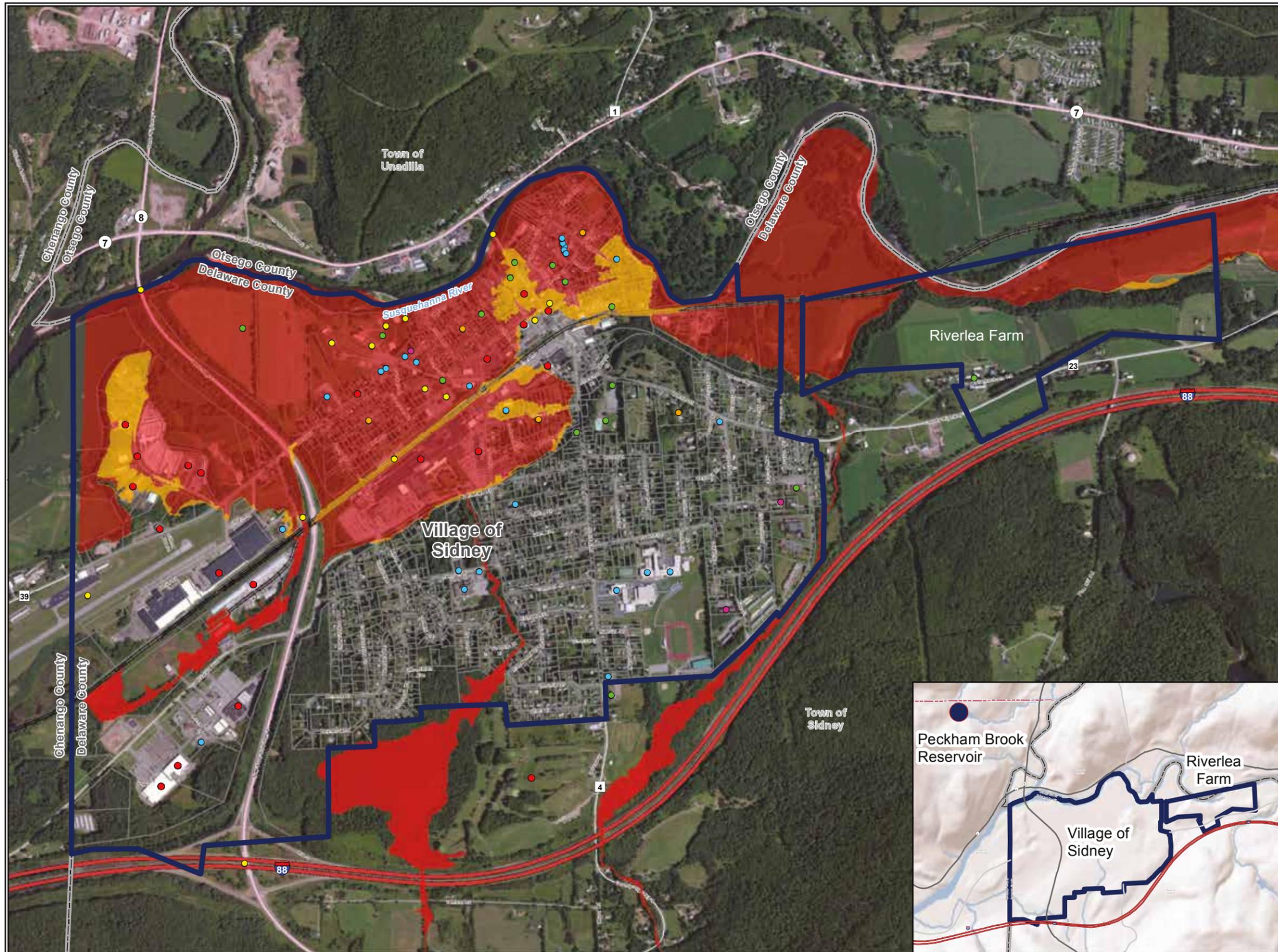
- Extreme Risk Area
- High Risk Area
- Planning Area Boundary
- Municipal Boundary
- County Boundary
- Tax Parcels
- Railroad

Data Sources:
 Base Imagery – ESRI ArcGIS Online Server; Delaware County.
 Planimetric Features – CIRIS.
 Risk Areas - FEMA.



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Figure 2.2: Assets and Risk Areas



Legend

- Economic
- Health and Social Service
- Housing
- Infrastructure
- Natural and Cultural Resource
- Socially Vulnerable Population
- Extreme Risk Area
- High Risk Area
- Planning Area Boundary
- Municipal Boundary
- County Boundary
- Tax Parcels
- Railroad

Data Sources:
 Base Imagery – ESRI ArcGIS Online Server; Delaware County.
 Planimetric Features – CIRIS.
 Risk Areas - FEMA.
 Assets: CIRIS; Parsons

NORTH

0 1,050 2,100 4,200
 Feet

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Economic Development. After the 2011 flooding, Amphenol Aerospace began construction of a new flood-safe facility, but its metal plating operation would remain at the current location and would require protection. The Village's other large employer, ACCO Brands USA, did not flood, but was cut off and construction of a secondary access road is a priority to avoid future business disruption. The Village's Industrial Park, with 300 jobs, remains at risk. A number of constructed and green infrastructure projects are being evaluated to make the area more resilient. The Main Street business district is at high risk and a green streets program is being piloted to handle storm water more efficiently.

Health and Social Services. Critical assets such as the Tri-Town Hospital, Bassett Health Center, Sidney High School (shelter), Sidney Senior Village, Village Highway Garage, and Sidney Municipal Airport are outside the 100-year floodplain and are at moderate or low risk of significant damage. As in 2006, the main Fire Station flooded and all dispatch and command center functions moved to a very small station on higher ground. There is serious concern that disruption of public safety services may occur, particularly in a flash flood situation.

Housing. Village neighborhoods at extreme risk are along River Street at Division and at Oak Avenue, the Sherman Avenue and Adams Street neighborhood, and the Willow and Liberty Street neighborhood. These areas flood regularly and include numerous properties that are in the Hazard Mitigation Grant Program for buyout or elevation. These areas are home to a large number of seniors and are the poorest in the community. The residents in these neighborhoods have few resources to address relief and recovery needs, and require significant community support. Relocation of families from these areas is a key strategy. Using green infrastructure the Village may be able to repurpose some lands for entertainment or recreation. For the North End historic district, the Village has asked USACE to reevaluate development of a berm.

Infrastructure Systems. Necessary systems, including health and mental health care and education facilities are out of the flood zone and recovered quickly, though the schools were used as shelters resulting in some disruption to their normal operation. Many utilities at high or moderate risk, including the water and wastewater treatment plants, two municipal drinking water wells, the radio station, the telephone company, and a pump station suffered damage. The wastewater treatment plant flooded, causing the holding tanks to overtop and suffer some damage. NYS Route 8 Bridge washed out, limiting access in and out of the Village. Due to flooding of two substations, electricity was cut off to the Village for days.

B. Assessment of Needs and Opportunities

Since 2006 Sidney has been pursuing buyouts of properties in the extreme risk areas. After 2011 the Village moved more assertively to encourage relocation. Building on the NYRCR program Sidney is now embracing new approaches, especially best practices in green infrastructure to keep residents safe.

Extensive profiling of the Village's capacity, demographics, economy, housing market, tourism potential, infrastructure needs, flood mitigation options, and recreation resources have been completed as part of the NYRCR program.

When FEMA updated the National Disaster Recovery Framework (NDRF) it identified six Recovery Support Functions (RSFs) that represent the central capabilities necessary to address recovery needs that "help facilitate local stakeholder participation and promote intergovernmental and public-private partnerships [thereby] accelerating the process of recovery, redevelopment and revitalization."¹⁹ A summary of the resulting needs and opportunities are presented by recovery function.

Recovery Support Function

The six strategies are organized by the six Recovery Support Functions (RSFs) established by President Barack Obama.

- **Community Planning & Capacity Building** – Considers the need for staffing and development of regional strategic partnerships.
- **Economic Development** – Considers the need to redevelop idled industrial sites, guarantee safe access to major employers, and make Main Street resilient.
- **Health and Social Services** – Considers the needs of vulnerable populations and the need to relocate critical facilities and other services.
-
- **Housing** – Considers the need for broad housing choice, the shortage of developable land, and the need for replacement housing.
- **Infrastructure** – Considers the need to protect critical facilities, protect historic resources and expand green infrastructure.
- **Natural & Cultural Resources** – Considers need for floodplain restoration and enhancement to address flooding, restore habitat and improve water quality.

i. Community Planning and Capacity Building

Sidney has a population of 3,900 people and is managed by a mayor, clerk, and board of trustees. The Village maintains a small airport, police department, volunteer fire department, and an EMT squad. The Civic Center houses municipal offices and some services, including the Boys and Girls Club, but all are in the 100-year floodplain and sustained damage in 2006 and 2011. The Village and Town offices are co-located and their administrations are exploring ongoing opportunities for shared facilities and consolidated services. The Village recently created its first web site, though it does not yet provide information related to relief and recovery.

Sidney's NYRCR Plan gained broad local support through numerous meetings, design review, focus groups, surveys, and one-on-one interviews with affected families. More opportunities for regional collaboration are emerging through various programs including the Chesapeake Conservancy's Envision the Susquehanna. The Upper Susquehanna Basin Flood Mitigation and Watershed Assessment prepared by the USACE and NYS DEC offers an opportunity for Sidney to present its projects as models of sustainable flood mitigation. The science that emerges would help the Village incorporate mitigation measures into planning and decision-making that are strategic, cost-effective, and climate-change driven. By participating in the NYRCR Southern Tier Regional Resiliency Summit, held at SUNY Binghamton in November 2013, and presenting their initiatives at numerous conferences, Village leaders built consensus and translated new knowledge into resilient land and stream management tools.

Although the Delaware County Planning Department (DCPD) has been an important partner in implementing buyout and elevation programs, lack of Village planning and development staff may be a challenge to moving multiple initiatives forward. It would be critical to secure staff resources to plan, manage, administer, and implement recovery projects. New opportunities



Sidney Chamber of Commerce

New York State Troopers assist in evacuation of stranded residents.

to establish formal support relationships with the Delaware County Department of Economic Development (DC DED), Soil and Water Conservation District (DC SWCD), and Industrial Development Agency (DC IDA) would expand access to technical assistance. These County agencies can also help the Village in building capacity to implement and attract new uses such as a waterfront entertainment and environmental center, or a conference center and hotel, creating local work and wealth.

ii. Economic Development

Like most communities affected by flooding, Sidney's businesses suffered enormous losses. Nonetheless, the Village remains an employment and commercial center with sturdy manufacturing, retail, health care, and administration sectors. These afford a degree of stability, but some facilities are in flood hazard areas.

The November 2013 unemployment rate of 6.9% is much lower than the November 2012 rate of 8.5%. The lower rate reflects a post-flood "bounce back." Sidney lost just over 4% of its population between 2000 and 2010, which likely represents some displacement after the 2006 flood.²⁰

After Tropical Storm Lee, Sidney was fortunate when New York State worked with Amphenol Aerospace to locate a site for a new facility and provided the financial incentives to keep the company and its 1,000+ jobs in Sidney. When the new plant is completed, the existing plant in the Village core would be largely empty, except for the plating facility. An adaptive reuse strategy is needed if the facility can be protected from future flooding. If not, the site might offer an opportunity for flood mitigation/green infrastructure along Weir Creek. Other companies, such as ACCO Brands USA, require safe secondary access to their facilities to prevent them from becoming inaccessible islands during flooding. Such access would reduce business disruption losses.

Industrial Park and Main Street businesses are reluctant to spend money to maintain and upgrade buildings that have flooded twice. They need to feel confident that an effective flood mitigation plan is in place and that critical infrastructure is flood safe before they would expand their investments. The Village secured grant funds from the NYS DOS for the first phase of a green streetscape program that would handle storm water more efficiently, but other phases still need to be funded, designed, and



John Reardon

Main Street businesses in Sidney are reluctant to upgrade buildings without effective flood mitigation in place.

constructed. A recently awarded grant from NYS ESD would enable the agency to work with Main Street merchants to evaluate potential development of a Business Improvement District (BID). The small business owners would also like to capitalize a Main street program to help with commercial building upgrades and façade improvements.

Major local employers report that large numbers of workers would retire in the next five years, creating a significant opportunity for local hiring. The Village wants to attract and keep younger workers and to work with schools and employers to ensure new work candidates are trained in the trades and technologies that are in demand by local industries. These workers need a path to a solid economic future in Sidney. This requires not only job training but also ensuring affordable housing, maintaining the excellent schools, and offering more of the amenities that young families want. On the other end of the career ladder, companies report that their professional staff do not live in Sidney because it lacks executive housing. The jobs/housing balance is a critical issue for the Village.

iii. Health and Social Services

Resilience in the face of natural disasters is strongly affected by socioeconomic conditions. Sidney is a low- to moderate-income community with almost 60% of households reporting incomes under 80%

of the State median income.²¹ Sidney's percentage of vulnerable residents living below the poverty line (17%) limits its ability to absorb losses. Sidney has double the national average of single female-headed households, many of whom support dependent children or aging and disabled relatives. They lose time and money caring for dependents when daycare facilities and support services are affected by disasters. Ensuring that such services are available, affordable, and in flood-safe areas would cut down on lost work and improve the Village's resiliency.

The floods in 2006 and Hurricane Irene and Tropical Storm Lee brought home the need for additional emergency preparedness, especially for vulnerable populations. A voluntary registry identifying elderly and disabled residents with their locations and a description of their special needs would streamline evacuations. More accessible shelter space is needed, with dedicated storage for pre-positioned, non-perishable supplies, and options for evacuated pets.

Many senior households live on retirement and Social Security incomes. Recent U.S. Bureau of the Census estimates show just over 100 households with residents over age 60 living in the highest flood risk neighborhood of the Village.²² Many of these households reported between three and five feet of floodwater in their first floor in 2006 and again in

2011. The NYRCR Planning Committee and residents have shared stories about elderly couples taking out new mortgages to restore homes in extreme risk areas because no viable alternative exists in Sidney today. Development of affordable senior housing is critical. Small, aging communities like Sidney also need to provide more opportunities for residents to become and stay active as they age and the Village would partner with local healthcare providers and schools to develop recreation facilities that are suitable for all age groups.

Most religious denominations are represented in the Village, and the community supports many service organizations and public interest groups. There is an AM-FM radio station, a weekly newspaper, and the high school operates a television station. The school district encompasses two villages and parts of three others. The public library is chartered to service school district residents. Sidney offers many core services including a hospital and urgent care center, pharmacies, groceries, and basic retail. Medical specialties available in the Village include



Andrew Gates

Amphenol Aerospace shop floor flooded to four feet deep in some places.



John Redente

Homes in the highest risk neighborhoods stand vacant more than two years after Tropical Storm Lee hits.

family practice, obstetrics and gynecology, and pediatric care. Mental health services include several clinical social workers in private practice, as well as a Sidney branch office of the Delaware County Office of Social Services (DC OSS), which handles public services such as Youth Bureau, Office for the Aging, Alcohol and Drug Abuse programs and more. If large scale relocation is pursued there may be need for expanded social supports and opportunities to relocate some critical facilities. Challenges remain to help other institutions, especially churches, which lack the financial resources.

iv. Housing

Sidney is concerned about keeping residents safe in extreme weather, since over 42% of the Village population is likely to be immediately displaced by a 100-year event. Others may require evacuation because they are surrounded by water and cut off from emergency services.

According to the 2010 U.S. Census, Sidney had just under 2,000 households and almost the same number of housing units. At the time the Census was

taken, Sidney's housing was 57% owner-occupied, and the single family detached structure was the most common (almost 63% of houses). The Village's housing is mostly older, built in the early to mid-1900s, and fewer than 200 units have been built in the past 25 years. The median housing value was \$84,000 in 2010, but values are much lower in the most vulnerable neighborhoods.

The rate of renter occupancy and cost of rental property is high for a Village of Sidney's size and location (43% of units are rentals). The median monthly rent in 2010 of just over \$570 left over 22% of renters "severely cost burdened" (paying over 35% of income for shelter costs).²³ The Committee reports a noticeable increase of single family homes being converted into rental properties in extreme risk areas. The loss of owner occupants with a strong vested interest in the neighborhood is not a positive trend.

According to Trulia²⁴, a reliable Internet source of local real estate data, there are currently 52 resale and new homes for sale (includes vacant properties, leaving 47 actual structures for sale). These include 13



Sidney Chamber of Commerce

Sidney First Responders go building by building to help with evacuation.

homes in the pre-foreclosure, auction, or bank-owned stages of the foreclosure process. The average listing price for homes for sale in Sidney was approximately \$109,000 for the week ending February 12, 2014. Almost three-quarters of the listings are in the 100-year (25 properties) or 500-year (nine properties) floodplain. The average asking price for properties in the floodplain is approximately \$53,000 less than half the Village-wide average. The average asking price for the 13 homes outside the floodplain is approximately \$144,000.

Even with declining prices, affordability remains an issue. Using the rule of thumb that a house should cost no more than 2.5 times the family income, a family earning the median income for Sidney (\$37,000) could afford a house worth \$92,500, leaving a gap of \$51,500 to be able to purchase an average-priced home outside the floodplain.

The character of the riverside neighborhoods has eroded since the 2006 flood. A substantial number of buyouts have occurred and the Village reports that other units are abandoned because property owners did not have the resources to fix flood-damaged properties. There are currently 29 parcels and 24

homes in the buyout program and 11 structures seeking elevation. FEMA recently classified over 200 properties in the floodplain as “repetitive loss,” meaning that flood insurance may increase dramatically unless a homeowner elevates their home to FEMA standards. Increasing rates of foreclosure in the high-risk neighborhoods are expected as a result of this classification.

More diversity in housing types are needed, including well-managed rental housing, affordable starter homes, independent senior apartments and cottages near services and retail, assisted living for seniors and the disabled, and high-end homes for upper management and professionals. Homes in the Village’s historic North End can be protected or elevated under the housing assistance programs offered through the Governor’s Office of Storm Recovery (GOSR).

v. Infrastructure

As noted earlier, most of the Village’s critical facilities are in the flood zone, including the shared Village and Town Hall (Civic Center), the main and secondary police station, main fire station, fire training facility,



Sidney Chamber of Commerce

Main Street bridge after the Susquehanna began receding.

emergency center, and local health services. There are also a dozen utilities in the flood zone, including the water treatment plant, two municipal drinking water wells, two electric substations, the radio station, and a pump station. Engineering studies are needed to determine whether utilities in the flood zone can be adequately protected so as to remain in service during a flood, or if they must be relocated. New flood mitigation measures may allow for adaptive reuse of the Civic Center building for non-critical facilities.

Until facilities can be relocated, back-up power supplies are needed at the police station, fire stations, public works facilities, and Civic Center. Radio interoperability between the Village, police, fire, and emergency services must be improved, and enhanced emergency communication between first responders and the public, including an audible warning system and reverse 911 system, are being proposed. The Village identified a number of longer-term public works projects that would make it more resilient, including special focus on resolving problems at the Peckham Brook Reservoir dam upstream from Sidney, which is in deteriorated condition.

The Village needs to determine the best way to protect the Amphenol plating facility that would remain

at the current location and determine whether of reuse of the remaining facility is feasible. Protection of this facility must be carefully planned so that it does not displace significant volumes of floodwater to elsewhere in the Village. A new engineering study is needed to update base flood levels and take into consideration both tributary and river flooding.

vi. Natural and Cultural Resources

Although Sidney's location along the Susquehanna River led to problems and losses from flooding, it represents a resource as well. The Village has over two miles of riverfront, with scenic beauty and recreation opportunities for boating, fishing, bird watching, and more. At present, the river is accessible and conducive to public use only at Keith Clark Park but opportunities exist to enhance passive recreation along the river while developing additional flood storage. The 62 acre parcel owned by the Sidney Community Foundation could be central to offering these new uses.

In 2013, the Village worked with the New York State Historic Preservation Office (SHPO) to designate a considerable part of the Village as a historic district, though much of the district is within the flood zone, especially the North End. Unfortunately many of the

properties included in the district are at high risk of flooding. The Village is asking USACE to reevaluate if a floodwall or berm could protect these historic homes and businesses. An architectural survey would also help to determine which structures can be protected in place or elevated and which are worthy and able to be moved, if that is the best way to preserve them from future floods.

Cultural resources include Sidney Memorial Public Library, which offers classes and movie showings as well as books; the Sidney Museum, in a room in the Civic Center; the music and arts programs at the public schools; a private school of dance; and the Summer Arts and Music Festival, a one-day platform

for local craftspeople and musicians that takes place on Main Street.

As the market supports, the Village can pursue additional waterfront entertainment and education assets that expand community celebrations, arts, and cultural events, and include direct connections to the downtown. There are no large entertainment venues between Tioga Downs (75 miles to the southwest) and the Saratoga Performing Arts Center (110 miles to the northeast). Such amenities might be expected to draw patrons from the entire region as well as offering entertainment opportunities to enhance the quality of life for local residents.



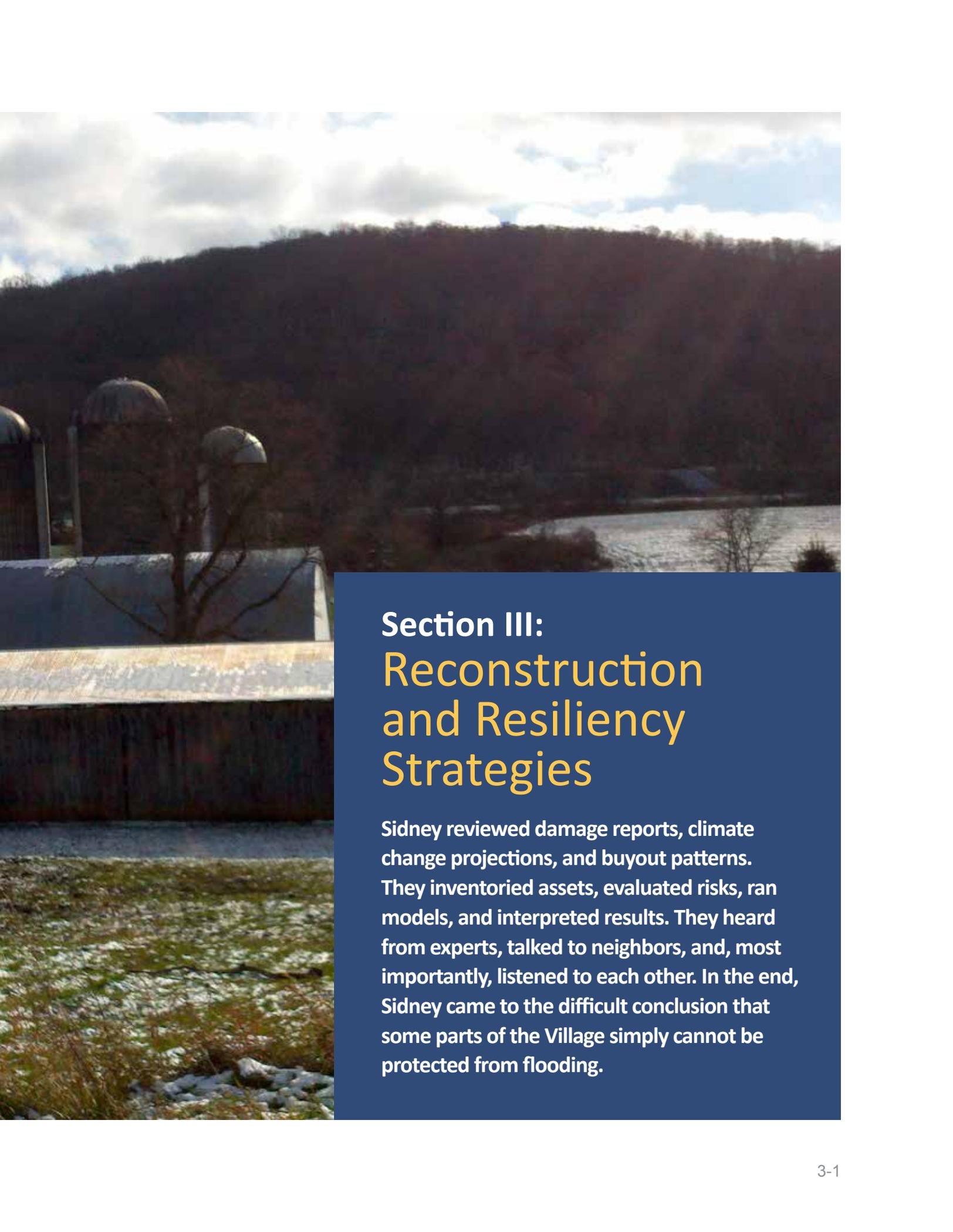
Riverlea Farm.

Ian Law



Ian Law

Riverlea Farm, Plankenhorn Road, Town of Sidney, NY.



Section III: Reconstruction and Resiliency Strategies

Sidney reviewed damage reports, climate change projections, and buyout patterns. They inventoried assets, evaluated risks, ran models, and interpreted results. They heard from experts, talked to neighbors, and, most importantly, listened to each other. In the end, Sidney came to the difficult conclusion that some parts of the Village simply cannot be protected from flooding.

A. Introduction

The Planning Committee integrated all that they learned from the NYRCR and LTRC processes in developing six overarching strategies. These strategies have been tested at committee meetings, public meetings, and by other public, private, and nonprofit partners. They bring together preceding components, building on local knowledge; considering critical issues; and addressing risks, needs, and opportunities. The strategies tell the story of how the Village's considerable assets would be used

to advance important projects. Sidney's approach is resourceful and determined, focused clearly on keeping residents safe, growing more prosperous and becoming a more resilient village. Sidney is approaching this challenge on a transformational scale, focusing less on the small public works projects and more on the big picture investments for new residential neighborhood development, sustainable Main Street investment and large scale floodplain restoration and enhancement.

1 Create a vital new neighborhood where relocated residents, businesses, and community organizations can enjoy a remarkable quality of life.

After two major floods within five years, and careful consideration of studies and other input, Sidney reached the difficult conclusion that there are core areas of the Village's riverfront land that cannot be protected cost effectively. The Village stepped up, committing to any and all possible options to help residents in the highest risk neighborhoods to relocate to flood safe locations, offering the 100% solution to vulnerable seniors and many middle income families: they would never have to worry about damage from flooding again.

Sidney's vision is of a mixed use, mixed income, mixed age, complete community that addresses the central challenge to move families and seniors to higher ground while building a model of sustainable community development. While comparable in scale and character to the Village's existing residential

areas, a new neighborhood would be cleaner, greener, smarter, safer, and completely flood resilient. It would use LEED Neighborhood Development (LEED-ND) strategies with green building and green infrastructure practices to set a new regional model. The mix of uses fulfills most of the Recovery Support Functions by offering safe housing at various price points, providing for neighborhood-serving retail, and offering green infrastructure that provides protection for the neighborhood and downstream village core. A new civic center would provide more efficient and reliable services and consolidated government functions, additional community support services, and expanded recreation opportunities. Table 3.1 provides more detailed information about the specific actions and estimated costs associated with this initiative.



Table 3.1 Projects to Create a Vital New Neighborhood for Relocation

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Acquire the 165-acre Riverlea Property on Plankenhorn Road in the Town of Sidney, NY.	Acquire and annex the property into the Village to create a new, flood-safe, complete community.	\$1.3 million	Proposed	Yes
Extend phase one municipal infrastructure to Riverlea Farm Neighborhood.	Extend water and sewer to the Riverlea Farm site to support phase one build out of homes and senior housing.	\$2 million	Proposed	Yes
Village of Sidney Home at Riverlea Program (HARP).	HARP would provide financial tools such as buyouts, property swaps, new construction purchase price buydowns, assistance with down payment and closing costs, and home relocations to encourage relocation from vulnerable neighborhoods.	\$3 million	Proposed	No
Riverlea Farm Complete Community Housing Program.	Develop affordable and moderate priced single family and senior housing for residents relocated from high-risk areas. Phase one includes development of 20 affordable single family homes, relocation of 11 structures, construction of 32 units of affordable senior rental housing, and a 24-unit senior cottage community. Phase two of the project includes market rate housing valued at \$20 million.	\$41 million	Featured	Yes
Riverlea Civic Commons.	Plan and construct a new civic commons at Riverlea Farm including a senior center/Boys and Girls Club, shared Village and Town offices, Village Police Station, and other community services being relocated from vulnerable locations.	\$5.8 million	Featured	Yes
Make Riverlea Farm a resilient, green, and smart neighborhood.	Evaluate use of green building and green energy to power Riverlea, including potentially a solar microgrid, making it more sustainable and ensuring that critical facilities can recover more quickly from extreme weather. Develop green infrastructure and recreation on a 30-acre lower terrace to provide upstream mitigation and reduce flooding impacts downstream.	\$4.1 million	Featured	Yes



U.S. Green Building Council

LEED Neighborhood Development strategies seek to create sustainable and connected neighborhoods.

2 Use sustainable green infrastructure to mitigate flooding along the Susquehanna River and Weir Creek for the Village and its neighbors.

Governor Cuomo recently said that “There are some parcels that Mother Nature owns,”²⁵ and after borrowing them for generations, Sidney has decided to give them back. After experiencing devastating floods in 2006 and 2011, the Village is choosing to work with nature to increase the capacity of the reclaimed lands and protect surrounding neighborhoods, the Main Street core and, possibly Sidney’s downstream neighbors.

Through the NYRCR process and past planning efforts the Planning Committee and the Village envisioned a 140-acre GreenPlain to transform vacated neighborhoods into a high-capacity, green infrastructure floodplain that would handle millions of gallons of floodwater and use natural areas to improve water quality. To make this work Sidney would need to continue partnering with multiple levels of government, academic, nonprofit, and private sectors. The New York State Department of State (NYS DOS) has awarded the Village \$75,000 in funding to complete the initial design study for the GreenPlain. Working together these collaborators can construct and conserve the riverfront in a manner

that allows for safe use for recreation, cultural, and entertainment venues with regional impact.

This strategy addresses Recovery Support Functions related to green infrastructure, economic development, and social services, including recreation and education through the enhancement of natural resources, creating a destination for residents of all ages and abilities and for visitors. Connections to Main Street enhance the Village core and support the Village’s critical small business base while potentially directly reducing flood levels in surrounding neighborhoods. The project also includes creation of an edible floodplain, part of a local sustainable food movement with potential to link to the TasteNY brand initiative. The Village has begun designing a LEED-ND green streetscape program to help the Main Street corridor handle floodwater more efficiently. A series of other mitigation areas and “pocket wetlands” can offer additional storage volume upstream from the Village core. Table 3.2 provides more detailed information about the specific actions and estimated costs associated with this initiative.

Table 3.2 Projects to Use Sustainable Green Infrastructure to Mitigate Flooding

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Design, assemble, and construct the 140-acre Sidney GreenPlain.	Design the GreenPlain. Partner with organizations or land trusts to consolidate waterfront property, including residences, Village Park, and Sidney Community Foundation land. Construct the GreenPlain.	\$22 million	Featured	Yes
Make the GreenPlain a Community and Regional Asset for Recreation and Education.	Make the GreenPlain a community and regional asset offering lifelong passive recreation with walking trails, edible forest, wetland walks, interpretive signs, scenic overlooks, picnic areas, connections to a riverwalk, and active recreation park all within walking distance of Main Street. Use the GreenPlain to educate the public about climate change, healthy ecosystems, green infrastructure techniques, and resiliency in partnership with higher educational institutions and environmental organizations.	\$2.1 million	Featured	Yes
Develop the Sidney Waterfront Entertainment, History, and Environmental Education Center.	Develop the Sidney Waterfront Entertainment, History, and Environmental Education Center with recreation amenities to increase the tax base, draw tourists, and create spinoff businesses and microenterprises that create jobs.	\$9 million	Featured	Yes

3 Protect the Village’s manufacturing and Main Street commercial base by helping businesses of all sizes to become more resilient.

When the floods hit, Sidney’s major employers suffered direct damage and business disruption that idled facilities and the Village’s workforce. An aging employee base and lack of training in the trades and technologies, where there are current and near-future needs, concerns major employers. Sidney’s future efforts would build on the investment that NYS made in saving Amphenol Aerospace as one of Sidney’s major employers and corporate partners, and reinforces the Village’s identity as a regional industrial center. It addresses critical issues by identifying resilient ways to reuse the vacated Amphenol plant, extend safe secondary access to ACCO, and protect the Industrial Park.

Restoring the tax base and business diversity lost after the floods in a sustainable way for both large and small businesses is a central focus for Sidney. Although much of the Main Street corridor lies in the 100-year floodplain, many business owners have decided to try to remain and improve conditions. The downtown Green Streets initiative models cleaner and greener practices along with LEED-ND standards

as promoted by the Southern Tier Regional Economic Development Council. With the first phase of streetscape design and construction already funded by the NYS DOS, Sidney would reduce impervious pavement, introduce green infrastructure, and leverage the investment of many small businesses that have struggled to retrofit their buildings. Development of a business improvement taxing district with a planning grant from NYS ESD would allow for increased capacity to advance economic development, collaborative marketing, promotion of the historic district and cultural events, enhanced services, and safe downtown housing.

Sidney is also looking ahead with the development of destination projects for entertainment, education, and hospitality. This initiative addresses several Recovery Support Functions, including economic development, housing, green infrastructure, community services, and planning, through development of smart-growth, resilient land management tools. Table 3.3 provides more detailed information about the specific actions and estimated costs associated with this initiative.

Table 3.3 Projects to Protect and Make the Village’s Manufacturing and Commercial Base More Resilient

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Evaluate reuse and expanded use strategies for industrial sites.	Evaluate reuse strategies for the current Amphenol Aerospace plant and expanded use of the Village Industrial Park.	\$100,000	Proposed	Yes
Provide safe emergency access for ACCO Brands USA.	Provide secondary access for ACCO Brands USA in the event of flash flooding to reduce business disruption during extreme weather.	\$260,000	Proposed	No
Design and construct Sidney “Green Streets.”	Maintain and advance a multi-modal, walkable downtown featuring LEED-ND standards in a sustainable landscape, with green streetscape, building design, and historic buildings that incorporate green infrastructure to handle storm water more effectively.	\$1.6 million	Featured	No

4 Offer safe and resilient neighborhoods Village-wide, with “life cycle” housing for people of all ages, abilities, and incomes.

The need to create and maintain a spectrum of housing choices and opportunity for local residents is a critical issue for Sidney. The development of a range of safe and affordable housing for lower-income households is a priority, as is the development of higher-end housing for executives.

The Sidney Village core is densely settled. Over time, and due to repeated flooding, a number of downtown residential structures have been converted from owner-occupied residences into lower-income rental properties. The residential neighborhoods nearest the Susquehanna River and Weir Creek are generally occupied by older residents, with a significant percentage being low- and moderate-income. While the availability of well-paying jobs at the Village’s major employers was identified as an opportunity, a declining percentage of higher-income employees choose to live in the Village. Some of the Village’s prime family homes in the North End have suffered repeated flooding, and reevaluation of a constructed floodwall together with green infrastructure offers potential mitigation measures to bring them renewed viability.

Sidney seeks to offer life-cycle housing where a young adult can find an affordable first apartment, buy a starter home, move to a residence large enough to raise a family and, when they no longer want the responsibility of a home, have access to a full array of senior housing. Offering choice in senior housing from accessible apartments and a cottage community to assisted living addresses the needs of vulnerable seniors and encourages the turnover of homes in flood-safe neighborhoods, putting “wheels on the street” as kids on bikes and parents wheeling baby carriages represent a new generation of Sidney families. Partnering with employers and local financial institutions, Sidney can address critical issues of cost burden and low rental and for-sale vacancy rates. This would enable young families to afford a first home and encourage professional workers to choose homes in Sidney via a full range of affordable, market-rate, and executive housing. This initiative addresses Recovery Support Functions related to housing, health and human services, and infrastructure. Table 3.4 provides more detailed information about the specific actions and estimated costs associated with this initiative.

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Evaluate the feasibility of constructing a berm to protect the Village’s Historic North End Neighborhood.	Develop a preliminary study and work with the USACE to determine the feasibility of building a berm to protect the north end of the Village, including the areas east of Union Street.	\$30,000	Proposed	No
Sidney Safe Neighborhoods Grant Program.	Continue to restore homes Village-wide that were damaged by Tropical Storm Lee, and create affordable rental housing Village-wide, including in upper stories of downtown buildings, as a transitional step to homeownership, creating flood-safe options and increasing turnover so young families can remain in the Village. Work with financial institutions to develop a range of homebuyer incentives and partner with major employers to offer a home purchase grant or down-payment matching program for workers who move into safe Village homes.	\$3 million	Featured	No



Sidney is in critical need of a new range of housing options for local residents (Strategy 4, opposite page).

5 Prepare for climate change by educating, alerting, and protecting Village of Sidney residents.

In 2006, Sidney was not ready for flooding. The response to Hurricane Irene in 2011 was more efficient, but critical facilities still suffered damage and demonstrated the need for resilient retrofits. The Village must address critical issues related to readiness for extreme weather and development of facilities that are fully accessible to vulnerable populations.

In the NYRCR process, particularly through the Southern Tier Regional Resiliency Summit, Sidney’s leaders became informed advocates for floodplain management, restoration and enhancement, and now they need to spread the word. Sidney needs to raise awareness about emergency preparedness and disaster recovery, especially among the most vulnerable residents and their caregivers. Residents can also become advocates for green infrastructure and programs can be delivered to educate the

population on the impact that they, as individuals, can have on storm water management and emergency awareness, building on the successful flood monitoring program at Sidney High School.

Working across various municipal departments at the local and County level, the Village would integrate recovery planning with long range capital improvement and related policies. Careful land management is key to creating a safer, more connected community that meets the needs of all residents and implements a system of codes and regulations that leads to their preferred land use pattern. This initiative addresses Recovery Support Functions related to community planning, capacity building, and health and social services, particularly for vulnerable residents. Table 3.5 provides more detailed information about the specific actions and estimated costs associated with this initiative.

Table 3.5 Projects to Prepare the Community for Climate Change

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Develop an emergency preparedness plan including the Sidney High School Flood Monitoring Program.	Develop an emergency preparedness plan to address the needs of all residents using traditional approaches as well as web-based systems and social media. Support and expand the Sidney High School Flood Monitoring Program, which provides early warning information to Village residents and property owners.	\$150,000	Proposed	No

6 *Become a leader in watershed-wide planning for the Susquehanna Corridor regionally and model sustainable mitigation measures locally.*

The sheer intensity of damage that occurred in Sidney demands a transformational approach that requires its leaders and residents to become active in regional efforts to conserve and manage the Susquehanna watershed. Flooding in Sidney is not primarily a result of local actions. Every community in the massive Upper Susquehanna Basin watershed has a role in improving how the river and its tributaries handle extreme rain events. This is especially important in addressing the runoff that is impairing the magnificent Chesapeake Bay. As farming and other activities across the upper basin shed excess nitrates and phosphates water quality along the entire river corridor is compromised. Acting alone is not an option.

For the region to be safer, both watershed wide and local evaluations must be completed. Planned efforts by the USACE and NYS DEC to study the Upper Susquehanna Basin would build the scientific basis necessary to make wise choices regarding

hazard mitigation measures. As these plans and initiatives advance, the Village would focus in on its tributaries, especially the Weir Creek, which is prone to dangerous flash flooding to evaluate its health and how the Creek would perform in various intensities of flooding. Many other regional coordination opportunities exist, including the community based planning process advanced by the Chesapeake Conservancy called “Envision the Susquehanna” and the proposed NYRCR Regional River Initiative (see Section I Part 3 Relationship to Regional Plans.)

In order to advance the ambitious vision, achieve the strategies, and implement the projects described in Section IV the Village would need to build staff capacity and strategic partnerships. This approach addresses community planning and capacity building, infrastructure, and wise use of natural resources. Table 3.6 provides more detailed information about the specific actions and estimated costs associated with this initiative.



Gail Bounds!

The Chesapeake Conservancy is leading “Envision the Susquehanna.”

Table 3.6 Projects to Become a Leader in Watershed-Wide Planning Both Regionally and Locally

Project Name	Description	Estimated Cost	Proposed or Featured	Regional
Regional Susquehanna River Initiative	Participate in a two year regional river system initiative in Delaware, Tioga and Broome Counties as part of a regional collaboration to better understand stream conditions and build capacity to advance resilience projects at the local level.	\$3 million	Proposed	Yes
Develop a resilient land management framework.	Develop a resilient land management framework, including updated floodplain management laws; comprehensive plan, building and land use codes; designation of critical environmental areas; and subdivision and site plan regulations to increase safety and direct development to flood-safe locations.	\$70,000	Featured	No
Advance infrastructure improvements necessary to mitigate flooding and protect critical facilities.	Advance Village infrastructure improvements to mitigate flooding and protect facilities, including potential relocation of the water treatment plant and other facilities and public works projects to be identified.	\$7.5 million	Featured	Yes
Develop a tributary improvement plan for Weir Creek and other waterways.	Study the current health, pattern, profile, erosion potential, and capacity of the tributaries and their floodplains within the Village to support wise choices in future hazard mitigation investments.	\$50,000	Featured	No
Implement the NYRCR Plan and advocate for Susquehanna River initiatives.	Develop an organization to lead long-term recovery. Build capacity by hiring a regional resiliency coordinator and developing a formal relationship with Delaware County Soil and Water Conservation District. Through this organization cooperate Susquehanna Corridor communities, Delaware County agencies, and organizations to advocate for the Susquehanna River watershed issues. Participate in the joint USACE and NYS DEC Upper Susquehanna River Basin Watershed Assessment and Hazard Mitigation Strategy.	\$200,000	Featured	Yes



Susquehanna Greenway Partnership

Kayakers enjoy the Susquehanna by Fort Hunter in Dauphin County, Pennsylvania.



Riverlea Farm - High above the river, the new 165 acre new neighborhood would be mixed use, mixed income, and mixed age.



Section IV: Implementation - Project Profiles

Sidney is making a bold choice. They are stepping up, and offering a fresh start to families and seniors by transforming the high and dry Riverlea Farm into a neighborhood where they can rebuild their lives.

Introduction

Sidney is a small community with big plans, turning challenges into opportunities through collaborative local and regional partnerships, consensus around climate change, and sheer determination to keep residents safe and businesses resilient.

Building on a wealth of public input since the floods, Sidney enjoys strong support for all projects in the NYRCR Plan and broad consensus that the Village is on a path to continued success. The Sidney NY Rising Community Reconstruction Plan (NYRCR Plan) deepens and enhances planning begun in the Long Term Community Recovery Strategy (LTCRS).

During the NYRCR process, the Planning Committee identified and ranked economic, health and social services, housing, infrastructure, and natural and cultural assets. They evaluated and scored each asset based on the level of hazard, exposure, and vulnerability each faces in extreme weather. Many were found to be at high risk. Once the proposed and

featured projects were identified, the Committee used the scores, cost estimates, market analyses and identified community benefits to evaluate how feasible the projects are and how effectively they would reduce risks, once implemented.

The Planning Committee selected 20 proposed and featured projects, including 12 with regional impact. The projects are directly linked to the strategies and cover the entire range of Federal Emergency Management Agency (FEMA) Recovery Support Functions (RSFs). Cost estimates have been developed for all proposed and featured projects using quotes from vendors, traditional construction standards and multipliers for capital projects, and the cost of comparable local projects. Many of Sidney’s initiatives are programs rather than capital projects, requiring staff capacity instead of traditional operation and maintenance budgets. Detailed site selection, conceptual design, market assessment, program planning, and advanced graphic renderings were prepared for the Riverlea Farm Neighborhood and Sidney GreenPlain.



The fields at Riverlea Farm with silos in the distance.

Jan Law

Riverlea Farm Flood-Safe Neighborhood

Overview

The Planning Committee reviewed damage reports and studies, climate change projections, buyout patterns, and floodplain reform legislation. They inventoried their assets, evaluated risks, ran the models, and interpreted results. They heard from experts, talked to neighbors and, most importantly, they listened to each other. When all was said and done, the Committee came to the difficult conclusion that some neighborhoods at extreme risk simply cannot be protected from flooding.

Then the Village made a bold choice. They stepped up and committed any and all necessary support to offer a fresh start to families devastated by repeated flooding. They would seek to accomplish this by transforming the majestic Riverlea Farm, high and dry above the Susquehanna River, into a complete neighborhood where families and seniors can rebuild their lives (see Figure 4.1 and Figure 4.2). Their vision for relocation consists of six projects including:

- Acquire the Riverlea Property on Plankenhorn Road in the Town of Sidney, NY.
- Extend infrastructure to the Riverlea Neighborhood.
- Launch the Home at Riverlea Program (HARP) to encourage relocation from the Village's extreme risk neighborhoods.
- Develop a range of housing at Riverlea to meet identified community-wide needs.
- Develop Riverlea Civic Commons including a regional senior center, community center, and municipal facilities.
- Make Riverlea a resilient, green, and smart neighborhood.

A. Riverlea Farm Acquisition – Proposed Project

Project Description

There are very few alternatives for replacement housing in this densely settled village that are flood safe, given that most of the Village core is considered to be an extreme risk area. Some small, empty, developable sites are available for infill, but neighbors in the extreme risk areas say they prefer to stay together and, to the extent possible, recreate the character of their riverside neighborhoods. Riverlea Farm, which straddles the boundary between the Village and Town of Sidney along Plankenhorn Road and County Route 23, became the only reasonable alternative, and the Village executed an option to purchase the 165-acre property in October of 2013, for \$1.3 million. Once funding has been committed, the Village would begin the process of annexing the property, and would facilitate development under its Planned Unit Development (PUD) Standards.

Cost Estimate – Property acquisition is approximately \$1.3 million.

- **Community Benefits** – The Riverlea Farm Neighborhood project is expected to have a net positive benefit by safeguarding vulnerable residents; improving community livability, health, and wellness; and expanding the residential tax base as new people are exposed to Sidney, spend money locally, and may choose to make it their home.
- **Flood Safety** – Acquisition of the site would enable relocation of vulnerable seniors and low- and moderate- income families currently living in extreme risk areas adjacent to the Susquehanna River and Weir Creek. The lower terrace at Riverlea along the Susquehanna River would provide additional floodwater storage during extreme weather.

- **Environmental** – The use of extensive green infrastructure in the site design would work with nature to handle all storm water on site so that its development would not contribute to downstream Village flooding.
- **Economic Development** – The uses planned for the site represent a financially sound regional model of a complete and sustainable neighborhood. Retention of existing businesses and residents who would otherwise leave the Village, including the professional workforce of local employers, would have economic benefits for the entire community.
- **Public Support** – Riverlea Farm Neighborhood has received strong support in public meetings. In addition, the Village received positive feedback about the development at a public engagement meeting attended by 150 residents in January 2014. The Village has executed an option to purchase the property. Once the path to ownership is clear, the Village would formally annex the property, a process likely to take four months. The Town Board has formally endorsed the annexation for flood replacement housing. The Village would update its comprehensive plan to encourage flood-safe development in this area and would use its Planned Unit Development (PUD) standards to facilitate the project.
- **Cost Benefit Analysis** – The Riverlea Farm Neighborhood development is estimated to have a net positive benefit by safeguarding vulnerable residents; improving community livability, health, and wellness; and expanding the residential tax base. The acquisition costs are reasonable (at \$1.3 million, acquisition is less than 2% of total \$78 million development cost). A detailed development proforma was prepared for the Riverlea Farm Neighborhood project, which assumes a total of 120 developable acres at total development cost for all identified components of approximately \$78 million (a development cost of just over \$650,000 per acre.). The average development cost per square foot of all intended build out is \$135 per square foot. At full construction, Riverlea would yield a net increase in property assessment of just over \$42 million (net increase in assessment per acre of \$255,000), yielding new taxes per year of \$418,791. This proforma reflects that municipal uses are non-taxable and many non-profit uses including senior housing would be built under a Payment in Lieu of Taxes (PILOT) agreement.
- **Risk Reduction** – The Riverlea development generates significant direct and indirect risk reduction. Risk reduction for flood hazard would be 100% for residents who relocate to the new flood-safe residential areas at Riverlea, which is 90 feet above the river.
- **Regulatory Reviews** – A Generic Environmental Impact Statement (GEIS) would be prepared for the entire project addressing regulatory and permitting requirements of all involved agencies. The property would require New York State Department of Environmental Conservation (NYS DEC) storm water permitting, Phase 1 and/or 2 archaeology, environmental site assessment under the National Environmental Policy Act (NEPA) and coordination with New York State Historic Preservation Office (NYS SHPO).
- **Implementation Timeframe** – Implementation tasks include program design (1 month), screening (2 months), application review (2 months), and compliance monitoring (1 year).
- **Jurisdiction** – The Village of Sidney (post-annexation).

Figure 4.1: Conceptual Plan for Riverlea Farm Floodsafe Neighborhood



LAND USE LEGEND

	CIVIC
	SENIOR HOUSING
	NEIGHBORHOOD COMMERCIAL
	HOTEL / CONFERENCE CENTER
	SINGLE FAMILY COTTAGE (REAR LOADED) TOTAL LOTS = 63
	SINGLE FAMILY VILLAGE (FRONT LOADED) TOTAL LOTS = 54
	SINGLE FAMILY ESTATE (LARGE LOT) TOTAL LOTS = 48

INDEX OF KEY FEATURES

1	CIVIC CENTER
2	SENIOR HOUSING
3	FIRE / POLICE DEPARTMENT BUILDING
4	VILLAGE OFFICES
5	NEIGHBORHOOD COMMERCIAL
6	RIVERLEA COMMON
7	HOTEL / CONFERENCE CENTER
8	MARKET DRIVEN RETAIL
9	RIVERLEA GREEN
10	NEIGHBORHOOD GREENSPACE WITH GREEN INFRASTRUCTURE
11	RAIL TO TRAIL CONNECTION TO VILLAGE CENTER
12	TRAIL CONNECTION TO RIVER ACCESS
13	RIVER ACCESS ROAD
14	PICNIC PAVILION
15	FLOOD MITIGATION AREA
16	MULTI-PURPOSE ATHLETIC FIELDS
17	WALKING TRAILS WITH SCENIC OVERLOOKS
18	CANOE / KAYAK LAUNCH

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Figure 4.2: Aerial Perspective of Proposed Riverlea Farm Floodsafe Neighborhood



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DOH Oneonta District Office (ODO). NYS DOH would also be an involved agency for State Environmental Quality Review (SEQR) and may need to endorse a water withdrawal permit from DEC. Delaware County Planning Board approval would be required for the subdivision plan and for the site plans.

- **Implementation Timeframe** – The extension of infrastructure to the site would take nine months to complete, including three months for design and permitting and six months for construction.
- **Jurisdiction** – Village of Sidney (post annexation).

C. Village of Sidney Home At Riverlea Program (HARP) - Proposed Project

Project Description

Over the past 8 years, residents and other property owners in Sidney’s high-risk neighborhoods have taken advantage of various programs to relocate or flood-proof their homes. Based on past damage reports, buyout cases, changes at the current Amphenol Plant that may affect surrounding neighborhoods, and input from residents, the Committee concluded that the neighborhoods immediately north of the railroad tracks between Route 8 and Union Street are at extreme risk. In developing the Village of Sidney Home at Riverlea Program (HARP, a proposed project) the Committee has tried to identify unmet needs and design a program that fills those gaps, organizing a variety of incentives that can be combined and layered to help residents relocate to the Riverlea Farm neighborhood. Assistance to owner occupants who would like to be bought out, but do not wish to relocate to Riverlea, could also be available. This program would be completely voluntary. Funds would be prioritized as follows:

- **First**, residential owner occupants in the extreme risk area (100-year floodplain), especially vulnerable residents (seniors and disabled persons), whose property is identified for inclusion in the GreenPlain and who wish to relocate to Riverlea would be assisted.
- **Second**, vulnerable residents (seniors or disabled persons) living anywhere in the extreme risk area or another high-risk location in the Village who wish to relocate to Riverlea would be assisted.
- **Third**, residential owner occupants in the extreme risk area whose property is identified for inclusion in the GreenPlain, but who do not wish to relocate to Riverlea would be assisted.
- **Fourth**, residential owner occupants who live outside of the GreenPlain target area, but in the extreme risk area who wish to relocate to Riverlea would be assisted.
- **Other Relocation Options.** The Village could provide assistance to homeowners who would like to physically move their home (if structurally possible for a reasonable cost) including the cost of land, site preparation and infrastructure among other necessary expenses. Buyout of vacant land is also eligible either for cash payment or property swap for a parcel of land at Riverlea Farm. Assistance to residential investor owners may be made available after the needs of owner occupants are met.

The Village could work with local financial institutions to assist with refinancing or mortgage transfer to their new property. It could also explore mortgage matching programs whereby local employers offer matching grants for down payments or closing costs on new private mortgages.



Phase one includes 32 units of affordable senior apartments.

- **Commercial Buyouts.** Sidney would also work with Delaware County Economic Development to assist commercial property owners on an individual basis using a combination of local resources and various State programs available, including those through New York State Empire State Development (NYS ESD). Once residential needs are met, if further resources remain the Village may be able to assist some commercial and institutional partners.

Relationship to Other Assistance Programs. It is expected that residents would take full benefit of existing State and Federal programs and other potential sources of support before requesting assistance through HARP. There are two current New York State programs available directly to residents including the Hazard Mitigation Grant Program's Buyout and Elevation Programs, and the NY Rising Storm Recovery Programs. The FEMA Hazard Mitigation Grant Program (HMGP) is administered in New York State by the Office

of Emergency Management (OEM). It provides assistance that municipalities can use to buyout flood-prone property and integrate the property into a forever-green floodplain. The program also offers assistance to property owners who wish to elevate their homes. In the Village (at the time of publication) there are 34 parcels and 26 homes in the New York State Hazard Mitigation Grant Buyout Program and 11 properties in the Elevation Program. New York State developed the NY Rising Housing Recovery Program, which is also available to homeowners in the extreme risk area (100-year floodplain) to repair their homes (including reimbursement for some past repairs), mitigate damage, elevate, or have their property acquired or bought-out. Recently the Village hosted an open house with the Governor's Office for Storm Recovery where over fifty families were assisted to register for housing assistance.

- **Cost Estimate** – The estimate for the HARP program is \$3 million.

- **Community Benefits** – The project is estimated to have a net positive benefit on life safety, health and wellness, and the environment.
 - **Flood Safety** – By relocating dozens of families living in extreme risk areas of the Village the Riverlea development generates significant direct and indirect risk reduction. Low-income families and vulnerable seniors are targeted for relocation to flood safe replacement housing.
 - **Environmental** – Once residents are relocated from the extreme risk target areas the lands can be enhanced and restored as active floodplain, adding enormous capacity for flood storage. The enhanced Sidney GreenPlain would also improve water quality and create a beautiful restored landscape and habitat along the Susquehanna River.
 - **Economic Development** – The availability of buyout assistance and relocation incentives would help families to rebuild equity and economic security affected by multiple extreme flood events in a 5 year period. The vacated lands would be used as a site for new entertainment, recreation, and environmental education to attract residents and visitors and help restore the tax base. The GreenPlain area would link directly to the Main Street Core and direct visitors to Sidney’s small businesses.
- **Public Support** – Hundreds of residents have participated in meetings to discuss buyout and relocation needs. The Village conducted over 70 individual interviews with impacted residents. They coordinated an open house with Governor’s Office of Storm Recovery (GOSR) staff and helped over 50 families to register for relocation or elevation assistance programs. Public support for this project is very high.
- **Cost Benefit Analysis** – Relocation of residents, including vulnerable seniors, from extreme risk areas to completely flood-safe housing is essential to guarantee public safety. The Risk Reduction Division of FEMA has determined that the acquisition of a structure in the 100-



Planned senior housing would offer affordable apartments and on-site services and support.

year floodplain that costs less than or equal to \$276,000 is considered cost effective. Based on current cases the cost to buy out a property in Sidney’s target area is significantly less than \$276,000. At \$3 million, the cost to move people and structures to Riverlea is a fraction of the \$40 million cost estimated by the United States Army Corps of Engineers (USACE) in 2009 as required to construct a floodwall to protect the Village core.

- **Risk Reduction** – Once residents have been relocated they would face no risk of flooding. By creating an area for significant additional flood water storage, the HARP project also protects surrounding neighborhoods and potentially downstream neighbors. Buyouts would allow flooded areas to become open space, green areas of the Village that can store and slowly release floodwater, increasing the safety of nearby properties and downstream communities.
- **Regulatory Reviews** – In addition to CDBG-DR environmental review and release of funds requirements, a variety of reviews required under buyout programs would be necessary, including NY State Office of Historic Preservation (SHPO) review, as many of the potential buyout properties in the floodplain are also in the Sidney Village Historic District.
- **Implementation Timeframe** – Implementation steps include compiling case records (1 month), coordinating with Delaware County Planning Department (6 months), and completing property appraisals and other required steps (12 months).
- **Jurisdiction** – N/A.



The Village would benefit from a range of housing options.

Public Domain

D. Riverlea Farm Complete Community Housing – Featured Project

Project Description

The Village lacks suitable locations for new and relocated housing for families devastated by flooding in 2006 and 2011. Riverlea Farm Neighborhood would offer housing options for all income levels, including opportunities for senior housing, low maintenance senior cottages or patio homes, and a range of single family homes for young families and executive level professionals in a traditional hamlet-scale pattern. The community would offer a healthy diversity in a truly mixed-income neighborhood.

One of the many advantages of this traditional development pattern is that the focus of the homes is integrated with the public spaces. Locating the parking and garages to the rear through either rear access alleyways or detached garages creates the opportunity for houses to be closer to each other, bringing neighbors together on front porches, while they overlook community green space.

The first phase in affordable housing development would be 40 single-family homes and up to 12 relocated homes. In January 2014 the Village submitted an application for \$1.6 million to the New York State Affordable Housing Corporation (NYS AHC) for assistance to buy down the purchase price on the initial phase of 40 single family homes by an estimated average of \$40,000 per home for income-qualified homebuyers. Current plans include using specially designed modular units planned to fit a hamlet-scale neighborhood, which would be produced in an upstate New York factory. These homes include Energy Star rated components and use a high efficiency foundation system.



Senior cottages would have access to a range of amenities.

The senior housing offered would include mixed income rental and cottage options. The senior apartment component would include between 24 and 32 units of comfortable and accessible one- and two-bedroom apartments with a community room; 24 hour security; emergency call buttons; outdoor patios; access to support services; and organized transportation to events, activities, and appointments. This complex would use green materials to increase energy efficiency and reduce long-term operating expenses. The 20-40 unit senior cottage community would offer accessible, architect-designed modular cottages of between 700 and 1,000 square feet, with porches fronting a central green, shared patio

areas, and connections via walking trails to all of the Riverlea amenities. Seniors in both programs would have access to the community center for social gatherings and targeted programming, including wellness programming.

In discussion with residents, the Village found that some potential buyers interested in relocating to Riverlea are willing and able to pay market rate purchase prices with low or no additional financial assistance. The Village would work with the private real estate development community to facilitate development of these homes, offering limited assistance with closing costs or down payment if necessary. Residents report that the professional workforce from local employers, including Amphenol Aerospace, ACCO, and other companies, choose to live outside of Sidney because there is not an adequate choice of market rate and executive level housing in the Village. Although this housing would be completely market dependent, there is an opportunity to locate some at Riverlea to diversify the incomes in the neighborhood and support the tax base.

- **Cost Estimate** – The estimate for all types of housing at Riverlea is \$41 million over a 10-year build out period. This includes estimated costs for senior housing in apartments and cottages at \$10 million, single family affordable homes at \$6.4 million, market rate and executive homes at \$20 million, with an estimated \$4 million allocated to extend internal site infrastructure in support of the housing components.
- **Community Benefits** - The project would have a net positive benefit on life safety, health and wellness, and the Village's tax base. The compact development pattern reduces lawn space on many of the lots while enabling the community to share much larger beautiful green spaces that create a visual and recreational amenity that brings the community together and increases property values. These



Phase one includes up to 40 units of affordable single-family homes for families relocating from high risk neighborhoods.

interconnected green amenities would offer residents' areas to walk the dog, have a picnic, play ball on the playground, or sit quietly and read a book within a lush landscape. The senior housing project components have regional benefits, serving a 10-mile market area around Sidney including the entire Towns of Sidney and Masonville (Delaware County), Town of Unadilla (Otsego County) and the Towns of Bainbridge and Guilford (Chenango County) as well as several surrounding communities with a total year-round population of close to 18,000 people earning mostly moderate- to- low incomes.²⁶ The market support for the project is strong with a 5:1 coverage ratio. As a result, Riverlea Farm can offer both affordable and market-rate housing and a variety of services on a sliding scale basis.

- **Flood Safety** – By relocating dozens of families living in extreme risk areas of the Vil-

lage, the Riverlea development generates significant direct and indirect risk reduction. Low-income families and vulnerable seniors are targeted for relocation to flood-safe replacement single-family homes, patio homes, and senior apartments.

- **Environmental** – The design of this compact, tightly knit, and walkable residential area anticipates many of the various housing types to be situated on smaller lots to achieve the density necessary to sustain a viable mixed-use neighborhood and to conserve open green spaces for use in flood mitigation.
- **Economic Development** – The senior housing component would be staffed 24 hours per day and a range of services would be available to make sure that seniors without cars remain integrated

into Village life, helping support local businesses and retaining local jobs. Interest among market rate buyers opens the potential for the Village to partner directly with a developer and advance multiple components simultaneously. This approach is under active exploration. Under this scenario it is possible that the developer would purchase the property, rather than the Village. In support of this initiative, Sidney applied for \$1.6 million from New York State Affordable Housing Corporation (AHC) and would continue following up with this agency.

- **Public Support** – Hundreds of residents have participated in meetings to discuss buyout and relocation needs. Over 70 individual interviews were conducted with affected residents. The Village coordinated an open house with Governor’s Office of Storm Recovery (OSR) staff and helped over 50 families to register for relocation or elevation assistance. Public support for this project is very high.
- **Cost Benefit Analysis** – Multiple benefits are provided including health and social services with 100% flood-safe housing for seniors, allowing them to age-in-place as part of Sidney’s life-cycle approach to housing. The various housing components would create as many as eight full-time equivalent (FTE) jobs at the senior apartment complex, including professional, clerical, and janitorial positions. Assuming 50% of a construction cost is labor (\$20.5 million for full build out) and an estimated average salary of \$40,000 for the range of workers, the FTE employee job generation over the life of the build out would be as high as 512 construction period jobs. Indirect job creation is likely to be in the same range, as general contractors form supplier relationships with local companies.
- **Risk Reduction** – The Riverlea development generates significant direct and indirect risk reduction. Risk reduction for flood hazard would be 100% for residents who relocate to the new flood-safe residential areas at Riverlea, which is 90 feet above the river. Development of affordable senior housing and homeowner units as replacement housing for participants in buyout programs and others in vulnerable areas who wish to buy new homes or relocate their current dwelling would increase safety of vulnerable residents.
- **Regulatory Reviews** – Preparation of a site-wide GEIS would be completed in order to facilitate multi-phased development. As some federal funds may be used for pre-development tasks including subdivision, site plan, and Stormwater Pollution Prevention Plan (SWPPP) development, State Environmental Quality Review Act (SEQRA) and National Environmental Protection Act (NEPA) assessments, and overall coordination with the selected developer would be necessary. Any development on Riverlea would require Section 106 historic and archaeological resource review, an environmental site assessment, and a NEPA/SEQRA review.
- **Implementation Timeframe** – It is estimated that the single family affordable housing component could be completed within 24 months following funding, including six months for design and permitting and eighteen months for phased build-out. Construction of senior housing apartment units could continue on a parallel path with completion in 24 months. Construction of market rate components could advance within twelve months.
- **Jurisdiction** – Village of Sidney.



Riverlea Farm's iconic triple silos anchor a common green space with a new community duck pond.

E. The Riverlea Civic Commons – Municipal and Community Center - Featured Project

Project Description

At the core of the new community would be “Riverlea Commons,” a mixed-use center including new Village and Town municipal offices and a community and senior center (with the Boys and Girls Club) available to the Village and region, shared with a resilient new police station. Relocation of the Village’s main fire station is being considered.

A common green space would showcase the site’s history by preserving the farm’s iconic “triple silos” to overlook a new community duck pond. At the heart of the resilient community’s success would be the idea of connectivity. The pedestrian friendly mixed-use center would connect via sidewalks to the neighborhood’s green spaces, parks, trails, and

natural areas. Some neighborhood commercial services may be available, carefully scaled to complement rather than compete with the existing Main Street small business core. Mixing uses in a compact neighborhood that encourages walking and bicycling makes Riverlea a candidate for Leadership in Energy and Environmental Design Neighborhood Development (LEED ND) certification, and designation by the American Association of Retired Persons (AARP) as an Age-Friendly Community.

One integrated 25,000 square foot civic complex would be developed including approximately 10,000 square feet of municipal offices (including police services) and 15,000 square feet of community center space. The complex would be a green building, ideally LEED certified, which would reduce operating costs and increase sustainability. The community/senior center would be the center point of the Riverlea Common, providing large multi-functional gathering places for community events, a recreation

and fitness center, and abundant opportunities for enrichment activities and classes with a focus on cultural, technological, and community services for all ages. The fully accessible 15,000 square foot building would operate 7 days a week for 15 hours a day on weekdays, and 8 to 10 hours a day on weekends. It

would provide a basketball court/multi-purpose room for recreational activities, banquets, and dances; a stage with an audio-visual control room; a gym with exercise machines and free weights; locker rooms with showers; a workout/dance room with hardwood floors; two activity rooms for presentations, senior



A multi-functional senior center/Boys and Girls Club would be the center point of the Riverlea Common.

activities, arts and crafts, and company meetings/ retreats; a full commercial grade kitchen; library and multi-media technical center; and required general operation space. The center would also be designed to serve as an evacuation site, helicopter landing site, and emergency shelter in times of extreme weather, providing “near-absolute” life-safety protection to approximately 100 occupants in both flooding and extreme wind events, and during early relief and recovery.

Cost Estimate – The estimate for the Riverlea Civic Commons is \$5.8 million including approximately \$2.3 million for construction of a senior and community center component, \$3.1 million for construction of the municipal services and police facility, and \$500,000 for all site infrastructure in support of the complex.

- **Community Benefits** – The project would have a net positive benefit on health and wellness, emergency command and response, overall quality of life and the Village’s tax base. The community and senior center components would offer inter-generational programming that enhances the lives of all residents.
 - **Flood Safety** – Riverlea Farm is flood safe. The Village and Town Hall (which currently houses the Boys and Girls Club) and the main police station flooded badly in 2006 and again in 2011. This hindered relief and recovery and increased the risk to life and safety both for the general public and for first responders.
 - **Environmental** – The new mixed-use community would take the form of a “traditional neighborhood” comparable to the desirable fabric of many existing Village neighborhoods, built at a relatively high density to conserve open and green spaces.



The community center would be a center point of the Commons.

- **Economic Development** – Construction of the community center would draw existing local and regional residents who would shop locally and provide new revenue to local businesses. Relocation to a flood-safe location would save the Village and Town scarce resources making repairs to facilities following extreme weather. Including these important community amenities would enhance the marketability of the residential components and help to complete the community.
- **Public Support** – The municipal facilities and police station were damaged in both 2006 and 2011 flood events and the community strongly supports their relocation.
- **Cost Benefit Analysis** – The various civic components would relocate as many as 45 municipal and community service jobs at the Village and Town and at the Village Police Department. The Boys and Girls Club would retain six FTE and expand services by creating an additional three FTE and generate opportunities for youth to be employed as after school and summer camp counselors. Assuming 50% of the construction cost is

labor (\$2.9 million for all components) and an estimated average salary of \$40,000 for the range of workers, the full-time equivalent employee job generation would be as high as 73 construction period jobs. Indirect job creation is likely to be in the same range, as general contractors form supplier relationships with local companies. The market analysis for the community/senior center, based on typical Boys and Girls Club operating budgets, establishes that it may earn a small profit under the preliminary evaluation, assisting the Village to cover maintenance of enhanced trails and linkages to the downtown core. Opportunities also exist to consolidate some Village and Town functions and to share services in the new facility.

- **Risk Reduction** – In both 2006 and 2011 flooding events a range of municipal services were impacted and disrupted. This resulted in delays in emergency response and inefficient relief and recovery. Relocating the offices of the Village and Town, police services, and community center to Riverlea Farm would reduce the risk completely to these facilities for any flood event. The center would also be designed to serve as an evacuation site, helicopter landing site, and emergency shelter.
- **Regulatory Reviews** – Preparation of a site-wide GEIS would be completed in order to facilitate multi-phased development. Any development on Riverlea would require Section 106 historic and archaeological resource review, an environmental site assessment, and a SEQRA review.
- **Implementation Timeframe** – This project is estimated to take 18 months, including six months for design and permitting and 12 months for construction.
- **Jurisdiction** – Village of Sidney.

F. Make Riverlea a Resilient, Green, and Smart Neighborhood – Featured Project

Project Description

In addition to the compact neighborhood’s interconnectivity, the community also would promote its resiliency and sustainability by integrating green infrastructure to handle all of the development’s storm water management. This is possible due to the neighborhood’s layout, as it is organized around a network of green spaces. The central green space, “Riverlea Green,” provides both a visual and physical connection to the mixed-use center. This primary green space, as well as several other green spaces throughout the community, offers a rich range of diversity. The neighborhood overlooks the property’s lower terrace, which also offers multiple benefits. At the bottom of the nearly 90-foot wooded slope, the lower section of Riverlea Farm connects the site to the beautiful Susquehanna River. This area comprises open fields and pockets of woods, offering an excellent opportunity for both passive and active recreation.

The development approach provides for several community amenities including picnic areas, walking trails, nature overlooks, a canoe/kayak launch, as well as multi-sport fields for active recreational uses. The site also offers an opportunity to link Riverlea Farm to the heart of the Village Center by creating a multi-use path along the historic rail bed that runs through the site and connects to the Village center. In addition, the 35-acre lower terrace’s connection to the Susquehanna River’s floodplain offers the opportunity to create additional flood storage and mitigation areas. These mitigation areas would be designed depressions planted with native species that grow in these types of environments, allowing for increased flood storage and buffering while also

stabilizing the streambank, addressing water quality and filtering sediment.

Planning for Riverlea would evaluate use of green building and green energy to provide power, making it more sustainable and ensuring that critical facilities can recover more quickly from extreme weather. The scale and mix of uses at Riverlea make the option of developing a small-scale solar microgrid possible, yielding more reliable energy to power critical

- **Community Benefits** – The green infrastructure components are estimated to have a net positive benefit by reducing flooding, restoring water quality, and increasing health and wellness. Opportunities exist to partner with the Sidney Community Foundation, the Rotary Club, or other nonprofit organizations to develop active recreation facilities like playing fields and passive recreation assets, including walking trails.



A small-scale solar microgrid could power critical facilities.

facilities, reducing carbon emission, and reducing operating costs particularly for affordable homes, municipal services, and senior apartments.

- **Cost Estimate** – The estimate for the green space, green infrastructure, and green energy components is approximately \$4.1 million. This includes estimated costs for internal site infrastructure and green spaces of \$1.5 million, development of riverside mitigation area and recreation amenities at \$2.5 million, and \$85,000 for a study to determine the feasibility of creating a solar microgrid at Riverlea Farm.

- **Flood Safety** – The new neighborhood would incorporate green building and green energy techniques to increase sustainability and resiliency in the face of extreme weather. Development of green infrastructure and recreation fields on Riverlea Farm’s 35-acre lower terrace can serve as upstream flood storage to reduce the impact of flooding on immediately adjacent structures and potentially the hamlet core downstream.
- **Environmental** – The inclusion of green infrastructure at Riverlea Farm, throughout



Delaware County Conference Center is a potential later phase anchor.

the development and on the lower terrace would enhance and protect the river's floodplain, improve water quality, and remove sediment that would allow the River to flow more efficiently past the densely settled village core.

- **Economic Development** – The opportunity to generate green energy could significantly reduce energy costs for the mostly low- and moderate-income residents moving to Riverlea Farm in the early phases. Creating a physical trail linkage to the Village core would create opportunities for safe walking, hiking, and biking and make a direct connection between the neighborhoods and Village shopping district.

- **Public Support** – Public support for this project is very high.

- **Cost Benefit Analysis** – The mitigation areas would become a valued amenity to the community and provide the opportunity for interpretive signage to educate the public on the benefits of green infrastructure for storm water management and flood mitigation. All components would use green building techniques and, potentially, green energy, reducing operating costs and long-term maintenance expenses. The potential solar microgrid would yield more reliable energy to power critical facilities, reducing carbon emission, and reducing operating costs particularly for affordable homes, municipal services, and senior apartments.

- **Risk Reduction** – The compact development and consolidated green spaces provide the space needed to integrate bio-swales and bio-retention areas, which function as aesthetic rain gardens, accepting all of the community’s storm water runoff. The runoff from the neighborhood’s streets, alleys, driveways, sidewalks, and rooftops can all be directed to these green infrastructure systems, further exemplifying the community’s sustainability. These constructed mitigation areas could potentially provide an additional 120,000 cubic yards of flood storage, while providing ecological benefits and environments for wildlife habitat.

- **Regulatory Reviews** – Preparation of a site-wide GEIS would be completed in order to

facilitate multi-phased development. Various forms of green building practices and green energy sources are being incorporated into the project. Because they are yet to be determined, it is unknown what regulatory requirements might apply.

- **Implementation Timeframe** – The development of site amenities would occur as various phases of the build out progress. The green infrastructure feasibility study could be completed in nine months. Construction of recreation resources on the Riverlea lower terrace can be completed in 12 months with design and permitting taking 3 months and construction taking 9 months.

- **Jurisdiction** – Village of Sidney.



Aerial photo showing location of Riverlea Farm in the Town of Sidney, NY.



The Sidney GreenPlan works with nature to safeguard the Village core.

Work with Nature to Realize the 140-Acre “Sidney GreenPlain”

Surviving a flood, and importantly, bouncing back quickly is all about the little things. Inches here and fractions there, over a large floodplain, is what makes a difference. Sidney’s GreenPlain project reinforces the concept that every community in the watershed is connected to every other community. It shows that even the smallest village can make a significant impact on regional flooding by taking every step it can to be more resilient. The GreenPlain can be a model for regional partners, helping to envision the Susquehanna as a national treasure rather than a force to be controlled. If each community does its part reducing storm water runoff, exploring opportunities to relocate vulnerable populations, and creating additional flood storage wherever feasible, as the NYRCR program advocates, then this region, this watershed, and, by extension, the entire State would become safer and more flood resilient, “drop in the bucket” after “drop in the bucket.”

Focused less on the 500-year event, under which significant damage is unavoidable, Sidney’s GreenPlain controls what it can year after year, and season after season. It can divert storm water runoff from the Main Street area – where inches make the difference between water filling the now empty basements versus ruining finished first floor spaces and valuable inventory. It can receive, hold, and treat the millions of cubic feet of floodwater that collect in

the Amphenol Plant. And it can do all of this within a beautiful landscape that restores habitat; uses natural measures to protect stream banks and corridors; and provides safe public access to the waterways, recreation, education, and entertainment that would attract visitors and lead to positive economic impacts.

The Village came to the difficult decision that it cannot protect its most vulnerable neighborhoods and began exploring opportunities to move residents to higher ground and use the vacated land for the greatest public good possible: protection of other neighborhoods from the impact of flooding. The 165 acre Riverlea Farm has been optioned for possible floodsafe replacement housing. Leaving the vacant floodplain unused would always be a reminder of what was lost, instead of what was gained. The Planning Committee and the Village envisioned the GreenPlain at a scale grand enough to make a meaningful difference to the community, the watershed, and the environment as a whole.

This initiative includes three projects:

- Designing, assembling and building a 140-acre Sidney GreenPlain.
- Making the GreenPlain a community and regional asset for recreation and education.
- Developing the Sidney Waterfront Entertainment, History, and Environmental Education Center, making the GreenPlain a national model for watershed resiliency education.

Figure 4.3: Conceptual Plan for Sidney GreenPlain



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* THIS AREA IS NOT INTENDED TO HOLD WATER BEYOND THE FLOOD STAGE; AS THE FLOOD RECEDES, THIS AREA WILL DRAIN AS WELL.



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Figure 4.4: Perspective of Proposed Sidney GreenPlain



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Cross section showing the Susquehanna River at the Sidney GreenPlain.

A. Design, Assemble, and Construct the 140-acre Sidney GreenPlain - Featured Project

Project Description

The GreenPlain itself is comprised of four distinct mitigation areas that each would have the ability to function independently, while forming one contiguous system. The four mitigation areas include the Amphenol Mitigation Area, the Neighborhood Mitigation Area, the Performing Art/Environmental Education Center Mitigation Area (located primarily on the riverfront, on Sidney Community Foundation property), and the Industrial Park Mitigation Area on the west side of Route 8. These areas, in combination with the area of the existing Keith Clark Park, make up the approximately 140-acre Sidney GreenPlain (see Figure 4.3 and Figure 4.4).

The GreenPlain's mitigation areas are designed to provide additional flood storage for both the Susquehanna River and Weir Creek by creating a series of meandering channels that connect to larger depressed storage areas. These areas would be seeded and planted with native trees and shrubs, including edible varieties if possible, that would, overtime, restore the forested floodplain, maximizing the area's ability to store, clean, and reduce storm

water runoff that removes sediment. Mitigation along the Weir Creek would help to restore its ability to carry floodwater (conveyance capacity) and reduce flash flooding. The GreenPlain would provide an additional 12 million cubic feet of flood storage in the floodplain, the equivalent of a swimming pool the size of a football field that is 20 stories deep.

The mitigation areas would also restore the Weir Creek's edges (riparian corridor), the unique plant community that thrives along and stabilizes the edge of the creek, while adding additional flood storage. The restored creekside would incorporate small channels within the creek. These braided channels would slow the water moving through the system, allowing sediment to drop out of the water and build up the natural stream bed, while adding oxygen to the stream and supporting fish and other water life. Collectively these measures would enhance the health of Weir Creek and its ability to handle larger storm events. They would slow flow and reduce the amount of soils and sediments that wash into the Susquehanna River.

The GreenPlain depends on access to property, consensus among many partners, and a phased, incremental approach. It is a long-term project requiring the patient support of the community, and many State and Federal partners, but it would

yield big benefits and risk reduction. The Village is exploring many partnerships to assemble, conserve, and interpret the GreenPlain, including initial conversations with local and national land trusts, including the Delaware Conservancy and the Trust for Public Lands, as well as higher educational institutions. These partners bring resources, but also a wealth of knowledge that would help promote the GreenPlain attributes and establish it as a national model. This creative approach to financing redevelopment allows the Village to direct more resources to the core task of relocating residents to safe locations. Other partners would step in as various components are ready to come on line. The Village can begin by acquiring and beginning work on the 62-acre property owned by the Community Foundation immediately adjacent to the Susquehanna River, and with green retrofits at Keith Clark Park. As buyouts and relocations occur, the target area can slowly be integrated into the system, respecting that some users and residents may stay in the short term.

- **Cost Estimate** – The cost to design, acquire and construct the Sidney GreenPlain is estimated at just over \$22 million. This includes \$90,000 to complete evaluation and design, \$5 million to acquire and conserve the sites, and \$17 million to create all phases of GreenPlain buildout over a ten-year timeframe.
- **Community Benefits** - The Village would give over one hundred acres of land back to the natural floodplain, reducing risks village-wide, while improving floodplain function, reducing damage to the Village core and protecting residents.
 - **Flood Safety** - Working with the U.S. Army Corps of Engineers the Village would be able to examine the risk reduction of various GreenPlain components in

detail. By relocating residents from the GreenPlain lands, the community’s first responders would no longer be called on to evacuate areas prone to dangerous flash flooding.

- **Environmental** - The conceptual design proposes the creation of a series of wetlands and ponds that would help slow and clean the runoff coming under the railroad tracks. This channel drains a large portion of the south side of Sidney. This restored wetland, stream and pond complex would help reduce the rate of runoff coming from the south side of the railroad tracks, helping to reduce flood waters reaching the Susquehanna River and downstream. Improvements to wildlife habitat would include not only the additional naturally vegetated area, but also the enhanced quality of water discharged into the Susquehanna.
- **Economic Development** - The GreenPlain would provide over 12 million cubic feet of volume for flood water. Enhancing storm water storage capacity should reduce runoff during severe weather events and protect all property owners from losses. To the degree possible, reuse strategies and hazard mitigation measures for the current Amphenol Aerospace plant and expanded use of the Village Industrial Park would reap economic benefits. Adaptive reuse of the Amphenol Aerospace facility as part of the GreenPlain would provide opportunities to reduce impervious surfaces and add green infrastructure, reducing runoff significantly.



Andy Bohne

The Sidney GreenPlain Waterfront Entertainment, History, and Environmental Education Center.

- **Public Support**—Restoration and enhancement of the GreenPlain has received strong support in community workshops.
- **Cost Benefit Analysis** – The GreenPlain is estimated to have a net positive benefit by reducing flooding, restoring water quality, increasing health and wellness, attracting visitors, increasing local spending on provisions and outdoor recreation products, expanding jobs, and attracting visitors. Rather than revisit expensive plans to wall off the Village from its waters, Sidney devised a sophisticated system that can be built gradually over time as land and financial resources allow. In 2010 the USACE estimate for construction of a floodwall to protect the Village was in excess of \$40 million dollars without considering design, engineering, and acquisition. Preliminary estimate for just construction of the GreenPlain is \$17 million, less than half the cost.
- **Risk Reduction** – The GreenPlain would help to minimize the amount of sediment from entering the streams and river, improving water quality and keeping the streams functioning properly. When sediment from construction sites, farming and residential neighborhoods is deposited in streams, the streams' capacity to convey storm water efficiently is reduced. This was a significant contributing factor in the level of damage in both the 2006 and 2011 floods, and is also a contributor to the range of impairments affecting the Chesapeake Bay.
- **Regulatory Reviews** - Preparation of a site-wide GEIS would be considered in order to facilitate multi-phased development. Assembly, acquisition and conservation of all GreenPlain lands would require various reviews including subdivision of parcels, site plan and Stormwater Pollution Prevention Plan (SWPPP) development, SEQRA and NEPA assessments and overall coordination. Design development of the GreenPlain would require Section 106 historic and archaeological resource review, an environmental site assessment, and a NEPA/SEQRA review. As the GreenPlain would involve some development on the banks of natural waterways, review by the U.S. Army Corps of Engineers (USACE) would be required, as would the NYSDEC Article 15 permitting process. Given its location in the floodplain, the project would likely impact wetlands and require NYSDEC permitting under Article 24, the Freshwater Wetlands Act.
- **Implementation Timeframe** - The Village secured a grant from New York State Department of State (NYS DOS) through the 2013 Consolidated Funding Application (CFA) competition to conduct the preliminary design for the GreenPlain. This is a first step in applying for Green Infrastructure Grant Program funds through the New York State Energy Research and Development Authority (NYS ERDA.) The assessment focuses on advanced site analysis and development of sufficient information to demonstrate project feasibility, including alternatives analysis and conceptual site plan. Acquisition of available property is estimated to take 12 months. Parcels coming through the various buyout programs would happen incrementally over 24 months with construction in the neighborhood mitigation area completed in 24-36 months.
- **Jurisdiction** – Village of Sidney.



The Waterfront Entertainment, History, and Environmental Education Center.

B. Make the GreenPlain a Community and Regional Asset for Recreation and Education - Featured Project

Project Description

In addition to providing more flood storage and mitigation, the GreenPlain is intended to become a valuable asset to the Village, its neighbors, and the region, offering a variety of opportunities for recreation, education, entertainment, and economic development. It would be designed to lessen the impacts of storm water runoff occurring during normal rainfall events and coming from the impervious Main Street area and other surrounding commercial and industrial sites. This can be accomplished by diverting the storm water from these areas, which currently directly discharges into the Susquehanna River, to the GreenPlain, where the runoff would be stored and allowed to infiltrate over time.

The proposed riverfront trail and recreation area would provide recreation opportunities for all ages. The main trail would be handicapped accessible, allowing use by the very elderly, the disabled, and families with small children. A separate trail with a higher speed limit and more challenging terrain would be considered to allow athletes, teenagers, and commuters in a hurry to get more of a workout. The school physical education curriculum could be expanded to include sports such as snowshoeing and cross-country skiing to encourage winter use as well as warmer weather walking, biking, and rollerblading. Educational and environmental partners can use the GreenPlain to educate the public about climate change, healthy ecosystems, green infrastructure techniques, and resiliency.

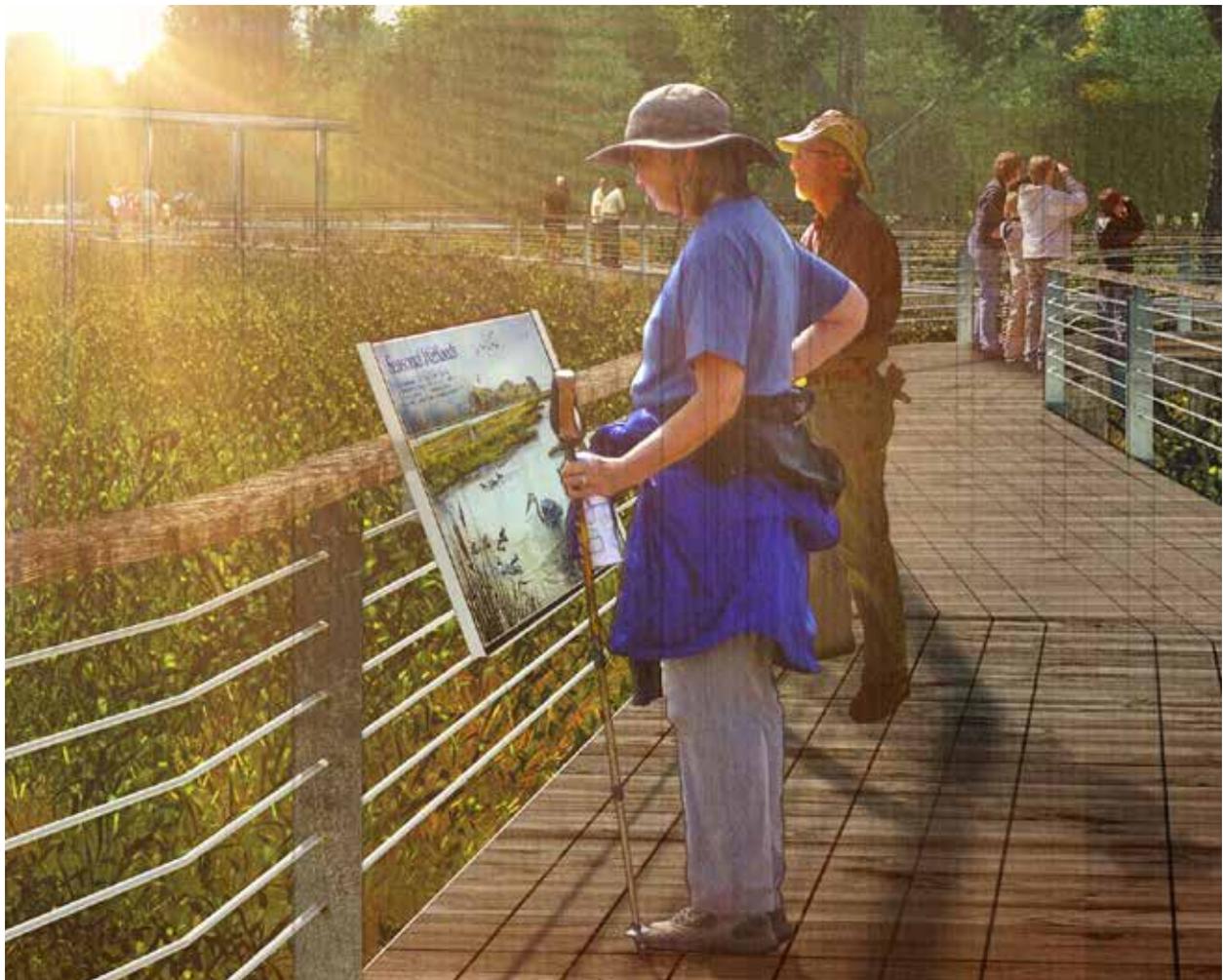
A recreation survey and master plan would be undertaken by the Village among physical education teachers, coaches, athletic trainers, health-care

providers, medical and public health professionals, and recreation professionals as well as residents to decide what facilities and programs they would like to have available in Sidney. The Village would establish a referral center, which would bring volunteers willing to teach and mentor others in active outdoor pursuits such as kayaking and canoeing, hunting, fishing, hiking, orienteering, geocaching, and bird watching. The cost of special sports equipment and clothing, transportation to a venue, and participation fees are barriers to some. The Village and school district can work together to fund this program.

The proposed riverfront trail and recreation area would provide recreation opportunities for all ages. The main trail would be handicapped accessible,

allowing use by the very elderly, the disabled, and families with small children. A separate trail with a higher speed limit and more challenging terrain would be considered to allow athletes, teenagers, and commuters in a hurry to get more of a workout. The school physical education curriculum could be expanded to include sports such as snowshoeing and cross-country skiing to encourage winter use as well as warmer weather walking, biking, and rollerblading. Educational and environmental partners can use the GreenPlain to educate the public about climate change, healthy ecosystems, green infrastructure techniques, and resiliency.

- **Cost Estimate** – The cost estimated to build the recreation amenities and trails throughout



Learning about the GreenPlain.

the GreenPlain is \$2 million. The cost to develop and promote a community education curriculum in partnership with environmental groups is estimated at \$110,000.

- **Community Benefits** - Development of passive recreation assets, including walking trails, wetland walks, and interpretative signage, scenic overlooks, picnic areas, and connections to the river walk help make Sidney a healthier community.
- **Flood Safety** - Sidney accepts that flooding is inevitable, but costly damage and destruction from flooding is not. No longer would human habitation compete with nature, but both river and streams would be allowed the space they need to spread out into areas where people, infrastructure, and community investments would not be in danger.
 - **Environmental** - The GreenPlain would act as a living demonstration area that can be used to help study storm water impacts and educate the community on how the natural ecosystem functions during different storm water events. While celebrating that balance, the GreenPlain can also educate the public on the impact they can have as individuals on storm water management, and provide guidance about what they can do to help (minimizing impervious cover, directing down spouts to rain gardens, minimizing the use of road sand in the winter, respecting encroachment limits to stream and wetlands, etc.).
 - **Economic Development** - Once the GreenPlain is constructed, other neighborhoods and the Main Street, in addition to being safer, would be located adjacent to a 100-acre plus park and recreation area. It is generally accepted that residences near parks can be worth as

much as 20% more than other residences. Study after study has shown walking and biking trails to be assets to communities in multiple ways, improving public health, increasing home prices, attracting “new economy” workers, even reducing crime and public infrastructure costs. A walkable community is also more attractive to tourists. The GreenPlain recreation amenities, along with those that would be enhanced at Keith Clark Park would draw local and regional families to the area who would also support the nearby small businesses on the Village’s Main Streets.

- **Public Support** – Public support for this project is very high.
- **Cost Benefit Analysis** – The GreenPlain would become a community and regional recreation asset by incorporating trails, canoe launches, playing fields, and other opportunities for outdoor activities. The promotion of lifelong physical activity would be a part of the Village of Sidney’s policies for a more sustainable community. They would pursue agreements with the school district to use the GreenPlain for recreation and educational opportunities. A 2011 study by the University of California at Berkley found that having parkland nearby significantly reduced children’s risk of overweight and obesity when they reached age 18.²⁷ Many studies, including the 2013 report by the Outdoor Industry Association, recognize the significant economic impact of recreation, reported to be an over \$650 billion dollar industry. In 2010 the Outdoor Foundation found that recreation uses consistent with the GreenPlain, including running, jogging and trail running, are the most popular activities and generate over \$56 billion in annual revenues. The study shows that interest in sustainability and eco-tourism/adventure tourism, and in agro-tourism and the local food movement are

positive travel trends consistent with Sidney’s approach.

- **Risk Reduction** – Through careful planning and design the recreation components of the GreenPlain can enhance its **risk reduction** benefits and model best practices for the design and development of recreation areas that can withstand periodic flooding with minimal damage.
- **Regulatory Reviews** - Preparation of a site-wide GEIS would be considered in order to facilitate multi-phased development. Because the development of recreation amenities would parallel the GreenPlain construction, additional reviews and permitting is not anticipated.



The GreenPlain would incorporate recreational activities.

- **Implementation Timeframe** - It is anticipated that improvements to make Keith Clark Park more resilient can begin as soon as funding is available with timeframe for implementation dependent upon design. Initial design can be completed in six months. The development of trails on the Sidney Community Foundation property would be an early goal if acquisition can be secured. That component is estimated

to take six to nine months with design and permitting taking three months. Other recreation components would be phased in as construction advances over time phases.

- **Jurisdiction** – Village of Sidney.

C. Develop the Sidney Performing Arts and Environmental Education Center - Featured Project

Project Description

The largest mitigation area within the GreenPlain is the Performing Arts & Environmental Education Center Mitigation Area, located on a 62-acre piece of vacant farmland owned by the Sidney Community Foundation. The Performing Arts/Environmental Education Center would be constructed resiliently above base flood elevation, open on all sides, enabling the site to flood during major storm events without causing significant damage (and meeting FEMA’s requirements for construction on land bought-out through federal programs.) Surrounded by the constructed natural environment of the mitigation area, visitors would walk nature trails and experience wildlife along wetland boardwalks and scenic overlooks, while reading interpretive signage about the ecological benefits of green infrastructure and sustainable floodplain management. The site would provide access to the Susquehanna River while directly connecting to the existing river-walk and Keith Clark Park.

The resilient Performing Arts and Environmental Education Center and amphitheater would host both large and small events while demonstrating green technologies and sustainable site practices. These measures would include LEED Certified buildings, solar technologies, rain gardens, porous pavements, and reinforced grass parking areas. The site could also

Susquehanna Greenway Partnership



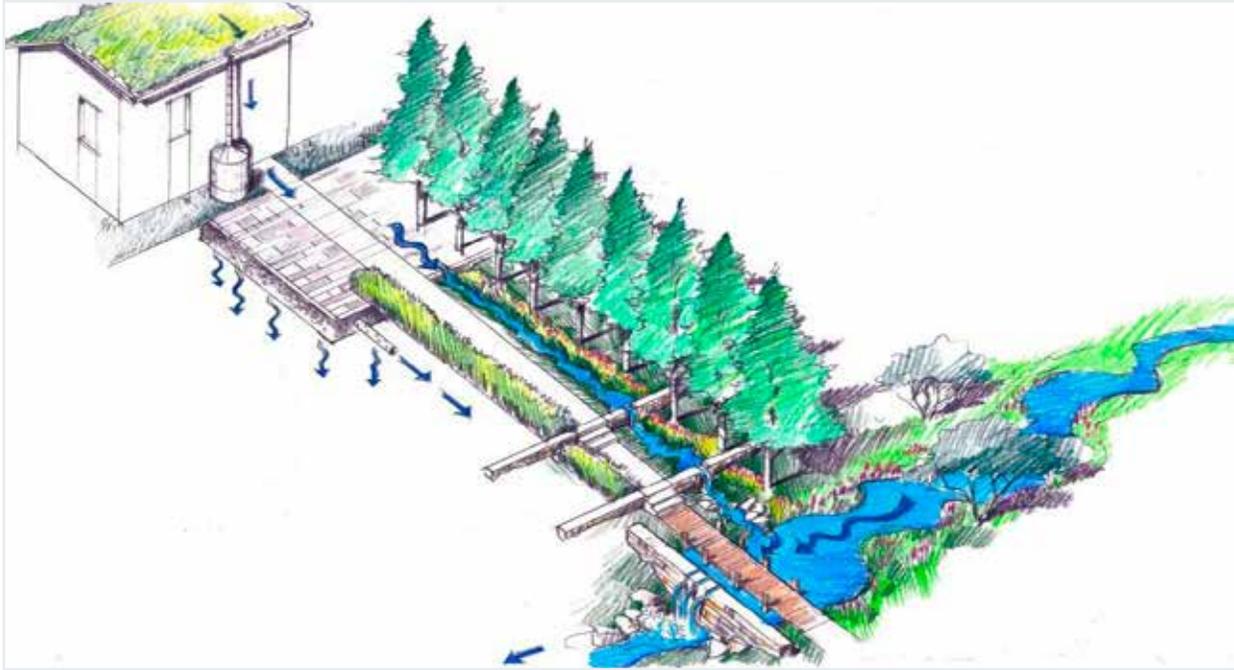
New festival and event area at the GreenPlain.

promote edible forest areas within the GreenPlain that would educate and promote healthy sustainable lifestyles and produce marketable products and small business opportunities for specialty products. These amenities collectively could create a dynamic and resilient educational, recreational, and entertainment facility and become a tremendous asset to the community and the region.

The center itself would provide a destination for out-of-town visitors, and the option to stroll or bike along a pleasant river greenway from the theater to the restored Main Street adds interest and increases the chances that visitors would extend their stay in Sidney rather than getting right back on the highway after attending an event. It works the other way as well: a trail between Village neighborhoods and the entertainment complex would enhance its connection to the community. Residents can walk to events, relieving congestion and reducing the need

for parking; parents can allow kids to ride their bikes to children's programs. Both personal motivation and an accessible destination must be available to encourage active recreation and the GreenPlain offers both, making Sidney a healthier place.

- **Cost Estimate** – The estimated cost for the Performing Arts/Environmental Education Center and amphitheater is \$9 million.
- **Community Benefits** - The property is located between Route 8 and Main Street, where it can be an attractive gateway to the Village. It can also be an important regional attraction with greenways and sidewalks providing direct connections to the Village's shops and eateries, leading to investment and reinvestment in the downtown.



Ni Village

Diagram shows a number of ways to mitigate storm water, many of which are recommended for the Sidney GreenPlain.

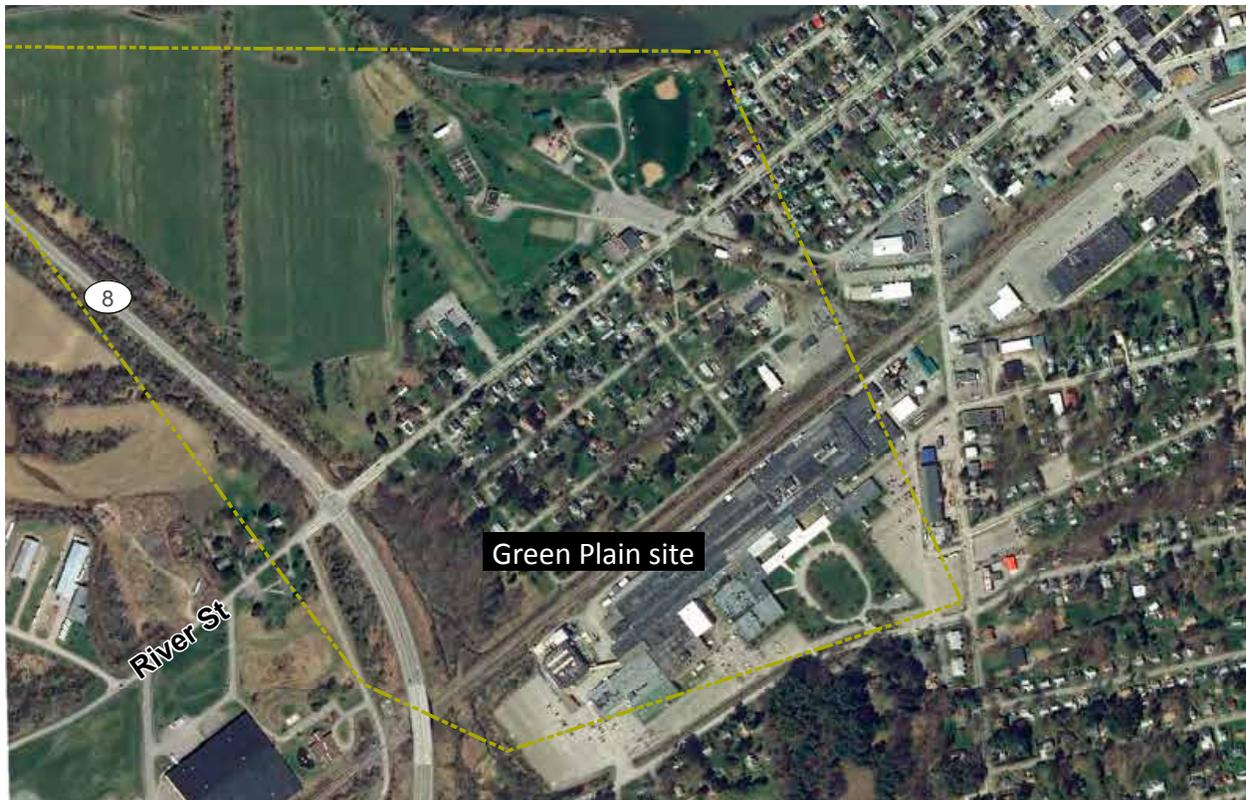
- **Flood Safety** - The Center would be designed to flood safely. It would not impede floodwater or the flow of debris.
 - **Environmental** - The Center would be developed to blend with and enhance the natural setting using green design, sustainable materials and green infrastructure.
 - **Economic Development** - Development of a waterfront entertainment complex, history, and environmental center is intended to draw tourists and use the riverside floodplain for recreational purposes.
- **Public Support** – Public support for this project is very high.
 - **Cost Benefit Analysis** – There are no large entertainment venues between Tioga Downs (75 miles to the southwest) and the Saratoga Performing Arts Center (110 miles to the northeast). An amphitheater in Sidney might be expected to draw patrons from the entire region as well as offering entertainment opportunities to enhance the quality of life for local residents. The recovery of New York State’s tourism economy continued to expand in 2012, according to the I Love NY Program, growing 6.2% after an 8.3% expansion in 2011. As a result, traveler spending reached a new high of \$57.3 billion. In the Catskills region, which includes Delaware County, tourism is a \$1 billion industry accounting for 15% of all employment. While there are no visitor projections for Sidney, it is clear that capturing additional visitor spending with a focus on recreation and nature tourism has a strong potential that would have both direct and indirect benefits for local businesses.
 - **Risk Reduction** – Though the Center itself would not serve a risk reduction role, it would be designed to minimize damage and represent a model of sustainable and safe use of enhanced post-buyout open space which can include recreation, preservation, cultivation, grazing,

camping, event space, public facilities open on all sides, and public restrooms that are wet floodproofed according to FEMA standards.

- **Regulatory Reviews** - The Sidney Waterfront Entertainment, History and Environmental Education Center would be addressed in the site-wide GEIS. In addition, providing road access to the project would require a highway access and work permit from the New York State Department of Transportation (NYS DOT), and a new on-grade railroad crossing, which must undergo an extensive safety evaluation and review by multiple agencies. The Center site plan would be subject to review and approval by the Delaware County Planning

Board, and if sewer or water service extensions are needed, plan approval and a possible water supply permit modification would be required from NYSDOH Oneonta District Office.

- **Implementation Timeframe** - The site renderings locate the center on the Sidney Community Foundation land which is currently vacant. The center can advance as soon as the basic GreenPlain infrastructure on that site has been constructed. Pending funding availability the center could be designed in nine months and constructed in six.
- **Jurisdiction** – Village of Sidney.



Aerial photo showing location of the proposed Sidney GreenPlain.

Sidney Works!

The Sidney Works! Project actively integrates green infrastructure into streetscape design, ensures safe emergency access to major employers, and evaluates strategies for the reuse of Amphenol Aerospace's existing plant in the floodplain.

Much of Main Street has flooded in recent extreme weather events. In 2006, downtown Sidney between the railroad tracks and the river was evacuated as the waters rose. The flooding was deepest and damages the worst on Willow, Maple, Oak, Winegard, Bridge, and River Streets. Many commercial buildings in the Main Street business district were flooded to three feet above the ground floor elevation. In 2011, the basements of Main Street businesses were flooded, but the water did not reach into the first floors as it had in 2006. Many building owners and business owners along Main Street say that they would likely continue operations if the extent of the flooding can be contained to the basements of their buildings in future flood events. This establishes a local standard by which the quality, feasibility, and impact of flood mitigation projects or policies can be measured. The planned evaluation of green infrastructure on a major scale would be measured against this standard. This initiative has three projects project has three components including:

- Design and construct Sidney “Green Streets.”
- Evaluate reuse strategies for Amphenol Aerospace plant.
- Provide safe emergency access for key employers.



Sidney streetscape today.

A. Sidney Green Streets - Featured Project

Project Description

The Village is committed to design and construct a system of “Green Streets” and to maintain and advance a multi-modal walkable downtown guided by LEED Neighborhood Development Standards, with site design and historic buildings that incorporate green infrastructure to handle storm water more effectively.

The streetscape design component would include design of all infrastructure and streetscape amenities including storm water management, improvements to increase general safety and overall walkability in the downtown, the street furnishings package, and the landscaping. Design elements would include pre-design (survey, storm water analysis and possibly geotechnical study); schematic design (concept plans, public meetings, steering committee meetings); and design development (selection of materials, colors, construction methods, detailed construction estimate). This would likely include construction of storm water improvements, granite curbs, enhanced pavement, sidewalks and crosswalks; and installation of decorative street lighting with banners and



Sidney Green Streets would incorporate green infrastructure designed to handle storm water more effectively.

hanging baskets, a street clock, wayfinding signage, information kiosk, and benches.

A number of green practices would be featured in Sidney's Green Streets. Incorporating sidewalk bumpouts at key intersections would provide areas for integrating urban rain gardens into the streetscape. Rain gardens are planted depressions that allow storm water runoff to be filtered through vegetated soils and absorbed into the ground, recharging the water table, reducing runoff to nearby water bodies, and improving water quality. Curb inlets provide openings to send storm water into the rain gardens. Street trees play an important role in the community forest, including absorbing and slowing storm water and reducing air pollution. Merchants feel that additional parking in the Village core would help to increase the base of shoppers and make it easier for visitors to be oriented to the community, but there

are limited opportunities to add to the on street parking inventory. Parking in the rear of buildings can create a more cohesive feel to the Village's streetscape and expand the supply of parking, as well as providing a place for business owners and workers to park. If excellent signage, lighting, and pedestrian connections can be maintained this approach would also be in compliance with the Americans with Disabilities Act (ADA) and accessible to visitors. As Sidney focuses on becoming a more pedestrian friendly environment it would try to establish a "park once" mentality where people walk between multiple destinations on Main Street and the rest of the core.

It is widely accepted that, to the greatest degree possible, while maintaining the integrity of the existing Main Street business district, the location of future new development in the Village core would be best directed outside of extreme and high hazard areas.

A possible future location for the new Village Square could be at the triangle created by the convergence of West Main Street and East Main Street. Future infill development could extend Main Street development uphill surrounding a new “Village Square,” creating a dynamic mixed-use pedestrian-friendly community center, which would also function as a visual and physical gateway into downtown Sidney. The new urban core could integrate Sidney Plaza into the fabric of the development by sharing parking areas and reconfiguring access.

- **Cost Estimate** - The cost for the Sidney Green Streets Program is \$1.6 million.
- **Community Benefits** - In interviews and focus groups, current commercial building and business owners indicated that if future floodwater “stayed in the basement” their desire for immediate relocation might be allayed. The program would employ a range of green streets techniques intended to work in conjunction with other flood mitigation measures in the Village, which would be designed to collectively contribute to the reduction of flood elevations enough to reduce the risk of floodwaters entering the first floor of businesses on Main Street.
- **Flood Safety** - As reported, the Village Main Street flooded seriously in 2006 and again in 2011 resulting in millions of dollars of damage to the Villages small business base. The plan to gradually shift the core north to a new Village Square created at West and East Main would reduce flood impacts and business losses over time.
- **Environmental** – This approach is not only sustainable, but also attractive. The downtown improvements would also develop new parking using pervious pavements. By modeling cleaner and greener practices and building to LEED-

ND standards the Strategy is consistent with Southern Tier Regional Economic Development Council priorities. With the first phase of streetscape design and construction already funded by the NYS DOS, Sidney would reduce impervious pavement, introduce green infrastructure, and leverage the funds businesses have already invested to recover.

- **Economic Development** - The rain gardens along Main Street can also provide opportunities for outdoor art displays and interpretive signage to enhance the business district and promote the Village’s efforts and commitment to becoming a more flood resilient and sustainable community. The complementary development of a Business Improvement District would allow for a range of improvement and marketing programs that can enhance and protect the historic character of the area. Protecting these properties and increasing their value balances the tax base loss from residential properties being bought out through various federal, state, and local initiatives, and the relocation to higher ground of some commercial operations.
- **Public Support** – Public support for this project is very high.
- **Cost Benefit Analysis** - The Green Streets Program is estimated to have positive net benefits including generating jobs, restoring tax base, creating new supplier relationships, and further enhancing Sidney’s reputation as a regional center of commerce. Streetscape improvements benefit merchants and leverage private sector reinvestment in flood damaged properties. The Village would work with private property owners to donate easements, construct compatible improvements, and coordinate



Curb drainage.



Rain gardens.

landscaping that enhances the designs. During visioning sessions, business owners and residents alike have called for improving the visual appearance of the downtown business district. They recognize the project as a potential generator of jobs and tourism dollars as well as a source of community pride. Improving the core would make significant contributions to Sidney’s quality of life. Other communities have found such projects to be important in restoring a tax base and a local economy that has been damaged by disaster losses.

- **Risk Reduction** – The Village has requested that the U.S. Army Corps of Engineers (USACE) update the studies completed in 2010 to evaluate the impact of the GreenPlain, Amphenol Aerospace relocation, and buyouts. Until that time, the installation of green infrastructure would help the core to resolve flooding more quickly and minimize damage and disruption. This evaluation would form the basis for considering flood mitigation measures including determining the potential risk reduction benefits of the proposal to construct a berm or low floodwall around the historic North End of the Village.
- **Regulatory Reviews** - The component would involve site development and would therefore be subject to the usual regulatory

review requirements for property alterations and development. In addition to typical environmental review they may require subdivision and site plan review by the Delaware County Planning Board, Stormwater Pollution Prevention Plan (SWPPP) review and State Pollutant Discharge Elimination System (SPDES) permitting. A Highway Work Permit would also need to be obtained from NYS DOT prior to the commencement of work in the state right-of-way. Examples of activity in the right-of-way include constructing new or modifying existing driveways, altering drainage ditches, stream restoration/mitigation, and storm water management activities that may impact the state right-of-way.

- **Implementation Timeframe** - The Village has received a funding commitment from New York State Department of State (NYS DOS) under the 2013 Consolidated Funding Application (CFA) process for \$575,000 to design and construct phase one of a two phase Streetscape Enhancement Project. Phase one of the Main Street Revitalization Strategy would focus on the approximately 950 linear foot section between River Street and Division Street, roughly half of the village core and would be completed in 12 months. A second

phase of streetscape investment would address the streetscape between Division Street and the railroad tracks (and is estimated at \$1.6 million.) It is anticipated that both phases could be completed in 24 months. The Village of Sidney would advance the implementation of the 2013 grant and NYS ESD studies for a Business Improvement District, which would be completed in six months.

- **Jurisdiction** – Village of Sidney.

B. Reuse of Amphenol Aerospace Plant - Proposed Project

Project Description

Amphenol Aerospace, a division of Amphenol Corporation, and its predecessor companies, have maintained active manufacturing operations in the Village of Sidney since 1925. Amphenol is one of the largest manufacturers of interconnect products in the world for the military, commercial aerospace, and industrial markets. The current Amphenol facility is located along Weir Creek north of Delaware Street, south of the Delaware and Hudson (D&H) Railroad, west of Union Street, and east of State Route 8. At this location, the D&H Railroad acts as a barrier for floodwaters from the Susquehanna River near the Amphenol facility. During high flood events, the complex is protected from the Susquehanna River flooding by flap gates on the Weir Creek culverts under the railroad. These gates failed to close in the 2006 floods and during Tropical Storm Lee, and the plant quickly filled with floodwaters.

After Tropical Storm Lee, the Company faced more than \$20 million in damage for the second time in five years and Amphenol decided to relocate to a safer site. A package of incentives was developed to facilitate the relocation. On November 30, 2011 Governor

Cuomo announced that “Funding will be directed to the Delaware County Industrial Development Agency and would help offset costs associated with site acquisition, building construction, extension of a natural gas line to both the existing facility and new facility, and construction of a levee around the existing plating facility. The incentive package is being funded by Empire State Development, Empire State New Market Corporation, and New York State Homes and Community Renewal’s Office of Community



Amphenol Aerospace temporary berm.

Amphenol Aerospace

Renewal.”⁷⁷ In February 2014 Delaware County Industrial Development Agency awarded a grant of \$750,000 for the construction of a natural gas pipeline from the proposed Constitution Pipeline to Amphenol Corporation’s existing facility as well as to the new plant, which is scheduled to be occupied in the summer of 2014.

The Village recently directed its consulting engineer to evaluate the temporary flood mitigation measures the company put into place in preparation for Hurricane Sandy as part of a strategy to determine whether the current Amphenol Plant can be safely reoccupied or redeveloped. Working with Amphenol and the Delaware County Industrial Development Authority, the Village would facilitate an evaluation of the reuse options for the current plant. Hiring a consultant to evaluate the site and identify potential

users would enhance and focus current marketing efforts and help the Village to determine which would be the most strategic mitigation measures to pursue in conjunction with the GreenPlain development.

Cost Estimate - The estimated cost of this proposed project is \$100,000.

- **Community Benefits** – It is important that the Village understand the potential reuse options for the plant in order to select the most strategic mitigation measures, and in order to design the GreenPlain with knowledge of the needs and opportunities at the Amphenol site.
 - **Flood Safety** - As part of the evaluation of reuse opportunities for the current Amphenol Aerospace plant the Village would determine the risk reduction benefits associated with the current temporary berm that company constructed around the existing Delaware Avenue facility in 2012.
 - **Environmental** - Adaptive reuse of the Amphenol Aerospace facility using green street and development approaches could provide opportunities to reduce the significant amount of impervious surface and add green infrastructure in the Amphenol Plant parking lot.
 - **Economic Development** – Amphenol Aerospace is the Village’s largest employer and it has made a significant investment in the community through construction of its new facility. Supporting its continued

success is important to the Village and the many local workers the company employs.

- **Public Support** – Public support for this project is very high.

- **Cost Benefit Analysis** – The Amphenol facility has flooded severely twice in the past eight years and the Company is unwilling to continue to occupy the site. If the site is to be reused it must be redeveloped resiliently. The planned study is necessary to understand the alternatives for reuse and the costs associated with various potential alternative scenarios. Given the strategic importance of the site and its history as a cornerstone of the Village’s tax base, the commitment of \$100,000 for a reuse strategy is a reasonable investment.
- **Risk Reduction** – It is necessary to evaluate the impact of the GreenPlain’s development on flooding at the Amphenol facility. If the enhanced floodplain can accommodate floodwater displaced from the site by the Amphenol berm such that it causes no additional flooding in adjacent neighborhoods, reuse of the plant may be feasible. In addition, appropriate hazard mitigation measures added to the Amphenol Aerospace facility site may help make reuse possible.
- **Regulatory Reviews** – The project is a study; therefore no regulatory review is required.
- **Implementation Timeframe** - This project can be completed in six months.
- **Jurisdiction** – N/A.



Sheri Youngs

ACCO Brands USA Earth Fest event.

C. Emergency Access at ACCO Brands USA Facility - Proposed Project

Project Description

ACCO Brands USA (ACCO), employs over 700 people in Sidney and is the Village's second largest employer. It is one of the world's largest suppliers of branded school and office products, and occupies a large facility in Sidney's industrial Park. Although the ACCO facility was not flooded by Tropical Storm Lee in 2011, lack of secondary access to their site meant significant business interruption as their existing road access was under floodwater and the plant was closed for four days, idling its over 700 employees and recording business disruption that cost the company significant revenue. The risk of Weir Creek tributary flash flooding leaves the plant subject to isolation in extreme events creating disruption and potentially trapping employees in the facility or in the parking area.

The Village would begin by working with ACCO to design safe emergency access by assisting with construction of a secondary road connection. The

secondary access road would begin at Delaware Avenue and run northwest approximately 940 feet to the parking lot at the west side of the ACCO plant. The roadway section would consist of two 12-foot lanes with 6-foot shoulders. Coordination with the railroad owner would be required to establish the at-grade crossing of the railroad track.

Cost Estimate - The estimated cost of this featured project is \$260,000.

- **Community Benefits** - Ensuring that its hundreds of workers are able to safely come and go, even in extreme weather, is an important priority.
- **Flood Safety** - The project would provide a secondary emergency access drive to the ACCO facility which would facilitate evacuation for workers in the event of flash flooding. It addresses a critical life safety concerns and ensures that first responders would be able to access the property during relief and recovery.

- **Environmental** - The Village would evaluate whether the use of green infrastructure, especially pervious pavement, at the ACCO parking lot and main access driveway would help address the length of time floodwater stands around the facility blocking access.
- **Economic Development** - ACCO is one of Sidney's largest employers and supporting its continued success is critical to the community. Avoiding losses and worker displacement allows the Village to recover more quickly from extreme weather events.
- **Public Support** – Public support for this project is very high.
- **Cost Benefit Analysis** - The ACCO facility suffered business disruption following Tropical Storm Lee. Assisting the Company to gain safe secondary emergency access is an important priority for the Village and the budgeted project is a reasonable investment.
- **Risk Reduction** – If secondary access can be provided to the plant, business disruption would be reduced and employees would be able to return to work more quickly.
- **Regulatory Reviews** – The component would involve site development and would therefore be subject to the usual regulatory review requirements for property alterations and development. In addition to typical environmental review it may require subdivision and site plan review by the Delaware County Planning Board, Stormwater Pollution Prevention Plan (SWPPP) review and SPDES permitting. Provision of a secondary access to ACCO Brands USA is likely to require a Highway Work Permit, and also a railroad crossing, which must undergo an extensive safety evaluation and review by multiple agencies.
- **Implementation Timeframe** - Design could require significant consultation with the railroad and take as long as 12 months. Construction can be completed in six months.
- **Jurisdiction** – Village of Sidney.



Aerial photo showing location of Sidney's Main Street, Amphenol Aerospace site, and ACCO Brands USA facility.

Parsons

Sidney Safe Neighborhoods

Over 400 properties were damaged in Tropical Storm Lee, and over 40% of Village residents are vulnerable to a 100-year flood event. The Village has low vacancy rates for both rental and sale properties located outside the extreme risk areas. Where homes are available, they are not affordable to the average Sidney family. The extreme risk neighborhoods in the Village’s 500- and 100-year floodplains have deteriorated physically and lost value since 2006. Between those properties in the various buyout programs, and those vacant or abandoned, some Sidney residential streets are largely empty and raise serious concerns for long-term viability. Other neighborhoods that flooded, like the North End Historic District, are still largely intact, but remain unprotected.

In order to remain a balanced community, more diversity in housing is needed, including well-managed rental housing, affordable starter homes, independent senior apartments and cottages near services and retail, assisted living for seniors and the disabled, and high-end homes for upper management and professionals. The Sidney Safe Neighborhoods project lays the groundwork for continued residential development and infill construction throughout the Village, building on new flood-safe housing to be constructed at Riverlea Farm. The Sidney Safe Neighborhoods project offers housing options and homeownership assistance, incorporating best practices in sustainable growth and energy conservation to meet the needs of current and future residents and rebuild the community and the tax base. This initiative has two projects including:

- Evaluate the feasibility of constructing a berm to protect the Village’s North End from floodwaters.
- Continue to develop new affordable housing in the Village through the Restore Sidney Grant Program and encourage local workers to live in Sidney.



ACCO Brands USA employees help with clean up.

A. Evaluate the Feasibility of Constructing a Berm to Protect the Village’s North End - Proposed Project

Project Description

The potential positive impacts of the proposed GreenPlain have been discussed, and the feasibility of constructing a berm or low floodwall to protect the Village’s North End is proposed for additional evaluation. The United States Army Corps of Engineers (USACE) evaluated a number of potential strategies to protect the Village of Sidney in studies undertaken in 20087, 20098, and 20109. These studies were influenced by the desire to protect the Amphenol Aerospace plant in its current location. Though numerous options were identified and found to be feasible, none had moved forward before Hurricane Irene and Tropical Storm Lee hit in 2011.

Since that time Amphenol Aerospace has almost completed construction of a flood-safe plant at a new location and has built a berm around its current facility. Many buyouts have occurred in the surrounding neighborhood and many others are planned. New options for flood-safe replacement housing have been identified and the GreenPlain is being designed.

Property owners throughout the Village core are eligible for rehabilitation and for elevation assistance from the Governor’s Office of Storm Recovery. However the North End historic neighborhood and the area east of Union Street remain unprotected and may benefit from construction of a berm.

Though the hazard mitigation measure has not been designed, some local residents believe that the berm may only need to be three or four feet in height, offering important protection without isolating the neighborhood from the riverbank or damaging the context of this National Register listed Village of Sidney Historic District. The process to advance design of the potential berm includes identifying properties that could be protected, and using existing

contour mapping to prepare a conceptual layout with cross sections to illustrate the relationship to existing buildings and neighborhood features (in scale, appearance, height, etc.) and to estimate construction costs. The feasibility of incorporating a river walkway on the berm would also be evaluated. This constructed mitigation measure could be linked to the GreenPlain which would accept floodwater displaced by the berm. Since the Village would pursue USACE certification of the flood mitigation measure, it would be necessary for the USACE to complete additional study. The cost to construct the berm is not known at this time. The Village would like to advance preliminary evaluation of this project if funds become available. This measure, combined with elevation of structures under the NY Rising Housing Recovery



Paducah Kentucky floodwall interprets the area’s history.

James Hawkins

Program, reduces risk in the historic district, protects an intact single-family neighborhood, and maintains an active residential core to support downtown businesses.

Under the NY Rising Housing Recovery Program, homeowners in the floodplain who suffered damage may now elevate their properties. New York State Historic Preservation Office (SHPO) assistance is available to owners of historic properties to help them elevate without ruining the historic character of the home and its relationship to other historic properties in the neighborhood. Completion of a building inventory and architectural survey would help identify the best candidates for elevation.

- **Cost Estimate** - The estimated cost of this featured project is \$30,000.
- **Community Benefits** - Protecting the Main Street core, through the GreenPlain, a berm, property elevations, or other measures is essential to save the primary small business district and the existing supply of affordable housing. Main Street and the surrounding streets in the Village Historic District is a mixed-use area with many residences, often large, older, and historic homes. While some of these properties have been converted into multiple apartments, a number remain as single-family homes.
- **Flood Safety** - Accomplishment of the major hazard mitigation project to construct the Sidney GreenPlain, whether in tandem with a North End berm or not, may have considerable risk reduction benefit to dozens of Village structures. As part of the update to the USACE study, the Village has asked for an evaluation of whether these mitigation measures would be effective and affordable.

- **Environmental** – Any planned mitigation measure resulting from the study would be designed to enhance the Village’s North End neighborhood environment. Integration of walking trails as part of any protective measure would help maintain the link between the Village core and its riverfront.
- **Economic Development** – A residential area close to a downtown mixed commercial district is a desirable neighborhood and puts “feet on the street” to support small businesses. The integration of multi-family housing in the downtown core could offer tremendous benefit to Main Street businesses due to the increased residential density within walking distance, but only if they can be located and constructed to be resilient.
- **Public Support** – Public support for this project is high.
- **Cost-Benefit Analysis** – The cost of the study is a reasonable investment to determine a course of action to protect the Village’s historic core. The cost-benefit evaluation of any identified mitigation measure, following established USACE standards, is yet to be determined.
- **Risk Reduction** – For those residents who choose to remain in the floodplain, programs are available to rehabilitate, flood-proof, and elevate structures which would reduce risk. The future viability of housing in the Village core would be greatly influenced by the implementation of major hazard mitigation projects including construction of the Sidney GreenPlain and construction of a low berm around the North End which, taken together, could significantly reduce risk to many of the remaining hamlet residences by reducing base flood elevation



New housing with traditional character.



Riverlea housing at hamlet density.

- **Regulatory Reviews** – The project is a study and therefore regulatory review is not required.
- **Implementation Timeframe** – The implementation strategy for this project includes partnering with the USACE to reevaluate the 2009-2011 flood mitigation studies and evaluate the feasibility of a low floodwall or berm around the North End. It would be important that this evaluation include all ongoing operations and maintenance costs that the Village would have to meet. The project is ready to begin if funding is available. It is estimated that this study could be completed in 12 months.
- **Jurisdiction** – N/A

B. Sidney Safe Neighborhoods Grant Program - Featured Project

Project Description

The Sidney Safe Neighborhoods Grant Program builds on the available incentive programs to assist homeowners in other Village neighborhoods with rehabilitation or elevation. The Village’s major employers have identified an anticipated turnover in

workforce, beginning immediately. The opportunity for residents to both live and work in the Village is important to economic development and to creating the kind of close-knit community Sidney has traditionally been. Understanding the housing interests and needs of new employees would enable the Village to maximize the number of new workers who live in the Village.

The next stage of the housing rehabilitation process would address rental properties and create incentives for new residents to redevelop flood damaged properties, providing up to \$50,000 through direct grants and forgivable loans. In the core and throughout the Village, new affordable rental housing would be developed as a transitional step to homeownership. Based on careful evaluation of the possible mitigation measures already mentioned, it may prove possible to encourage second story service or residential uses above Main Street buildings, at least in the short term. If determined to be safe, the integration of second story residential apartments can help add to the affordable housing inventory, though they should not be housing for vulnerable populations, such as seniors.

This program would also offer purchase price buydowns on new housing or assist with down payment and closing costs. The Village can reach

out to local financial institutions to create mortgage-matching programs where savings by low- and moderate-income homeowners are matched by the banks and credit unions up to a set amount, helping buyers to raise down payments and banks to meet their obligations under the Community Reinvestment Act (CRA). When funding is available the Village would match contributions from the homebuyer, employer, and financial institution up to \$5,000.

- **Cost Estimate** - The estimated cost of this featured project is \$3 million.
- **Community Benefits** - The project offers a number of important benefits to the community including expanding housing choice to create incentives for the private and non-profit sectors to develop a full complement of single-family homes, townhomes and apartments in floodsafe locations. By encouraging relocation to Riverlea for seniors Village-wide, some turnover in housing can be expected, opening up opportunities for young families to buy starter homes. All of these interventions help adjust the “jobs/housing balance” where more workers from the Village’s considerable manufacturing base, including professional staff would find and choose a home in the Village.
- **Flood Safety** – Sidney Safe Neighborhood grant program would support the resilient reconstruction of Sidney’s residential areas and upper stories of downtown buildings. The program would create incentives for local workers to buy or build floodsafe residences as infill throughout the Village.
- **Environmental** – A concentrated focus to preserve and elevate the historic North End properties protects an irreplaceable part of Sidney’s heritage and character.

- **Economic Development** - Protecting the Village’s walkable and compact hamlet core by supporting rehabilitation or infill on vacant land in a resilient way expands housing choice and helps stem population loss. The program would also offer incentives for the use of green building design and green materials so homeowners and businesses can reduce their energy costs and reinforce the Village’s identity as a smart and sustainable place. The assistance would be in the form of forgivable loans to income eligible homeowners or investor owners.

- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** - The Sidney Safe neighborhoods project would have a positive net benefit on the community by restoring the residential tax base; helping community members to rebuild equity in their homes; making buildings floodsafe through elevations; and attracting new residents to the community, especially young families. According to the Village, over 400 buildings were devastated by Tropical Storm Lee effecting 42% of the Village population. The need to restore what is left and to add new housing is critical and affects the jobs/housing balance; workers prefer a community where they can live, and residents would like shorter travel distances to work if development can occur in a sustainable fashion that is compatible with community character.
- **Risk Reduction** – By offering grant support and incentives the program helps close the affordability gap for many residents, enabling them to buy a safe home outside of the extreme risk area.

- **Regulatory Reviews** – The project is a study and therefore regulatory review is not required. the project can be completed in 24 months or sooner, based on demand.
- **Implementation Timeframe** – It is estimated
- **Jurisdiction** – N/A.



Riverlea residential areas would be connected to public gathering areas.

Public Domain

Sidney's Ready!

Sidney's Ready! focuses on development of an emergency preparedness plan that educates community members so that they are ready to handle extreme weather, establishes a local framework for emergency response, and supports the Sidney High School Flood Monitoring Program. The initiative has one project:

- Develop an emergency preparedness plan (EPP) and website that integrates the work of the Sidney High School Flood Monitoring Program.

A. Develop an Emergency Preparedness Plan and Web Site that Integrates the Sidney Flood Monitoring Program - Featured Project

Project Description

The Village does not have an emergency preparedness plan that municipal officials, residents, and businesses can use to prepare and guide them in planning for various stages of relief and recovery. The Village's plan would identify preparedness tasks and identify equipment or supplies necessary to enhance their ability to properly respond to extreme weather. The Village would develop a companion web site to host emergency preparedness information, provide real time access to relief and recovery information, and create an Internet based system using email, Facebook, and Twitter to update residents and businesses during a flood or extreme weather event. A well designed and maintained website would increase government efficiency by reducing time spent answering routine questions and providing basic information and forms. It would create a central place to assemble, organize, and disseminate emergency preparedness information, emergency response and operations plans, making them available outside

office hours and from remote locations. During and after a disaster, the website would inform citizens of where to turn for help and how to navigate the maze of requirements for obtaining relief.

The Plan would also outline a system of notifications that would be used to provide real time information and warning to residents and property owners. Sidney would employ multiple techniques including telephone, Reverse 911, text message, and Facebook, since receiving information from multiple sources appears to increase resident response.

As part of the Emergency Preparedness Plan (EPP), the Village would support expansion of the Sidney High School Flood Monitoring Program, which provides early warning information to Village residents and property owners. As a case study, the Village would encourage students to work with a neighborhood that has a direct tributary discharge and monitor flows during an existing storm event. Working with the neighborhood, the program could explore where storm water peak flows can be reduced by creating rain gardens to collect roof run off, cutting curbs to direct storm water into bio-swales, and by the deployment of other green infrastructure practices. New information would be gathered about stream flow rates and compared to the baseline data. This information would then be shared with the community through presentations and a webpage linked to the Village's new website.

Cost Estimate - The estimated cost of this featured project is \$150,000.

- **Community Benefits** – The project is estimated to have a net positive benefit to health and safety, by improving the efficient delivery of emergency services and recovery support. A well designed and maintained website would reduce time spent answering routine questions and providing basic information and forms. The project would have a net positive benefit on community safety, protection of public



Sidney High School

Students in the Sidney Flood Monitoring Program examine collected sediment.

assets and of private property. The various components taken together would strengthen community infrastructure, increase emergency service capability, and reduce health and safety risks to residents and visitors during a disaster. Building capacity by supporting an organization to spearhead implementation of projects would enable the Village to plan for, respond to, and implement projects directly related to flood recovery, reducing damage and costly repairs to public and private properties. Developing an EPP and website are the key components of keeping residents safe and minimizing threats to life and property.

- **Flood Safety**—Life and health are protected by helping to ensure that residents are prepared for extreme weather and alerted in real time, especially to the risk of flash flooding. Sidney has a significant number

of vulnerable residents, as reflected in high rates of poverty, an aging population, an increase in female-headed households, and a growing number of large families. To reach these residents and integrate them into the emergency response system, the Village would conduct comprehensive outreach to vulnerable residents and their advocates, assess the needs of the populations, and develop a detailed plan of action as part of the emergency preparedness plan. Including the Sidney Flood monitoring program in this process has the co-benefit of strengthening inter-generational bonds.

- **Environmental** – The Sidney Flood Monitoring Program has extensive experience in stream monitoring and evaluation. Engaging them as community

instructors helping neighborhoods to tackle hands on projects puts them in a leadership role and, in an accessible way, disseminates new information about green infrastructure and the environment.

- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** - The project would increase preparedness, improve the effectiveness of alerts and notifications, improve coordination between first responders and the public and improve efficiency during the relief and recovery phases. All of these benefits increase the likelihood that residents would survive extreme weather events and recovery more quickly.

- **Risk Reduction** – The project generates indirect benefits based on improved emergency preparedness planning, increased awareness and improved safety of residents in the event of severe weather, and an expanded flood-monitoring program. When residents are better prepared, first responders are safer and more efficient.
- **Regulatory Reviews** – The project does not require regulatory review.
- **Implementation Timeframe** – The project can be completed in six months.
- **Jurisdiction** – N/A.



Sidney High School

The Sidney High School Flood Monitoring Program provides real time flood warning and information.



Students monitor Sidney's tributaries.

Sidney High School

Delaware Susquehanna Compact: Advancing Implementation of NYRCR Projects

Sidney has decided to put itself forward as a partner in regional planning efforts in support of the Upper Susquehanna River Basin watershed. Whether the discussion is local, Tri-Town, County, State or watershed-wide, the Village grasps the importance of speaking with one voice. Sidney supports the Chesapeake Conservancy's efforts to develop a shared vision of the Susquehanna that meets the needs of all member communities. Given the level of flood damage and disruption Sidney has faced, it is critical to be part of management and conservation efforts. Sidney's response to restore the floodplain and facilitate relocation requires many partnerships, and the Delaware-Susquehanna Compact is a strong start. Key to advancing the Village's position, however, is the need for capacity and local staff support. This initiative has five projects including:

- Implement the NYRCR Plan and Advocate for Susquehanna River Initiatives
- Develop a Resilient Local Land Management Framework

- Create a Hazard Mitigation Program Fund
- Develop a Tributary Improvement Plan for Weir Creek and other waterways
- Advance the Susquehanna Regional River Initiative

A. Implement the NYRCR Plan and Advocate for Susquehanna River Initiatives - Featured Project

Project Description

Sidney would create a long-term organization devoted to implementation and financing of the NYRCR projects and LTRC initiatives and provide staff enhancements to deliver projects. As Sidney recovers and rebuilds, many of the projects would continue to evolve. Some would require further planning, analysis, and design. New projects may be identified and developed. The timetable for implementation would be adjusted frequently, would rely on opportunities as they present themselves, and in some cases, on available funding and technical assistance. The new organization could take the



Sheri Youngs

Sitting by the Susquehanna River.

form of a Local Development Corporation (LDC), the mission of which would encompass recovery needs across a variety of sectors and strategic partnerships with community based organizations like the Sidney Chamber of Commerce or nonprofit housing development agencies. This new organization can also assist the Village with its general mission to support economic development and advance existing projects that can spur resilient recovery and educate the public about storm water management.

To build additional capacity the Village would structure a formal agreement with Delaware County Soil and Water Conservation District (DC SWCD) in support of environmental planning, watershed and stream management, and implementation of projects in the 2013 Hazard Mitigation Plan.²⁸ DCSWCD would help identify ways to strengthen the back-up water supply system, coordinate stream management alternatives, and work with NYSDEC to facilitate permitting of appropriate projects.

As part of this effort, the Village would work with neighbors to hire a Regional Resiliency Coordinator and engage partners in the Susquehanna Corridor communities, Delaware County agencies, and other concerned organizations. Together these partners would advocate for improved Susquehanna River watershed management, storm water pollution prevention, habitat protection, and floodplain management. The coordinator would help the Village participate in the joint USACE and New York State Department of Environmental Conservation (NYS DEC) Upper Susquehanna River Basin Hazard Mitigation and Watershed Assessment. This project would be completed at a regional level and build a base of science to inform future hazard mitigation choices and guide individual community efforts, such as updating the Village of Sidney *2009 USACE Study*.²⁸ (2009).

- **Cost Estimate** – The estimated cost of this featured project is \$200,000.

- **Community Benefits** – The organization itself, additional staff capacity, and strategic partnerships would speed implementation of projects and make the best use of resources. The knowledge gained through participating in regional planning would enable the Village to make smart choices about mitigation measures that would protect residents and property values.
- **Flood Safety** – As a result of the regional planning undertaken, the Village would understand how the different parts of the watershed react during the specified rain events. This would allow Sidney to verify the adequacy of its emergency management plans and mitigation measures. This model would also show the Village how the surrounding upstream and downstream communities are affected by changes in storm water runoff, enabling them to design the GreenPlain for the maximum benefit.
- **Environmental** – Professional coordination of planned initiatives ensures that they are well designed and have maximum positive environmental impact.
- **Economic Development** – Establishing staff capacity or identifying committed volunteer leadership would provide the ability to maintain sustainable partnerships with other organizations and to plan, implement, and manage the capital needed for individual investments.
- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** – Sidney’s projects are transformational in scale and considerable in cost. Having a professional organization administer the projects for a reasonable fee is a wise investment.
- **Risk Reduction** – Potential benefits arise from participation in the Upper Susquehanna Basin Flood Risk Management Watershed Assessment, depending on the outcome and conclusions of the study.
- **Regulatory Reviews** – The project is a study and therefore regulatory review is not required.
- **Implementation Timeframe** – Hiring the coordinator can be completed in three months.
- **Jurisdiction** – N/A.

B. Develop a Resilient Land Management Framework - Featured Project

Project Description

Building on the technical support, Sidney would develop a resilient land management framework by reviewing the comprehensive plan and zoning ordinance, especially in regard to lands adjacent to the waterways, and consider developing flood hazard zone and stream corridor development overlay districts and other measures to protect the floodplain. The Local Flood Damage Prevention law would be reviewed and adopted to New York State Department of Environmental Conservation (NYS DEC) standards for flood-safe building measures in high and extreme hazard areas as defined in Flood Insurance Rate (FIRM) mapping and classified in the hazard assessment portion of the NYRCR Plan. Training in handling post-flood building assessment would be provided for the Flood Compliance Officer (Code Enforcement Officer), including determination of “percent damaged,” identification of health and safety problems, demolition determinations, and permitting. These determinations drive access to individual assistance and various other Federal Emergency Management Agency (FEMA) programs and affect repetitive loss classification, elevation

requirements, eligibility for various buyout programs, and future National Flood Insurance Program (NFIP) premiums.

In a flood-prone area like Sidney’s Main Street, design standards can help deal with the complexities of creating a harmonious streetscape where some buildings remain in their traditional state and others are elevated. The Village’s standards should anticipate this reality and offer techniques to integrate buildings of different heights and setbacks with landscape areas, green infrastructure amenities, and deck and stair guidelines, for example. To the degree possible the standards must integrate concerns for building performance during extreme weather events either in the form of recommended guidelines, or formally adopted standards. These may be part of the zoning ordinance or put in a separate ordinance, to help property owners make better choices and be properly prepared. This is a particular challenge for historic properties where their essential historic character is at risk in extreme weather events. The cost for development of new standards is part of the overall land management budget.

- **Cost Estimate** - The estimated cost of this featured project is \$70,000.
- **Community Benefits** – Careful land management is key to creating a safer and more connected community that meets the needs of all residents. A system of codes and regulations that leads to the community’s preferred land use future is needed to guide development. Adoption of a zoning code with a site plan review article would contribute to general welfare of the community in areas such as accessibility and buffering of incompatible land uses.
- **Flood Safety** – Improved regulations would help lessen the impact of storms on

homes, businesses, and key assets during future floods.

- **Environmental** – Adoption of a zoning code with a site plan review article would promote sustainable development and minimize negative environmental effects on adjacent properties and land uses. This effort can also educate the population on the impact they have as individuals on storm water management and provide guidance about what they can do to help (e.g., minimizing the impervious cover, directing down spouts to gardens, minimizing the use of road sand in the winter, protecting streams and wetlands with vegetated buffer zones). Reduction of sediment loading to streams and the river would pay dividends in water quality improvement and maintaining these waterways’ carrying capacity.
- **Economic Development** – Improved regulations would help to lessen the impact of storms on homes, businesses, and key assets during future floods. Revisions to the zoning code could enhance economic activity in the Village through establishment of mixed-use districts.
- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** – Local laws and land use regulations control changes in the community day by day and can have a considerable impact on resiliency in the built and natural environment. The cost to update the Village’s codes is minor when compared to the level of impact these regulations can have to help make the Village flood-safe.



Restored wetlands retain floodwater and improve water quality.

- **Risk Reduction** – Reduction in risk would be realized from improved land management codes and standards (zoning, subdivision, site plan) and erosion control measures being implemented.
- **Regulatory Reviews** – Review and adoption of new local laws and codes may require regulatory and permitting approvals from federal, state and local agencies including SEQRA, consultation with FEMA and NYS Department of Environmental Conservation (NYS DEC) floodplain management staff, local approval of zoning changes, and review by Delaware County Planning Office under Section 239 of New York State municipal law.
- **Implementation Timeframe** – This project can be completed in six months.
- **Jurisdiction** – N/A.



Walkways through the GreenPlain would provide educational opportunities.

C. Sidney Resilient Hazard Mitigation Project Fund - Featured Project

Project Description

Sidney would establish a major fund to facilitate identified State, County, and local hazard mitigation projects. A list of the projects is being further developed but it includes resizing infrastructure, stabilizing streams, removing debris, enhancing municipal infrastructure and hardening critical services like wells and pump stations. Some projects can be tackled with coordinated local labor from the Village or County Highway Department or the Delaware County Soil and Water Conservation District (DC SWCD), while others would require the concentrated attention of State agencies. Village infrastructure improvements to mitigate flooding and protect facilities, including potential relocation of the water treatment plant and other facilities and public works, would be evaluated further and advanced

based upon the Village’s priorities and access to funding.

The dam on the Peckham Brook Reservoir in Bainbridge, Chenango County is of high concern. Recent dam inspections have identified significant structural problems. If the dam fails, the water released would put at least 35 homes at immediate risk. At this time the dam is so vulnerable to failure that it cannot be insured. The water supply regulated by the dam is a back-up water source for residents along the Route 7 corridor. The Village is considering a strategy to replace this water supply with a municipal well system. Ongoing collaborative advocacy with Chenango County is important to finalize a strategy that would remove the dam and design new wells and a piping system under the river to serve the residences on the far side. The additional wells would be located out of the flood zone, most likely as part of the Riverlea neighborhood development, and would provide a backup water source, enabling removal of the dam. The planned FEMA project including dam

removal and well installation is estimated to cost \$2.3 million, but the final scope and budget is still being evaluated by FEMA, Chenango County, and the Village.

This project would be subject to all the usual site regulatory reviews for construction projects, including SWPPP review and SPDES permitting, depending on their size and location. As the infrastructure elements involved are to be relocated because they are in flood hazard areas, some work would occur in the floodplain and would require NYS DEC Article 15 permitting.

- **Cost Estimate** - The estimated cost of this fund is estimated at \$7.5 million. Some components may be eligible for partial FEMA reimbursement or candidates for funding under the Hazard Mitigation Grant Program.
- **Community Benefits** - Multiple benefits are provided by making critical infrastructure more resilient, lessening the period post storm when municipal facilities are unavailable, and reducing property damage costs and risks to public safety.
 - **Flood Safety** – The projects on the Village’s initial list for further evaluation address many important community needs. Improvements to roads and culverts reduce road damage and maintain mobility for first responders and residents. Water and sewer enhancements reduce disruption when services cease to function due to flood impacts. Wellhead protection, flood proofing well houses, and/or drilling new replacement well(s) to replace the Peckham Reservoir protect the Village’s water supply.
 - **Environmental** – Many of the project ideas improve municipal infrastructure to minimize the impact of flooding on the built and natural environment. Potential storm water improvement projects, including cleaning, repairing and stabilizing the tributaries would enable the waterways to convey floodwater more efficiently. Stream and habitat restoration would reconnect the streams to their floodplains and improve water quality.
- **Economic Development** – As projects are implemented, the community would benefit from uninterrupted service in extreme weather, reducing the time during which residents cannot access their homes, as well as disruptions in business that result in lost revenue and lost wages.
- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** - Improvements to the Village’s most important core infrastructure ensures that it can protect people and property and maintain critical services.
- **Risk Reduction** – Reduction of risk resulting from the repair of the Peckham Reservoir Dam and other identified hazard mitigation measures would be determined once the scope of each effort is known, but could be substantial, considering the cumulative benefit. Indirect benefits accrue from improved land use plans that successfully direct development to flood-safe locations, including concentrating future downtown development along West Main Street south of the railroad.
- **Regulatory Reviews** – The smaller local hazard mitigation projects would be prioritized and advanced as resources allow and specific permit requirements would be evaluated at that time. Local review of these actions may include site plan approval and issuance of building permits. Review under the New

York State Environmental Quality Review Act cannot be determined until actual projects are identified and improvements are designed. New York State Department of Environmental Conservation (NYS DEC) may need to process Article 15 Protection of Waters Permit, Stream Disturbance Permit, or Stormwater Pollution Discharge Elimination System (SPDES) permits. The New York State Department of Transportation (NYS DOT) may be asked to provide a highway permit. Review by United States Army Corps of Engineers (USACE) may be required if projects fill the floodplain or affect federally designated wetlands.

- **Implementation Timeframe** – Implementation steps include completing cost estimates (3 months), preparing funding applications (6 months), designing projects (12 months) and construction (24 months).
- **Jurisdiction** – N/A.

D. Weir Creek Tributary Improvement Plan - Featured Project

Project Description

As the Upper Susquehanna River Basin assessment is being completed, the Village would commission a study of the current health, pattern, profile, erosion potential, and capacity of the tributaries and their floodplains within the Village to enable wise choices in future hazard mitigation investments. Based on the results of this study, the Village would produce a tributary improvement plan for Weir Creek and other waterways (budget estimate \$50,000 for this featured project). The outcome would be a detailed assessment of their current tributary system with a project matrix, showing the hierarchy of projects, estimated design and construction costs, possible project partners, and permits required.

The Village would identify the locations across the village, especially upstream locations where green infrastructure practices such as pocket wetlands, bioswales, porous asphalt, and rain gardens could help to slow the rate of runoff into the tributaries.. This would also include creating incentives for private property owners to minimize impervious cover and promote infiltration.

- **Cost Estimate** – The estimated cost of the project is \$50,000.
- **Community Benefits** – Once the evaluation is complete the Village would be better informed for selection and prioritization of investment in various potential hazard mitigation and stream maintenance projects.
- **Flood Safety** – Modeling of tributary performance in different storm events would highlight where there may be existing pinch points (i.e. undersized culverts and bridges, elevated roads that may be creating a dam situation, etc.) that cause floodwaters to back up and can be modified to improve flood safety.
- **Environment** – Understanding the ecology of the river would help with understanding of overall water quality issues. Looking at vegetation patterns, sediment transport (erosion issues), the habitat types needed by animals in the region, and other ecological features would provide the baseline information needed to understand the dynamics of this living system. The information gathered would be used to support and evaluate possible mitigation efforts related to flooding and water quality for their effect on the ecosystem.
- **Economic Development** – There would be indirect economic benefits as a result of reduced flood damage to property and infrastructure.



Green infrastructure practices, such as rain gardens, would help slow the rate of runoff into tributaries such as Weir Creek.

- **Public Support** – Public support for this project is high.
- **Cost Benefit Analysis** – The amount of damage caused by tributary flooding in Sidney is considerable. Most flooding to the Amphenol Aerospace Plant, for example was due to flash flooding on Weir Creek rather than flooding along the Susquehanna River. The flashy nature of these smaller creeks and streams increases risk to life and property. The cost to document conditions and prioritize sustainable and natural solutions to tributary flooding is reasonable considering the value of the property and the number of people at risk.
- **Risk Reduction** – The strategy would identify very specific and strategic interventions including removing pinch points, upsizing culverts, improving stream conveyance capacity, reconnecting streams to their floodplains, adding wetland areas, and other efforts to reduce risk to life and property.
- **Regulatory Reviews** – The project is a study and therefore regulatory review is not required.
- **Implementation Timeframe** – The project can be completed in nine months.
- **Jurisdiction** – N/A.

E. Regional Susquehanna River Initiative - Proposed Project

Project Description

The Village would participate in a two year regional river system initiative in Delaware, Tioga and Broome Counties as part of a regional collaboration to better understand stream conditions and build capacity to advance resilience projects at the local level. The intent is to build and create regional resiliency through specific projects as well as outreach and education. It would include watershed modeling to identify and implement cost effective floodplain and stream channel improvements to reduce flood impacts through natural measures at the headwaters, across the landscape and finally at the stream edge. Wetland creation and restoration with flood attenuation, green infrastructure, natural stream rehabilitation and floodplain enhancement through berm removal may be piloted at the local level. An environmentally sensitive stream management program would train Department of Public Works (DPW) and Highway Superintendents in best practices to restore stream transport of water and sediment after major storm events. The final component of the initiative would train municipal officials and staff, County legislators, and residents about the function of floodplains and establish a network of community storm water/floodplain outreach volunteers. The initiative would reduce the effects of floodwaters using natural means, restoring floodplains, creating wetlands and employing various green infrastructure practices.

- **Cost Estimate** - The estimated cost of the project is \$3 million.
- **Community Benefits** – Once the evaluation is complete, the Village would be better informed for the selection and prioritization of investment in various potential hazard mitigation and stream maintenance projects.
- **Flood Safety** – The study would identify specific mitigation measures to improve flood safety.
- **Environment** – Environmental benefits would include wetland creation and restoration with flood attenuation, green infrastructure, natural stream rehabilitation and floodplain enhancement through barrier removal.
- **Economic Development** – There would be indirect economic benefits as a result of reduced flood damage to property and infrastructure.
- **Cost Benefit Analysis** – Across the three-county Upper Susquehanna Watershed, damage from the 2006 and 2011 storms amounted to billions of dollars in property loss and business disruption. This approach is very community based—using the data modeled in various planning programs it drives the identification of sustainable community projects and builds the capacity of local municipal staff to implement programs, manage improvements and monitor performance.
- **Risk Reduction** – The project would reduce the effects of floodwaters by desynchronizing flows, infiltrating runoff into the groundwater, spreading flow into the natural floodplain and ensuring streams are correctly shaped to accommodate flood events.
- **Regulatory Reviews** – The project is a study and therefore regulatory review is not required.
- **Implementation Timeframe** – The project can be completed in 24 months.
- **Jurisdiction** – Village of Sidney, Delaware County, Tioga County, Broome County.



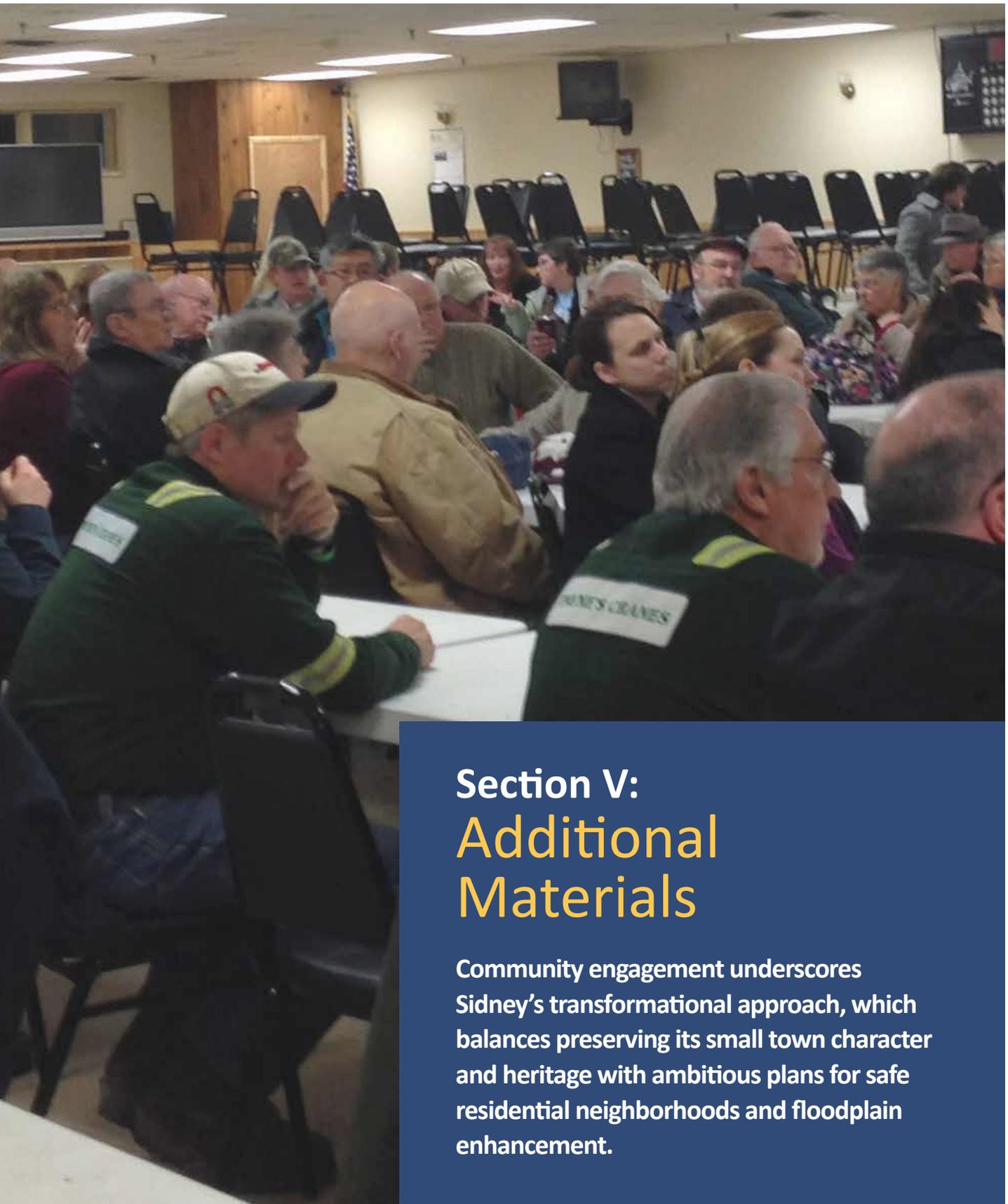
Sheri Youngs

Local children take a stroll by the Main Street Bridge over the Susquehanna River.



Margaret Irwin

In January 2014 the Village of Sidney met with 150 residents from the extreme risk areas to discuss relocation.



Section V: Additional Materials

Community engagement underscores Sidney's transformational approach, which balances preserving its small town character and heritage with ambitious plans for safe residential neighborhoods and floodplain enhancement.



Kerri Green

Village children enjoy themselves at a local holiday event.

A. Additional Resiliency Recommendations

Table 5.1 presents Sidney’s additional resiliency recommendations.

Table 5.1 Additional Resiliency Recommendations					
Project Name	Short Description	Estimated Cost	Regional	Strategy	
Support evaluation of the Delaware County Conference Center and Hotel at Riverlea.	Support the development of a Delaware County Conference Center and Hotel. If market conditions are encouraging, the Riverlea neighborhood could be expanded to south of County Route 2 and include a regional 200 room hotel and conference center, as well as additional commercial development.	\$20 million	Yes	1	

B. Master Table of Projects

Table 5.2 presents a comprehensive list of Sidney’s proposed and featured projects.

Table 5.2 Master Table of Projects					
Strategy	Project Name	Short Description	Project Category	Estimated Cost	Regional
Strategy 1: Keep Sidney residents, businesses, and community organizations in the highest risk areas of the Village safe by developing a new resilient Riverlea Farm neighborhood on Plankenhorn Road.	Acquire the 165-acre Riverlea Property on Plankenhorn Road in the Town of Sidney, NY.	Acquire and annex the property into the Village to create a new, flood-safe, complete community.	Proposed	\$1.3 million (acquisition)	Yes
	Extend phase one municipal infrastructure to Riverlea Farm Neighborhood.	Extend water and sewer to the Riverlea Farm site to support phase one build out of homes and senior housing.	Proposed	\$2 million	Yes
	Village of Sidney Home at Riverlea Program (HARP).	The HARP program would provide financial tools such as buyouts, property swaps, new construction purchase price buydowns, assistance with downpayment and closing costs, and home relocations to encourage relocation from vulnerable neighborhoods.	Proposed	\$3 million	No
	Riverlea Farm Complete Community Housing Program.	Develop affordable and moderate priced single family and senior housing for residents relocated from high-risk areas. Phase one includes development of 20 affordable single family homes, relocation of 11 structures, construction of 32 units of affordable senior rental housing and a 24-unit senior cottage community. Phase two of the project includes market rate housing valued at \$20 million.	Featured	\$41 million	Yes
	Riverlea Civic Commons.	Plan and construct a new civic commons at Riverlea Farm including a senior center/Boys and Girls Club, shared Village and Town office, Village Police Station, and other community services being relocated from vulnerable locations.	Featured	\$5.8 million	Yes
	Make Riverlea Farm a resilient, green and smart neighborhood.	Evaluate use of green building and green energy to power Riverlea, including potentially a solar microgrid, making it more sustainable and ensuring that critical facilities can recover more quickly from extreme weather. Develop green infrastructure and recreation on a 30-acre lower terrace to provide upstream mitigation and reduce flooding impacts downstream.	Featured	\$4.1 million	Yes
Strategy 2: Use sustainable green infrastructure to mitigate flooding along the Susquehanna River and Weir Creek for the Village and its neighbors	Design, assemble and construct the 140 acre Sidney GreenPlain.	Design the GreenPlain. Partner with organizations or land trusts to consolidate waterfront property, including residences, Village Park, and Sidney Community Foundation land. Construct the GreenPlain.	Featured	\$22 million	Yes
	Make the GreenPlain a Community and Regional Asset for Recreation and Education.	Make the GreenPlain a community and regional asset offering lifelong passive recreation with walking trails, edible forest, wetland walks, interpretive signs, scenic overlooks, picnic areas, connections to a riverwalk, and active recreation park all within walking distance of Main Street. Use the GreenPlain to educate the public about climate change, healthy ecosystems, green infrastructure techniques, and resiliency in partnership with higher educational institutions and environmental organizations.	Featured	\$2.1 million	Yes
	Develop the Sidney Waterfront Entertainment, History, and Environmental Education Center	Develop the Sidney Waterfront Entertainment, History, and Environmental Education Center with recreation amenities to increase the tax base, draw tourists, and create spinoff businesses and microenterprises that create jobs.	Featured	\$9 million	Yes

Table 5.2 Master Table of Projects

Strategy	Project Name	Short Description	Project Category	Estimated Cost	Regional
Strategy 3: Protect the Village’s manufacturing and Main Street commercial base by helping businesses of all sizes to become more resilient through “Sidney Works!”	Evaluate reuse and expanded use strategies for industrial sites.	Evaluate reuse strategies for the current Amphenol Aerospace plant and expanded use of the Village Industrial Park.	Proposed	\$100,000	Yes
	Provide safe emergency access for ACCO Brands USA.	Provide secondary access for ACCO Brands USA in the event of flash flooding to reduce business disruption during extreme weather.	Proposed	\$260,000	No
	Design and construct Sidney “Green Streets.”	Maintain and advance a multi-modal, walkable downtown featuring LEED-ND standards in a sustainable landscape, with green streetscape, building design, and historic buildings that incorporate green infrastructure to handle storm water more effectively.	Featured	\$1.6 million	No
Strategy 4: Offer safe and resilient neighborhoods Village wide with “life cycle” housing for people of all ages, abilities, and incomes.	Evaluate the feasibility of constructing a berm to protect the Village’s Historic North End Neighborhood.	Develop a preliminary study and work with the USACE to design and permit a partial floodwall or berm to protect the north end of the Village, including the areas east of Union Street.	Proposed	\$30,000	No
	Restore Sidney Grant Program: Continue to restore homes and develop new, affordable, rental housing Village-wide.	Continue to restore homes Village-wide that were damaged by Tropical Storm Lee, and create affordable rental housing Village-wide, including in upper stories of downtown buildings, as a transitional step to homeownership, creating flood-safe options and increasing turnover so young families can remain in the Village. Work with financial institutions to develop a range of homebuyer incentives and partner with major employers to offer a home purchase grant or down-payment matching program for workers who move into safe Village homes.	Featured	\$3 million	No
Strategy 5: Prepare for climate change by developing the “Sidney’s Ready!” emergency preparedness strategy to educate, alert, and protect the public.	Develop an emergency preparedness plan including the Sidney High School Flood Monitoring Program.	Develop an emergency preparedness plan to address the needs of all residents using traditional approaches as well as web-based systems and social media. Support and expand the Sidney High School Flood Monitoring Program, which provides early warning information to Village residents and property owners.	Proposed	\$150,000	No
Strategy 6: Advance hazard mitigation planning and implementation initiatives for Delaware County communities through the “Delaware-Susquehanna Compact.”	Regional Susquehanna River Initiative.	Participate in a two year regional river system initiative in Delaware, Tioga, and Broome Counties as part of a regional collaboration to better understand stream conditions and build capacity to advance resilience projects at the local level.	Proposed	\$3 million	Yes
	Implement the NYRCR Plan and Advocate for Susquehanna River Initiatives.	Develop an organization to lead long term recovery. Build capacity by hiring a regional resiliency coordinator and developing a formal relationship with Delaware County Soil and Water Conservation District. Through this organization cooperate Susquehanna Corridor communities, Delaware County agencies, and organizations to advocate for the Susquehanna River watershed issues. Participate in the joint USACE and NYS DEC Upper Susquehanna River Basin Watershed Assessment and Hazard Mitigation Strategy.	Featured	\$200,000	Yes
	Develop a resilient land management framework.	Develop a resilient land management framework, including updated floodplain management laws; comprehensive plan, building and land use codes; designation of critical environmental areas; and subdivision and site plan regulations to increase safety and direct development to flood-safe locations.	Featured	\$70,000	No
	Advance infrastructure improvements necessary to mitigate flooding and protect critical facilities.	Advance Village infrastructure improvements to mitigate flooding and protect facilities, including potential relocation of the water treatment plant and other facilities and public works projects to be identified. Develop a tributary improvement plan for Weir Creek and other waterways. Study the current health, pattern, profile, erosion potential, and capacity of the tributaries and their floodplains within the Village to support wise choices in future hazard mitigation investments.	Featured	\$7.5 million	Yes
	Develop a tributary improvement plan for Weir Creek and other waterways.	Study the current health, pattern, profile, erosion potential, and capacity of the tributaries and their floodplains within the Village to support wise choices in future hazard mitigation investments.	Featured	\$50,000	No

C. Public Engagement Process

A NY Rising Community Reconstruction (NYRCR) Planning Committee (Committee) was formed to guide the development of the NYRCR Sidney Plan. The Committee conducted four Public Engagement Events over the course of the eight month planning process. In addition to attending events, residents, public and private agencies, community organizations, and local businesses were encouraged to provide feedback to the Committee regarding the process and plan components via the NYRCR website and Facebook page. All Committee Planning Meetings were open to the public and publicized via the Storm Recovery Press Office through press releases for events to local media.

Initial Outreach

The community engagement approach included multiple efforts and began by getting the word out that the NYRCR planning process had started. A subcommittee was established to assist with public outreach. The first Public Engagement Event provided a general introduction to the NYRCR

program, followed by discussion of the NYRCR Sidney Plan's proposed geographic scope, vision statement, community engagement plan, needs and opportunities, goals, strategies, proposed projects, regional linkages, and implementation partners.

Southern Tier Regional Resiliency Summit

On November 18, 2013, many representatives from the Village joined with communities from Broome County and Tioga County to host the Southern Tier Regional Resiliency Summit at the second community meeting. The daylong event was held at the Binghamton University's Innovative Technologies Complex and attracted over 120 participants. Experts from government, academia, and the private sector discussed the viability of various approaches to flood control, helping to shape future efforts to devise realistic and effective NYRCR plans in the region. Topics addressed included changing weather patterns, local and regional mitigation techniques, and learning from each other – communities taking action. The NYRCR Conceptual Plans for Tioga, Broome and Sidney were presented. The Sidney High School Flood Monitoring



NYRCR Co-Chair John Redente at workshop.

Sheema Felzak



Elan,3 Consulting

Public participation at the Regional Resiliency Summit.

program was highlighted as a model to be replicated. After the presentations, summit participants were invited to attend an interactive Open House with presenters, panelists, and State agencies. Each of the communities in Broome and Tioga counties and the Village of Sidney sponsored a table to share the Conceptual Plan, proposed projects, and other information on the NYRCR program.

Riverlea Farm Presentation

The Village of Sidney conducted a public outreach event in support of the NYRCR Plan and the Riverlea Farm project on January 29, 2014, with over 150 local residents from its most vulnerable riverfront neighborhood. The Village presented the vision for the Riverlea Farm neighborhood and residents asked a variety of questions. The Village offered to set up individual interviews during which property owners could share their unique circumstances and inform the Village about the type of assistance they would require to relocate from flood-prone areas. The Village met with more than 90 residents from

over 60 households in the target area and confirmed their interest in relocating to Riverlea Farm. Case managers were made available to Sidney to present the NY Rising Housing Recovery program and enroll interested residents.

Additional Public Engagement Events

The NYRCR Planning Committee organized a series of Public Engagement Events to engage the community in the NYRCR process and present information on all components to the public. Members of the public were asked to reconfirm proposed projects, review project classification (i.e., proposed, featured, and aspirational projects), and assess project readiness and feasibility. The Committee and Consultant Team shared with the community the preliminary market analysis for the Riverlea Farm and Sidney GreenPlain projects. Detailed feasibility studies and illustrative renderings were presented by the Consultant Team and discussed by the Committee and the public. The Consultant Team also provided an overview of Community Development Block Grant-Disaster Recovery (CDBG-DR) funds to help the

Committee understand funding issues and assist in finalizing project priorities. Some public comments were received regarding the risk assessment that the Committee agreed to review. There was strong support for the core projects among Committee members and the public, and press coverage of the event on the local television station was positive.

During the fourth Public Engagement Event, conducted as an open house, members of the Committee, NYRCR

program staff, and the Consultant Team used large-format graphics to discuss the Village's six projects with the public. The meeting was well attended with over 100 residents participating. Feedback was collected about all projects and the Committee thanked the public for their commitment to the process. A fifth and final Public Engagement Event will be conducted in May 2014 to present the NYRCR Sidney Plan.



NYRCR Co-Chair John Redente participates on a panel at the Regional Resiliency Summit.

Elan.3 Consulting



Sidney festival held on Moin Street.

Sheri Youngs

D. Community Asset Inventory

Table 5.3 Assets and Risk Assessment

Asset Information					Landscape Attributes								Risk Assessment (100-year event)				Risk Assessment (500-year event)			
Asset	Risk Area	Asset Class	Asset Subcategory	Critical Facility	Community Value	Defensive flood protection measures	Asset elevation below base flood elevation	Freeboard elevation less than two feet above BFE	Asset near point of confluence	Asset near stormwater system discharge	Asset within floodway fringe and without adequate vegetated buffers	Landscape Attribute Score (Yes= +0.5)	Hazard Score	Exposure Score	Vulnerability Score	Risk Score	Hazard Score	Exposure Score	Vulnerability Score	Risk Score
ACCO Brands USA, LLC	Extreme	A	Employment Hub	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	3.00	5	45	4	3.00	5	60
Amphenol Corp.	Extreme	A	Employment Hub	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Bassett Healthcare	N/A	B	Healthcare Facilities	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Citizens Tele Co Building (Grand St)	N/A	D	Telecommunications	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Citizens Tele Co Building (Winegard St)	Extreme	D	Telecommunications	Yes, FEMA	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Community Foundation Lands	Extreme	E	Parks and Recreation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
Delaware Opportunities	Extreme	B	Government and Administrative Services	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0.5	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
Delaware Valley Humane Society	Extreme	B	Government and Administrative Services	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Drinking Water Well 1-46	Extreme	D	Water Supply	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
Drinking Water Well 2-88	Extreme	D	Water Supply	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
Interstate 88 Exit 9 Interchange	N/A	D	Transportation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Main Street Bridge	Extreme	D	Transportation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	3.00	3	27	4	3.00	3	36
Main Street Business District	Extreme	A	Downtown Center	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Mead Substation	Extreme	D	Power Supply	Yes, FEMA	High	0.5	0.5	0	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
NYS Electric & Gas Corp. Substation	Extreme	D	Power Supply	Yes, FEMA	High	0.5	0.5	0.5	0	0	0	1.5	3	3.50	3	32	4	3.50	3	42
Planned Parenthood	High	B	Government and Administrative Services	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	2.00	3	18	4	2.00	3	24
Price Chopper	N/A	A	Grocery / Food Suppliers	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0

Table 5.3 Assets and Risk Assessment

Asset Information					Landscape Attributes								Risk Assessment (100-year event)				Risk Assessment (500-year event)			
Asset	Risk Area	Asset Class	Asset Subcategory	Critical Facility	Community Value	Defensive flood protection measures	Asset elevation below base flood elevation	Freeboard elevation less than two feet above BFE	Asset near point of confluence	Asset near stormwater system discharge	Asset within floodway fringe and without adequate vegetated buffers	Landscape Attribute Score (Yes= +0.5)	Hazard Score	Exposure Score	Vulnerability Score	Risk Score	Hazard Score	Exposure Score	Vulnerability Score	Risk Score
Pump Station	Extreme	D	Water Supply	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Radio WCDO	High	D	Telecommunications	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	2.00	3	18	4	2.00	3	24
Rail System	High	D	Transportation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	2.00	3	18	4	2.00	3	24
Rite Aid	High	A	Small Business	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0.5	1	3	2.00	3	18	4	2.00	3	24
River St / Division St Neighborhood	Extreme	C	Single Family Residence	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
River St / Oak Ave Neighborhood	Extreme	C	Single Family Residence	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Riverlea Farm	N/A	E	Agricultural Area	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Sherman Ave / Adams St Neighborhood	Extreme	C	Single Family Residence	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Sidney Ambulance Squad	Extreme	B	Emergency Operations / Response	Yes, FEMA	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Sidney Civic Center	Extreme	B	Government and Administrative Services	Yes, FEMA	High	0.5	0	0.5	0	0	0.5	1.5	3	3.50	3	32	4	3.50	3	42
Sidney Fire Station 1	Extreme	B	Emergency Operations / Response	Yes, FEMA	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Sidney Fire Station 2	N/A	B	Emergency Operations / Response	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Sidney High School	N/A	B	Schools	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Sidney Highway Garage	High	B	Public Works Facility	Yes, FEMA	High	0.5	0	0	0	0	0.5	1	3	2.00	3	18	4	2.00	3	24
Sidney Municipal Airport	N/A	D	Transportation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Sidney Senior Village	N/A	F	Elderly	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Sidney Wastewater Plant	Extreme	D	Wastewater	Yes, FEMA	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
St. Luke's Lutheran Church	N/A	E	Cultural or Religious Establishments	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0

Table 5.3 Assets and Risk Assessment

Asset Information						Landscape Attributes							Risk Assessment (100-year event)				Risk Assessment (500-year event)			
Asset	Risk Area	Asset Class	Asset Subcategory	Critical Facility	Community Value	Defensive flood protection measures	Asset elevation below base flood elevation	Freeboard elevation less than two feet above BFE	Asset near point of confluence	Asset near stormwater system discharge	Asset within floodway fringe and without adequate vegetated buffers	Landscape Attribute Score (Yes= +0.5)	Hazard Score	Exposure Score	Vulnerability Score	Risk Score	Hazard Score	Exposure Score	Vulnerability Score	Risk Score
State Route 8 Bridge	Extreme	D	Transportation	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0	0.5	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Tri Town Regional Hospital	N/A	B	Primary / Regional Hospitals	Yes, FEMA	High	0.5	0	0	0	0	0	0.5	3	N/A	3	0	4	N/A	3	0
Willow St / Liberty St Neighborhood	Extreme	C	Single Family Residence	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48
Winkler Road Business Park	Extreme	A	Large Business	No, Locally Significant Facility. Identify source of classification: Committee	High	0.5	0.5	0.5	0	0	0.5	2	3	4.00	3	36	4	4.00	3	48



The largest mitigation area within the proposed GreenPlain is the Performing Arts & Environmental Education Center Mitigation Area, which would be located on a 62-acre piece of vacant farmland owned by the Sidney Community Foundation.

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E. End Notes

- ¹ Susquehanna River Basin Commission, "Flood Summary Report, June 2006 Flood," January 2007: 1.
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- ³ Susquehanna River Basin Commission 3.
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- ⁵ United States Army Corps of Engineers, Baltimore Division, "Preliminary Flood Investigation and Alternatives Analysis at Weir Creek - Village of Sidney, Delaware County New York," October 2009.
- ⁶ Delaware County Department of Planning.
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- ¹⁰ United States Army Corps of Engineers, Baltimore Division, "Flood Risk Management Analysis, Village of Sidney, Delaware County New York," August 2010.
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¹⁸ Federal Emergency Management Agency (FEMA) Floodplain Management Task Force, "Sharing the Challenge: Floodplain Management in the 21st Century, Report of the Interagency Floodplain Management Review Committee to the Carter Administration," Washington DC, 1994.

¹⁹ Federal Emergency Management Agency (FEMA), U.S. Department of Homeland Security, "Recovery Support Functions," June 2012. FEMA. Accessed 20 Mar. 2014. <<http://www.fema.gov/recovery-support-functions>>.

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²² Health and Human Services data for this section is derived from the U.S. Census Bureau, 2000-2010. Accessed 13 Mar. 2014. <<http://www.census.gov/2010census/data/>>.

²³ Housing data for this section is derived from the U.S. Census Bureau, 2010. Accessed 13 Mar. 2014. <<http://www.census.gov/2010census/data/>>.

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²⁵ Governor's Press Office, "Transcript of Governor Andrew M. Cuomo's 2013 State of the State Address," (Press release). 9 Jan. 2013. Accessed 20 Mar. 2014. <<http://www.governor.ny.gov/press/112911announcement>>.

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F. Glossary

APA	American Planning Association
ASLA	American Society for Landscape Architecture
BID	Business Improvement District
CRA	Community Reinvestment Act
Committee	NYRCR Planning Committee
CDBG-DR	Community Development Block Grant - Disaster Recovery
DCPD	Delaware County Planning Department
DC SWCD	Delaware County Soil and Water Conservation District
DPW	Department of Public Works
ECOS	Environmental Clearinghouse
EMT	Emergency medical technician
FEMA	Federal Emergency Management Agency
LDC	Local Development Corporation
LEED	Leadership in Energy and Environmental Design
LTCR	Long Term Community Recovery
ND	Neighborhood Development
NFIP	National Flood Insurance Program
NYRCR	NY Rising Community Reconstruction Program
NYS AHC	New York State Affordable Housing Corporation
NYS CFA	New York State Consolidated Funding Application
NYS DEC	New York State Department of Environmental Conservation
NYS DOS	New York State Department of State
NYS EFC	New York State Environmental Facilities Corporation
NYS ERDA	New York State Energy Research and Development Authority
NYS ESD	New York State Empire State Development
NYS FSMA	New York State Floodplain and Stormwater Managers Association
NYS HTF	New York State Housing Trust Fund
PUD	Planned Unit Development
SCA	Susquehanna Conservation Alliance
SEQRA	State Environmental Quality Review Act
SGP	Susquehanna Greenway Partnership
SHPO	New York State Historic Preservation Office
SRBC	Susquehanna River Basin Commission
STREDC	Southern Tier Regional Economic Development Council
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	Utica School of Commerce

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