The Croton Reservoir System

&

The Town of Southeast

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; Poster printing courtesy of the Putnam County Italian American Social Club, Brewster, NY; Fall 2025

A Network that Sustains New York City

For more than a century, New York City has depended on the watersheds to its north for a reliable supply of clean water. Today, the New York City Department of Environmental Protection (DEP) maintains a network of nineteen reservoirs, drawing water from the Croton River Watershed in the Lower Hudson Valley and the Catskill Mountains further north.

As the city grew, so did its need for water. Early, smaller reservoirs close to the city eventually gave way to larger, more complex systems farther upstate—none more historically significant than the Croton Reservoir System, the city's first major expansion into distant sources.

New Croton Dam Spillway - NYC Water (2025)

The Croton System

The Croton system consists of twelve reservoirs and three controlled lakes, created by damming the Croton River and its tributaries. Collectively, they capture water from a drainage basin covering much of northern Westchester, Putnam, and smaller portions of Dutchess County, NY, and Fairfield County, CT.

Constructed largely between the late 19th and early 20th centuries, the Croton system represents New York City's earliest large-scale effort to collect water from further away from the city. It is connected to the city by the New Croton Aqueduct, a 33-mile underground tunnel built between 1885 and 1893, which carries water from storage reservoirs and dams south, entirely by gravity, its slight downward slope guiding the flow all the way to Central Park.

NYC Water (2025)

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

Developments in the Town of Southeast

The Town of Southeast is uniquely tied to this story. It contains all or parts of five reservoirs—more than any other town in the Croton Watershed—making it especially significant to the system's history and engineering.

Between 1878 and 1911, several tributaries of the Croton River were impounded to create the Middle Branch (1878), Bog Brook (1893), Diverting (1898), East Branch (1891–1893), and Croton Falls (1911) Reservoirs. Together, these reservoirs cover more than 1,400 acres of Southeast's landscape.

Town of Southeast section
of the 1876 Map of Putnam County,
by Thomas J. Reed;
Putnam County Historian's Office (CHO)

To protect the city's new water supply, the City of New York ordered the evacuation of all areas within the flood zones of the reservoirs and within 300 feet of any inflow source. This action, clearing all timber and vegetation, also displaced many long-established families and erased entire settlements, permanently altering the town's geography and economy.

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

East Branch Reservoir
Construction & Engineering

The East Branch Reservoir stands as an impressive example of late 19th-century engineering. Construction of it along with the Sodom Dam began in 1888 under a contract awarded to Sullivan, Rider & Dougherty. The East Branch of the Croton River was soon diverted to clear the dam site, and two stone towers were anchored into the bedrock on either bank.

Hydraulic engineers supervised the work, which involved the most advanced technology of the era. The work drew national attention and was featured on the cover and in Scientific American issue of August 17, 1889. In addition to damming the water, crews built stone walls, carried out grading and filling, installed drains, culverts, bridges, and abutments, and placed riprap – layers of large stones around the shoreline to prevent erosion caused by reservoir water.

Property of Southeast Museum, photograph by Watler McCulloh, ca. 1890

A steel cable system, among the first used in dam construction, was installed to transport massive stones from nearby quarries, including one in nearby Towners, NY. The stone was delivered to the site by railroad. Over five years, workers erected the impoundment that would hold 5.2 billion gallons of water. A 1,773-foot tunnel was also built to connect the East Branch Reservoir with the Bog Brook Reservoir, balancing water levels between the two.

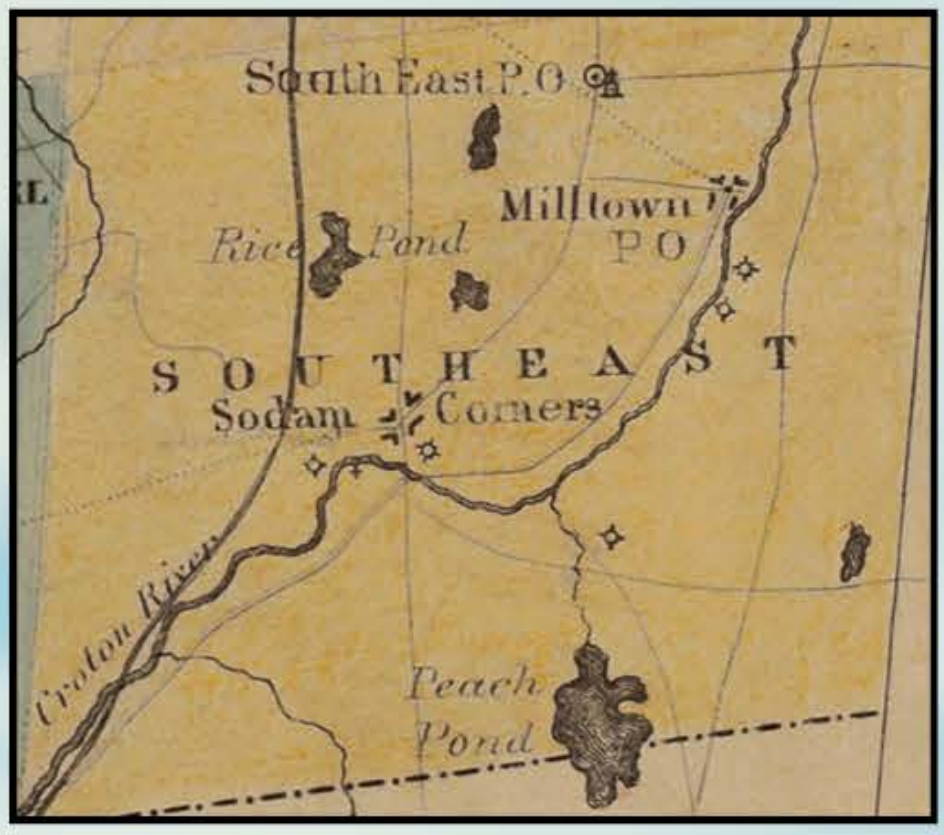
In addition, engineers constructed an overflow spillway for excess water and a fountain-aeration system at the base of the dam. This marvel became an attractive destination for visitors to the area. The reservoir entered service on July 25, 1891, and was formally completed in 1893.

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

Transformation of the Area

The reservoir's creation reshaped some parts of the Town of Southeast. Twenty-one families living on land designated for flooding were displaced, and after construction, the city acquired more surrounding property (1896–1897) to safeguard the water supply.

This acquisition forced the removal of many farms, homes, and businesses, including much of Southeast Centre, the town's early population hub located near today's spillway and dam base (near Sodom Road and the bottom of Brewster Hill.) Buildings were torn down, auctioned, or abandoned, and in some cases, new roads were built. The displacement of Southeast Centre and neighboring areas stifled local development, dairy farming, and contributed to a decline in Putnam County's population during the 1880s and 1890s.



1829 map featuring "Sodam Corners", later named Southeast Centre. CHO

1867 Beers Map, CHO

Historic photo of Southeast Centre in an early 20th century postcard; CHO

The construction of the East Branch and other reservoirs was an important turning point in Southeast's history—ending farming and small industry as economic activities and permanently restricting development within large areas sectioned off by the city.

Early 20th century reservoir views; HC548, Howes Family Collection; CHO

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

Public Sentiment and Fear

Johnstown Flood, 1889: Gen. view of debris #15; Photo copyrighted by Langill & Darling, 1889; Library of Congress

At the same time, public anxiety ran high. In May 1889, during the East Branch Reservoir's construction, the Johnstown Flood in Pennsylvania claimed more than 2,000 lives after the South Fork Dam collapsed. News of the disaster spread quickly, and fear gripped residents of Southeast, particularly in Brewster and Southeast Centre, who lived just downstream from the East Branch dam under construction.

Locals worried about the safety of the new reservoir and dams—and with reason, given the immense scale of the project and the unfamiliar engineering methods being used.

Death on and Near the Construction Site

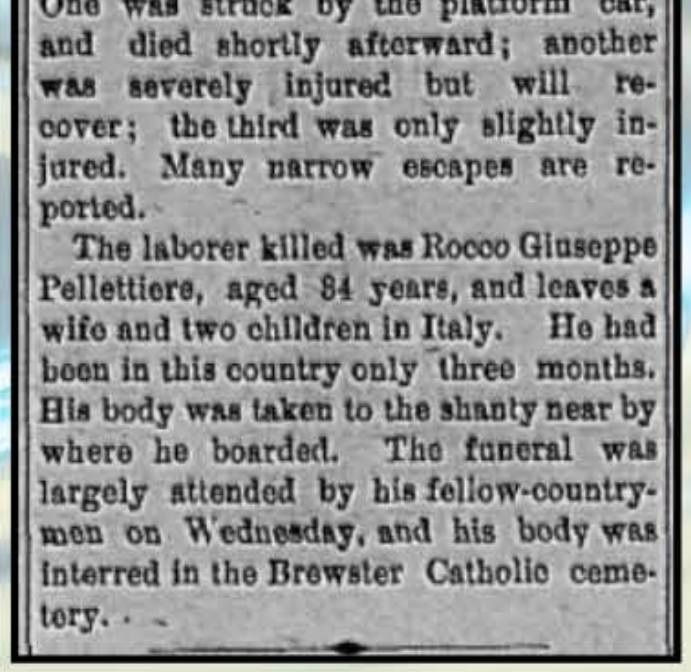
Tragedy struck in the fall 1889 when a steel cable carrying platforms loaded with stone and cement snapped during construction. The heavy cart plunged to the ground, killing Rocco Giuseppe Pellettiere, a 34-year-old Italian immigrant and laborer who left behind a wife and two young children in Italy.

The following year, on Saturday, September 13, 1890, a violent storm swept across the Town of Southeast, unleashing torrents of rain, lightning, and thunder. A large group of immigrant laborers took refuge in a two-story "Italian shanty" near the stone works of the Sodom Dam, close to Seth B. Howes's "Stonehenge" estate. A bolt of lightning struck the structure, killing four men instantly:

- **Nicolo Bellizza, 17**
- **Umberto Desantes, 22**
- **Bruno Butucci, 44**
- **Antonio Gabrile, 45 (married, with family in Italy)**

According to the *Brewster Standard*, their bodies were carried by two hearses making two trips each, to the one grave for the four laborers which was prepared at St. Lawrence O'Toole Catholic Cemetery.

Headstone at St. Lawrence O'Toole Cemetery, Brewster, NY. Source: Find A Grave Memorial



Accident at Sodom.

The first serious accident at the works at Sodom occurred about 10:30 o'clock on Tuesday. A huge iron cable spans the valley wherein the masonry dam is being built by Contractors Sullivan, Rider & Dougherty. The cable is stretched directly above the dam and all the large stones, cement, etc., used in its construction are loaded upon platforms, run out upon the cable and lowered to the workmen. The work was being carried on as usual Tuesday morning, when, without a moment's warning, the cable, weighing several tons, with its heavily freighted car, came crashing down upon the forty laborers below. Fortunately only three men were hurt. One was struck by the platform car, and died shortly afterward; another was severely injured but will recover; the third was only slightly injured. Many narrow escapes are reported.

The laborer killed was Rocco Giuseppe Pellettiere, aged 34 years, and leaves a wife and two children in Italy. He had been in this country only three months. His body was taken to the shanty near by where he boarded. The funeral was largely attended by his fellow-countrymen on Wednesday, and his body was interred in the Brewster Catholic cemetery.

Brewster Standard, 1 Nov 1889

These are just a few stories of many immigrant workers whose labor and sacrifice built the infrastructure that continues to sustain millions of New Yorkers. Their stories serve as a somber reminder of the human cost of progress during this transformative era.

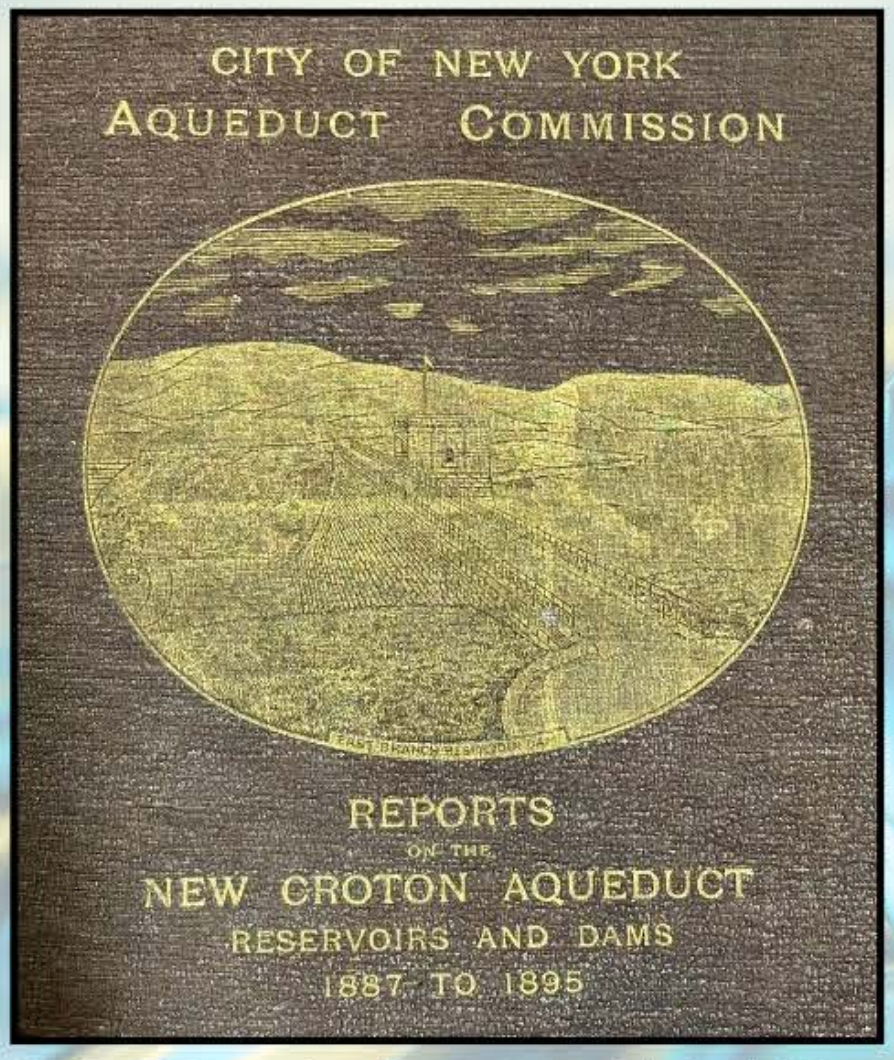
Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

Aftermath and Legacy

Despite setbacks, by 1891–1892 both the Sodom (East Branch) and Bog Brook Reservoirs were in active service. The following year, the Watershed Act of 1893 gave New York City greater power to acquire land and enforce sanitary protections throughout the watershed, addressing more than 1,000 sources of pollution identified near reservoirs in Putnam County.

Today, the reservoirs that reshaped some of the Town of Southeast's landscape still serve as vital links in New York City's water supply system—a legacy of vision, engineering, sacrifice, and enduring impact.

The East Branch Spillway, 1972; Patent Trader Morgue, CHO

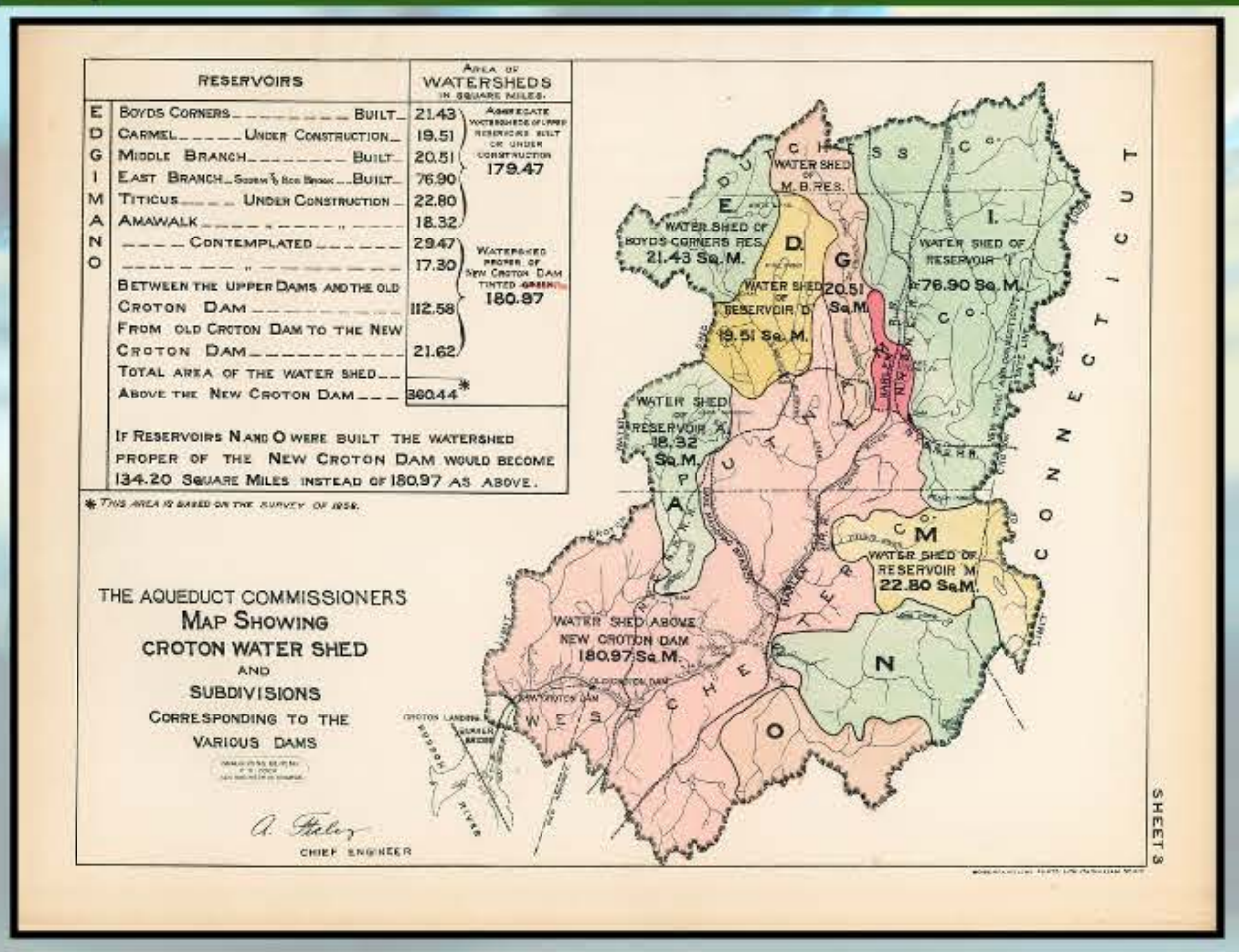


East Branch Reservoir and Dam on cover of the book; CHO

In 1895, a publication titled Report to the Aqueduct Commissioners by the President, James C. Duane, was released. The cover of the book features a gold embossed image of the East Branch Reservoir and Sodom Dam.

Years later, a copy of this report—featuring many of the photo plates, survey maps, and blueprints included in this exhibit—was gifted to the Brewster Public Library by Leon Brewster Lent (1876–1956), grandson of Walter Brewster, the Village's namesake. Lent attended Stevens Institute of Technology and studied engineering. He later served in World War I as an early aviation engineer and again in World War II, achieving the rank of Colonel. Lent was a longtime friend of pioneering aviator Orville Wright.

The Brewster Public Library subsequently donated this significant volume—an invaluable record of late 19th-century engineering achievement—to the Putnam County Historian's Office, located in the Village of Brewster, for preservation in the County Archives, ensuring its accessibility to the public and future historians for research and study.



RESERVOIRS		Area of Watersheds in Square Miles.	
E	Boyds Corners ... Built	21.43	Aggregate watersheds of upper reservoirs built or under construction 179.47
D	Carmel ... Under Construction	19.51	
G	Middle Branch ... Built	20.51	
I	East Branch ... Built	76.90	
M	Titicus ... Under Construction	22.80	
A	Amawalk ... "	18.32	
N	... Contemplated	29.47	Watershed proper of New Croton Dam tinted green 180.97
O	... "	17.30	
	Between the upper Dams and the old Croton Dam	112.58	
	From old Croton Dam to the New Croton Dam	21.62	
	Total area of the water shed above the New Croton Dam	360.44*	

If Reservoirs N and O were built the watershed proper of the New Croton Dam would become 134.20 Square Miles instead of 180.97 as above.

* This area is based on the survey of 1856.

THE AQUEDUCT COMMISSIONERS
MAP SHOWING
CROTON WATER SHED
AND
SUBDIVISIONS
CORRESPONDING TO THE
VARIOUS DAMS

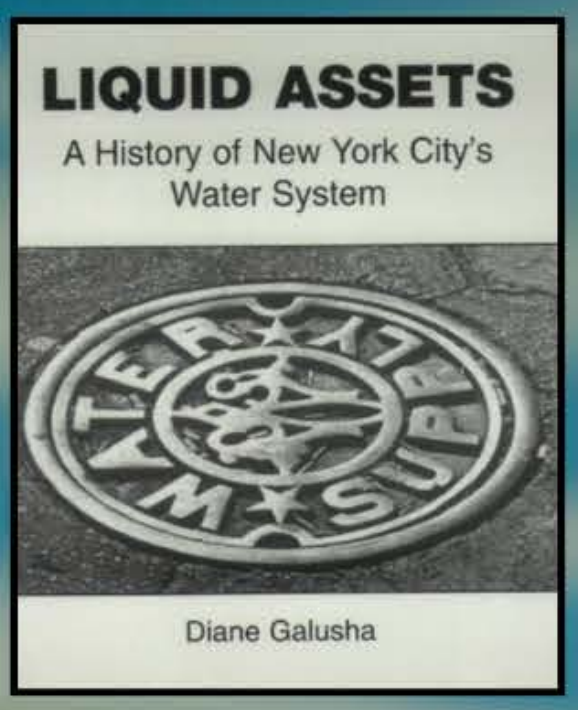
A. Fteley
CHIEF ENGINEER

Above & right: pages from the book; CHO

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025

The Croton Reservoir System
&
The Town of Southeast

Recommended Reading:
Liquid Assets: A History of New York City's Water System by Diane Galusha



For more photo plates, survey maps, and blueprints included in the *Report to the Aqueduct Commissioners,* visit the Putnam County NY History Collections on New York Heritage

To explore reservoir history in the archives of the *Brewster Standard*, visit Brewster Library. Links

Deliverable research and development completed as a component of the Eagle Scout Service Project of Connor O'Reilly, Troop 228 Somers, NY, in collaboration with Southeast Museum, the Town of Southeast Historic Sites Commission, and the Putnam County Historian's Office; with financial support from the Putnam County Italian American Club, Brewster, NY; Fall 2025