Result 12-31-15

NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer to complete all items.

1. Name of Property

historic name **CALEDONIA FISH HATCHERY**

other names/site number "Spring Brook" / Seth Green State Hatchery

2. Location

street & number 16 North Street [ ] not for publication

city or town Caledonia [ ] vicinity

state New York code NY county Livingston code 051 zip code 14423

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this [X] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements as set forth in 36 CFR Part 60. In my opinion, the property [X] meets [ ] does not meet the National Register criteria. I recommend that this property be considered significant [X] nationally [X] statewide [ ] locally. ([ ] see continuation sheet for additional comments.)

Richard Pierpont DSHPO — 1/6/15

Signature of certifying official/Title — Date

State or Federal agency and bureau

In my opinion, the property [ ] meets [ ] does not meet the National Register criteria. ([ ] see continuation sheet for additional comments.)

Signature of certifying official/Title — Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

[X] entered in the National Register
[ ] see continuation sheet
[ ] determined eligible for the National Register
[ ] see continuation sheet
[ ] determined not eligible for the National Register
[ ] removed from the National Register
[ ] other (explain) _____

Signature of the Keeper — date of action

Alexis Abernethy — 2/27/15

5. Classification

Ownership of Property
(check as many boxes as apply)

[ ] private
[ ] public-local
[X] public-State
[ ] public-Federal

Category of Property
(Check only one box)

[ ] building(s)
[X] district
[ ] site
[ ] structure
[ ] object

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
5	4	buildings
1		sites
5	5	structures
2		objects
13	**9**	**TOTAL**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions
(enter categories from instructions)

AGRICULTURE/SUBSISTENCE/
Fishing facility or site (fish hatchery)

Current Functions
(Enter categories from instructions)

AGRICULTURE/SUBSISTENCE/
Fishing facility or site (fish hatchery)

7. Description

Architectural Classification
(Enter categories from instructions)

No style

Materials
(Enter categories from instructions)

foundation concrete
walls wood
roof asphalt shingle
other concrete

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets)

CALEDONIA FISH HATCHERY | **Livingston, New York**
Name of Property | County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

[**X**] **A** Property associated with events that have made a significant contribution to the broad patterns of our history.

[**X**] **B** Property is associated with the lives of persons significant in our past.

[ ] **C** Property embodies the distinctive characteristics of a type, period, or method of construction or that represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

[ ] **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all boxes that apply.)

[ ] **A** owned by a religious institution or used for religious purposes.

[ ] **B** removed from its original location

[ ] **C** a birthplace or grave

[ ] **D** a cemetery

[ ] **E** a reconstructed building, object, or structure

[ ] **F** a commemorative property

[ ] **G** less than 50 years of age or achieved significance within the past 50 years

Areas of Significance:
(Enter categories from instructions)

Agriculture

Period of Significance:

1864 – ca. 1964

Significant Dates:

1864, ca. 1870, ca. 1880

Significant Person:

Green, Seth

Cultural Affiliation:

N/A

Architect/Builder:

William C. Green (hatching house)

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

[ ] preliminary determination of individual listing (36 CFR 67) has been requested.
[ ] previously listed in the National Register
[ ] previously determined eligible by the National Register
[ ] designated a National Historic Landmark
[ ] recorded by historic American Building Survey
_____
[ ] recorded by Historic American Engineering Record
_____

Primary location of additional data:

[ ] State Historic Preservation Office
[ ] Other State agency
[ ] Federal Agency
[ ] Local Government
[ ] University
[ ] Other repository: _____

10. Geographical Data

Acreage of Property 18.53 acres

UTM References SEE CONTINUATION SHEET FOR ADDITIONAL UTM REFERENCES
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing		Zone	Easting	Northing
1	18	266943	4763437	3	18	266935	4763156
2	18	266972	4763283	4	18	266892	4763079

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Jennifer Walkowski, Historic Preservation Specialist

organization New York State Historic Preservation Office date January 5, 2015

street & number Peebles Island Resource Center, PO Box 189 telephone (518) 237-8643 x3214

city or town Waterford state NY zip code 12188

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location
A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items
(Check with SHPO or FPO for any additional items)

Property Owner (Complete this item at the request of the SHPO or FPO)

name NYSDEC, Bureau of Public Lands [Contact: Charles Vandrei]

street & number 625 Broadway, 5th Floor telephone

city or town Albany state NY zip code 12233-4255

The Caledonia Fish Hatchery occupies a campus of approximately eighteen acres on the west side of North Street (NY 383/36) on the northern edge of the Village of Caledonia in northeastern Livingston County, New York. The surrounding area is residential in character, with nineteenth- and twentieth-century houses on village lots. The local topography is generally flat. Spring Creek runs through the property just west of the complex; underground pipes feed water from the creek through the various artificial ponds of the facility.

The buildings of the complex are clustered in the west-central portion of the property with the long concrete ponds arrayed to the east and north of the building group. Parking for visitors is located north of the buildings and the northerly ponds and is accessed by a driveway from North Street. Additional paved areas are located between the buildings and to their south. A small, modern (non-contributing) gazebo is located in a grassed and treed area at the northeast corner of the campus, near the visitors' parking lot and access drive. Also located in this area is a memorial boulder with bronze plaques (contributing) in tribute to Seth Green.

With the exception of the manager's residence, contributing buildings are generally barn-like in character with wood novelty siding over heavy framing that is exposed on the interior. An annotated list of buildings, structures and objects follows.

Resource List

Unless otherwise noted, all resource are contributing. Although several resources are non-contributing as they are less than 50 years of age, they do add to the general environment of the actively operating fish hatchery.

Buildings:

Main Hatchery Building – c. 1880
Designed by William C. Green
Large two and one-half story five- by seven-bay building with broadly pitched gambrel roof surmounted by a square cupola near the east end. The gambrel roof has three steeply gabled dormers on each of the lower slopes at the second-floor level. Fenestration is regular, with window openings fitted with six-over-six double-hung sash. Decorative elements include simple pendant ornaments at the four corners of both the main and cupola roofs, large diamond windows at the attic level of the end walls and a large fish weather vane on the cupola.

Manager's Residence – c. 1889-90
Simple Queen Anne style residence with wrap-around porch with turned-spindle balustrade and frieze.

Ice house – c. 1890
Small front-gabled one-story wood frame building with only one small window opening on the west side. Features weatherboard siding and asphalt shingle roof. Roof features long gabled ventilator at roof, presumably for use venting condensation. Interior reveals wood frame construction.

"Lake House" – c. 1903
Three- by five-bay one-story symmetrically cruciform building with gable roofs; roofs of short arms of cross have lower profiles than the main roof. Named for its initial use in raising lake trout.

Intake building – c. 1975
Non-contributing (outside of period of significance)
One-story modern ribbed concrete block building used to house water intake and filtering mechanical equipment. Sited near Spring Creek.

Garage - c. 1950

Structures:

Retaining Wall – c. 1870
Rubble retaining wall just east of main building – originally part of support for a large artificial pond, now functions as retaining wall for raised flat area that supports a broad lawn and complex of modern linear concrete ponds.

Concrete dam across creek – c. 1920s, rebuilt 1942
The dam functions primarily as a retention dam, providing a supply of gravity fed water that can be adjusted to properly support the hatchery system. It consists of a reinforced concrete form with wood boards manually inserted to raise or lower the water level.

Steel Food Storage Building – 1977
Non-contributing (outside of period of significance)
One-story metal building.

Pole Barn – c. 1990
Non-contributing (outside of period of significance)

Gazebo – 2000
Non-contributing (outside of period of significance)
Modern octagonal wood gazebo.

Above-ground fuel tanks – c. 1995
Non-contributing (outside of period of significance)

Pump House – 1977
Non-contributing (outside of period of significance)

Ponds:

Note that ponds at the hatchery are located in related groupings of structures. Each pond series is composed of several smaller ponds, some of which may interconnect with each other to allow for water circulation, although a gate divides them. Many of the ponds were established early-on in the hatchery's history, and were slowly improved through the use of concrete, as technology developed.

18 East Ponds (at east of property) – c. 1975
Non-contributing (outside of period of significance)
System of long, rectangular interconnected ponds located at far eastern edge of property. Each pond holds 1350 ft^3 of water. Each pond measures approximately 90' long by 9' wide by 25.5" deep, and the overall group measures 78' wide by 270' long.

9 Upper A Ponds – built 1950s, concrete bottoms added 1990s
Located near the 18 East Pond series, towards east edge of site. Series of three rows of connected ponds with octagonal shaped areas. Each pond holds 1200 ft^3 of water. Each pond measures 15' wide by 55' in length by 21" deep, overall group approximately 55' wide by 165 in length.

1 long pond, 10A – ca. 1930s; concrete walls built 1980s, concrete bottom 2008
Located between the Upper and Lower A Ponds. At the lower end is a display area, used to house large specimen fish. Holds 6500 ft^3, and measures roughly 49' wide x 95' long by 22" deep.

4 Lower A Ponds – c. 1930s; modified 1960s, concrete bottoms added 2008
Located near the north side of the facility, near the parking area and the main hatchery building. Series of two rows of connected ponds. The 2 easternmost, upstream ponds in this grouping holds 2700 ft^3 measuring approximately 23' wide by 74' long and 21" deep, while the 2 westernmost, downstream ponds hold 1650 ft^3, measuring 23' wide by 50' long by 20" deep. The overall pond group measures 50' wide by 124' long.

3 circular ponds (created from barn silo blocks) – 1950s
Grouping of three concrete bottom circular ponds each measuring 25' in diameter and 24" deep, holding 860 ft^3 each.

2 ponds - located on west side of creek, abandoned 1990s
Non-contributing/Not in use.

Clarifiers - settling sewage ponds – 1992
Non-contributing (outside of period of significance)

Objects:

Memorial boulder and plaque – 1935
Irregular monolith roughly six feet high and three feet by two feet in plan with bronze plaque that pays tribute to Seth Green. Text summarizes Green's life and career.

Centennial boulder and plaque – 1964
A large natural stone boulder with an attached bronze informational plaque.

The Caledonia Fish Hatchery is nationally significant for its association with Seth Green, one of the most important figures in American pisciculture.[1] Green (March 19, 1817 – August 18, 1888) established the facility as the "Spring Brook" hatchery in the small village of Caledonia in 1864. Intended initially as a commercial venture, the hatchery became a laboratory for Green, whose deepening interest led to significant advancements in improving artificial propagation of several types of American fish, as well as sparked a national movement to protect and conserve America's fish stock. The Spring Brook hatchery, now known as the Caledonia Fish Hatchery, remains as Seth Green's legacy to the world of fish culture. The site is a highly intact nineteenth-century fish hatchery, located in the Village of Caledonia, Livingston County, New York. After its founding in 1864, the facility quickly emerged as an early nationally-recognized center for pisciculture in North America.

Since Green's time, the Caledonia Fish Hatchery has continued to serve as a large and active fish farm, producing millions of eggs and fry used to stock streams, rivers and lakes across the United States.[2] The Caledonia Fish Hatchery is the earliest organized fish hatchery in New York State and is thought to be the oldest commercially viable hatchery in the country.[3] The Caledonia Fish Hatchery also played a key role in developing and promoting organized fish culture and propagation during the late nineteenth century, meeting Criterion A in the area of Agriculture.

For its associations with Seth Green, often referred to as the "Father of Fish Culture" in North America, the facility meets Criterion B. Green's innovative experiments in fish culture and concern over depletion of fish in the state's waterways also led to the first state and federal governmental regulatory involvement in the commercial fish industry in America. For decades in the late nineteenth century, Seth Green served as an ambassador for pisciculture in the United States, and his services were requested by groups in California, Virginia, Connecticut and the Mid-west. His 1870 book *Trout Culture* was an early "how-to" manual for

[1] The term "pisciculture" refers to the breeding, hatching, and rearing of fish under controlled conditions.

[2] The various stages of fish development can be described as: **egg**, **larva** (when the just-hatched young fish still retains its yolk sack for nutrition), **fry** (a young fish capable of feeding itself), **fingerling** (several inches in length and has scales and working fins), **adult** (a fish is considered an adult when it is fully grown and sexually mature). A fish in any stage other than the egg or adult stage can generally be referred to as a juvenile.

[3] It may, in fact, be the oldest fish hatchery in the western hemisphere, although additional research would be needed to confirm this claim.

establishing a successful fish hatchery, and was a useful reference manual that helped spur a national hatchery movement. Nearly one hundred and fifty years later, the general principles of modern fish culture are still based on those used by Seth Green at Caledonia. The period of significance for the hatchery begins with its founding at this site in 1864, and ends once century later in ca. 1964. The Caledonia Fish Hatchery is the most important resource associated with Green's life and work.

Seth Green and the "Spring Brook" Fish Hatchery

Seth Green, considered to be the "Father of Fish Culture," and his fish hatchery in Caledonia, NY are inextricably linked, and Green's early life was influential on his eventual career in pisciculture. However, while the facts of Green's productive life are recognized by scholars as accurate and his scientific and practical contributions to fish culture are extremely well documented, records of his early life are rarer. In fact, it appears that some of the information relating experiences in his early life that seemingly motivated or influenced him are either apocryphal or were legends fashioned as his fame increased, perhaps to embellish his biography. Those biographical facts thought to fall into that category will be footnoted. Nevertheless, however Green arrived at his chosen field, the nature and importance of his contributions is unquestionable.

Green was born on March 17, 1817 in present-day Rochester, just west of Irondequoit Bay, to Adonijah Green and Betsy Bronson Green. Growing up in a log cabin in what was at the time still largely unsettled and undeveloped land, Green's early life was as a pioneer farmer, hunting and fishing in the untamed wilderness. While Green was still a young boy, the family moved to the more populated village of Carthage, three miles north of Rochester, a busy port on the Genesee River, where his father ran a tavern.[4] Here, growing up amidst the fishing and shipping community, Green spent much of his time with a group of Seneca Indians in the area. From the Native Americans, Green learned to carefully observe nature and he became a skilled outdoorsman. Perhaps more importantly, he also learned to become an expert fisherman through observing the nature of the

[4] The community of Carthage or Carthage Landing no longer exists, but appears to have been absorbed early-on by Charlotte and the city of Rochester.

fish, including when the optimal times of the year were for fishing, noting the condition of the water and wind, and how these affected the spawning season.[5]

During the financial panic of 1837, Carthage was hard-hit economically, and the future of Adonijah Green's tavern in the village seemed uncertain, as business and industry began to move elsewhere. At this point, Seth Green decided to make a living for himself, entering the commercial fishing trade at about the age of 20. Using what little money he had, Green bought himself a net and began catching the salmon, sturgeon, bullheads and other fish that could be found on the lower Genesee River. While his operation was modest, Seth Green was an adept fisherman as well as a businessman, saving his profits. Before long, Green began to expand his business by accompanying a fishing boat on trips to Canada. In Canada, he benefited from large hauls of salmon, which he sold for 5 cents a pound back in Rochester.[6]

According to a biography prepared by Sylvia Black in 1944, it is on one of these fishing trips to Canada that Seth Green had an epiphany. Spending long hours amongst the streams and fish, Green noticed the salmon preparing nests for their spawn. He was apparently so entranced by his study that he climbed a tree to overlook the river and remained observant for two days. While studying the salmon spawning, Green noticed the high number of eggs that were lost during the natural mating process and began to wonder what could be done to prevent such waste. From a business standpoint, if there were a higher number of salmon hatching, this could mean larger hauls and more profitability. While the story itself is likely a later embellishment, it is apparently after these Canadian fishing trips Seth Green set about trying to find ways to artificially hatch fish.[7] Seth Green's first experiments with the artificial propagation of fish began around 1848. By this time, Green had saved enough money from his fishing that he married Helen Cooke of Rochester and established a fish market on Front Street. At this point, Green appears to have started carrying out his experiments with fish culture,

[5] Sylvia R. Black, "Seth Green: Father of Fish Culture," *Rochester History* VI, no. 3 (July 1944): 1-4. Ms. Black's essay cites Green's own scrapbook as a major source of information on his life and career, and much of her narrative reads as a mythologized version of Green's early life. Whether these tales were perpetuated by Green himself or embellished by Ms. Black, the account of his early life appears to be a bit exaggerated. All citations associated with Ms. Black's essay on Green, especially those recounting his earlier life, should be taken with some skepticism.

[6] Black, 4-5.

[7] Black, 6-7.

working with his brother and partner, Monroe, to experiment with spawning fish at a camp on a small island in the Genesee River just below the lower falls. While his experiments continued, Green's fish market became very successful. By 1857 it was regarded as one of the largest dealers in New York State and employed over one hundred men who caught and sold fish. Green himself gained a reputation as a leading fisherman.[8]

It is unknown to what degree that Seth Green was influenced or aware of other scientific studies of artificial fish propagation, although there were several other early experiments and trials during the first half of the nineteenth century both in the United States and Europe. Most of the early experiments with farming fish appear to have been small scale, laboratory-type experiments, and brook trout were perhaps the most popular fish studied. Fish farming has its early origins in ancient China, where it was conducted on a very basic level to raise ornamental fish such as goldfish for centuries. The earliest discovery of fertilizing trout eggs by artificial means is generally attributed to Dom Pinchon, a French monk living in the fourteenth century, although some believe that he used naturally spawned eggs for his experiments. He was, however, the first to use a hatching box that used modern principles. The ends of the box were made of woven wicker, and the bottom was covered with sand into which the eggs were deposited. The box would then be submerged into a gently flowing stream. Despite these early efforts, centuries passed with little progress made in fish culture. It was not until 1763-64 that a series of papers by Lieutenant Stephan Ludwig Jacobi, a large estate owner in southwestern Germany, described his experiments with artificial propagation of fresh water fish. Jacobi was successful in artificially fertilizing salmon and trout eggs by mixing the eggs and milt (fish sperm) in water. Once fertilized, the eggs were buried in gravel using a hatching box. Jacobi was generally successful in his work, establishing several fish farms in Germany; however, his methods were soon forgotten and fish culture stalled for nearly a century.[9]

[8] Black, 7. While little historical mention of Seth Green's fish market is made, it apparently continued in operation throughout Green's life and career as a fish culturalist. At some point, he turned operations of the business over to his son, Chester K. Green, who operated it as "Seth Green's Son" at 78-80 Front Street in Rochester at least until 1890. "Advertisement - Seth Green's Son," *Rochester Democrat and Chronicle* (Rochester, NY), January 2, 1890. Like his father Seth and uncle Monroe, Chester Green was also apparently a highly regarded pisciculturalist. He is noted as managing the hatchery in Washington D.C., the hatchery in Erwin, Tennessee, and in 1906 the hatchery at Cape Vincent, NY. "Chester K. Green," *Forest and Stream* 81 (November 22, 1913): 644.

[9] Herbert Spencer Davis, *Culture and Diseases of Game Fishes* (Berkeley: University of California Press, 1953), 5-6.

Two French fishermen were responsible for reestablishing fish culture in Europe during the early nineteenth century. Joseph Remy and Antoine Gehin made their livelihood from the trout in the streams of the Vosges Mountains in the 1840s. Although they had no formal education or scientific background, much like Seth Green, Remy and Gehin became increasingly alarmed by the disappearance of trout in the streams and began to study their habits during spawning season. As a result of their study, the two rediscovered the methods pioneered by Jacobi in the 1700s. They put these methods of artificial fish propagation to work in 1842, receiving public attention for their work in 1848. During this time, favorable reports regarding their operations were made by two well-known French scientists, and the notoriety garnered Remy and Gehin great attention and publicity. This culminated in the construction of a purpose-built fish hatchery at Huninque by the French government in 1852. This facility is regarded as the first publicly owned fish hatchery in history and was well known for supplying eggs throughout France and Europe.[10]

One of the earliest known published accounts of artificial fish spawning in the United States came from a paper presented by the Rev. John Bachmann of Charleston, South Carolina, to the South Carolina State Agricultural Society in 1804. In his report, Rev. Bachman commented on fertilizing and hatching corporal (an unknown type of fish) and brook trout and raising the trout fry in a pond. Little appears to have been made of this report, and Rev. Bachmann apparently abandoned his pursuit of fish farming. European publications on fish culture were starting to come into the United States during the 1840s and '50s, and Theodatus Garlick, M.D., and Professor H.A. Ackley were able to successfully fertilize and incubate brook trout eggs at Ackley's farm, which had a small hatching house and three ponds totaling less than two-acres of land. They are generally credited with the first successful attempt at artificial propagation in the United States and they displayed the fish they produced at the Ohio State Fair. In 1857 Dr. Garlick published *A Treatise on the Artificial Propagation of Certain Kinds of Fish, with the Description and Habits of Such Kinds as Are the Most Suitable for Pisciculture*. In Simsbury, Connecticut, E.C. Kellog and D.W. Chapman hatched 75 of the 2,000 eggs they collected from a single female brook trout in 1855, and by 1857 they had successfully produced 400 fry. In 1860, Kellog managed a hatchery set up by Colonel Samuel Colt, better known for his work with firearms, who also dabbled in the fish hatchery

[10] Davis, 6-7.

business, producing about 4,000 fry. Another notable early pioneer in fish hatcheries was Stephen H. Ainsworth, a hobbyist in West Bloomfield, NY, who was able to produce sufficient numbers of brook trout to pay expenses, stock area streams and ponds and have enough as surplus for his own needs.[11]

It was amidst this climate of early, limited experimentation with artificial fish spawning that Seth Green established his fish hatchery. Although there were several early fish hatcheries and facilities established during the era, it is thought by historians and pisciculturalists that Seth Green established the first purpose-built fish hatchery in the United States, rather than using naturally-occurring ponds. In the summer of 1864, after more than a decade of experiments and with advice from Ainsworth, Green purchased for $2,000 a site in Livingston County. Known as Spring Brook, taking its name from the Spring Creek that flowed through the property, the facility was located near Caledonia, a farming village of around 100 residents. As far back as the 1810s, the natural springs in Caledonia were well known for their abundance of naturally occurring trout. The Spring Creek originates in the village of Caledonia, flowing north about one mile before it unites with Oatka Creek, a tributary of the Genesee River, in the village of Mumford. In the 1860s, Spring Creek was noted for having a bottom covered in small white shells and gravel, and clear water with traces of lime and sulfur. The abundance of insects in the creek provided an ample food source for the trout, and the water temperature remained generally steady at a cool 48-58 degrees Fahrenheit throughout the year.[12] Because of its ample water supply, more than 7 million gallons per day, the hatchery site was once the location of a woolen factory owned by Donald McKenzie.[13]

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[11] Black, 7-8. Also, Robert R. Stickney, *Aquaculture in the United States: A Historical Survey* (New York: John Wiley & Sons, 1996), 8-9. Also, J. T. Bowen, "A History of Fish Culture as Related to the Development of Fishery Programs," ed. Norman G. Benson, *A Century of Fisheries in North America*, 1970, 72.

[12] "Artificial Propagation of Trout," *Frank Leslie's Illustrated Newspaper*, September 1, 1866, 372.

[13] McKenzie's homestead was built just south of the present-day hatchery at the site of what is now the "Spring Brook Inn/Spring Creek Hotel" or Daffie's Pizza and Tavern. The house was built in 1818 and the carding mill, located near the water, was constructed in 1822. The house was removed in 1889 for the construction of the Spring Brook Inn, which was constructed by McKenzie's heirs to accommodate the growing tourist traffic to the Caledonia Hatchery. The carding mill was lost to a fire at an unknown date, and nothing was said to remain of it. "Seth Green and the Caledonia Fish Hatchery," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 10-11.

Here, Seth Green started building his fish hatchery in 1864. While never explicitly described as such, Green apparently envisioned the hatchery as a sort of factory, being streamlined and efficient in the production of fish eggs and fry. During its early years the hatchery focused on raising brook trout, rainbow trout, lake trout, Atlantic salmon, grayling, lake herring, whitefish, carp and gold fish.[14] In its earliest phase, the hatchery appears to have contained few buildings, focusing on establishing different size ponds and holding tanks for the fish. He created the ponds by building barriers in the fore-bay and millrace of the former mill site.[15] Early buildings on the property may have included a small one-room house and a few small buildings used as hatching houses, but these earliest structures are not well documented.[16] An early description of the facility describes it as such:

> *…The grounds embracing a few hundred feet in circumference, are filled with tanks or wooden boxes, sunk to the level of the ground, through which the water is conveyed, and which are filled with fish – millions of them – of every size and age, from those no longer than a common pin up to a single trout of nine pounds in weight. Those of about the same size are kept by themselves. Though confined in the tanks, they are as lively and as healthy as though they were in the creek, as the water is gurgling through the tanks constantly.*[17]

The earliest description of Green's hatching house setup comes from 1866. While it makes no mention of the size, shape and design of this early hatching building, it was likely a very crude, rectangular structure that served as a container for the activity within. Inside the hatching house there were three hatching troughs. Water was brought into the building from the stream via hollowed logs into a tank, measuring 6-feet long by 2-foot 8-inches wide and 1 ½-feet deep, where it passed through a series of strainers. This exterior tank then connected to an interior system of troughs through a hole in the building. One trough ran the entire width of the building and fed into the three hatching troughs. The building interior also had a platform, which held a wood burning stove for the comfort of its workers, and at the end of the building was a large, indoor 18-foot square tank. Any hatched fish that managed to escape from the hatching troughs would get caught in the tank, and the fish could

[14] Stickney, 10.
[15] Bowen, 72.
[16] Black, 9.
[17] Quoted in "Seth Green and the Caledonia Fish Hatchery," 11.

be allowed to develop and mature slightly in the protected environment before being released to one of the exterior ponds.[18]

At the hatchery in Caledonia, Green developed and refined a method for artificial propagation known as the dry impregnation method. Unlike the earlier method for wet impregnation, the industry standard promoted by Remy and Gehin in the early 1800s, Green's method involved adding no water to the pan while mixing the eggs and the milt. Green had found that this earlier wet technique yielded only 25 percent fertilization of the eggs, which, at the time, was considered a highly successful rate. However, Green continued to experiment and refine his dry method, consulting with his friends and colleagues in the process, finally perfecting his technique to result in a staggering 97 percent yield of fertilized eggs. A shrewd businessman, Green apparently kept his dry impregnation technique a trade-secret for many decades. While many of the details of his own methods were kept a closely guarded secret, he did offer lessons on fish culture at a rate of $10 per day. Initially, his goal had been to raise brook trout for his fish market; however, it quickly became more profitable to sell the eggs or fry. For 1,000 brook trout eggs, Green could get $8 to $10, for fingerlings (fish larger than fry measuring roughly 2 inches in length), Green could get $30-$40 per thousand, and for 1,000 2-year-old fish, a price of $250 could be commanded. He noted that in 1865, after being in operation for only one year, his profits were $1,000, but by 1868 had they had skyrocketed to $10,000 from the sale of more than 180,000 eggs (equivalent to more than $160,000 today). Green acknowledged Ainsworth's assistance in getting the hatchery established, but he proved that fish culture could be a commercially viable, profitable industry, rather than just a hobby.[19]

From its earliest years, Green's hatchery in Caledonia attracted national attention. In September of 1866, only two years after it had opened, *Frank Leslie's Illustrated Newspaper* published a lengthy, illustrated article about the "Artificial Propagation of Trout" at the Caledonia hatchery. *Harper's New Monthly Magazine* published a similar article in its December 1867 issue, titled "Fish Farming in Western New York," describing in lush detail the setup and operation at Green's facility, noting his farm as a zoological tourist attraction. Both *Leslie's* and *Harper's* were popular publications, read by people across the country. Not only serving as a glowing

[18] "Artificial Propagation of Trout," *Frank Leslie's Illustrated Newspaper*, September 1, 1866, 373-373.

advertisement of his own business, the attention paid to Green's Spring Brook hatchery during these early years helped to disseminate his ideas and practices to a national audience. Articles such as these in 1866 and 1867 provided a business model, images, detailed plans and other information that was critical in spurring others to establish their own fish farms and hatcheries copying his model.

During the 1860s, others also sought to establish commercially viable fish hatcheries in the United States, some influenced by articles about Green's hatchery, although none appear to have been founded earlier, nor were as successful, as Green's in Caledonia. Rev. Livingston Stone, Thaddeus Norris and Samuel Milmot opened a hatchery in Charleston, New Hampshire in 1865, intending to raise trout for food, as Green had initially planned. Like him, they learned that there was more profit to be had in eggs and young fish, and after instability in the market in 1868, they focused on raising Atlantic salmon eggs and bass eggs for $50 per thousand. Dr. J.H. Slack started the Troutdale hatchery near Bloomsbury, New Jersey, in 1867, reportedly after reading about Green's hatchery. After several years of financial struggle with the facility, Slack was finally able to turn a profit there around 1871, eventually opening other hatcheries. Fred Mather established his farm in Honeoye Falls, New York, in 1868, not far from Green's Caledonia facility. Perhaps sensing a potential rival, Green provided little advice to Mather, and his fish farm proved to be little competition for the Caledonia hatchery. Mather eventually resorted to selling table fish rather than eggs and fry. Nelson W. Clark founded his hatchery, also in 1868, at Clarkston, Michigan; however, this facility was closed around 1874, when Clark moved to Northville, Michigan and turned his attention to establishing a hatchery there (this hatchery, although highly successful, was largely been demolished in the 1860s).[20]

With his hatchery business fully operational, Seth Green's success quickly drew attention. In 1867, he was approached by several state officials from New England who asked him to attempt to hatch shad, a popular game fish that was rapidly declining and apparently a challenge to propagate artificially. Green travelled to Holyoke on the Connecticut River, where he made several unsuccessful attempts at spawning the shad. Eventually, after days of trial and error, he was able to successfully hatch 15 million eggs in 15 days, and the

[19] Black, 9-10. Also, Bowen, 73.

shad fry were released into the river.[21] For the project, Green developed a new type of hatching box for shad. Unlike trout eggs, which had a sticky coating that helped bind them to the substrate in the hatching box to prevent them from being carried away by the current, shad eggs floated and were easily washed out of the box. Green's shad hatching box prevented this with an angled design, and it was granted U.S. patent number 68,871 on September 17, 1867.[22]

The success and attention brought to Seth Green's hatchery in the 1860s did not go unnoticed by New York State. During the early 1860s, several New England states had started establishing state fish and game commissions, following the lead of Massachusetts, which became the first state to appoint a commission tasked with investigating fish culture in 1856.[23] Since colonial times, hunting and fishing had been unregulated activities in the United States, and people were able to take as many fish and game animals as they needed for sustenance. However, the nation's rapid population growth in the late eighteenth century put new pressures on its natural resources. As early as 1762, striped bass and sturgeon became extinct from the Exeter River in New Hampshire due to overfishing. During the 1800s, fishing also transitioned into a sport, rather than a basic necessity to provide food, further stressing the natural supply. Other activities, such as commercial fishing and the construction of dams, further exacerbated the problem.[24] States in the northeast began to become concerned with the depletion of their fish stock and sought methods both to regulate fishing and to restock their rivers and lakes. Seeing the promise of Green's hatchery, New York State leased his fish hatchery in 1868, bringing in Alfred S. Collins as manager.[25] Collins came from an academic background and was raised in New York City; however, he was drawn to switching careers and pursuing the natural sciences.[26]

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[20] Bowen, 73.
[21] Stickney, 11.
[22] Seth Green, Fish Spawn Hatcher, US Patent 68,871, issued September 17, 1867.
[23] Davis, 7-8. Also, "100 Years of Fish Culture," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 29.
[24] Stickney, 1-2.
[25] The state's relationship to the hatchery prior to 1873 is a bit unclear. Some sources note that the state leased the hatchery from Green beginning in 1868. See citation below. Other sources indicate that, because of the immediate financial success of the hatchery, Green sold half the interest in the business to Alfred S. Collins for $6,000, bringing him onboard as a partner. See Bowen, 72.

Concurrent with the state's lease of Green's hatchery, the New York State Legislature created the first New York State Fish Commission in 1868. The commission was composed of Horatio Seymour of Utica, Robert B. Roosevelt of New York City, and Green. However, Green's term as a commissioner was short lived. In 1869, the legislature appropriated $10,000 to finance the commission's fish propagation program, and Seth Green immediately stepped down as a commissioner to become the new superintendent of fish culture. With a salary of $250 a month and ample state funding in place, Green quickly began to develop and promote the Caledonia fish hatchery and fish culture in New York State and across the country.[27]

Alfred S. Collins and Green apparently worked well together at the fish hatchery, and, perhaps inspired by Collins's academic background, collaborated on releasing a book. The book *Trout Culture*, published by the two men in 1870, provided a wealth of information on Seth Green's decades of experience with fish farming and hatchery development. A thorough guide to establishing fish hatcheries and fish farming, the book covered a wide range of topics including laying out ponds, the proper shape for ponds, the proper size and shape for a hatching house, how to place the fertilized eggs in the hatching boxes and trough, how to care for the young fish, and many others. The book included several diagrams and illustrations that clarified the topics. Although published in the small community of Caledonia, the book became a well-known treatise on fish culture. A contemporary review published in *The American Naturalist* journal, a national publication issued by the American Society of Naturalists out of Chicago, heralded the book's release, noting:

> *This is just the book that has been wanted by every one interested in the raising of fish by artificial propagation. It contains a statement of the experience of the most successful fish breeder in the country, presented in concise and forcible language; every word fully convincing the reader that the author is simply giving the results of his experience with the earnest desire of furnishing others with all the information necessary for them to become as successful breeders of trout as himself. With this book in hand, and a proper location and supply of water, there is no reason why trout raising should not succeed in the hands of any careful and energetic person. In fact nothing but pure carelessness could make it fail…*[28]

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[26] "Alfred S. Collins," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 14-15.
[27] Clayt Seagears and R. B. Miller, "Fish Planting Pioneers," *The New York State Conservationist*, June/July 1951, 20.
[28] Quoted from "Reviews: Trout Culture," *The American Naturalist*. 4, no. 7 (September 1870): 434, www.jstor.org/stable/2446769.

The book also contained a description of the facility in Caledonia, including giving prices for eggs and spawn and serving as a sort of advertisement for his business. It also noted that by 1870, Green, Collins and S.M. Spencer were partners at the Spring Brook hatchery.[29]

On the heels of the successful release of Green's book, the 1870s brought improvements to the Spring Brook hatchery in Caledonia. Using some of the $10,000 appropriated by the state in 1869, the year 1870 saw the construction of several new buildings, including a new hatching house. Green's description of an ideal hatching house in *Trout Culture* was apparently based on his new building in Caledonia, which, completed as he wrote his book, follows the same specifications. Green noted that an ideal hatching house could be of any material provide shelter from the elements to protect the eggs from the sun, rain and predators. It should have few windows and be fitted with blinds or shutters to prevent the direct sun from hitting the eggs. Green's strongest recommendation for a hatching house was that it should be kept clean to help protect the eggs from contamination and disease.[30] The new hatching house was described as being located over the Spring Creek, to allow for the intake and expulsion of the moving water, and was a one-and-a-half story wood frame building, devoid of any sort of ornamentation and resembling a shed. The lower level of the building housed the spawning troughs, while the upper level served as a workshop for building hatching and transportation boxes, as well as serving as a bunk house for the workers.[31] The hatching house was constructed quickly, taking less than two months to complete. Despite its modest specifications and materials, in 1871 it was lauded as "the world's largest and most productive fish plant."[32]

Acting as New York State superintendent of fish culture, Seth Green also served as a national ambassador for fish culture and propagation. Gaining a national reputation, thanks in part to the release of his popular book, Green's services were much in demand during the late 1860s and early 1870s. As early as 1868, Green was noted as shipping a small can of brook trout eggs to England. In May of that year, Green became concerned

[29] Seth Green and A. S. Collins, *Trout Culture.* (Caledonia, NY: S. Green and A.S. Collins, 1870), 86-88.
[30] Green and Collins, 86. Also, "Monroe A. Green," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 17.
[31] "State Hatching House," *New York Times*, February 7, 1875.
[32] Quoted in Seagears and Miller, 21.

about the depleted fish population in the Potomac River, traveling to meet with a General Spinner in Washington and demonstrating his fish hatching abilities to him in a room in the U.S. Treasury Building, where he hatched 1,500 eggs in a salt box. After this demonstration, Green was tasked with stocking the Potomac with white perch, stripped bass, herring, sturgeon and catfish. While in the area, Green also provided stock for the Susquehanna and Delaware Rivers, before traveling to the Southern United States, and stocking the Rappahannock, James and York Rivers in Virginia, as well as the Savannah River in Augusta, Georgia.[33] Following his successful experiments with shad in Connecticut in the late 1860s, Green continued to focus on shad, as well as whitefish and "salmon trout" (a vague and outdated term associated with a variety of different fish, but here likely meaning rainbow trout), establishing temporary hatching boxes in the Hudson River, at Mull's fishery, near Albany, New York, in 1870. The hatchlings were distributed in the Finger Lakes as well as other streams and rivers in New York. Some of the young were swapped with Canadian officials for Atlantic salmon eggs. In 1872, Green helped to introduce shad to tributaries of the Ohio and Mississippi Rivers and successfully brought back fertilized grayling eggs from Michigan's Au Sable River. In addition to his propagation of native species, Green also experimented with producing hybrids between some of the species to combine the positive qualities of each fish.[34]

Green's efforts were supported by a national effort to organize and support pisciculture. In 1871 the National Fish Hatchery System (NFHS) was created by Congress and signed into law by President Ulysses S. Grant, through the creation of a U.S. Commission for Fish and Fisheries. Noted natural scientist Spencer F. Baird was appointed to serve as the first commissioner. In 1872, the first federal hatchery was established on the McCloud River in California. The establishment of a federal fish management and protection agency was significant in helping to maintain declining fish populations on a national level, and its establishment is indicative of the interest and progress in American fish culture at the time.[35]

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[33] Black, 17-18.

[34] Seth Green is thought to have created the first hybrid fish, the Splake, a cross between a brook (or speckled) trout and the lake trout. Paul R. Betz and Mark C. Carnes, eds., *American National Biography. Supplement 2* (New York: Oxford University Press, 2005), 213-214.

[35] In 1938-40, the name of the U.S. Commission for Fish and Fisheries was changed to the Fish and Wildlife Service and it was placed in the Department of the Interior. In 1956, the name of the service was changed to U.S. Fish and Wildlife Service and it was split into two separate agencies, each with different responsibilities: the Bureau of Sport Fisheries and Wildlife and the Bureau of

In the spring of 1871, Green received a letter from two fish commissioners in California, inquiring about the prospect of taking young shad across the country. Green replied that the eggs could not be shipped; however, he thought that it might be possible to ship the young hatchlings, if done during the stage of development when the young fish still relied on its egg sack for nutrition. However, Green cautioned, it was still highly unlikely to succeed, noting that the alkali land in the central United States would make suitable fresh water changes difficult to obtain. At the time, cross-country travel was difficult and arduous enough for human passengers, let alone fragile young fish, with the opening of the first Transcontinental Railroad having occurred only a few years prior, in 1869. However, Seth Green was never one to back down to a challenge when it came to fish propagation, and he told the California commissioners that if they would fund the travel expenses for himself and an assistant, his brother, Monroe A. Green, who joined the hatchery around 1868, he would supply the cans and fish free of charge. The commissioners agreed, and on June 19, 1871, Green collected 12,000 young shad from the boxes on the Hudson River, packed them into four 8-gallon milk cans, and began his journey across the country. Making stops for water changes in Cleveland and Chicago, Green deposited 200 fish in local waterways. Once they reached Omaha, Nebraska, however, the natural water sources became unsuitable for the young shad. In an amusing tale, Green apparently remedied this challenge by using the water reserved for the train passengers, bribing the porters to allow him to do so. Battling scorching temperatures, Green kept the fish cool by adding ice to their cans along the trip. On June 26, Seth Green and his cans of shad arrived in Sacramento, California, to meet with the commissioners. There, in the Sacramento River, Green successfully deposited 10,000 shad, the first introduction of the fish into any of the tributaries of the Pacific Ocean.[36]

Although Seth Green was by far the most notable and identifiable figure associated with the hatchery, he encouraged the contributions of others as well, and the Caledonia hatchery became the epicenter of the rapidly expanding pisciculture. In their 1870 *Trout Culture* book, Green credited Collins with making refinements and

Commercial Fisheries. In 1970, the Bureau of Commercial Fisheries was renamed as the National Marine Fisheries Service and placed under the National Oceanic and Atmospheric Administration of the Department of Commerce. Both the Bureau of Sport Fisheries and the National Marine Fisheries Service exist today, regulating and maintaining both commercial and recreational fishing at the Federal level. Stickney, 2-3. Also, "A Century of Fish Conservation (1871 - 1971)," National Conservation Training Center, May 21, 2009, accessed December 31, 2013, http://nctc.fws.gov/History/Articles/FisheriesHistory.html.

improvements to his own shad spawning box.[37] Monroe Green played a prominent role in helping his brother develop and refine methods for transporting fish eggs. Monroe devised an invention that consisted of a large box containing trays to hold at least 150,000 eggs. As soon as the eggs were fertilized, they were placed onto a damp cotton flannel on the trays. With the trays loaded into the box, they required no other attention and could be easily transported, with some eggs even hatching along the way. This box weighed substantially less than the method they used for transporting the shad to California, water-filled milk cans, and yielded superior survival rates.[38] Serving as Green's on-site manager at Caledonia when he made his many travels, Monroe Green also helped to spread pisciculture as well, traveling to Germany to establish a successful fish hatchery on the Rhine.[39]

During this decade of the 1870s, Seth Green emerged as the leading national figure in pisciculture in the United States and became a well known international figure as well. Among the earliest and most active members of the American Fish Culturalists' Association (later known as the American Fisheries Society), Green was selected as chair of its executive committee at the first annual meeting in 1872.[40] In 1872 and again in 1875 the Société Impériale d'Acclimatation of France awarded Green its gold medal for his contributions to the field of pisciculture. In the fall of 1876, the United States Centennial Commission gave Green a certificate award at the International Exhibition held in Philadelphia, noting that he was to be commended for his work "hatching shad economically and on a very large scale."[41] And the German Fisherman's Club of Berlin recognized him with its gold medal in 1880.[42]

Although the state purchased the Caledonia fish hatchery from Green, Collins and Spencer in 1875, Green continued to be actively involved in the facility, serving as the first foreman, or site manager. Green's brother,

[36] Black, 20-21.
[37] Green and Collins, 81-82.
[38] Black, 18-19.
[39] "Monroe A. Green," 17.
[40] Paul R. Betz and Mark C. Carnes, eds., *American National Biography. Supplement 2* (New York: Oxford University Press, 2005), 214.
[41] Quoted from A. T. Goshorn, Francis Amasa Walker, and Dorsey Gardner, *International Exhibition, 1876* (Washington: G.P.O., 1880), 662.
[42] Black, 23.

Monroe, also continued to play an active role at the hatchery, serving as the on-site manager and even residing at the facility in the late 1870s and early 1880s. During the later 1870s, Green continued to serve as an ambassador for fish culture throughout the country, publishing his second book, *Fish Hatching and Fish Catching*, in 1879. Written with his friend and former fellow state commissioner Robert B. Roosevelt, the book covered many of the same topics in Green's 1870 *Trout Culture* book, while providing some updates to his methods, techniques and technology, given the extreme advancements and expansion of pisciculture in only ten years. Engraved images of Green's own hatchery building, built in 1870, are also included, depicting the sort of primitive, one-and-a-half story shed-like building described by visitors and travelers. However, Green's text noted that the images depict the hatching house as it appeared in 1875 and that "subsequent changes" were not material to its success.[43]

Green was referring to the fact that, given the national and international prominence of the facility, around 1880 the site underwent several updates and upgrades. Perhaps the most notable change was the removal of the shed-like hatching building and other utilitarian structures and the construction of a large, new gambrel-roofed hatchery building. While still modest compared to the architecture and design trends of the era, the new hatchery building was a more elegant, ornamented building than its predecessor. As noted by Green's friend Robert B. Roosevelt in an 1885 letter to the editor of the *New York Times*,

> *I found almost a complete transformation from what it was when I was there the last time before. The new hatchery building, with its fresh coat of paint, presents a very handsome appearance and is doubtless the largest and most perfect of its kind in the United States. The improvements to the ponds are also striking.*[44]

The new hatchery building, with its decorative bargeboard, small square tower, and gabled dormers was designed by Seth Green's younger son, William C. Green, a recent engineering graduate from Cornell.[45] As the

[43] Robert Barnwell Roosevelt and Seth Green, *Fish Hatching, and Fish Catching.* (Rochester: Union and Advertiser, 1879), 38.
[44] Robert B. Roosevelt, "The Caledonia Trout Hatchery," *New York Times*, December 29, 1885.
[45] "Monroe E. Green," 17. Based on the available information, it appears that there have been three different hatching houses. The first house existed between ca. 1864 and ca. 1870. This was replaced by the second iteration, as described in the illustrations in Fish Hatching and Fish Catching, which was extant between ca. 1870 and ca. 1880. The third building, the current more decorative building, was constructed ca. 1880.

facility was quickly becoming a popular tourist destination, the words "New York State Fish Hatchery" were boldly written on the clapboard of the building's gable end and along the roof.

By the late 1870s and early 1880s, Seth Green had emerged as a leader of fish culture in the United States and the expert on all matters related to fish health, artificial propagation, and hatcheries. His advice and expertise were widely sought after, and he was a frequent correspondent with many people around the country on the subject. In fact, the 1881 annual report of the commissioner of fisheries noted that,

> *The correspondence of the superintendant* [Green] *is at all times considerable, and in the winter and spring seasons so large as to employ the greater share of his time and the time of the clerk in examining, classifying, filing, and answering letters. Often fifteen and twenty come with each morning and night's mail, and the aggregate in the year rises well up into the thousands. A large share of these letters contain calls for information relatively to points in fish history or breeding, and many come from points remote and distant from this State. It is the practice of the superintendant, heartily sanctioned by the commissioners, to answer promptly all these calls for information, whether they concern the legitimate business of the Commission or relate only to the proper wants of the writers.*[46]

Among the many people who wrote to Green and asked for his advice was Mormon leader Brigham Young, who corresponded with him on his advice for what type of fish might be suitable to stock the Great Salt Lake in Utah.[47] Green also served as editor of the sports department of the *First American Angler* publication.[48] His exploits and adventures were frequently recounted by Horace Greeley in the *New York Tribune*, and Green also answered many readers' questions about fish propagation and fish culture.[49]

During the early 1880s, New York State sought to expand its hatchery system. The state legislature passed a bill in 1881 that laid the groundwork for a hatchery at the foot of Lake Ontario in Jefferson County; however, this site was never used. In 1880-1882, when the New York State Commissioners on Fisheries sought to build a new state hatchery at Cold Spring Harbor on Long Island, they requested the services of Seth Green. Green, along

[46] Quoted from *Annual Report of the Commissioners of Fisheries of the State of New York for the Year 1881*, vol. 12 (Albany, NY: Weed Parsons and Company, 1882), 13-14.
[47] Stickney, 10.
[48] Black, 23.
[49] Stickney, 10-11.

with commissioners Eugene Blackford and Robert B. Roosevelt, was tasked to "fit up the buildings on the premises, construct the requisite ponds and supply the necessary outfit." Fish from the Caledonia facility were provided as stock for the new hatchery, as well.[50]

In addition to his work with hatcheries and fish culture, Seth Green was, throughout his career, also a noted angler and fisherman, undoubtedly an outgrowth of his time spent observing the behaviors of fish in nature. Green was known as a master trout fisher and an excellent fly caster, noted for his long-distance casting abilities. Beyond his inventions of hatching boxes, Green also developed a fishing reel and a complex deep trolling rig, known as the "Seth Green Rig." The rig consisted of a leader line with several other lines attached at different levels. Individual bait or lures could be attached to the multiple lines, allowing for more than one fish to be caught at a time. Pulling in the rig proved difficult in practice, however, as the lines were heavy and tangled. Green later developed a box to hold and store the rig that had multiple compartments for the lures.[51]

In his later years, Seth Green and Robert B. Roosevelt took frequent fishing trips. Often these trips began as scientific study expeditions, to investigate the stock of a certain river, but ended as pleasure trips, usually onboard Seth's own vessel. These trips frequently included the Great South Bay, between Long Island and Fire Island. However, on one of Green and Roosevelt's trips off the coast of the Carolinas in 1882, Seth Green contracted typhoid pneumonia. Green never fully recovered from the condition, although he continued his work on a much more limited scale. Always an active man, he used this time to write and publish his third book, *Home Fishing and Home Waters* (1888), an 81-page tome focusing more on small-scale and private fish keeping by farmers. In January 1888, a sleigh carrying Seth Green and his son William overturned, severely injuring the elder man. After the accident, Green was bedridden and in poor health. Seth Green died as a result of his lingering pneumonia and his injury on August 20, 1888.[52]

[50] *Annual Report of the Commissioners of Fisheries of the State of New York for the Year 1881*, vol. 12 (Albany, NY: Weed Parsons and Company, 1882), 15. The Cold Spring Harbor Fish Hatchery is listed on the National Register as part of the Cold Spring Harbor Lab Historic District, Nassau County, New York.

[51] Betz and Carnes, 214.

Upon his death, Seth Green was remembered across the country as a man who had left an indelible mark on fish culture in the United States. In the Biennial Report of the State Board of Fish Commissioners, officials from Michigan paid tribute to Green, noting "Mr. Green contributed largely to the literature connected with the subject of fish culture, and was a recognized authority on disputed questions. For many years he was superintendent of the N.Y. hatchery at Caledonia, NY, and actively overlooked the general conduct of the station until his death. He has educated many of the best fish culturalists of the United States in the rudiments of the business, who are now at the head of important work all over the country."[53] On the day of his death, the *New York Times* published a length obituary for Green, illustrating his many contributions to pisciculture and natural science in the country. While running through a history of fish culture in the United States, the obituary noted that as early as 1864 Green was cited by ichthyologist and eventual U.S. Commissioner for Fish and Fisheries Professor G. Brown Goode as being "the first American fish culturalist who carried on fish culture upon a basis pecuniarily profitable." However profitable his business was, the *Times* cited his extreme significance to establishing early fish culture and improving and promoting artificial fish hatching. "Mr. Green must be regarded as a man of great original thought and natural vigor, and for having been among the very first who practically carried out a most important work."[54]

While Seth Green's earliest interest in fish culture was rooted in a desire to improve the profitability of his fish market, his consideration developed into a larger concern for the depletion of the natural fish supply and an interest in understanding fish themselves. Unlike other successful industrialists of the era, who dealt with products such as oil, steel, or machines, Green was always cognizant that his product was a living organism. "I have been working at practical fish culture for about twenty-four years, and had it on my mind since the year 1837," wrote Green in his *Home Fishing and Home Waters*, "and I find there is still a great deal to be learned and discovered about fish and how to raise them."[55]

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[52] Black, 24.
[53] "In Memoriam" *Eighth Biennial Report of the State Board of Fish Commissioners*, vol. 8 (Lansing, MI, 1889), n.p.
[54] "Obituary - Seth Green," *New York Times*, August 20, 1888.
[55] Seth Green, *Home Fishing and Home Waters. A Practical Treatise on Fish Culture.* (New York: O. Judd, 1888), 45.

Later History of the Caledonia Fish Hatchery

After the death of Seth Green, his brother Monroe assumed his duties as supervisor of the Caledonia hatchery. Monroe A. Green had worked alongside his brother in Caledonia for decades, since around 1868, and he had been installed as the site supervisor to manage the daily operations of the facility while Seth Green traveled extensively. Not long after Seth Green's death, Monroe supervised a number of updates and upgrades to the Caledonia hatchery. During 1889, Monroe Green reported that a number of changes had been made to the facility, both from a functional standpoint as well as aesthetic. The hatchery had been a popular tourist destination since its founding the 1860s; however, by the 1880s it was visited by an increasing number of people. Monroe Green noted that the grounds of the hatchery had been improved by installing a board roadway from the highway (current Route 36/North Street) to the ponds and hatching house. Monroe Green noted that a hot-house that had been used to grow "proper decoration of the grounds" was removed, as the plants it once housed were obtained elsewhere. An island located behind the hatching house was cleared of logs and debris, so that it created an "attractive and pleasant ground" for the many visitors. The hatching house itself received new coats of paint, a new floor on the first floor, and new hatching troughs that expanded the previous capacity. Other small improvements were made to the outdoor ponds as well. Monroe Green also recommended to the state commissioners that he be allowed to construct a house on the grounds for use by the hundreds of visitors received in the summer, as well as for employee use. This house appears to have been constructed by 1890.[56] Monroe Green's era at the Caledonia hatchery marked a different era for the facility, apparently influenced by Victorian taste, one where the beauty of the grounds and buildings became important. This is an interesting contrast from the early incarnation of the hatchery in the 1860s, where the hatchery was said to resemble a primitive shed. It also is indicative of the general level of sophistication present in fish culture by the late nineteenth century.

Fish culture had grown in New York State by 1890 to encompass several hatcheries and facilities across the state. In 1889-90, the state operated the hatcheries at Caledonia and Cold Spring Harbor, the shad hatching site in the Hudson River, as well as the Adirondack hatchery, the Sacandaga hatchery on Mill Creek in Hamilton

[56] *Eighteenth Report of the Commissioners of Fisheries of the State of New York* (Albany, NY: James B. Lyon, 1890), 21-23.

County, and the Fulton chain hatchery. State records indicate that the Caledonia facility was roughly 15-acres in size, comparable to the property today, and buildings on the site included the hatchery (extant, contributing), a barn (possible the building known as the Lake House, extant), the dwelling-house (extant), a wood shed, and an ice-house (extant, contributing). Taking a page from Seth Green's own guidebook, the state also laid out specific guidelines for how these facilities were to be operated. Drinking and smoking were prohibited on the grounds and in the hatching rooms, in a nod to Green's rules about cleanliness being of utmost importance in the hatchery building.[57] These types of regulations created a sense that the hatchery was a place of scientific study.

After Monroe Green retired as foreman for the Caledonia hatchery in 1895, the facility was managed by Frank Redband. Redband had joined the staff at the hatchery in 1882 and assumed many managerial functions as assistant superintendent while Monroe Green travelled extensively through Germany and England spreading his knowledge of hatcheries. Between 1895 and 1910, Redband oversaw a number of updates and upgrades to the facility, including the installation of the new hatchery floor (currently still in place), leveling and landscaping of the grounds, removing wood pond linings and replacing them with stone and masonry, changing some of the ponds and creating new ones and upgrading the dams. After decades of use, many of the springs and waterways on the Spring Creek upstream from the hatchery had become clogged and filled with debris, restricting the flow of water into the hatchery. In 1907-08, under Redband's supervision, the state legislature approved funds to see to the cleanup of the springs in Caledonia, ensuring the flow of fresh water into the valuable hatchery. Redband's tenure of more than 36 years as manager was noted as a time of change at the facility, and he seems to have continued Monroe Green's legacy of modernization and improvement. The beautification of the grounds, to appeal to tourists, continued into the twentieth century, as did the improvements to the facility itself. As new advancements and discoveries were made and new methods or materials for successfully hatching and caring for the fish were tested, these changed were implemented at the facility. [58]

[57] *Eighteenth Report of the Commissioners of Fisheries of the State of New York*, 85-86.
[58] "Frank Redband," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 19.

After Redband's retirement in 1918, the next manager of the hatchery was William Burke, who was noted for his extensive knowledge of conservation. While Burke made fewer changes to the facility than his predecessor; he was noted for his practical experience with hatcheries. Burke died in January 1931 and was replaced by interim superintendent L.D. Winslow. In July of 1931, Howard C. Russ took over operations at the Caledonia hatchery. Russ faced many economic challenges as superintendent of the hatchery, as the Great Depression put new constraints on the budget and resources available. The staff of 23 workers was cut to 10, and the flower beds and landscaping were neglected. Budgetary concerns put new emphasis on efficiency at the hatchery, yet some upgrades and modernizations were made during the 1930s. It is during this era that the majority of the ponds were updated and reconstructed. From a functional standpoint, many of Redband's alterations in past decades had caused the ponds to leak. Also during this time, a young boy, visiting at the nearby Springbrook Inn, fell into the feeder channel and drowned, spurring new measures for safety and security at the facility. For these two reasons, during the 1930s the older ponds and feeder channels were reconstructed so that they were shallower and fewer in number than before. A large pond below the hatchery building became a lawn, and what had been one large pond north of the hatchery building was divided into several smaller ponds. Other improvements to the facility during Russ's tenure include the replacement of an old wooden bridge with a new concrete structure, as well as the construction of an automobile garage (ca. 1950s). Despite these modernizations, the history of the Caledonia hatchery was celebrated during this era as well. In September of 1935, in commemoration of the 50th anniversary of the New York State Fish and Game Commission, a boulder with a bronze plaque was dedicated at the hatchery, recognizing Seth Green's contributions to fish culture and conservation. Attended by state officials and Green family descendants, the plaque featured an image of a trout created by Dr. Eric Green, a grandson of Seth Green. Howard C. Russ retired as superintendent in 1957.[59]

While the Green family had not been involved in the daily operations of the hatchery since the nineteenth century, its members continued to be strongly associated with the Caledonia hatchery. During the 1940s, Rochester sportsman Howard C. Dana took an interest in Seth Green and his work at the facility, beginning to write and study his contributions to pisciculture. His own grandfather, John Holden Dana, was a friend of

[59] "Howard C. Russ," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society,

Green's, and his father had grown up with Seth Green's children. Howard Dana was instrumental in getting the hatchery renamed as the Seth Green Hatchery. In the summer of 1949, a group of writers from across the country came to Caledonia for a national convention of the Outdoor Writers of America. The event harkens back to the mid-nineteenth century literary interest in Seth Green and his hatchery. This three-day conference involved speakers, meetings and numerous social events, and during this event the hatchery was officially renamed after its founder.[60]

Upgrades to the ponds have continued into the late twentieth century. In 1992, construction of a pair of 36-foot concrete settling ponds was undertaken. These 8-foot-deep ponds were designed to capture the biological wastes generated by the fish in the production ponds, and new tanks were added to the facility to capture the material and improve the quality of the waste water before it re-entered Spring Creek.[61] Upgrades and modernization of the ponds, equipment and facility has remained a part of Seth Green's hatchery, as he himself was always expanding and making improvements to the facility.

Currently, Alan Mack serves as manager of the Caledonia Fish Hatchery. The New York State Department of Environmental Conservation (DEC), successor to the Conservation Department, currently operates 12 fish hatcheries across the state, a program that grew out of the early successes at the Caledonia facility. These hatcheries include the Adirondack Hatchery in Franklin County, the Bath Hatchery in Steuben County, the Caledonia Hatchery, the Catskill Hatchery in Sullivan County, the Chateaugay Hatchery in northern Franklin County, the Chautauqua Hatchery in Chautauqua County, the Oneida Hatchery in Oswego County, the Randolph Hatchery in Cattaraugus County, the Rome Hatchery in Oneida County, the Salmon River Hatchery in Oswego County, the South Otselic Hatchery in Chenango County, and the VanHornesville Hatchery in Herkimer County. In addition to its hatcheries, the DEC also operated the Rome Fish Disease Control Center, also known as the Rome Lab, which is involved in testing cultured and wild fish for parasites and pathogens. The Caledonia hatchery, the oldest in the state, continues to serve as the DEC's flagship facility. With an annual

1964), 23-26.

[60] "Howard C. Dana," *Seth Green and the Caledonia Fish Hatchery: 1864-1964* (Caledonia, NY: Big Springs Historical Society, 1964), 27.

production of more than 170,000 pounds of fish, the Caledonia fish hatchery remains highly productive. The site continues to raise brown trout, and virtually all of the two-year-old brown trout used in the DEC's stocking program come from the Caledonia facility.[62]

Seth Green and his successes at the Caledonia Fish Hatchery had a tremendous affect on the national fish hatchery movement. His books and publications helped spread his name and ideas throughout the country. Many of those interested in learning about or pursuing the occupation, whether for science or commerce, visited his hatchery to see his work with their own eyes. As one contemporary article put it,

> *If "imitation is the sincerest flattery," then Seth must feel awfully flattered, for not only do his immediate neighbors potter over amateur ponds, but people come from afar off to study his methods – and steal his ideas and then go home and patent them![63]*

Today, Seth Green is considered by many sources to be the "Father of Fish Culture" in the United States. While many of Seth Green's inventions, such as the hatching box and the "Seth Green Rig," have been replaced by newer and more modern techniques and methods, Green left a lasting legacy in the world of fish culture. Many of his pioneering observations and experiments served as the foundation for later developments, and his patents for fish hatching devices continue to be referenced by subsequent patents into the late twentieth century. His books, especially *Trout Culture*, continue to serve as the model for more recent books on fish hatcheries, such as *Culture and Diseases of Game Fishes* by Herbert Spencer Davis (1953), which borrows Green's method for simple, straightforward advice on observing fish, laying out ponds, hatching houses, and fish health. Nearly all historical and more recent histories of fish culture pay homage to the important contributions that Green made to the development and dissemination of pisciculture in the United States. In recognition of his role in spreading pisciculture nationally, Seth Green was inducted into the Fish Culture Hall of Fame, established through the Fish Culture Section of the American Fisheries Society and located at the D.C. Booth Historic National Fish

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[61] John Bartles, "Caledonia Hatchery Experiences Renovation," *Lake and Valley Clarion*, January 18, 1992.
[62] "Fish Hatcheries," NYS Department of Environmental Conservation, 2013, accessed January 03, 2014, http://www.dec.ny.gov/outdoor/7742.html.
[63] M.T.F., "Among Seth Green's Pets," *The World* (New York City), April 23, 1878.

Hatchery in Spearfish, South Dakota, in 1987.[64] His early contributions towards pisciculture and protecting depleted natural fish stock started a national dialogue that evolved into the larger fish conservation movement. From hatcheries such as Green's, which started as commercial operations, the scientific study and maintenance of fish originated. While today, his introduction of non-native species into new waterways is generally not standard practice, Green's work did provide a viable means to replenish depleted natural stock of fish in their native waters. His technique for dry impregnation, which was his carefully guarded secret for decades, has become the industry standard for fish culturalists around the world. The Caledonia Fish Hatchery, Seth Green's laboratory and workshop, has played a significant role in developing and shaping the early growth of pisciculture in the United States, and it continues to function in the same role as it has for the past 150 years. The Caledonia Fish Hatchery retains a high level of integrity as an active fish hatchery site, and it is the single most important resource that represents the important contributions of Seth Green to American fish culture.

[64] Stickney, 9. Also, "Fish Culture Hall of Fame," Fish Culture Section, American Fisheries Society, accessed January 06, 2014, https://sites.google.com/site/fishculturesection/recognizing-excellence/fish-culture-hall-of-fame.

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Also thanks to Alan Mack, Manager of the Caledonia Fish Hatchery and Amie Alden, Livingston County Historian, for providing additional information for this nomination.

Verbal Boundary Description

The boundaries of the Caledonia Fish Hatchery are an irregularly-shaped site, located on the west side of North Street in the northernmost part of the Village of Caledonia, Livingston County, New York. Refer to attached maps with scale.

Boundary Justification

The boundaries encompass all land currently associated with the Caledonia Fish Hatchery. This land was also associated with the historical development of the fish hatchery since 1864.

Additional UTM References:

Point	Easting	Northing
5	266709	4762915
6	266678	4762994
7	266680	4763030
8	266683	4763322
9	266722	2763362
10	266839	4763438

Additional Information

Photo Log:

Name of Property:	Caledonia Fish Hatchery
City or Vicinity:	Caledonia
County:	Livingston
State:	NY
Name of Photographer:	Jennifer Walkowski
Date of Photographs:	October 29, 2014
Location of Original Digital Files:	Peebles Island Resource Center, PO Box 189, Waterford, NY 12188

NY_Livingston County_Caledonia Fish Hatchery_0001
View of hatchery buildings, looking west

NY_Livingston County_Caledonia Fish Hatchery_0002
View of main hatchery building, looking south

NY_Livingston County_Caledonia Fish Hatchery_0003
View of "lake house," looking south

NY_Livingston County_Caledonia Fish Hatchery_0004
Looking west toward main hatchery building, showing landscape and relationship to ponds

NY_Livingston County_Caledonia Fish Hatchery_0005
Main hatchery building, gable detail showing cupola and bargeboard ornament

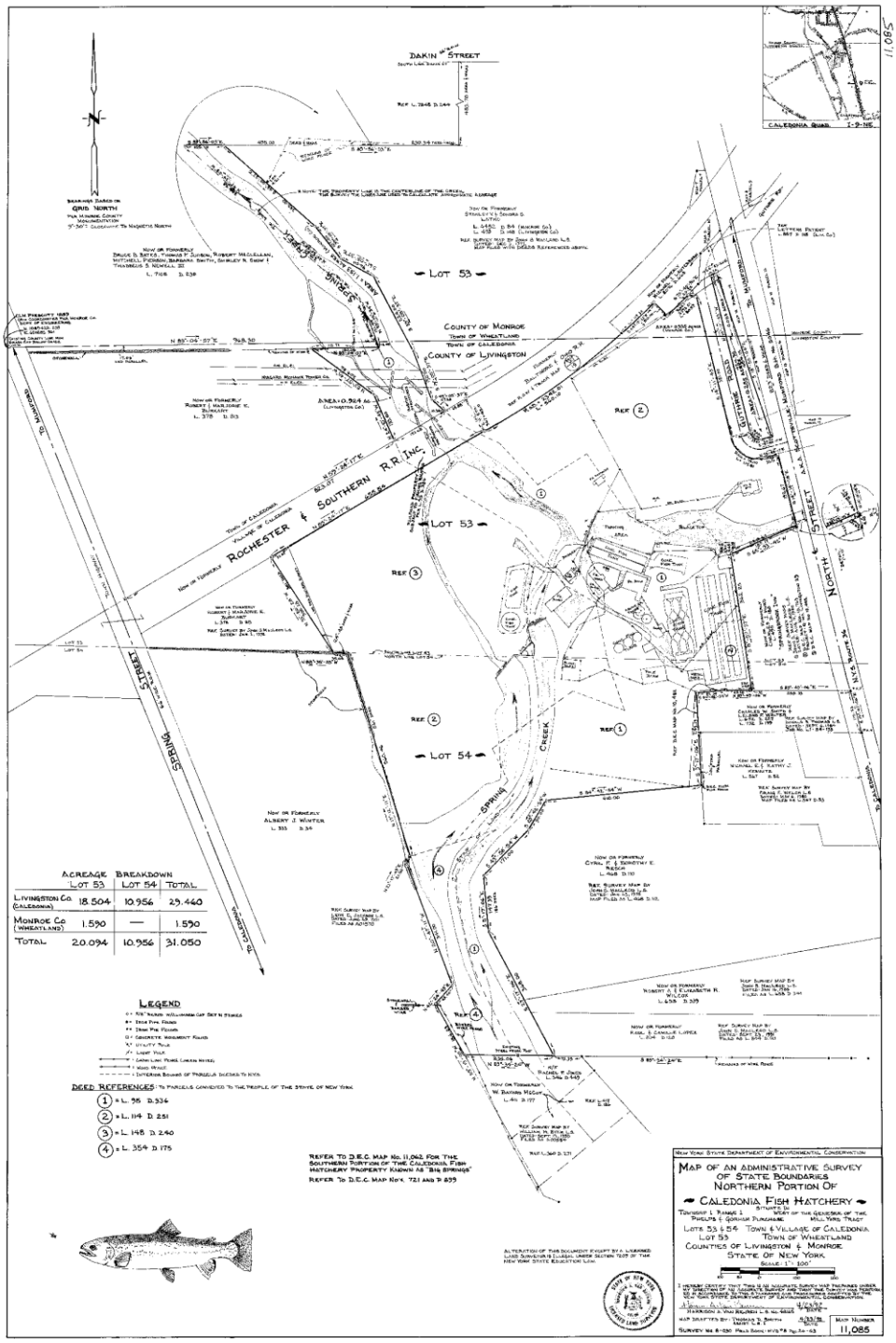
NY_Livingston County_Caledonia Fish Hatchery_0006
Interior of main hatchery building.

NY_Livingston County_Caledonia Fish Hatchery_0007
Looking northwest across Upper A Ponds towards hatchery building

NY_Livingston County_Caledonia Fish Hatchery_0008
Looking north across round ponds, showing feeding apparatus

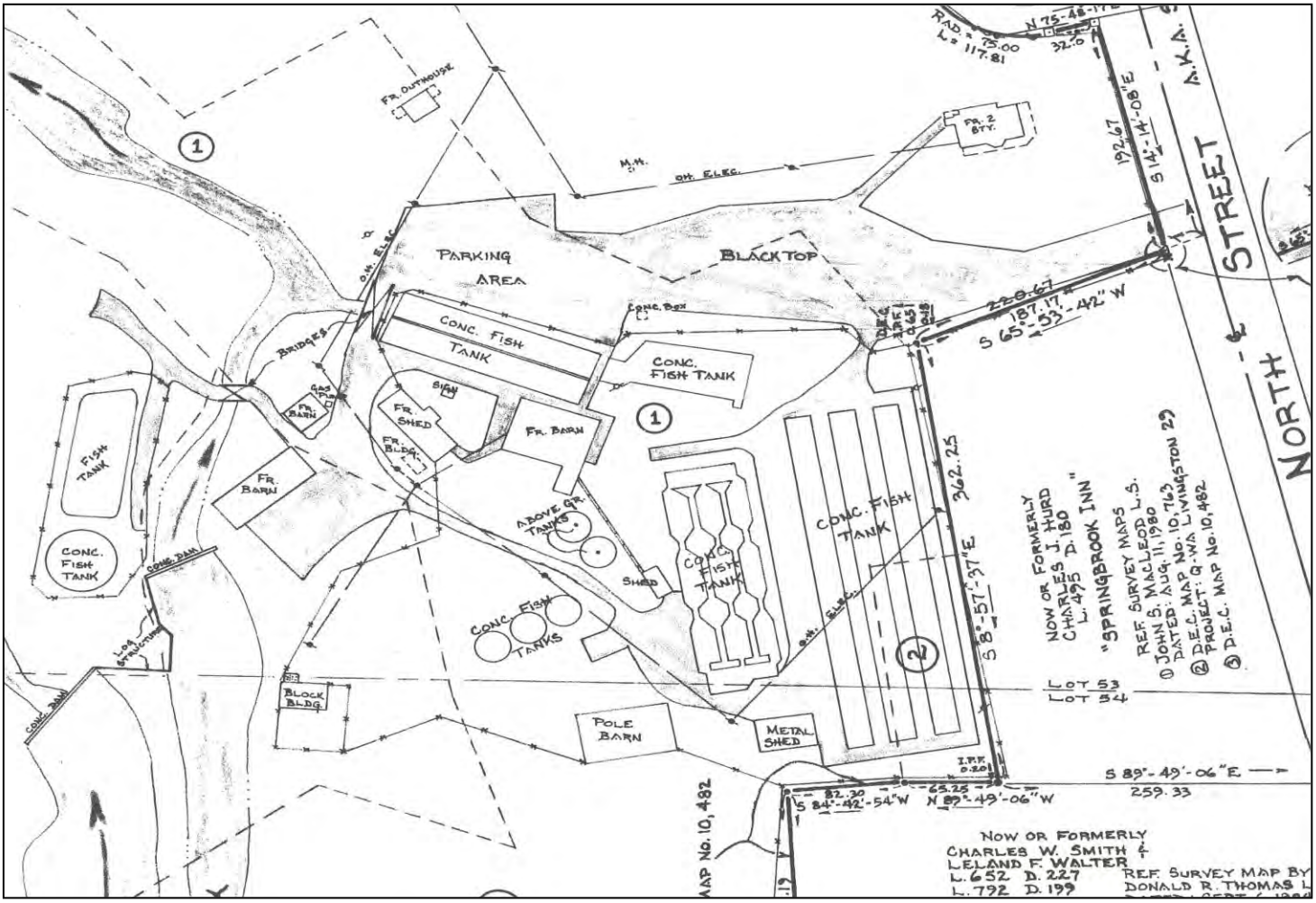
NY_Livingston County_Caledonia Fish Hatchery_0009
Looking south along Spring Creek, showing 1942 concrete dam

NY_Livingston County_Caledonia Fish Hatchery_0010
Looking northwest at manager's house, located near North Street



"Map of an Administrative Survey of State Boundaries, Northern Portion of Caledonia Fish Hatchery."

Created in 1992, this site survey describes the land historically and currently associated with the Caledonia Fish Hatchery.



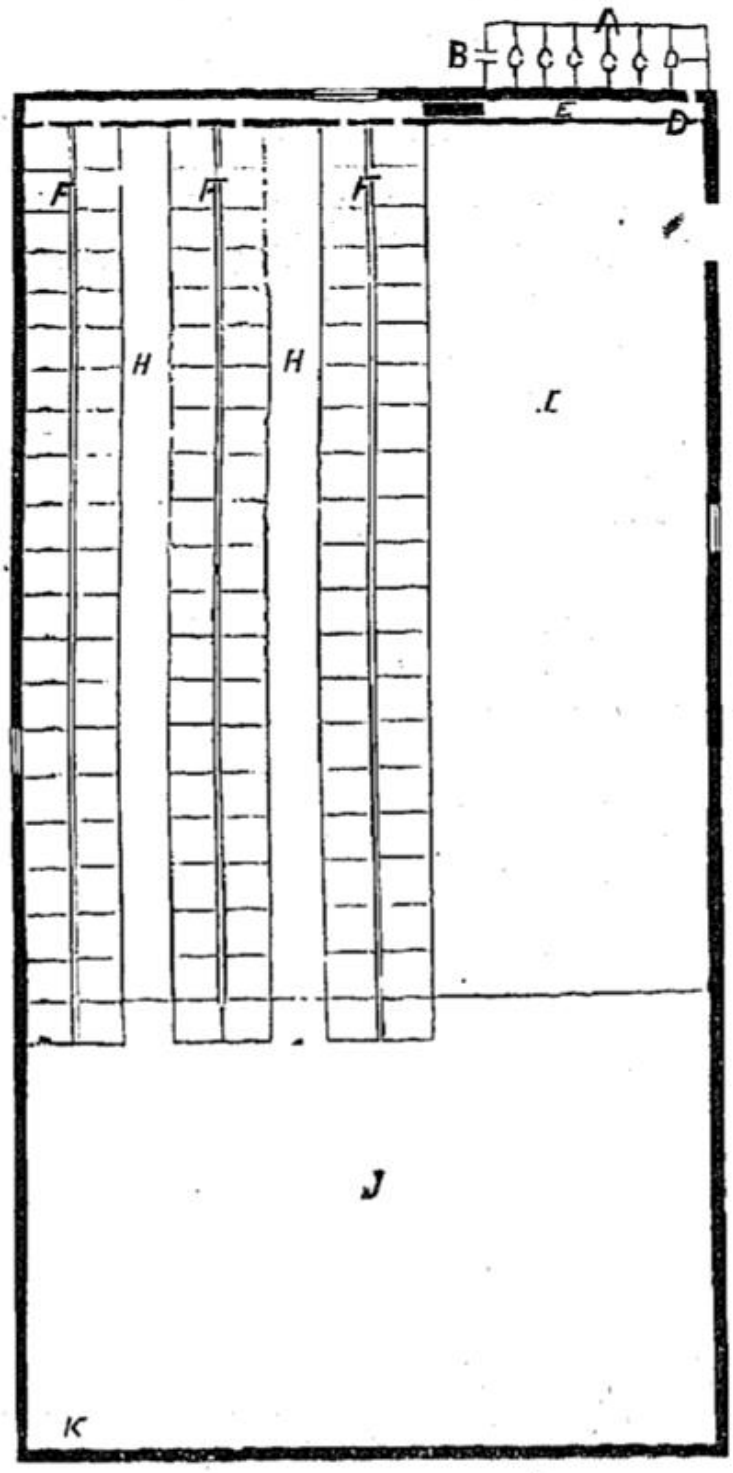
Detail of previous map

This detail focuses on the cluster of ponds, buildings and structures currently in existence at the Caledonia Fish Hatchery, and their present configuration and relationships.

SETH GREEN'S TROUT PONDS, near MUMFORD, N. Y., in 1866. Now CALEDONIA HATCHERY. (From Frank Leslie's Illustrated Newspaper, Sep. 1, 1866.)

"Seth Green's Trout Ponds, near Mumford, NY in 1866. Now Caledonia Hatchery." (1866)
Source: *Frank Leslie's Illustrated Newspaper*, Sep. 1, 1866

Not long after its opening, this image depicts the fish hatchery with a sense of its beauty and scenery, and is already a tourist attraction.



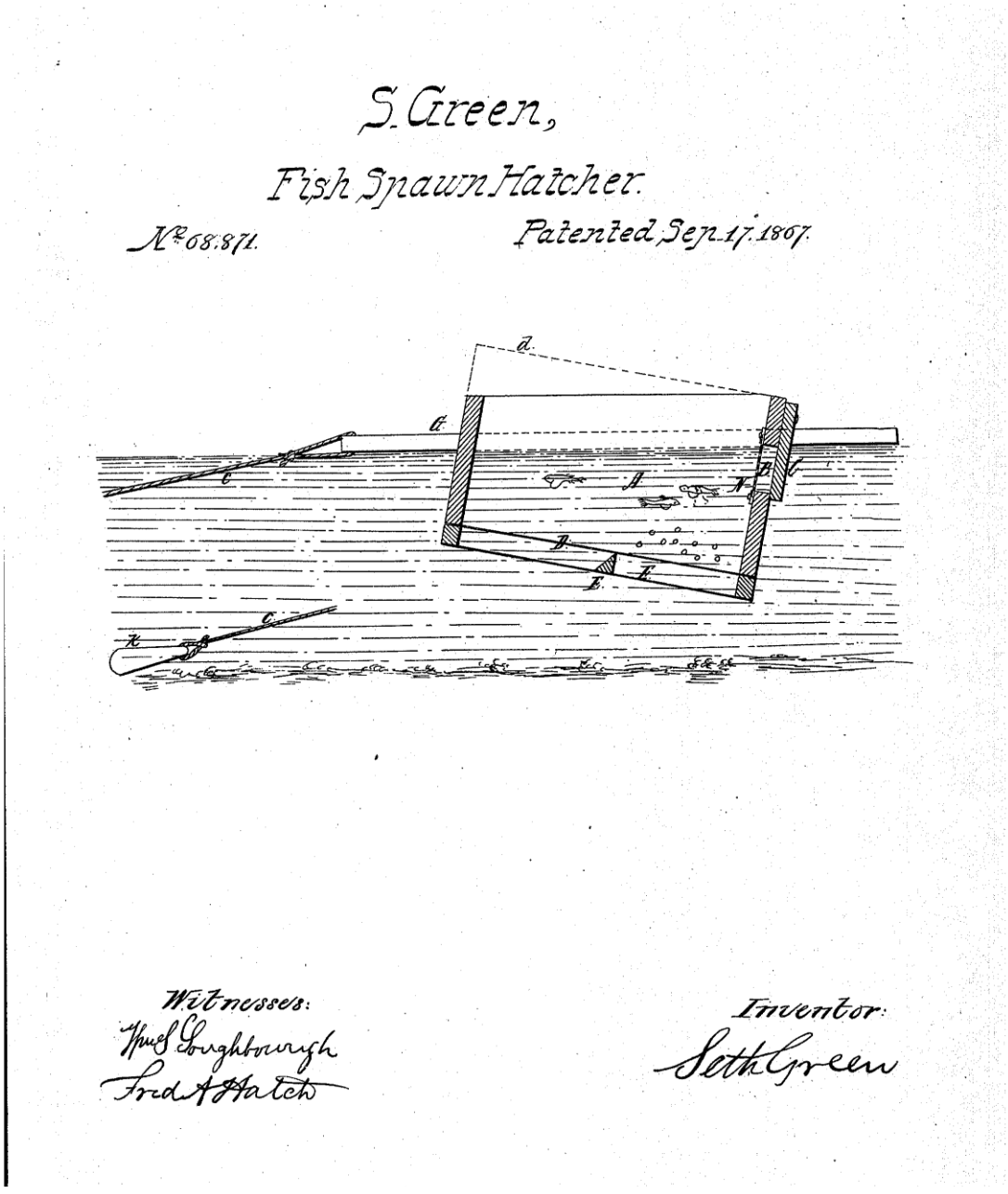
HATCHING TROUGHS.

"Hatching Troughs" inside the early Hatching House, Caledonia, NY (1866)
Source: *Frank Leslie's Illustrated Newspaper*, Sep. 1, 1866

This earliest hatching house was essentially a container for the activity within. This diagram depicts the interior of the building, with its three hatching troughs.

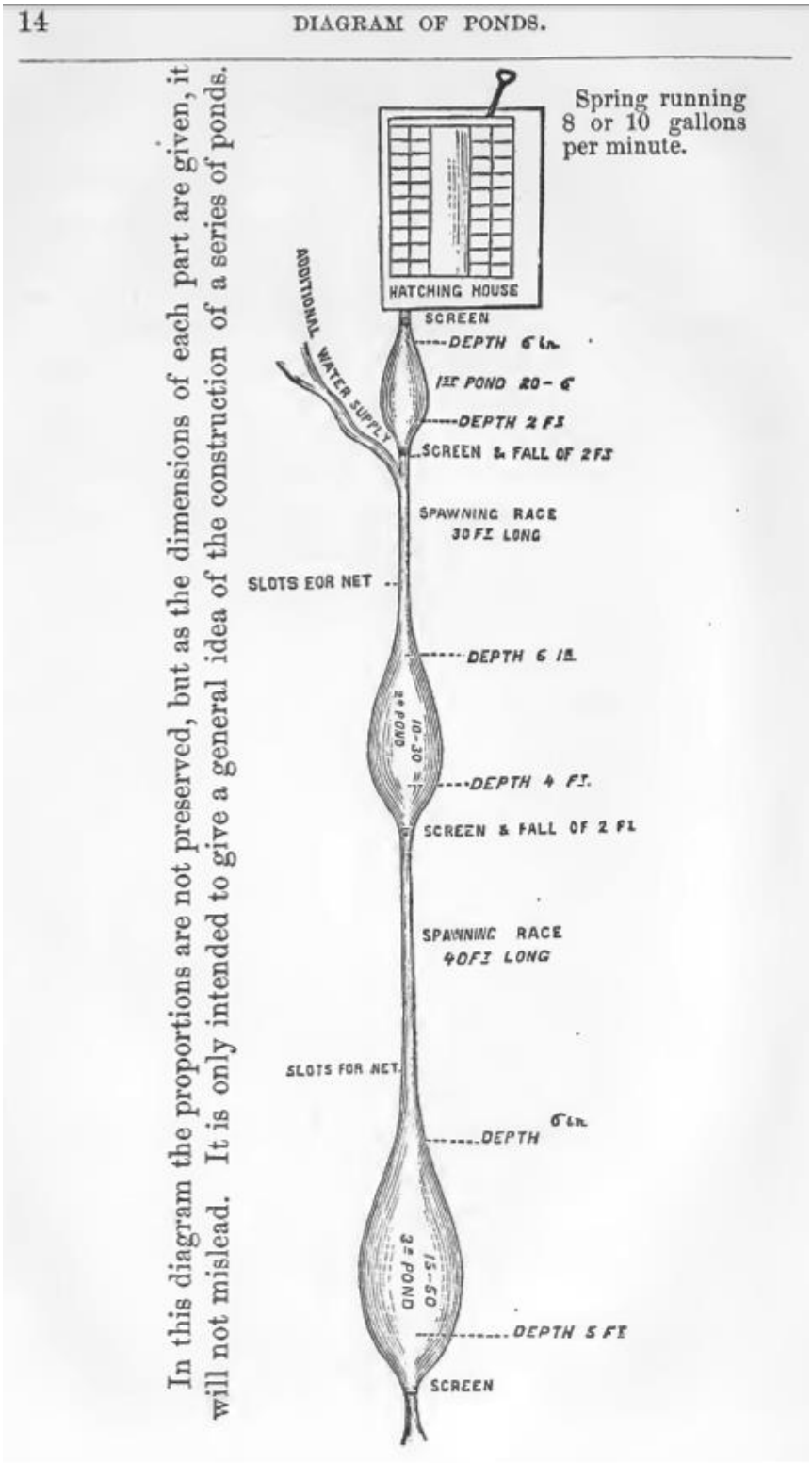
The letters reference:

A – Water holding tank
B – Water entrance
C – Series of 6 water strainers
D – Entry in building wall where water enters and fills interior trough
E – Trough running the entire width of the building
F – Hatching troughs
G – [Unused, apparently]
H – Passages for workers to attend troughs
I – Platform, could contain a stove for heat
J – Pond, 18-feet square, to shelter small trout hatchlings
K – Passage for water to return to stream



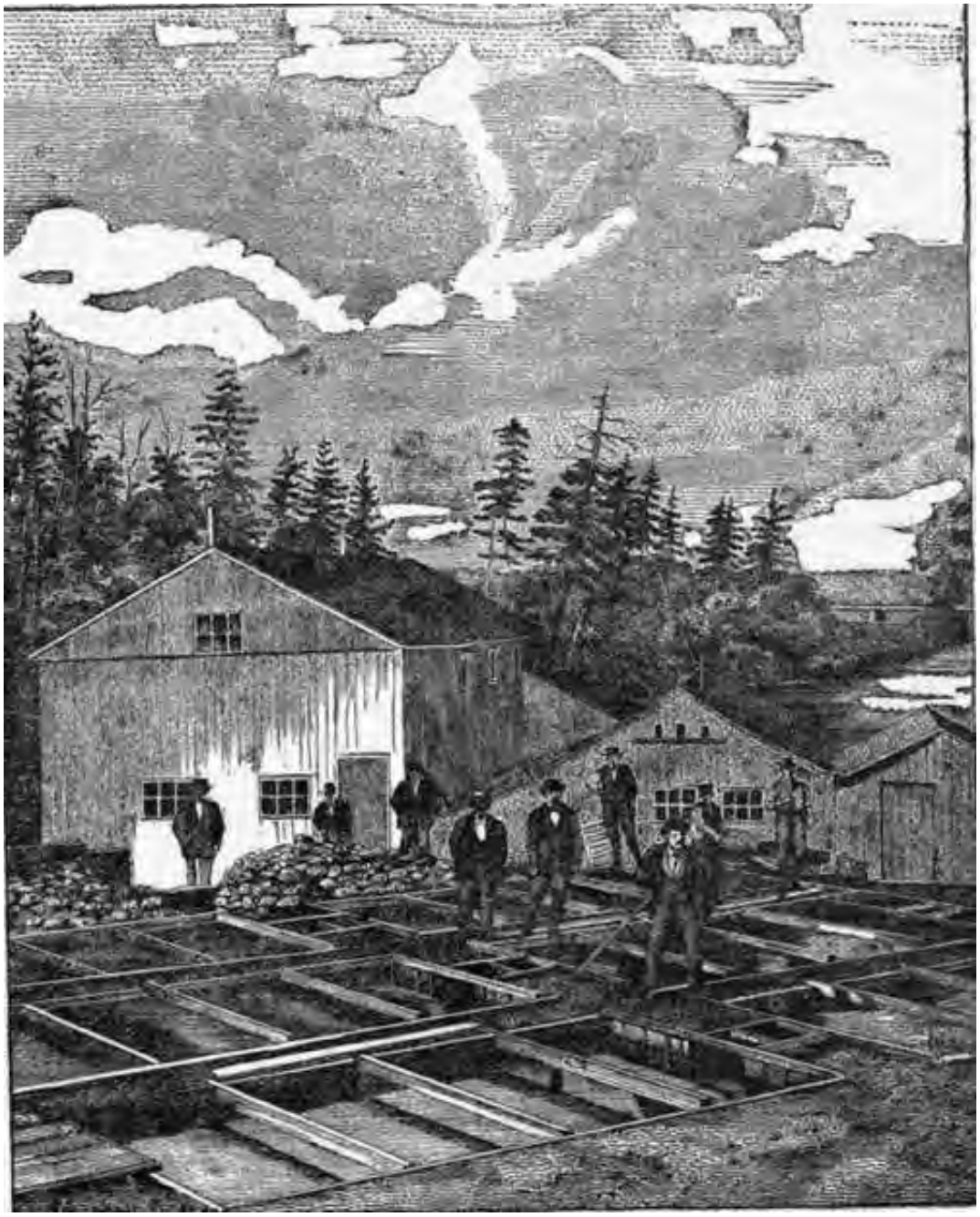
Patent drawing, Fish Spawn Hatcher
U.S. Patent No. 68, 871, Patented Sept 17, 1867
Source: Google Patents

Green's patent for a shad hatching box allowed for the popular sport fish of shad to be artificially fertilized. His patent, issued in 1867, continues to be highly influential, being referenced by other patents issued into the 1970s and 80s.



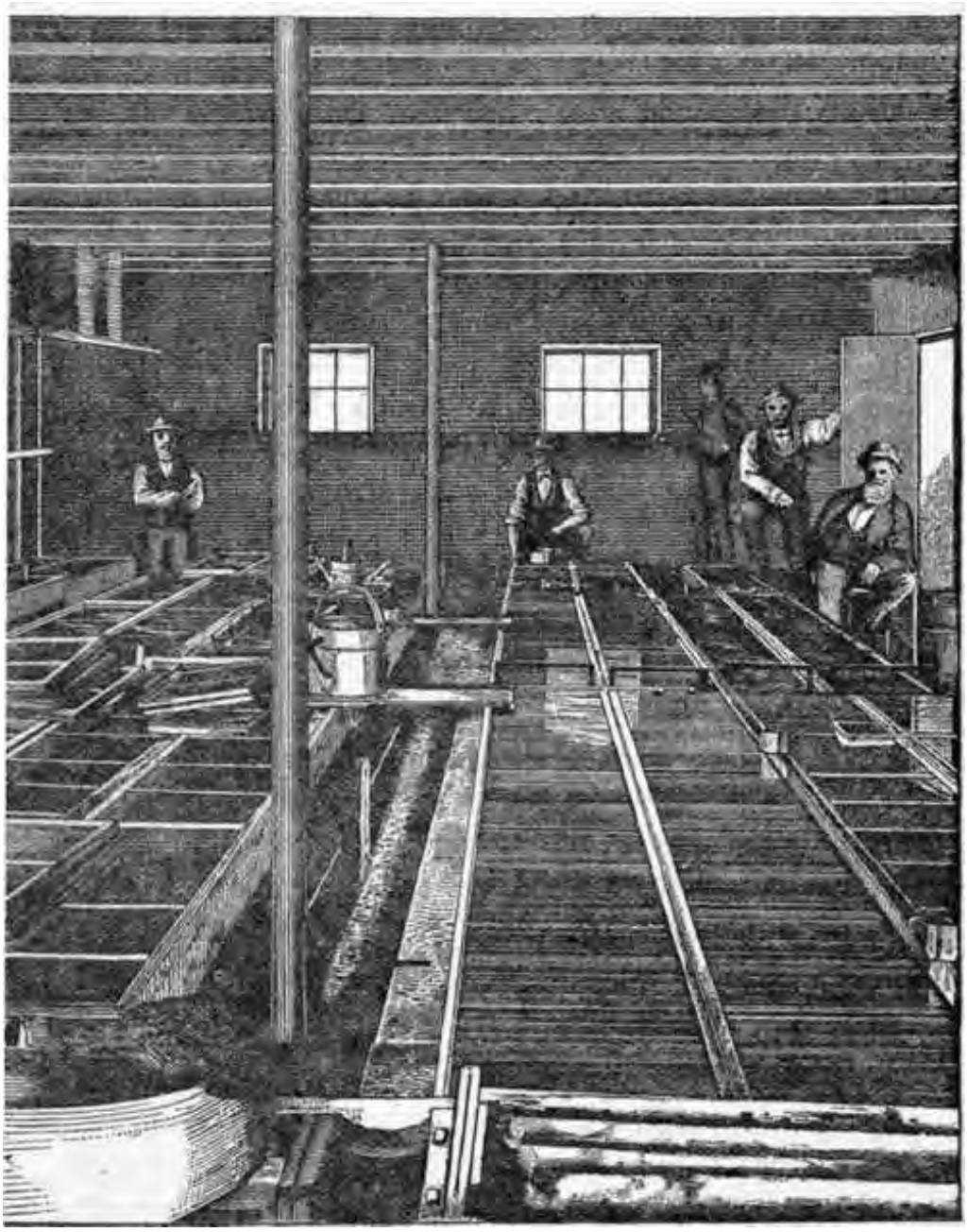
"Diagram of Ponds" (1870)
Source: *Trout Culture by Seth Green and A. S. Collins, 1870*

While idealized and not to scale, this diagram from Green's own book gives a good idea of the arrangement of his own hatching house and its relationship to the Spring Creek.



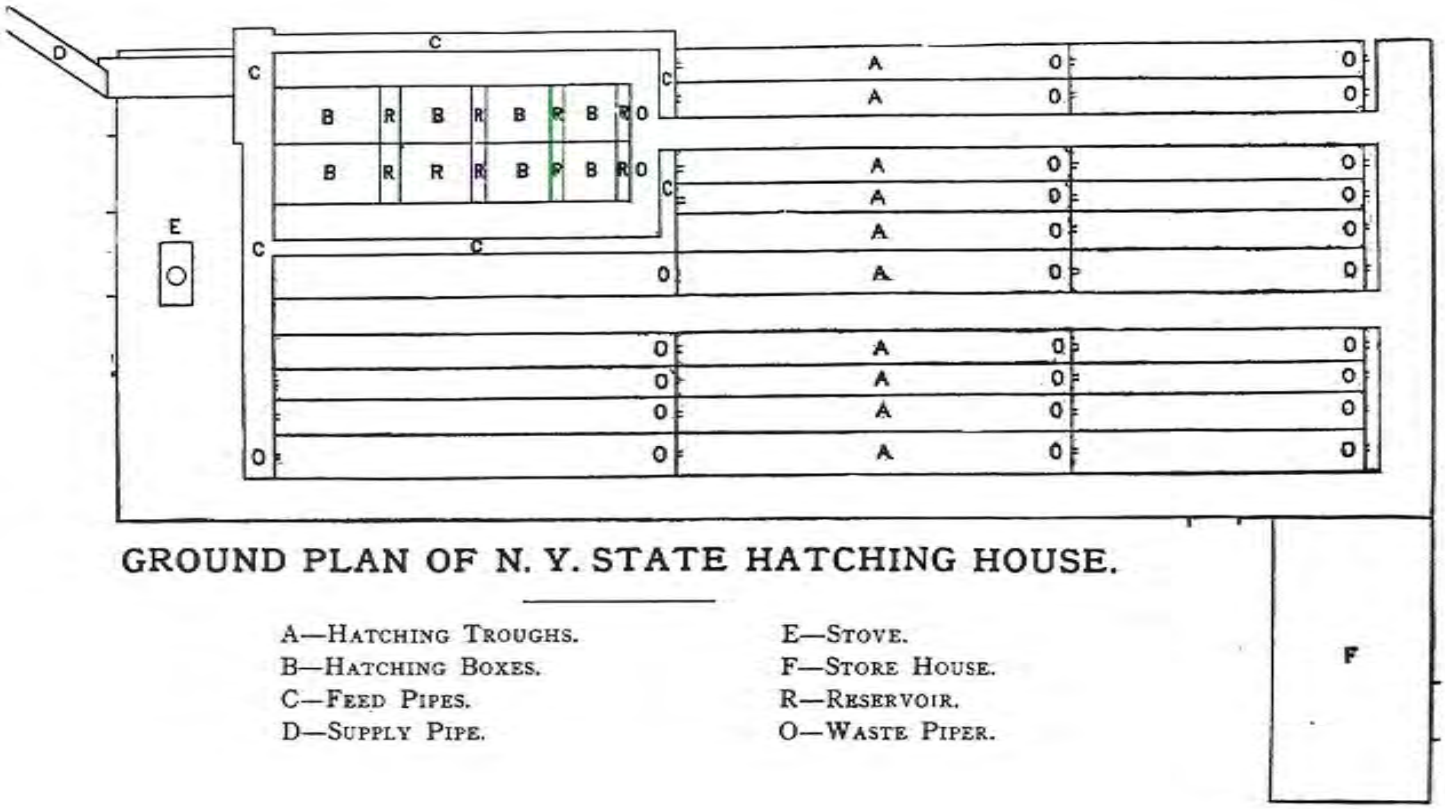
New York State Hatching House, at Caledonia, N. Y. (ca. 1875)
Source: "Fish Hatching, And Fish Catching" by R. Barnwell Roosevelt and Seth Green.

This engraving appears to depict the second hatching house constructed in 1870 that was replaced ca. 1880 with the currently existing building.



New York State Hatching House - Interior View (ca. 1875)
Source: "Fish Hatching, And Fish Catching" by R. Barnwell Roosevelt and Seth Green.

This engraving appears to depict the interior of the hatching house constructed in 1870 that was replaced ca. 1880 with the currently existing building. The man with the beard in the doorway appears to be Seth Green himself.



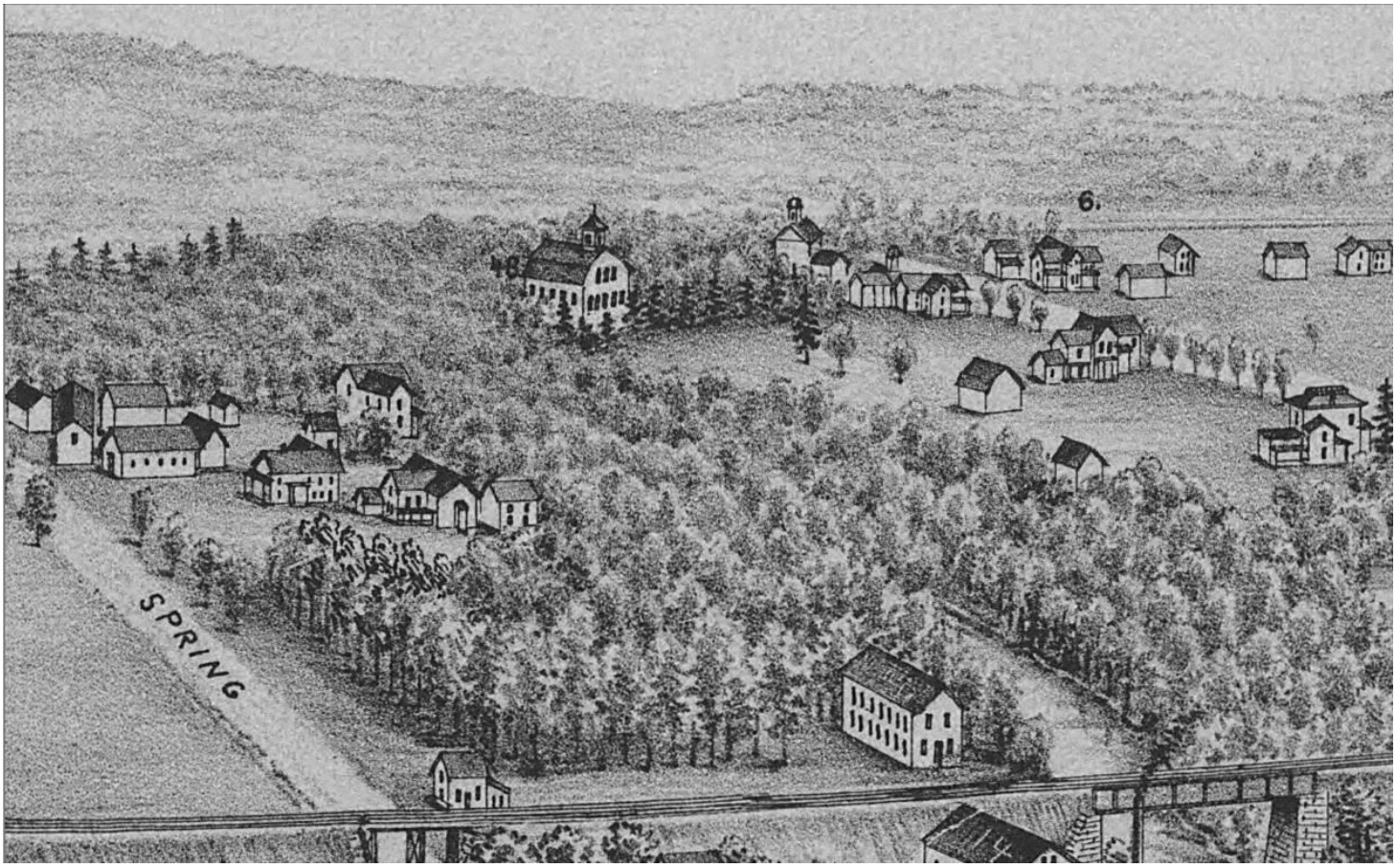
Plan, New York State Hatching House
Source: "Fish Hatching, And Fish Catching" by R. Barnwell Roosevelt and Seth Green.

This diagrammatical plan shows the layout and design of the 1870 hatching house, the second known building. Compared to the plan of the earlier hatching house from 1866, note the expansion of the hatching troughs and the overall improvements and upgrades made. For the sake of scale, each hatching trough was noted as being 40-feet in length.

New York Fish Commission at Caledonia, May 5, 1886.
Standing: E. G. Blackford, R. B. Roosevelt.
Sitting: Seth Green, W. H. Bowman, R. U. Sherman.
(From photograph by C. K. Green.)

"New York Fish Commission at Caledonia, May 5, 1886" (1886)
Source: Forest Fish and Game Commission Fourteenth Annual report, 1908

Standing: E.G. Blackford, Robert B. Roosevelt
Sitting; Seth Green, W.H. Bowman, R.U. Sherman



Detail, Caledonia birds eye view (1892)

This detail shows the landscape around the hatchery by the late nineteenth century, at the northern end of Caledonia. The hatchery building, with its prominent gambrel roof and square tower, are visible here toward the upper center of the image (marked #48).

Caledonia Hatchery, from below, looking up-stream (1897)
Source: Third Annual Report of the commissioners of Fisheries, Game and Forests of the State of New York, Third, 1897

An early view showing the ca. 1880 hatching house (at left) which is extant. This is the third hatching house known to have been constructed. The smaller building to the right of the hatching house is the Lake House, which is also extant. The small building to the far right is no longer existing.

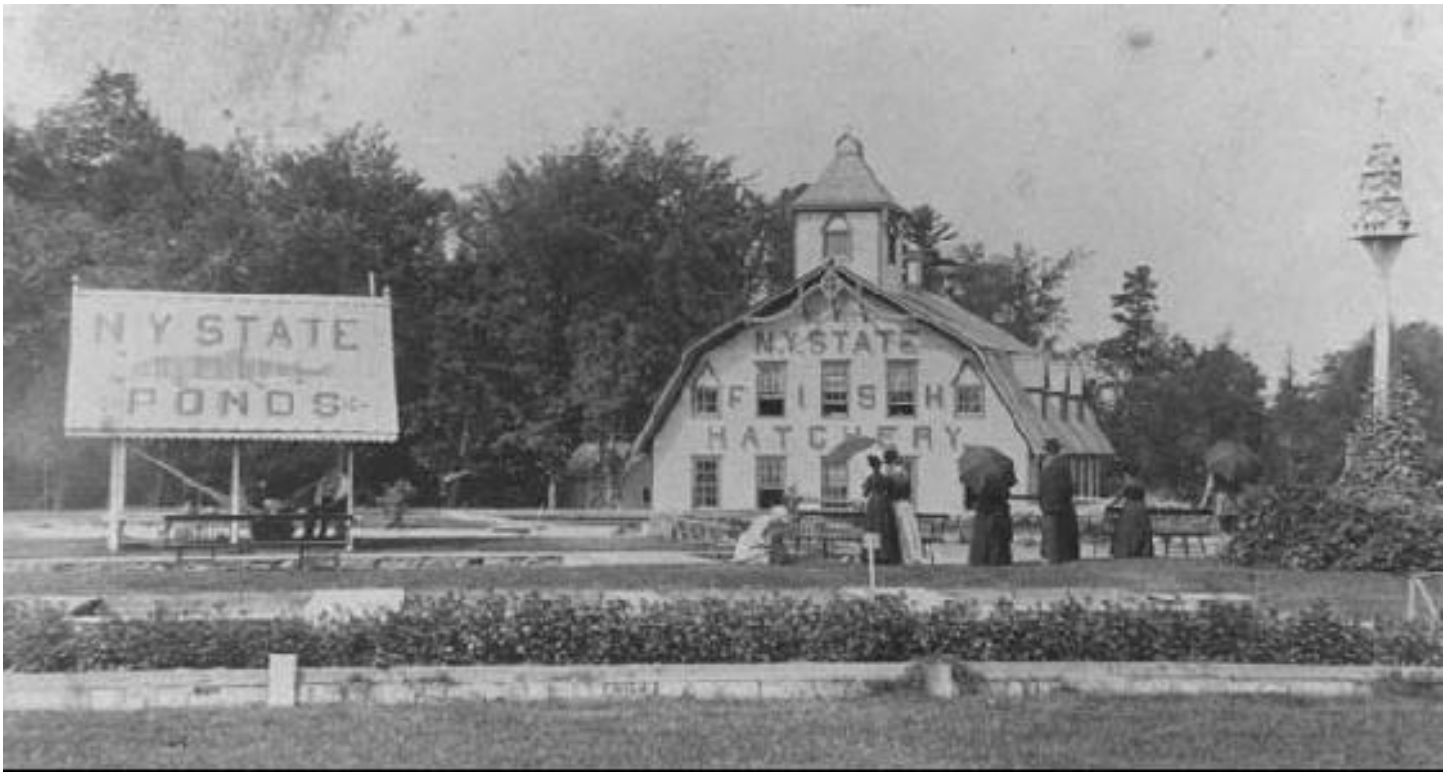
CALEDONIA HATCHERY, SHOWING STOCK PONDS.

Caledonia Hatchery, showing stock ponds (1897)
Source: Third Annual Report of the commissioners of Fisheries, Game and Forests of the State of New York, Third, 1897

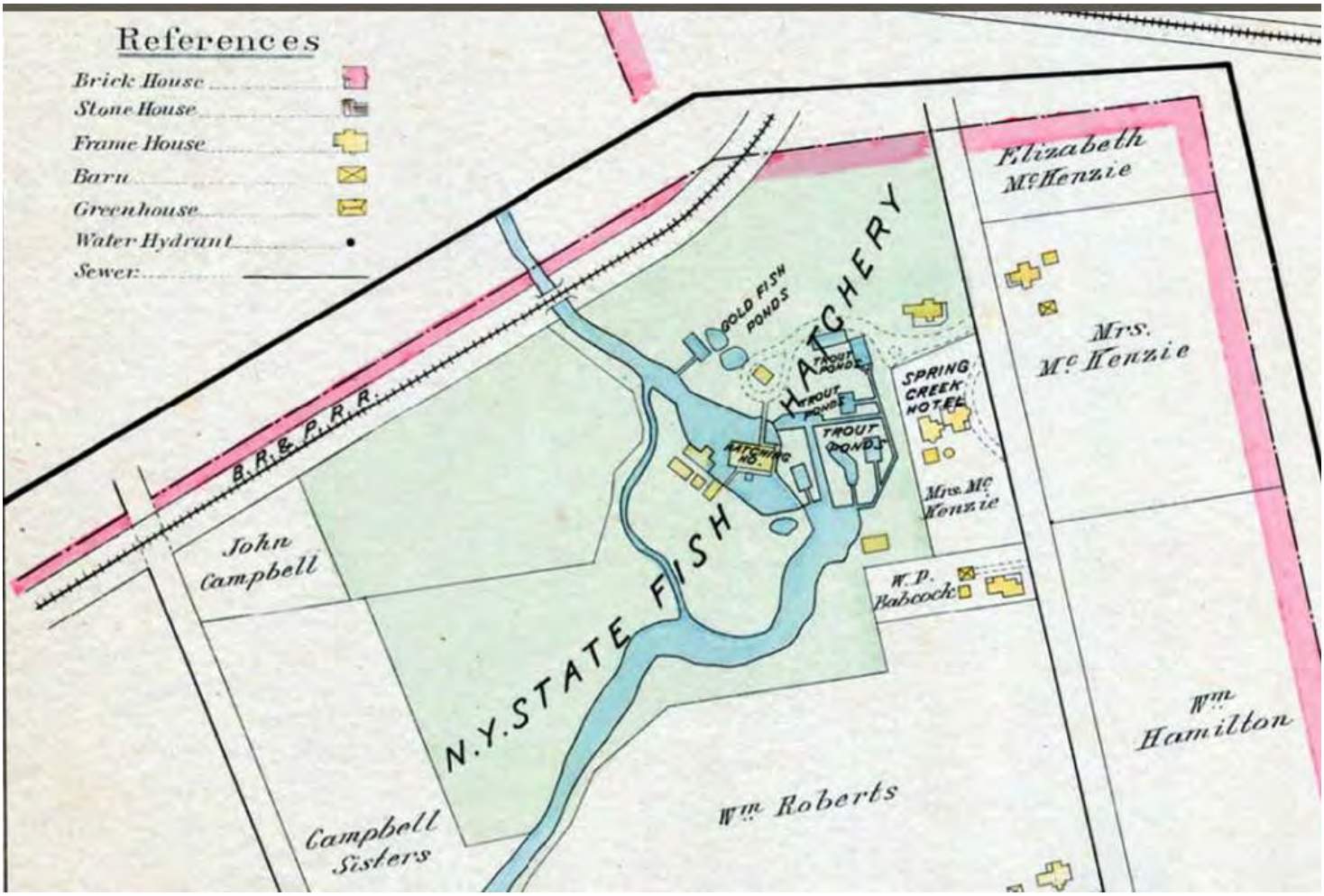
Caledonia Hatchery Looking Down Stream:
Rearing boxes for fingerlings in front of buildings at left (1897)
Source: Third Annual Report of the commissioners of Fisheries, Game and Forests of the State of New York, Third, 1897

Caledonia Hatchery, Interior (1897)
Source: Third Annual Report of the commissioners of Fisheries, Game and Forests of the State of New York, Third, 1897

The interior of the hatching house reflects many modernizations and improvements made in the process over the decades.



Tourists visiting the "New York State Ponds," Caledonia hatchery (ca. 1900)
From its beginning, the Caledonia Fish Hatchery was a popular tourist and recreational area, where people would stroll through the paths along the many ponds and view the juvenile fish.



Detail, "Caledonia Village" plate from *New Century Atlas of Livingston County, New York* (1902)
The earliest located plan for the entire hatchery site, this map shows the relationship of the buildings and ponds. Note here that the hatching house is present as a sort of island in the Spring Creek. The dwelling house has also been constructed by this time, likely being constructed ca. 1889-90, located near North Street. The "Spring Creek Hotel" also known as the Springbrook Inn, was built in 1889 to cater to the growing number of tourists visiting the hatchery.
Source: "Caledonia Village," map, in *New Century Atlas of Livingston County, New York* (Philadelphia: Century Map Company, 1902).

Two men fishing with a "Seth Green Rig" (ca. 1900)

Source: Charles R. Mitchell and Kirk W. House, *Corning* (Charleston, SC: Arcadia, 2003).

James Drake of Corning, NY (at left) and an unnamed man (at right, holding the Seth Green Rig). The Seth Green Rig involved a multiple weighted lines that would hold the bait at different levels in the deep water. Green also developed a multi-compartment box to bring in, store and organize the lines, which the man is holding. The rig was difficult to use, given the multiple lines and lures, and often tangled.

"Trout Ponds, State Fish Hatcheries, Caledonia, NY" (ca. 1918)

This postcard shows the natural landscape and setting of the Caledonia Fish Hatchery. While not labeled, this view shows the Spring Creek, looking west, with the bridge in the mid-ground and a train bridge in the background, which is still in existence.

Caledonia Fish Hatchery
Caledonia, Livingston Co., NY

16 North Street
Caledonia, NY 14423

Coordinate System: NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter

Feet
0 600 1,200 2,400

Fish Hatchery
USGS quad index

Tax Parcel Data:
Livingston Co. RPS
depot.livingstoncounty.us/rptx

OFFICE OF PARKS, RECREATION & HISTORIC PRESERVATION
NEW YORK STATE

Caledonia Fish Hatchery
Caledonia, Livingston Co., NY

16 North Street
Caledonia, NY 14423

Coordinate System: NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter

0 305 610 1,220 Feet

Fish Hatchery

USGS quad index

Tax Parcel Data:
Livingston Co. RPS
depot.livingstoncounty.us/rptx

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
NEW YORK STATE

Caledonia Fish Hatchery
Caledonia, Livingston Co., NY

16 North Street
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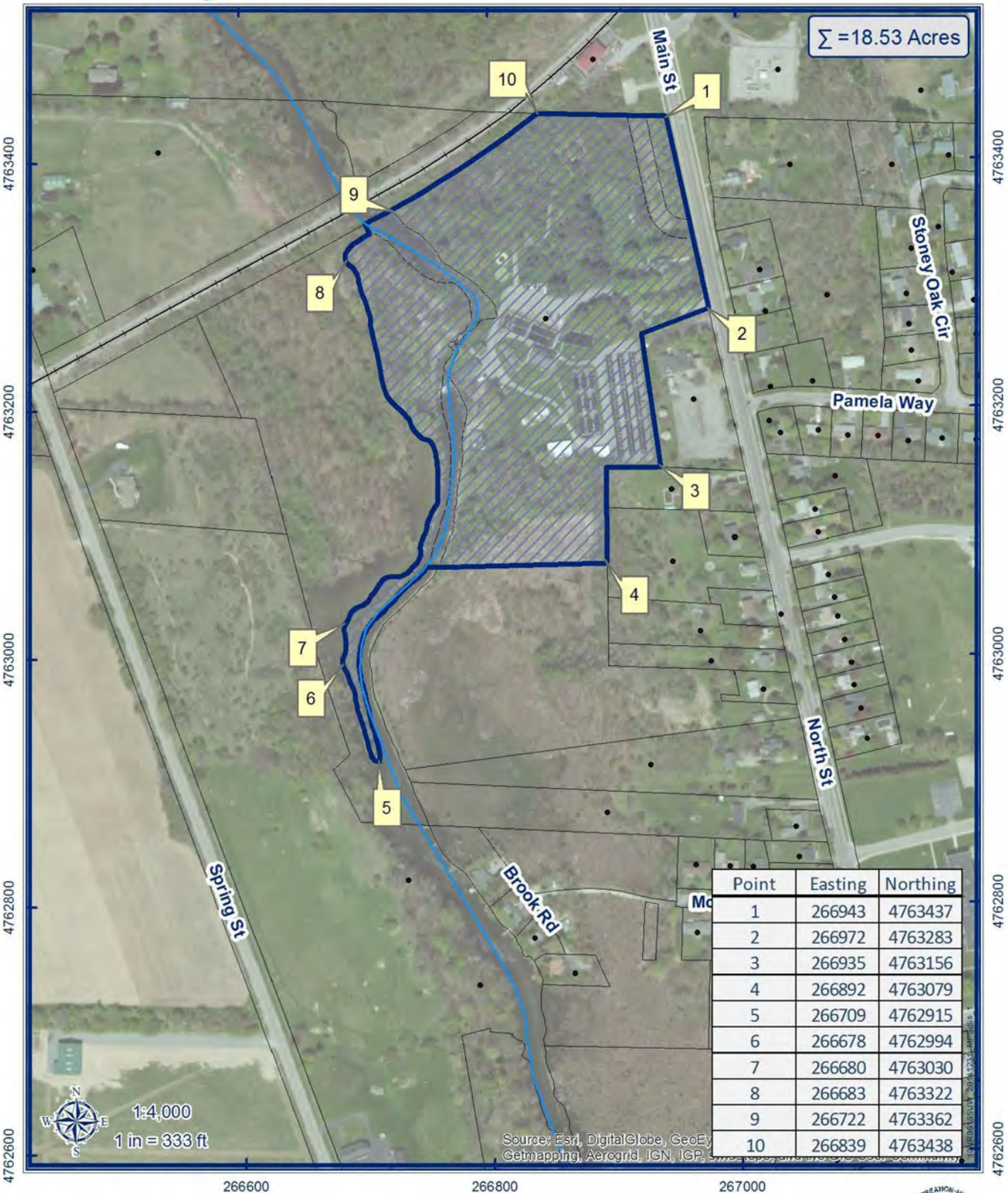

Point	Easting	Northing
1	266943	4763437
2	266972	4763283
3	266935	4763156
4	266892	4763079
5	266709	4762915
6	266678	4762994
7	266680	4763030
8	266683	4763322
9	266722	4763362
10	266839	4763438

Coordinate System: NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Datum: North American 1983
Units: Meter

0 100 200 400 Feet

Fish Hatchery

Tax Parcel Data:
Livingston Co. RPS
depot.livingstoncounty.us/rptx

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION
NEW YORK STATE


Emergency
Shower/Eye Wash
Caledonia Fish Hatchery
150th Year Celebration
August 9th & 10th
10AM to 2 PM
CAUTION
DO NOT ENTE
CAUTION
KEEP OUT
DO NOT ENTER
Conservationist
Dayton


GIANT-VAC

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: RESUBMISSION

PROPERTY NAME: Caledonia Fish Hatchery

MULTIPLE NAME:

STATE & COUNTY: NEW YORK, Livingston

DATE RECEIVED: 1/30/15
DATE OF PENDING LIST:
DATE OF 16TH DAY:
DATE OF 45TH DAY: 3/17/15
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 12000310

DETAILED EVALUATION:

X ACCEPT ___RETURN ___REJECT 2/27/15 DATE

ABSTRACT/SUMMARY COMMENTS:

See attached comments

RECOM./CRITERIA________________

REVIEWER Abernathy________________ DISCIPLINE________________

TELEPHONE________________ DATE________________

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE

New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
www.nysparks.com

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

6 April 2012

Alexis Abernathy
National Park Service
National Register of Historic Places
1201 Eye St. NW, 8th Floor
Washington, D.C. 20005

Re: National Register Nomination

Dear Ms. Abernathy:

I am pleased to enclose the following National Register nominations to be considered for listing by the Keeper of the National Register:

Seaman-Knapp House, Rockland County
Caledonia Fish Hatchery, Livingston County

Thank you for your assistance in processing these proposals. Please feel free to call me at 518.237.8643 x 3261 if you have any questions.

Sincerely:

Kathleen LaFrank

Kathleen LaFrank
National Register Coordinator
New York State Historic Preservation Office

NPS Form 10-900
(Oct. 1990)

OMB No. 10024-0018

310

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See Instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x' in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Caledonia Fish Hatchery

other name/site number

2. Location

street & number 16 North St ☐ not for publication

city or town Caledonia ☐ vicinity

state New York code NY county Livingston code 051 zip code 14423

Returned

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register criteria. I recommend that this property be considered significant ☒ nationally ☒ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Robert A. Pierpont DSHPO 4/4/12
Signature of certifying official/Title Date

New York State Office of Parks, Recreation and Historic Preservation
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

☐ entered in the National Register.
☐ See continuation sheet.
☐ determined eligible for the National Register
☐ See continuation sheet.
☐ determined not eligible for the National Register.
☐ removed from the National Register.
☐ other, (explain:) _____

Signature of the Keeper Date of Action

Caledonia Fish Hatchery
Name of Property

Livingston County, New York
County and State

5. Classification

Ownership of Property
(check as many boxes as apply)

- ☐ public-local
- ☐ private
- ☒ public-State
- ☐ public-Federal

Category of Property
(check only one box)

- ☐ district
- ☒ building(s)
- ☐ site
- ☐ structure
- ☐ object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
5	4	buildings
1		sites
5	5	structures
2		objects
13	9	Total

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Function
(Enter categories from instructions)

AGRICULTURE / SUBSITENCE / fishing facility or site

Current Function
(Enter categories from instructions)

AGRICULTURE / SUBSITENCE / fishing facility or site

Returned

7. Description

Architectural Classification
(Enter categories from instructions)

No style

Materials
(Enter categories from instructions)

foundation concrete
walls wood
roof asphalt shingle
other

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets.)

The Caledonia Fish Hatchery occupies a campus of approximately seventeen acres on the west side of North Street (NY 383/36) on the northern edge of the Village of Caledonia in northeastern Livingston County, New York. The surrounding area is residential in character, with nineteenth- and twentieth-century houses on village lots. The local topography is generally flat. Spring Brook runs through the property just west of the complex; underground pipes feed water from the creek through the various artificial ponds of the facility.

The buildings of the complex are clustered in the west-central portion of the property with the long concrete ponds arrayed to the east and north of the building group. Parking for visitors is located north of the buildings and the northerly ponds and is accessed by a driveway from North Street. Additional paved areas are located between the buildings and to their south. A small, modern (non-contributing) gazebo is located in a grassed and treed area at the northeast corner of the campus, near the visitors' parking lot and access drive. Also located in this area is a memorial boulder with bronze plaques (contributing) in tribute to Seth Green.

With the exception of the manager's residence, contributing buildings are generally barn-like in character with novelty (shiplap) siding over heavy framing that is exposed on the interior. An annotated list of buildings, structures and objects follows.

Buildings:

Main building – c. 1870
Contributing
Large two and one-half story five- by seven-bay building with broadly pitched gambrel roof surmounted by a square cupola near the east end. The gambrel roof has three steeply gabled dormers on each of the lower slopes at the second-floor level. Fenestration is regular, with window openings fitted with six-over-six double-hung sash. Single doors are located at the east end of the north elevation and at the center of the west elevation; a broad loft door is located at the center of the west gable. Decorative elements include simple pendant ornaments at the four corners of both the main and cupola roofs, large diamond windows at the attic level of the end walls and a large fish weathervane on the cupola.

The open first floor houses a complex of vats for the nurture of small fish. The small wing at the southeast corner of the building contains an office. The upper floor, reached by a stair at the southeast corner of the space, contains a small office and a large storage area.

Manager's residence – c. 1890
Contributing
Simple two-story Queen Anne style residence with stepped-back gables above shed roofs, broad windows, wrap-around porch with modern replacement turned posts and spindles. Contributing garage (c. 1950)

Ice house – c. 1900
Contributing
Tall windowless wood-frame building with shiplap siding, louvered vents in gables.

"Lake house" – c. 1903
Contributing
So called because of its initial use in raising lake trout.

Three- by five-bay one-story symmetrically cruciform building with gable roofs; roofs of short arms of cross have lower profiles than the main roof. Windows are fitted with six-over-six double-hung sash. A double plank door is located at the north side of the west gable end.

Barn – c. 1900
Contributing
Gable-roofed two-bay wood-frame barn/carriage house with shiplap siding, loft door and modern overhead doors.

Steel building (used for food storage) – 1977
Non- contributing

Pole barn – c. 1990
Non-contributing

Intake building – c. 1975
Non-contributing
Concrete block building

Above ground fuel tank and pump house – 1977
Non-contributing

Structures:

Retaining wall – c. 1870
Contributing
Rubble retaining wall just east of main building – originally part of support for a large artificial pond, now functions as retaining wall for raised flat area that supports a broad lawn and complex of modern linear concrete ponds.

Concrete dam across creek – c. 1920s, rebuilt 1942
Contributing

Gazebo – 2000
Hexagonal pavilion with pyramidal roof
Non-contributing

Ponds:

Complex of nine ponds
ca. 1955 - concrete bottoms added 1990s
Contributing

Complex of four ponds
ca. 1935 –modified 1960s, concrete bottoms added 2008
Contributing

3 circular ponds (created from barn silos) – 1950s
Contributing

18-pond complex (near North Street side of property) – c. 1975
Non-contributing
System of long, rectangular interconnected ponds located at far eastern edge of property

Complex of two ponds
located on west side of creek, abandoned 1990s
Non-contributing

1 long pond – pre 1970s, concrete walls built 1980s, concrete bottom 2008
Non-contributing

Clarifier - settling sewage pond – 1992
Non-contributing

Objects:

Memorial boulder and plaque – 1935
Contributing
Irregular monolith roughly six feet high and three feet by two feet in plan with bronze plaque that pays tribute to Seth Green. Text summarizes Green's life and career.

New York State Education Department historical marker – 1935
Cast-iron sign on a steel pole, painted a dark Sarum blue with yellow/gold, brown and green decorative elements: green pine tree, brown beaver, yellow/gold lettering

8. Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

☒ **A** Property is associated with events that have made a significant contribution to the broad patterns of our history.

☒ **B** Property is associated with the lives of persons significant in our past.

☐ **C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

☐ **D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

☐ **A** owned by a religious institution or used for religious purposes.

☐ **B** removed from its original location.

☐ **C** a birthplace or grave.

☐ **D** a cemetery.

☐ **E** a reconstructed building, object, or structure.

☐ **F** a commemorative property.

☐ **G** less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(enter categories from instructions)

AGRICULTURE

Period of Significance
1864 - ca. 1960

Significant Dates
1870

Significant Persons
(Complete if Criterion B is marked above)
Seth Green

Cultural Affiliation
N/A

Architect/Builder
William Green

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography
(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.

Previous documentation on file (NPS):

☐ preliminary determination of individual listing (36 CFR 67) has been requested
☐ previously listed in the National Register
☐ previously determined eligible by the National Register
☐ designated a National Historic Landmark
☐ recorded by Historic American Buildings Survey #
☐ recorded by Historic American Engineering Record #

Primary location of additional data:

☐ State Historic Preservation Office
☐ Other State agency
☐ Federal agency
☐ Local government
☐ University
☐ Other Name of repository:

The Caledonia Fish Hatchery is historically significant for its association with Seth Green and the development of pisciculture in the western hemisphere. Seth Green (1817-1888) popularly known as the "Father of Fish Culture in North America," established the first fish hatchery in the western hemisphere at Caledonia, Livingston County, New York in 1864. Since this time period the Caledonia Fish Hatchery has often been acclaimed nationally and internationally as the world's largest and most productive fish plant in continuous use. Millions of eggs and fry from Caledonia have been sent to stock the principle streams, rivers and lakes across the United States and around the world. Green's innovative experiments in fish culture and concern over depletion of fish in the state's waterways also led to the first state and federal governmental regulatory involvement in the commercial fish industry in America. Nearly one hundred and fifty years later the general principles of modern fish culture are still based on those used by Seth Green at Caledonia.

In 1868 New York State acquired control of the Seth Green Hatchery at Caledonia and as a result the first New York State Fish Commission (1868) was formed and Seth Green was one of the three commissioners appointed along with the Hon. Horatio Seymour, ex-Governor of New York State and Hon. Robert B. Roosevelt. As the fish propagation industry grew, awareness at the national level resulted in the establishment of the American Fisheries Society (1870) and the United States Fish Commission (1871).

One of the key components to the success of Green's artificial propagation techniques was the location of the hatchery where an abundance of natural fresh water from Spring Creek is fed by the flow of the springs, discharging thousands of gallons of water into the hatchery every minute. The spring water maintains years round mild water temperatures that are consistently cold without freezing which Green discovered was perfect for raising fish, especially trout. In 1864 Green purchased the exclusive rights to use a long stretch of fishing grounds at along the Caledonia Creek and built the first trout rearing ponds. According to author Sylvia Black, "Seth built a small one-room house and several plain but substantial building to house fish hatching apparatus. Numerous wooden tanks, a few hundred feet in circumference, were constructed in shallow pits with their tops built to the level of the ground. The fish were separated into sizes and kept in the tanks. Water was constantly gurgling in the tanks so that the fishes' environment would be the same as it would be in natural ponds."[1]

The first hatchling house was built in 1870 and the present (2010) main hatchery appears to have been erected in the early 1880s. The design of the building is credited to William C. Green, "a budding engineer," the younger son of Seth Green, after he graduated from Cornell.[2] Commission reports from 1895-1910 show major improvements including: leveling and landscaping, new ponds, rebuilt hatchery floor, and new dams. Many of the ponds and troughs built prior to World War I were filled in during the 1930s after a child wandered on the property

[1] Black, Sylvia. "Seth Green Father of Fish Culture." Rochester History, Vol. VI, July 1944, No. 3. p.9.
[2] Seth Green and the Caledonia Fish Hatchery 1864-1964. Published by the Big Springs Historical Society of Caledonia (1964). p17.

and drowned. Newer ponds were fewer in number, shallower, and fenced over concern for public safety. Modern restrooms and a picnic area to accommodate increasing numbers of visitors were added. The large pond area north of the hatchery was divided into smaller ponds and a new cement bridge along the drive way replaced the former wooden structure.[3]

A major renovation occurred in 1992 when New York State began construction on a pair of 36'concrete settling ponds with a depth of eight feet to capture the "cultural waste" generated by fish in the production ponds. The new tanks were designed to capture the waste and improving the water quality before entering Spring Creek, the source of water through the facility.[4] Currently (2010) the hatchery rears yearling brown trout and virtually all of the two-year-old trout used in the Department of Environmental Conservation's stocking program for 13-15" trout are produced at Caledonia. The annual production of 170,000 pounds exceeds all other hatcheries operated by the New York State Department of Environmental Conservation.[5]

In honor of its 50th anniversary in 1935 the New York State Conservation Department recognized the historical significance of Seth Green and the Caledonia Fish Hatchery as the first state fish hatchery by placing a historic marker on the property. September 28th of the same year the first memorial to Seth Green was dedicated on the site. Several other activities were organized to celebrate of the contributions of Seth Green at the local level including the placement of a five-ton boulder with a bronze plaque. Green's image is shown above and a bas-relief of a trout striking a fly below the inscription.

1817 Seth Green 1888
Father of Fish Culture in America
World-Famed Pioneer in Conservation
In 1837 Devised and Here in 1864 Developed
The Artificial Propagation of Fish [6]

A comprehensive biographical sketch of Seth Green's extraordinary life by Sylvia R. Black was published in the Rochester History magazine in July 1944.[7] Black chronicled Green's life from boyhood growing up the Carthage section of Rochester on the east side of the Genesee River at the lower falls and learning to hunt, fish, and the habits of fish from the Seneca children who lived nearby. By age twenty-one Seth Green was very adept at his work and decided to make fishing his trade. Between 1837 and 1840 Green made annual trips to Canada to salmon fish with veteran fishermen. This is where he observed salmon spawning for the first time and discovered how few eggs survived inspiring Green to perfect an efficient method to hatch eggs artificially. The successful results from his early groundbreaking

[3] Ibid. p. 23
[4] Bartles, John. "*Caledonia hatchery experiences renovation.*" Lake and Valley Clarion. June 18, 1992.
[5] New York State Department of Environmental Conservation, http://www.dec.ny.gov
[6] Black, *Seth Green...*, p. 25.
[7] Black. (Author's note at end of essay: "Most information was gleaned from Seth Green's Scrapbook begun in 1874 and continued beyond his death by his sister-in-law, Mrs. Julia P. Cook. A copy of the scrapbook and a file of letters, clippings and typed manuscripts by Seth Green were donated to the Rochester Historical Society by Mr. Howard C. Dana, formerly chairman of a Seth Green Memorial Committee

experiments eventually led to Green's reputation as one of one of the largest dealers of fish and greatest fishermen in the state.

Green's extraordinary success in hatching eggs using his unique dry fertilization method quickly spread making local and national headlines and subsequently trout ponds were built across the country. The science of fish culture (pisciculture) continued to expand in leaps and bounds with Green's work of shad propagation and most significantly in transportation of fish eggs. With the help of his brother Monroe (who joined the hatchery staff around 1868) and his invention of an ingenious hatching box, Seth Green became the first person to successfully pack and ship eggs ship anywhere in the country and across Europe. By 1873 eggs were being shipped around the world, leading Congress to appropriate money for the construction of the first 500-ton iron fish-hatching steamer equipped with the most advanced technology for catching fish and artificial propagation.

Seth Green received numerous awards for his work including gold medals in 1872 and 1875 from the Société Impériale d'Acclimatation of France for his work in pisciculture, an award in 1876 from the U. S. Centennial Commission at the International Exhibition held in Philadelphia and a gold medal in 1880 from the German Fishermen's Club at Berlin for his work in the field. In 1987 he was inducted into the Fish Culture Hall of Fame located in Spearfish, South Dakota.[8]

Green was a prolific writer and his reports and papers appeared regularly in the publications of the American Fish Culturists Association (later American Fisheries Society), in whose activities he was prominent. Green wrote articles for numerous magazines and newspapers and served as editor of The First American Angler. His publications included: Trout Culture in 1870 with Alfred S. Collins (a close associate and first director of the hatchery after Seth Green); Fish Hatching and Fish Catching in 1879 with the Hon. Robert B. Roosevelt (close friend and former Congressman who also served on the NYS Fish Commission with Green); and Green's final book before his death in 1888, Home Fishing in the Home Waters in 1888.

Local and national newspapers and periodicals published lengthy obituaries when Seth Green died due to senility and complications from a previous fall at his home on Alexander Street in Rochester, New York on August 20, 1888. The Rochester Democrat and Chronicle states, "In the death of Seth Green not only the city of Rochester, but the entire nation loses one of its most distinguished citizens, a man whose achievements in the work…gave him fame world wide".[9] The New York Times gave a full biographical review of Green's life and work, ending by stating that Green was "a man of great original thought."[10] Similar expressions are found in the *The American Angler*, *New York Times*, *Harper's Weekly*, and many other periodicals.

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[8] Fish Culture Hall of Fame, http://www.fishculturesection.org/Hall_of_fame/halloffame.html
[9] "Into Eternal Rest: Seth Green Passes Peacefully Away at His Home. Sketch of a varied career." *Democrat and Chronicle*. Rochester, New York. 8/20/1888.
[10] "Obituary. Seth Green." *New York Times*. 8/20/1888, p. 5.

Caledonia Fish Hatchery remains a popular attraction receiving thousands of visitors every year. The influence and scientific work of Seth Green gave birth to the fish culture industry and is inextricably linked to the multi-billion dollar fishing industry in the world today. It also serves as a memorial to Seth Green and his revolutionary development of pisciculture in America.

Sources

Black, Sylvia. "Seth Green Father of Fish Culture." Rochester History, Vol. VI, July 1944, No. 3. p.9.

Seth Green and the Caledonia Fish Hatchery 1864-1964. Published by the Big Springs Historical Society of Caledonia (1964). p17.

Bartles, John. "Caledonia hatchery experiences renovation." Lake and Valley Clarion. June 18, 1992.

"Into Eternal Rest: Seth Green Passes Peacefully Away at His Home. Sketch of a varied career." Democrat and Chronicle. Rochester, New York. 8/20/1888.

"Obituary. Seth Green." New York Times. 8/20/1888. p. 5.

Additional information was gathered from the following resources in the Livingston County Historian's Office (LCHO) archival and manuscript collection and the Seth Green collection at Rochester Museum and Science Center (RMSC).

Caledonia Fish Hatchery subject binder. (LCHO).
Green family correspondence folder. (LCHO).
Seth Green scrapbook on microfilm. (LCHO).
The Seth Green Family papers, 1844-1978 (RMSC).
Caledonia Fish Hatchery subject binder. (NYS DEC CFH).

Caledonia Fish Hatchery
Name of Property

Livingston County, New York
County and State

10. Geographical Data

Acreage of Property 17.07

UTM References
(Place additional boundaries of the property on a continuation sheet.)

1 18 266290 4763220
Zone Easting Northing

2 18 266970 4763000
Zone Easting Northing

3 18 266760 4762480
Zone Easting Northing

4 18 266560 4763070
Zone Easting Northing

☐See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title contact/editor: Robert T. Englert, Historic Preservation Program Analyst

organization NYS Office of Parks, Recreation & Historic Preservation date February 2012

street & number PO Box 189 telephone 518-237-8643

city or town Waterford state NY zip code 12188-0189

Additional Documentation
Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.
A **Sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and **white photographs** of the property.

Additional items
(Check with the SHPO or FPO for any additional items)

Property Owner
(Complete this item at the request of SHPO or FPO.)

name/title NYSDEC, Bureau of Public Lands [Contact:Charles Vandrei]

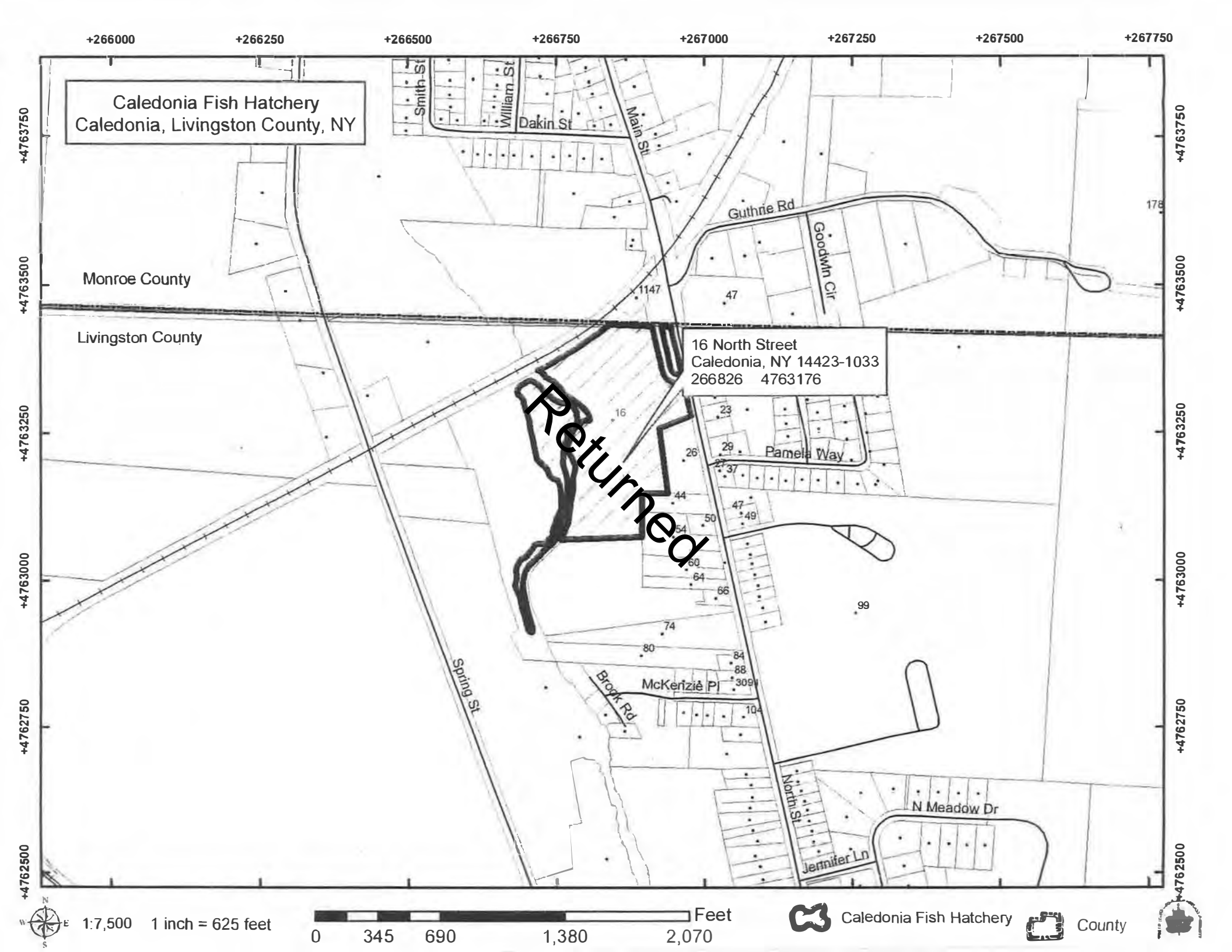
street & number 625 Broadway, 5th Floor telephone

city or town Albany state NY zip code 12233-4255

Research and draft Significance Statement

Amie Alden
Livingston County Historian
5 Murray Hill Drive
Mt. Morris, NY 14510

Alan D. Mack
Manager
Caledonia Fish Hatchery
16 North Street
Caledonia, NY 14423


Caledonia Fish Hatchery
Caledonia, Livingston County, NY
+266000
+266250
+266500
+266750
+267000
+267250
+267500
+267750
+4763750
+4763500
+4763250
+4763000
+4762750
+4762500
Smith St
William St
Dakin St
Main St
Guthrie Rd
Goodwin Cir
Monroe County
Livingston County
1147
47
178
16 North Street
Caledonia, NY 14423-1033
266826 4763176
Returned
16
23
29
26
27
37
Pamela Way
44
47
49
50
54
60
64
66
99
74
80
84
88
309
McKenzie Pl
Brook Rd
104
Spring St
North St
N Meadow Dr
Jennifer Ln
N
S
E
W
1:7,500 1 inch = 625 feet
0 345 690 1,380 2,070
Feet
Caledonia Fish Hatchery
County

S. Power collection

OBITUARY

This obituary notice was found, unmounted, between leaf #72 verso and leaf # 73 recto in scrapbook #2. It is marked in script: American Angler (NY) August 25, 1888.

Seth Green

The death of the great American pisciculturist, Seth Green, who since January 1, 1885 has conducted the "Fish Culture" department of this journal, removes from this country, and, indeed, from the world at large, one of the most practical, conscientious, pains-taking and efficient experimentalists in the realm of scientific research as applied to practical progress that have graced the century. Probably in no other country could a man deprived in early youth of the advantages of a higher education and left entirely dependent upon his own resources, have so successfully won for himself such position and world-wide fame in a walk of life so essentially scientific in its bearings and so necessarily restricted in its scope. Clear-headed, firm, honest, plain and unassuming, Seth Green devoted an allotted life-time to a pursuit requiring exceptional ability and qualifications, which, while promising no great rewards or emoluments at the outset, brought him at the last both name and fame, and such modest competency as men of his modest character are prone to be content with when they set before them as an object the well-being of their fellow-men rather than self-glorification and personal emoluments. Often assailed by the jealousy and thwarted by the ignorance of others, he pursued a straightforward path in the direct line of his self-imposed duty, and being thus a marked example of the now almost extinct honest American citizen in public life, he won deserved recognition at the hands of his countrymen and of the whole world, where his loss will be deeply felt. To those who have been familiar with his physical condition for some time past, his death was not a surprise, and it will gratify all to know that he passed painlessly away, surrounded by his family and friends.

Typescript of Seth Green obituary in the collections of the Rochester Museum and Science Center, 657 East Ave., Rochester, NY 14607.

Photographs

Photographer: Robert Englert
Historic Preservation Field Services Bureau
Peebles Island
PO Box 189
Waterford, NY 12188-0189

Date: 3 August 2010

Tiff Files: CD-R of .tiff files on file at
National Park Service
Washington, DC

Historic Preservation Field Services Bureau
Peebles Island
PO Box 189
Waterford, NY 12188-0189

Returned

NY_LivCo_CalHatchery:

1. Main Building, Ice House, Lake House, Gazebo, ponds, View to W
2. Main Building, ponds, Lake House, Pole Barn, View to E
3. Lake House, Barn, Ice House, ponds
4. Main Building Interior, View to E
5. Historic Retaining Wall, Gazebo, View to E
6. Memorial Boulder, View to E
7. Detail: Memorial Boulder plaque, View to E
8. State Historic Marker, View to W
9. Supervisor's Residence, View to NW
10. Pump building, storage shed, pole barn, View to SE
11. Complex of modern ponds, View to NE

Caledonia Fish Hatchery
Livingston County, New York
12000310

The Caledonia Fish Hatchery nomination, Livingston County, New York, is being returned because it does not meet the standards of a National Register of Historic Places nomination.

Section 5 Classification

The nomination has checked "buildings" as the classification category. This nomination has resources in every category. The bulletin on writing nominations states on page 15 , "A district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development." The proper classification for this resource would be "district".

Section 7 Narrative description

Under section 7 the nomination does list the contributing and non-contributing resources, which should be fully documented. As stated on page 28 of the bulletin on writing nominations, "The narrative should document the evolution of the property, describing major changes since its construction or period of significance." This narrative does not fully document the complex of ponds to tell the story of the fish hatchery and Seth Green.

Section 8 Narrative Statement of Significance

The documentation for this nomination is not sufficient for listing in the National Register. Section 8 needs to explain and make the case for the property's historic significance and using the properties integrity to justify the property for nominating. The statement of significance should explain what a fish hatchery is, who Seth Green is, when, what he did, why he did it first and why it was important. What is a fry? What is stock? What is fish culture? And why is it important? What is pisciculture?

There are two Criteria in this nomination. A) Broad patterns of events: Agriculture, a context has to be written for this and B) Significant Person: Seth Green, and a context has to be written for him as well. The nomination has also stated National significance. A case has to be made for National significance.

Guidance is available for all these cases on our website: http://www.nps.gov/nr/publications/index.htm. There you will find our general guidance on writing a nomination, How to Complete the National Register Registration Form. There is also a bulletin on writing nominations on significant people: Guidelines for Evaluating and Documenting Properties Associated with Significant Persons. Also available are helpful white papers on context writing.

Alexis Abernathy
Reviewer
202-354-2236
5/25/12

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Caledonia Fish Hatchery

MULTIPLE NAME:

STATE & COUNTY: NEW YORK, Livingston

DATE RECEIVED: 4/13/12 DATE OF PENDING LIST: 5/04/12
DATE OF 16TH DAY: 5/24/12 DATE OF 45TH DAY: 5/30/12
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 12000310

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	Y

COMMENT WAIVER: N

___ACCEPT X RETURN ___REJECT 5/30/12 DATE

ABSTRACT/SUMMARY COMMENTS:

See attached comments

RECOM./CRITERIA_____

REVIEWER [illegible] DISCIPLINE_____

TELEPHONE_____ DATE_____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

14 January 2015

Alexis Abernathy
National Park Service
National Register of Historic Places
1201 Eye St. NW, 8th Floor
Washington, D.C. 20005

Re: National Register Nominations

Dear Ms. Abernathy:

I am pleased to resubmit the nomination for the Caledonia Fish Hatchery, which was returned to us because there was insufficient documentation of the life of Seth Green, one of the most important figures in American pisciculture. This nomination has been completely rewritten and significantly expanded. We feel it now meets all required standards for documentation and offer it for consideration for listing by the Keeper of the National Register:

Also enclosed is a new nomination for:

St. Mary's Episcopal Church Complex, Otsego County

Please feel free to call me 518.237.8643 x 3261 if you have any questions.

Sincerely:

Kathleen LaFrank
National Register Coordinator
New York State Historic Preservation Office

Caledonia Fish Hatchery
Livingston County, New York
12000310

The resubmission of the Caldonia Fish Hatchery is an excellent nomination. For the 19th Century era of Seth Green and his brother, the founder of the hatchery and the innovator of artificial propagation of fish, the resource is nationally significant. It is significant on the state level as a significance resource as a state hatchery.

The nomination also does an excellent job of justifying this nomination for potential NHL consideration. The nomination includes the necessary comparison of what came before and showed that Green was the first to successfully to make fish hatcheries profitable. Plus the nomination indicates the significant advances Green made to the industry. Also the nomination made a good case for Green's National and International influence with the continued use of the ponds it indicates his influence is still felt today.

Recommendation for NHL consideration:

- National Significance until 1895 for the retirement of Monroe Green. Monroe Green was heavily involved with Seth and made advancements himself.
- State significance to 1964 is appropriate since the state still runs and upgrades the hatchery.
- Need to make sure the upgrades don't interfere with integrity issues with potential NHL status.

Alexis Abernathy
National Register Reviewer
2/27/15

LANDMARK SOCIETY of WESTERN NEW YORK

December 23, 2014

Ms. Jennifer Walkowski
New York State Office of Parks, Recreation & Historic Preservation
Peebles Island State Park
P.O. Box 189
Waterford, NY 12188-0189

RE: National Register listing of New York State Fish Hatchery

Dear Ms. Walkowski:

I am pleased to write to you in strong support of the State and National Register of Historic Places nomination for the New York State Fish Hatchery at 16 North Street, village of Caledonia, Livingston County. This year marks the 150th anniversary of this unique historic property. As the oldest fish hatchery in the Western hemisphere, with a campus that retains its historic buildings in excellent condition, the Hatchery is an obvious and worthy candidate for National Register listing.

This fall, The Landmark Society recognized this property's owner, the New York State Department of Environmental Conservation, with our Historic Landscape Award for their continued care of and commitment to this historic campus. We are extremely pleased to see that the DEC has pursued listing in the National Register of Historic Places.

Sincerely,

Caitlin Meives
Preservation Planner

cc: Mr. Alan Mack, Manager, New York State Fish Hatchery

133 South Fitzhugh Street, Rochester, NY 14608 P: (585) 546-7029 F: (585) 546-4788 W: www.landmarksociety.org