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<td>CHIEF OF PARTY</td>
<td>W.C. Hodgkins</td>
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U. S. COAST AND GEODETIC SURVEY.

T. C. Mendenhall ... Superintendent.

State: Conn.

DESCRIPTIVE REPORT.

Topographic Sheet No. 2009.

LOCALITY:

Connecticut River.

1890.

CHIEF OF PARTY:

W. Q. Hodgins.
Descriptive Report
to accompany Original Topographic Sheet 2009. No 4 of Connecticut River, Conn. Surveyed in August, September, and October, 1890.
by W. C. Rodgers, Assistant.

The general character both of the topography and the geology is very different in the upper and lower parts of the sheet.

In the lower part, we have the continuation of the steep granitic ridges, already noticed in the report on Sheet No. 3.

These here confine the river within even narrower limits and in the region called "the Strait," the stream flows, between almost precipitous hills, with a width of less than one-fourth, and in the narrowest part of less than one-eighth of a mile.

During this part of its course, the Connecticut flows from west to east for about five miles, making a bend of about 90 degrees at each end of this stretch.
Emerging from the "Straits" on the way up the river, the country is entirely different in aspect. Smoothly molded hills of drift take the place of the abrupt granitic ridges and the narrow valleys broaden out into the charming expanse of undulating slopes which surround Middletown. On the left bank of the river opposite Middletown occurs a remarkable deposit of brown sandstone, widely known as Portland brownstone.

The deposit, which is of great thickness, appears to run nearly north and south, passing diagonally under the river and cropping out again in the town of Cromwell, about two miles above Middletown.

There is quite a striking topographical feature of recent origin shown in the case of Willow Island, which occupies the middle of the Connecticut, west of the Portland Quarry wharves and which is almost three-fourths of a mile long.

I was informed that this island is entirely the result of the deposit, within quite recent
years of detritus from the river and that this deposit was caused by a stone-dike which was built in the river by the quarry owners for the purpose of deflecting a greater proportion of the water to their wharf front, giving increased scour and a gain in depth of water at the wharves. These results seem to have been attained, but in the eddy below the dike this very considerable island has grown up and seems by no means to have reached its limit of growth. The island consists of two nearly separate parts, which are joined by a small section of marshy ground, which is covered with water except at a low stage of the river. Each portion of the island, again, has a ridge along each margin with lower ground between; and both are overflowed in freshets. The eastern portion is considerably higher than the western and both are covered with trees, chiefly poplars and willows.
8. The soil around Middletown and Portland seems of a kindler nature than that further down the river, and crops seem to do well. Corn, potatoes, and tobacco seem to be among the principal crops.

In the lower part of the sheet, the rough hills are covered with forest of recent growth, all of it having been cut off several times, and of varied character. Chestnut and oak are most common. Hemlock, spruce, cedar, hickory, birch, maple, beech, dogwood, etc. occur frequently.

There is much undergrowth. The trees generally range from twenty to forty feet in height. In the upper part of the sheet there is comparatively little woodland but where it does occur, the trees are as a rule somewhat larger. In this part of the sheet there are many shade and fruit trees, the leading shade trees being the American Elm, and maples of various varieties. Fruit trees embrace the apple, peach, cherry, pear, and plum.
9. Probably there are about equal portions of cleared and wooded land upon the sheet. Of the cleared land, I think rather more than one half is generally in grass.

The upper portion of the sheet covers a quite thickly settled region, including parts of the city of Middletown and of the towns of Portland and Cromwell. The settlements in this region were among the earliest in New England.

Originally the farming element predominated, as it still does in the smaller towns, but there is now a great variety of occupations in these places. The extensive brownstone quarries already mentioned furnish employment to many persons and the manufacturing interests, especially in Middletown, are varied and extensive. Some of the principal lines are pumps, presses, rubber goods, textile fabrics of various kinds, etc.
Communication is maintained both by water and land. Steamers run daily between Hartford and New York, stopping both at Middletown and Portland. During the summer, a steamer also runs to New London and Sag Harbor. Many sailing vessels are employed in transporting stone, wood, coal, iron, etc. The roads are generally good and the grades moderate. Road bridges over small streams are mostly substantial and in good order.

There are no foot bridges over the Connecticut. A steam ferry between Middletown and Portland and another between Cromwell and Gilder's Ledyard afford means of communication, when the river is not blocked by ice. The Air Line Division of the New York, New Haven and Hartford Railroad, running from New Haven to Willimantic, crosses the river on an open truss iron bridge, supported on stone piers, of which five are in the river. The central span is a swinging draw, which is always kept open, except on the approach and passage of trains.
This railroad like all the others on the sheet is a single-track road. Middletown is well supplied with railroads, being connected with New Haven and New York by the Air-Line Division, with Berlin by the Middletown branch, with Hartford and Springfield by the Valley Division, with Willimantic and Boston by the Air-Line Division, and with Saybrook and New London by the Valley Division. The Connecticut River is navigable throughout the extent of this sheet, although Middletown is sometimes called the head of navigation. Navigation between there and Hartford is attended with considerable difficulty owing to bars in the river. The two small tributaries entering the river above and below Middletown are not navigable, but afford considerable water power which is fully utilized in the various manufactures spoken of above. The Connecticut is subject to frequent floods in the spring and after.
heavy rains and has a vertical range of something like fifteen feet at Middletown, though that rise is unusual.

Ice gorges are not common, but sometimes occur and cause unusually heavy floods. The horizontal range of floods varies with the shapes of the hills bordering the lowlands. It is greatest on the meadows around Little River, just above Middletown, and around Cecassett Pond in the southern part of Portland. Fences are most commonly of wood, though stone is also used.

10. There are no places on the sheet known as health or pleasure resorts. There are a good many visitors in summer, and the Connecticut State Hospital for the Insane located in Middletown just southeast of the city might be classed as a “health-resort.” This is a very extensive establishment and has about 1500 inmates, some of whom are pay-patients from
New York and other places outside of the state. Middletown seems to have a healthy growth in wealth and population, due to its manufacturing interests and the quarries at Portland and Cromwell add to the importance of those towns.

W.C. Hodgkins, Assistant
DESCRIPTION REPORT.

Topographical Sheet No. 2009

LOCALITY:

CONNECTICUT RIVER,

FROM:

WHITMORE'S DOCK TO PORTLAND.

1893.

CHIEF OF PARTY:

Charles H. Boyd, Assistant
Dr. Thomas C. Meadswell
Superintendent U.S. S.B. & G. Survey

Sir:

I have the honor to offer the following descriptive report to accompany topographical sketch No. 209. The Connecticut River from Whitman's dock to Portland, covering the work of my party during the season of 1893.

The Stone-line was delineated when the sketch was sent to me, having been surveyed by Assistant T. G. Hoogkamps in 1890. Within these limits the river is land from the Stoneline is generally quite abrupt and the prominent feature interest is Campbell. About mid-way of the sketch the river is much narrowed on by granitic formations on both sides known as "The Strata", with a width of 200 m.
This granite extends, thence, along the west bank to the lower limits of the cliff, where the outcrop is considerably withdrawn from immediate shore-line. In two places the ledges are new surface, at the Whitmanne Quarry, near Brown's and the Columbia Granite Quarry, some two miles above. These last named are quite extensive, having about 2 miles of railroad. A Cable deniers to facilitate the handling of the stone. Surfing & Paring Stone is all we saw of the product, which appeared of inferior quality for building purposes. At several places, in the mantled hills of this range, we noticed small pits where lica deposits had been mined.

Up the River from the Quarries, on the East Side, occurs the Brown Sand Stone formation when the famous Portland Clay are located. These are said to be the largest in the U.S. and are usually worked with the aid of Steam Drills. Channelling Machines, railroads, trawling devices, &c, modern appliances. Stones of 15 tons weight are handled. 500 or 600 men have been employed. The excavations extend back from the immediate river bank, to the 20 foot contour line, on a frontage of more than half a mile & into
the hill about 1/4 mile to the 1st set curve. Within this 3,000 feet the line has been removed to a depth of 15 feet; i.e., below mean high water, in one foot. In other places the abutment wall is 16 feet.

The country is well wooded with a second growth, mostly of white pine, hemlock, oak, and cedar. On humps from the meadow banks, cedars cut to trees of 40 feet. The area growing for timber is good.

The woods and grounds of the town are thickly planted with ornamental trees and orchards of apple and peach. The stones present the appearance of a thinly wooded country.

There are four towns upon the shield. The settlement was made by Colonists from Massachusetts early in 1636. The shieldtown was a city 110 years ago. Portland, on the E. bank of the shieldtown, is the seat of the Barstow Orange Grove. In the building of this is the principal industry of the place. There are good orange groves in the Orange Grove, and the town is sheltered.

The many railroads also have connection with the Boston & New York Air Line R.R. The Quincy granite is transported by these new systems of railroads.
to large "dumps" with stone & below them, which the low
exposure can not fill up. Changing the face of nature
in a marked degree or amount since the flood
small in 1690.

The mouth of the Eastern Ten or kernel
some smaller manufacturing are located in the
eastern portion of this town.

The small village of Bettsville and Middle Haddam
join Portland on the east. They are largely devoted
to farming. But there are several small water power
mills, as in Ten Mile brook. Some time one 6 horse
sounding power & a variety of small factories.
The lower power on Ten Mile brook is used in
making oastum for the tarry. The highest hill
assayed is Hog hill in Middle Haddam. 540 ft.
\[\text{ft.} \]
Upon this farmhouse is located. (5) the town
landings & also a railroad siding
on the Air Line R.R.

The village of South Farms, on the Kickem, a stream of Middlesex, from which it is separated
by Pemiscot brook, is also devoted to farming &
manufacturing. Upon one hill a lime kiln.

Near also, is located the Connecticut State
Hospital, for the insane in the City of Farm.
The Connecticut Valley Railroad is near the right bank of the River. Thus an
good landing wharf belongs to the Esopus
Illipatch. The Esopus Boats of formerly called
Dunkin's Dock 1/2 at the White's Dock near
The lower end of the stud is locally known as
"Dunkin's."

The only Bridge over the Connecticut, falling
upon this stud is the Benning Bridge between
Middletown & Hartford, belonging to the New Haven
Hartford & New York System. The rails are about 32 ft.
avoic m. & i. This is a steam ferry connecting
from the places about 3/4 mile above the Bridge.

I did not hear the time for which our
cause of much damage & presume this range of
The floods to be well under 32 ft. above m. & t.

as evidenced by the U.S. Bridge. The ice marked

gage at the upper end of the stream.

To the East of the Strains, there is a bank
of cemetery nearly 5 1/2 S. on the strand 3 1/2 ft.
of a mile in width, 8 inches wide evidence of
a former river bed. The Ponds & remains ther
"beach lake", occur here

Of the extensive meadow or cultural, fields.
as marked a feature upon the other sheets, but not that of Pecanada as found upon this. Should be

lined & concealed for ranging purposes. Water to the sink from little behind pumped over this tree,
as in Louisiana, of memory. A crow hop is our

craise upon it.

Very respectfully submitted,

C. W. Boyd

Assistant