

MORRIS CANAL FACT SHEET

Planes, Locks, Boats and Other Information

The inclined planes were first powered by overshot water wheels. Then the Scotch turbines were installed. These are cast iron "pin wheels" approximately 12.5 feet in diameter, powered by water from the canal and connected through gearing to a drum on which a wire rope cable was wound. This 2 inch diameter cable pulled the plane car up the plane. Prior to the use of the steel cables, iron chains were first used followed by hemp rope. The average grade of the planes was 1.11 - approximately 11 foot rise for a horizontal distance of 100 feet.

Plane 9 West – Port Warren near Phillipsburg:

Largest plane on the canal vertical lift of 100 feet
Length: 1,510 feet to summit – 1,788 feet end to end
Double track – approximate time for transit: 12 minutes

Lock dimensions: Original locks: 9 feet x 75 feet
Enlarged locks: 11 feet x 90 feet

Boats: Capacities: First boats: 10 tons of cargo
Second boats: 25 tons of cargo
1845 section boats: 44 tons of cargo
1860 section boats: 70 tons of cargo

Total weight of boat, cargo and cradle: 110-125 tons
Dimensions of 1860 boats: Length: 87.5 feet Width: 10.5 feet
Depth loaded in water: 4.5 feet

Other Information

Cost: Original: \$2,104,413 Enlargement: \$1,700,000

Tonnage: 1845 - 58,259 tons
1866 - 899,220 tons (maximum year)
1856 - 1870 Coal picked up at Washington from DL&W Railroad
1867 - 146,359 tons

Only prosperous period was 1860 – 1870

Large Aqueducts: Little Falls Aqueduct across Passaic River – 80 foot span
Pompton River Aqueduct between Mountain View and Lincoln Park
236 feet long, 9 stone piers

Long levels: Bloomfield to Lincoln Park: 17 miles
Port Murray to Saxton Falls: 11 miles

Notes on Lake Hopatcong:

Around 1750 Garrett Rapalje built the Old Forge Dam for a forge.

A new dam was built for the canal raising the lake by 5 ft and thus providing water for the canal in both an easterly and westerly direction.

From 1865 to 1881, the Ogden Mine railroad brought iron ore from the mine to Nolan's Point on Lake Hopatcong where it was loaded into canal boats. In 1880, 108,00 tons were moved in 1,500 boat loads. Then the Central Railroad took over that business.

Towns along the canal: Port Delaware (Phillipsburg), Port Warren, Stewartsville, New Village, Broadway, Port Washington Port Colden, Port Murray, Rockport, Hackettstown, Waterloo, Stanhope, Port Morris, Landing, Shippingport, Ledgewood, Wharton, Dover, Rockaway, Denville, Boonton, Montville, Beavertown (Lincoln Park), Mountain View, Little Falls, Paterson, Clifton, Bloomfield, Newark, Jersey City.