164670

INTERCONNECTION REPORT
City of Camden
Water Utility

Collingswood

The intersection of South Collings Road and Mt. Ephraim Avenue. 6" Cast iron pipe controlled by one 6" line valve on 6" C.I. pipe from Collingswood.

Gloucester

A 6" line valve located at the Southwest Corner of South Collings Road and Tennessee Road, through 2250' ± of 6" Cast iron pipe to a valve located directly under the viaduct portion of the Walt Whitman Bridge in Gloucester City on the Southerly side of Collings Road. Note: There is a 4" Cast iron blow off valve and discharge pipe under the bridge crossing the Newton Creek. The pipe under the Newton Creek Bridge is a 10" Cast iron pipe.

Pennsauken

There exist two separate interconnection points between the City of Camden water system and the Merchantville-Pennsauken Water Commission system through fire hydrants only.

1. A City of Camden fire hydrant located on River Road the South side, 93' East of Delair Avenue (in front of Puchack pump station in Delair, New Jersey) and a MPWC fire hydrant located on the Northeast Corner of Delair Avenue and River Road, 150' between hydrants and across River Road.

2. A City of Camden fire hydrant located on the Southerly side of River Road 98' East of the Easterly curb line of 49th Street and a MPWC fire hydrant located adjacent to it on the Southerly side of River Road, East of 49th Street, there are 47' between hydrants. The City hydrants are connected to a 36" water main at both locations.

New Jersey Water Company in Camden City

There are seven interconnections between the City of Camden water system and the New Jersey Water Company system. Two connections are via direct pipe interconnection and five locations via fire hydrants located in relative close proximity to each other.

A. Direct piped interconnections

1. The intersection of North 27th Street and River Road, from the City 36" cast iron main through a 36 x 12" tapping sleeve and valve via 12" cast iron pipe to the NJ Water Company 12" valve on 12" main in North 27th Street on the Southerly side of the intersection. Note: This interconnection was installed in 1983.

2. On River Road 258' East of Federal Street. A double valved interconnection between the City 30" main and the NJ Water Company 12" main via 12" C.I. pipe (See Plan #2841-1 cabinet 20)

B. Fire hydrant interconnections

1. Harrison Avenue, the North side, 73' South of North 21st Street, a City hydrant and a NJ Water Company hydrant located on Southwest Corner of Harrison Avenue and North 21st Street, the distance between hydrants is 99' across Harrison Avenue.

2. East State Street, the North side a City hydrant connected to the 30" water main, 200' West of River Avenue and a NJ Water Company hydrant on the Southerly side of River Road 175' West of East State Street. The distance between hydrants across both East State Street and River Avenue is 440'.

3. River Avenue, the North side 65' East of East State Street a City hydrant connected to the 30" water main and a NJ Water Company hydrant located on River Avenue the South side, 155' East of East State Street The distance between hydrants across River Avenue is 125'.

4. North 18th Street, the East side 92' North of River Avenue, a City hydrant connected via 120' of 8" C.I.P. to the 30" main in River Avenue and a NJ Water Company hydrant located on the North East Corner of North 18th Street and River Avenue. The distance between hydrants is 97'.

5. North 19th Street, the East side, 73' South of River Avenue a City hydrant connected via 80' of 8" C.I.P. to the 30" main in River Avenue and a NJ Water Company hydrant located on the North East Corner of River Avenue and North 19th Street. The distance between hydrants is 137'.

SOURCE DESCRIPTION WITH DEFICIENCIES NOTED

Morris North Well 1 - rated capacity = 1.44MGD (2)

Well not operable at time of inspection, power supply lost due to vandalism, break in raw water main to Morris Delair Treatment Plant, mineral oil container on pump empty.

Morris North Well 2 - rated capacity = NA

Well taken out of service in 1962 due to high phenols. Well housing destroyed.

Morris North Well 3 - rated capacity = 1.44MGD (2)

Mushroom vent missing from pump base, mineral oil around pump base from spill or leak.

Morris North Well 4 - rated capacity = 2.02MGD (2)

Morris South Well 6 - rated capacity = 2.30MGD (2)

Pump made a rattling noise which may indicate abrasion.

Morris South Well 7 - rated capacity = 2.30MGD (2)

Cover to valve pit missing, valve pit eroding, contains vegetation.

Morris South Well 8 - rated capacity = 1.44MGD (2)

Well house thermostat broken by vaudals.

Morris South Well 9 - rated capacity = NA

Well abandoned in 1977 due to low production. Well house heavily vandalized.

Morris South Well 10 - rated capacity = 2.02MGD (2)

Significant rust, oil, and corrosion around pump base.

Morris South Well 11 - rated capacity = 2.45MGD (2)

Pump motor running very hot at time of inspection, small leak noted at blowoff valve.

Morris South Well 12 - rated capacity = 2.38MGD (2)

Small leak noted at check valve in raw main to treatment plant.

Morris South Well 13 - rated capacity = 2.38MGD (2)

Mushroom valve replaced by plastic hose and steel fitting.

Delair Well 1 - rated capacity = 2.16MGD (2)

Well inoperable at time of inspection, motor burned out by lightning strike.

Delair Well 2 - rated capacity = 1.87MGD (2)

Well house floor very slippery from spilled or leaked oil, plaster walls spalling in well house, pressure gauge read <100PSI.

Delair Well 3 - rated capacity = 1.87MGD (2)

Well house floor very slippery, oil may be leaking from pump.

Puchack Well 1 - rated capacity = 1.91MGD (2)

Puchack Well 2 - rated capacity = 1.93MGD (2)

Puchack Well 3 - rated capacity = 2.03MGD (2)

Valve pit not fully covered, half full of water, mineral oil around pump base, mushroom vent missing from pump base.

Puchack Well 5 (3,4) - rated capacity = 1.44MGD (2)

Puchack Well 6 - rated capacity = NA

Well abandoned because of chromium contamination. Well housing heavily vandalized.

Puchack Well 7 (3,4) - rated capacity = 1.86MGD (2)

Well was in operation at time of inspection contrary to (3,4). No subsequent formal notification given to NJDEP, no housing for well, pump, or motor, just wire fence.

Parkside Well 13 - rated capacity = 1.44MGD (2)

Mineral oil jar empty, pump made knocking noise, pump base covered with oil from leak or spill, carboy of "Metclean" sulfuric acid in well house, water in valve pit, piping heavily rusted.

Parkside Well 17 - rated capacity = 1.44MGD (2)

Water in valve pit, service pump leaking.

Parkside Well 18 - rated capacity = 1.83MGD (2)

Small leak at check valve, low on mineral oil, no housing for well, pump, or motor, just wire fence.

City Well 1 (6) - rated capacity = NA.

Many bags of aluminum sulfate in treatment building.

City Well 3 (5) - rated capacity = NA.

Trash in well house, water from system dripping from check valve.

City Well 4 (6) - rated capacity = NA.

City Well 5 (5) - rated capacity = NA.

City Well 6 (6) - rated capacity = NA.

City Well 7 - rated capacity = 1.44MGD (2)

Service pump removed, direct opening in basin filled to floor with water, carboy of sulfuric acid in chlorine room, mineral oil jar empty, well can't presently be used because of problems at treatment plant 6.

City Well 10 (6) - rated capacity = NA

City Well 11 (4) - rated capacity = 1.44MGD (2)

Oil around pump base, valve pit full of water, lighting is inoperable.

City Well 12 (5) - rated capacity = NA.

City Well 15 (5) - rated capacity = NA

City Well 16 (6) - rated capacity = NA

Total Source Capacity = 42.82MGD (2)

Total Source Capacity presently available for Routine Operations = 33.04MGD (2)

TREATMENT FACILITY DESCRIPTIONS WITH DEFICIENCIES NOTED

Morris - Delair Water Treatment Plant - design capacity = 18MGD (1,7)

Treatment consists of aeration, gas prechlorination, pH adjustment by lime addition, flocculation, clarification, polyphosphate addition, gas chlorination, and pressure filtration.

Deficiencies observed

- pressure filter flow rate instrumentation not functional.
- pressure filter pressure gauges not calibrated.
- copper tubing for pressure filter instrumentation leaks.
- sludge pump access discharing sludge onto ground between clarifiers at time of inspection.
- red material was leaking from contents of 5 decaying buckets of slag-like material in chlorine cylinder loading area at time of inspection.
- finished water had pH of 9.7 at time of inspection.
- open manholes flush with ground level behind rear gate pose safety hazard.
- lime waste from plant routinely dumped on ground near well 10 and open manholes cited above.
- service pump #4 seized at time of inspection.

Puchack Run Water Treatment Plant - design capacity = 6MGD (1)

Treatment consists of aeration and gas chlorination.

Deficiencies observed

- Chlorine tanks not chained to prevent falling.
- Plant attendant had no key to the chlorine room at the time of inspection.
- Blowers on aerators were not operating when inspected, they were turned on by plant attendant upon request.
- Service pump #4 leaking, needs repacking.
- Service pump #1 leaking slightly, needs tightening.
- Auxiliary power not activated automatically and no personnel are stationed at this plant.

Parkside Water Treatment Plant - design capacity = 3.6MGD (1)

Treatment consists of aeration, pH adjustment by lime addition, gas chlorination, and pressure filtration.

Deficiencies observed.

- butterfly valve on influent line from Parkside well 18 malfunctioning, held open by bricks stacked on floor.
- inadequate self-monitoring and record keeping for pH.
- one of two service pumps dismantled at time of inspection.
- copper tubing on pressure filters leaking.

City Water Treatment Plant 4 - capacity = NA (8)

Treatment facilities for aeration, pH adjustment by lime addition, and gas chlorination.

Deficiencies observed.

- gas masks and chlorine tanks still present at plant.

City Water Treatment Plant 5 - design capacity = NA (8)

Treatment facilities for aeration, pH adjustment by lime addition, and gas chlorination.

Deficiencies observed.

- Finished water from distribution system leaking at service pump.

City Water Treatment Plant 6 - design capacity = 2.9MGD (2)

Treatment facilities for ion exchange, aeration, pH adjustment by lime addition, and gas chlorination.

Deficiencies observed.

- plant presently inoperable due to numerous equipment problems.
- no gas mask on premises.
- stagnant water in lime tanks.
- plant outage prevents utilization of functional City Wells 7 and 11.

Other treatment facilities at City Wells 1, 10, and 12.

Design Capacity = NA (8)

Deficiencies observed.

. functional equipment remaining at these facilities subject to vandalism or theft.

FINISHED WATER STORAGE WITH DEFICIENCIES NOTED

North Camden Tank - Delaware and Elm Street 5MG above-ground steel tank with booster pumps.

Deficiencies observed.

. altitude valve in booster pump house leaking into bucket.
. concrete base spalling next to overflow blocks.
. gate to tank area left unlocked, open.
. dense vegetation around tank base.

Whitman Park Standpipe - Rose Street and Whitman Ave.
0.57MG above-ground steel standpipe.

Deficiencies observed.

. standpipe not in service, status uncertain.

GENERAL DEFICIENCIES

No accurate measurement of production from each well available. Actual overall production capability is probably less than stated in (2).

Wells in general have been accessed by vandals, fences damaged or stolen, locks on well houses broken, windows broken, valve pit covers stolen, etc.

Well blowdown pipes are not screened as required to prevent entry by vermin.

Some wells are not apprpriately grounded to prevent or minimize possibility of damage from lightning.

Abandoned well and treatment housings pose public safety threat, city insurance risk, and threat to aquifers tapped by abandoned wells.

All equipment and chlorine cylinders should be removed from abandoned plants.

Abandoned wells remain unaddressed by the City.
Open manhole in line along access road between Morris South Well 12 and treatment plant.
Manhole deteriorated adjacent to Puchack Well 3.

FOOTNOTES

1) Malcolm Pirnie Inc., Report on Water System Improvements. City of Camden Department of Utilities, September 1981.

2) Original "guaranteed" capacity of wells and pumps from City records as reported in 1) above, actual capacities probably differ.

3) These wells should not be used routinely due to chromium contamination.

4) These wells should only be used during emergency low pressure situations, disinfection must then be provided, and prompt subsequent notification must be provided to NJDEP.

5) These wells will be sealed as per the September 14, 1983 Administrative Order.

6) These wells will be made functional for ground water monitoring as per the September 14, 1983 Administrative Order.

7) Plant flow is limited by size of flocculators, may actually be only 15MGD [1].

8) Wells supplying these facilities to be sealed or made functional for ground water monitoring pursuant to the September 14, 1983 Administrative Order.