



## Pumping Station and Hudson County Jail Kearny, New Jersey

### Introduction

Located between Newark Airport New Jersey and New York City, the town of Kearny is named after Civil War General Phil Kearny. General Winfield Scott, Kearny's commanding officer, called him "the bravest man I ever knew." Several years ago the Kearny Pumping Station was in need of a mechanical bar screen. Receiving industrial waste from various industries as well as the sewage from the Hudson County Correctional facility, the pump station was under constant "attack" from high solid loadings and illegally dumped material. The solids loadings through the pump station were severe, much higher than would typically be seen in a municipal sewer system.



Customer: Kearny, New Jersey  
Industry: Municipal

For many years the pump station had manual screens located below grade. The screens required manual raking down in a dirty confined space, an area that flooded during every major rain event. According to information from our rep in the area, John Corkery with Pumping Services, "the screens failed numerous times and the pump station was rebuilt once as a result of severe flooding before the Headworks® screens were installed."

### KEY FACTS

#### *One MS1 Bar Screens*

- **Specific Flow:** 3 MGD (0.13 m<sup>3</sup>/s)
- **Screen:** 35 ft. long (10.63 m)  
1.84 ft. wide (0.56 m)  
4263 lbs. (1933 kg)
- **Water Depth:** 3.50 ft (1.07 m)
- **Channel:** 2 ft wide (0.61 m)  
3.5 ft (1.07 m)
- **Bar Spacing:** 3/8" (9.53 mm)



Due to the severe duty and unusual volume, concentration and variety of solids expected, a unique performance clause was built into the specifications. The screen field had to withstand a 250 pound object hurling at the bar rack at a velocity of 5 feet per second. Headworks performed the test in their shop and won the order. After 25 direct hits the screen bar showed less than 0.025" deflection. Three years later in 2004, the jail that contributed to the pump station purchased a screen, but decided to go with an alternative to the Headworks Bar Screen.

The alternative was unable to handle the flow and solids load. Based on a recommendation from the City Engineer, The Hudson County Jail decided to replace the unit with a Bar Screen which continues to operate to the full satisfaction of the client.

***"KMUA needed to remove heavy duty screenings from this deep interceptor. The Headworks single unit with the lower sprocket assemblies delivered every day for 15 years trouble free,"*** said Tom Zatorski, KMUA Plant Manager. Remarkably, the screen has operated an estimated 50,000 to 75,000 hours, and has never had any spare parts installed. ***"The Headworks Screen with its lower sprocket assemblies ran trouble free for 15 years without spare parts,"*** mentioned Mr. Zatorski.

Given that 15 years had passed, the screen was recently removed for inspection. Inspection of the screenfield showed it to be in perfect condition and the lower sprockets and stub shaft assemblies were also still in "like new" condition! ***"The original lower sprocket assembly was in next to new condition when inspected after 15 years of continuous service!"*** underscored Mr. Zatorski. After some simple maintenance, the screen was placed back in service. "Folks in the Industry ask me all the time about the lower sprockets" says Tom Zatorski the KMUA Plant Manager. ***"Headworks International solved the lower sprocket challenges over 20 years ago and they have many installations which prove out their competency in handling the most challenging installations in the world including ours at Kearny."***

There are many clear reasons why you want your plant or pumping station protected by the best bar screens in the business. Not only have we the experience which has allowed us to avoid failures for over 20 years, but our customers save endless time and money during the many years of usage. Headworks' life cycle costs are the lowest in the industry and we have the proof from clients like Kearny to support the facts.

