

Department of Commerce and Labor  
IMMIGRATION SERVICE

1900/50.

MEDICAL DIVISION  
SAN FRANCISCO, CAL.

(Angel Island, via  
Ferry Post Office)

September 20, 1911.

The Commissioner of Immigration,  
Angel Island, Cal.

Sir:

I have the honor to submit the following report on the sanitary condition of this station with reference to the bearing on the same of the stables, vegetable garden and manure dump belonging to the U. S. Army:

Directly to the east of the Immigration reservation and adjacent thereto, capping the high ground, are the mule stables. To the south of the reservation and beyond the military road, just above a spring and stretching across the gully is the manure dump and, adjoining, the vegetable garden.

The Immigration reservation is in a ravine. Whatever surface water (springs or shallow wells) may be developed on this reservation comes from the hills surrounding this ravine. It has been estimated that over 10,000 gallons of surface water per day could be developed from these sources. This possible source of water supply has been compromised by the contamination from these stables

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and manure dump. That the deep well on the reservation owes its pollution to the same source is almost certain.

It is not the animal refuse that is so dangerous in this case, although no one cares to drink water contaminated even with mule manure, but the fact that human refuse has been, is now and will continue to be deposited on the surface of the watershed. Prisoners working in the neighborhood, on the road, in the garden or around the stables, deposit feces behind the bushes on the hillside. Teamsters, gardeners and others add to the contamination.

The gully crossed by the manure dump is the bed of a stream of surface water from a spring that under different circumstances would have been of considerable value as a source of supply.

I inclose herewith photographs, taken by Mr. Lawrence Gardner, showing the main points of the reservation in relation to this question. The close proximity of the mule stables to the cottages and well, the piles of lumber refuse near the water-tanks and the slope of the land from the stables and manure dump together with the location of the springs are features to which I would particularly invite attention.

Aside from the fact that these stables and manure dump have contaminated the ground water to such a degree

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as to forbid its use, they are equally objectionable from a sanitary point of view as breeders of flies and rats.

The families occupying the nine cottages complain bitterly of the swarms of flies, in which complaint the hospital and restaurant concur. Flies are now recognized as the common carriers of disease particularly typhoid fever. Indeed, the investigations of the Army itself on this disease during the Spanish-American war established this fact. As a breeding material for flies manure is unsurpassed. On the ground of flies alone these stables and dump should be removed. I doubt very much if they would be located so close to dwellings, hospital and well at any permanent Army post.

Rats have already been frequently seen on this station. The stables, dump and lumber refuse piled behind the water-tanks offer ideal places for rats to live and breed.

I would respectfully recommend that, if it be impossible to secure control of the watershed so as to develop the surface water of this locality, at least, the removal of the stables, refuse dumps and vegetable garden be urged.

Aside from the constant menace to our present water supply of a polluted earth we have always unhand a

