



August 28, 2017

MEMORANDUM

TO: Anson Moran
 President

FROM: Harlan L. Kelly Jr. 
 General Manager

SUBJECT: Declaration of Emergency – Repair of HHP facilities:
 Failure of the Moccasin Powerhouse GSU Transformer and
 Ancillary Buswork

In accordance with Chapter 6, Article IV, Section 6.60(D) of the Administrative Code of the City and County of San Francisco, I am declaring an emergency on behalf of the Public Utilities Commission.

At approximately 4 PM on July 31, 2017 Moccasin Powerhouse (MPH) Unit 2 tripped off-line due to a failure at its main transformer. This forced MPH Unit 1 to be shut down due to a previously failed station service transformer (MPH Unit 1 was dependent on MPH Unit 2 being in-service). This resulted in a complete power outage in Moccasin Camp and a cease of water flow through MPH. Due to the loss of both units at MPH, water flow through the powerhouse was then limited to the one available MPH bypass valve. The second bypass valve has a limited functionality due to a damaged actuator (expedited repairs are scheduled for April 2018). The rate of Hetch Hetchy supply to the Regional Water System was reduced to match the flow capacity of the single MPH bypass, from 285 to 140 million gallons per day.

On August 2, 2017 Hetch Hetchy crews were able to complete the installation and commissioning of a rented station service transformer and restore MPH Unit 1 to service. The restoration of MPH Unit 1 allowed Hetch Hetchy Water and Power to increase water deliveries to the scheduled rate of 285 MGD.

Both generator units at Moccasin have far exceeded their predicted life, and a project to rewind the units and upgrade the powerhouse auxiliary equipment has been delayed indefinitely. The preliminary report of the July 31st incident suggests a phase to phase fault on the MPH Unit 2 generator step-up transformer was the cause of MPH Unit 2 tripping off-line. Repair of the buswork and bushings on the step-up transformer is needed to restore MPH Unit 2 to service.

A failure of MPH Unit 1 would again result in restricted water deliveries from Hetch Hetchy for an unknown period of time. This reduction in delivery rate impacts the Regional Water System's operations and results in ramping up of water treatment facilities, notifying customers of changes in operations, and poses risk to water supply for the 2.7 million Regional Water System customers. The reliable delivery of water is an essential public service.

Edwin M. Lee
 Mayor

Anson Moran
 President

Ike Kwon
 Vice President

Ann Moller Caen
 Commissioner

Francesca Vietor
 Commissioner

Vince Courtney
 Commissioner

Harlan L. Kelly, Jr.
 General Manager



According to Chapter 6.60 of the Administrative Code, an "actual emergency" means a sudden, unforeseeable and unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of or damage to, life, health property or essential public services. An "actual emergency" shall also mean the discovery of any condition involving a clear and imminent danger to public health or safety, demanding immediate action."

This request for emergency declaration is for contract resources to repair the buswork and bushings on the MPH Unit 2 generator step-up transformer which will restore it to service. The lead time for new bushings is approximately 24 weeks. The work needs to occur as soon as possible and is beyond the capabilities of City forces. The cost is not anticipated to exceed \$0.4 million.

I am therefore declaring the existence of an emergency. I trust that this meets with your concurrence and approval.

CONCUR AND APPROVE:



Anson Moran – President,
San Francisco Public Utilities Commission

cc:

I. Kwon
V. Courtney
Mocc File

A. Moller Caen
S. Ritchie

F. Vietor
M. Hannaford