CITY OF HAYWARD
UTILITIES AND ENVIRONMENTAL SERVICES
INTERDEPARTMENTAL MEMORANDUM

TO: Fran David, City Manager DATE: May 21, 2013

FROM: Alex Ameri, Director of Public Works-Utilities & Environmental Services

SUBJECT: Additional Information Regarding Consent Calendar Item #5 – Water Pollution Control Facility Cogeneration System

The following information is meant to supplement my report to Council (Item #5 on the Consent Calendar) on the Co-generation project. Council Member Mendall pointed out what appeared to be a contradiction in the report, which I thought should be clarified for all readers.

I fully acknowledge that the economic impact of this project is not as straightforward as I would like it to be. However, based on reasonable assumptions, we believe the proposed project to be economically feasible and the best alternative for the City and its ratepayers. We did not want to "oversell" the project in the staff report so we utilized conservative estimates to indicate that there may be a small impact on sewer rates. However, given that we have been able to secure a substantial financial assistance package in the form of the SGIP grant and rebate, staff continues to recommend this project and requests the Council's approval.

Whether the project pays for itself in ten years or longer, there is little choice but to replace the existing cogeneration system. The efficiency of the current system is 50% of that of the recommended system, and in order to meet Air Board emission requirements, we would need to reduce its output by 30% below its rated capacity. Not replacing the system is not an acceptable alternative because that would result in the City having to burn off renewable bio-gas.

Technically speaking, the two viable options are fuel cells or the proposed internal combustion engine. As we explained in the report, because we could not reach a sale and maintenance agreement with the sole vendor for fuel cells, we are limited to internal combustion engine technology for replacement of the existing system.

The economic impact section gives a conservative estimate of the economic impact of the replacement project on customers. The projected sewer rate increases of 3% per year are related to the total operating and maintenance costs of the sewer collection and treatment system, including employee services and supplies as well as maintenance and utilities. Only a very small portion of these projected increases are attributable to operation and maintenance of the new cogeneration system. We are anticipating the need to add funds in the FY 2015 budget for cogeneration system maintenance and operation expenses; but, as stated in the report, the impact of this cost would be at least partially offset by reductions in PG&E purchases, which are conservatively estimated at $250,000 to $300,000.

Calculating the economic impact of the cogeneration analysis is far more complicated than doing so for a simple project. While we have utilized a variety of resources, including the expertise of Carollo Engineers, the City's project consultant, and knowledgeable PG&E staff, and concluded that the project

is economically viable and could pay for itself over the useful life of the project, there is uncertainty regarding some of the economic variables. Following are a few examples of the factors that need to be considered, but which cannot be fully known at this time:

- The actual SGIP rebate that the City receives through PG&E
- The City's ability to optimally run the cogeneration system
- The cost of PG&E energy over time
- Moving from the NEM metering to the RES-BCT