The Importance of including municipal user fees when justifying water reduction projects

David Auge, P.E.,

ESI Water Conservation and Management

GRIFOLS

- **Pharmaceutical Manufacturing in Clayton, NC**
- **~1700 employees, ~700 acres, ~1.7 millon square feet of production area**
- **Manufactures products from human plasma**
- **ISO 14001 Certified Program**

GRIFOLS

GRIFOLS BACKGROUND

GLOBAL MANUFACTURER

INDUSTRIAL FACILITIES IN THE US, EUROPE & AUSTRALIA

DIAGNOSTIC MANUFACTURING FACILITIES

BIOSCIENCE MANUFACTURING FACILITIES

HOSPITAL MANUFACTURING FACILITIES

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GRIFOLS BACKGROUND

WHAT DOES GRIFOLS DO?

PLASMA DONORS REPRESENT A CROSS-SECTION OF SOCIETY, INCLUDING COLLEGE STUDENTS, MILITARY PERSONNEL, HOMEMAKERS, PROFESSIONALS AND WORKERS. A DIVERSE POPULATION THAT SHARES A COMMON TRAIT: GOOD HEALTH.

BY GENDER

39% female

61% male

BY RACE

37% caucasian

31% african american

20% hispanic

9% others

2% native american

1% asian

BY AGE

41% 18-25

30% 26-35

16% 36-45

10% 46-55

3% 56-65

0% +66

"ONLY QUALIFIED-DONOR PLASMA IS USED TO PRODUCE PLASMA-DERIVED MEDICINES"

A qualified donor must donate twice within a six-month period without a positive test result and may donate as frequently as twice in a seven-day period with a full day in between. Grifols solely uses plasma from qualified donors to produce its plasma-derived medicines. Applicant-donor plasma is never used in the production of any Grifols medicine and is destroyed if the donor does not return for a second donation or has a positive test result.

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Importance of Including one-time water use and sewer use fees when justifying a project

Scope:
Install a new high efficiency 200 gpm Reverse Osmosis (RO) unit with carbon filter tank for chlorine removal.

Environmental Impact	
Clayton Site City Water Reduction	9%
Clayton Site Sewer Reduction	11%

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Initial Justification

Improved Reliability

Replacement of 22 year old RO unit including single loop controllers and instrumentation. Reliability is poor and spare parts are difficult to obtain. This RO unit supports the WFI production and cleaning for the Clayton South Plant Fractionation, Purification, Gamunex, and all Filling facilities. It will support the new PFF facility.

Water/Environmental Savings

- 9% reduction in site City Water demand.
- 11% reduction in site Sewer demand.

Operational Savings

$335,000 annual cost savings due to reduced city water and sewer demand.

- City Water: $117,000 annual
- Sewer: $218,000 annual

Maintenance Savings

$40,000 annual maintenance cost savings due to reduced membrane replacement. Current bisulfite injection for chlorine removal inefficient compared to carbon which leads to premature failure of membranes.

Reduction of .3 FTE. (Less maintenance, cleaning, troubleshooting, parts purchase, etc.)

Equipment Costs

Equipment and installation Cost - $1,250,000.

Return on Investment

Simple return on investment – One time cost/annual savings – 3.6

ROI = 3.6

Hold

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Follow up justification

Included municipal user fees

Avoidance of one-time municipal user fees

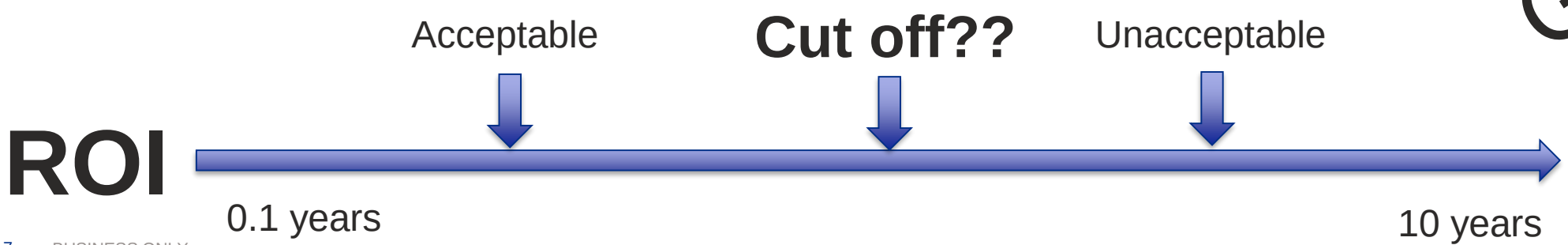
$630,000 avoidance of one time municipal user fees due to overall increase in city water and sewer demands driven by production.

- City Water User Fee: $210,000, one time
- Sewer User Fee: $420,000, one time

Total cost savings $1,005,000 including maintenance below. Simple ROI 1.2 years.

ROI = 1.2

Go!



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