

Mr. Tortorici has over 39 years of experience in environmental engineering, and has been responsible for design, post design, construction administration assistance, and operation assistance of major wastewater collection, treatment, residual solids handling, and water reclamation facilities in southern California. His wastewater treatment experience includes facilities up to 350-mgd, and he is one of a limited number of professionals possessing both a Grade V Wastewater Treatment Plant Operator Certification and a Professional Engineer Registration in the State of California.

## DETAILED EXPERIENCE

- **City of Los Angeles Department of Public Works: Primary Solids Thickening Centrifuge Project Hyperion Treatment Plant / Playa Del Rey CA.** Deputy Project Manager for pre-design and final design of installation of primary solids thickening centrifuges at the 350 mgd plant. The project included the design of three primary sludge thickening centrifuges with solids and hydraulic design capacities of approximately 17,000 lbs/hr and 1,400 gpm, respectively. The centrifuges included a dynamic pond depth varying system to consistently produce a thickened solids concentration at an operator-preset value between six percent and eight percent. Provisions were made to add up to two additional units.
- **Los Angeles County Sanitation District: Wastewater Sludge Management.** Senior Project Engineer and task force leader for startup and optimization of the Districts' 400-dry ton/day second-stage centrifuge sludge dewatering facility. Also, as Senior Engineer, led the research and development of design criteria for the waste activated sludge thickening, stabilization and dewatering facilities for the Districts' 200-mgd pure oxygen activated sludge plant.
- **Inland Empire Utilities Agency: Centrifuge Design / Chino CA.** Responsible as technical design leader for the design of centrifuge dewatering systems and a new dewatering building at the 44-mgd regional plant. The project included the design of four dewatering centrifuges with solids and hydraulic design capacities of approximately 4,000 lbs/hr and 900 gpm, respectively.
- **International Boundary and Water Commission: South Bay International Wastewater Treatment Plant.** Project Manager for design, design services during construction, construction management and start-up of the 25 MGD "advance primary" and secondary treatment plant.
- **City of Phoenix: 91<sup>st</sup> Avenue Wastewater Treatment Plant Solids Thickening Facility / Phoenix AZ.** Quality Assurance / Quality Control for project to design a thickening facility for primary and waste activated solids in which two new centrifuges were installed.

## Libby Tortorici, PE

### Title/Firm:

Senior Associate  
Malcolm Pirnie, the Water Division of  
ARCADIS

### Years of Experience

39

### Education

BS Civil Engineering Manhattan College  
1971  
MS Environmental Engineering  
Manhattan College 1972

### Licenses and Certifications

Professional Engineer  
Grade V Wastewater Treatment Plant  
Operator

### Health and Safety Training

Construction Safety Awareness

### Special Recognition

Corecipient of the Water Pollution Control Federation Bradley Gascoigne Medal for 'Outstanding contribution to the art of wastewater treatment plant operation through the successful solution of important and complicated operations problems,' 1980.

### Societies

California Water Environment Association  
Chi Epsilon - National Civil Engineering Honor Society  
Tau Beta Pi - The Engineering Honor Society  
Water Environment Federation

### Employment History

Malcolm Pirnie, Inc. 1991 to present  
John S. Murk Engineers, Inc. 1983 to 1991  
CM Engineering Associates 1978 to 1983  
College of the Canyons 1977 to 1977  
College of the Canyons 1975 to 1977  
Los Angeles County Sanitation Districts  
1972 to 1977

- **City of Oxnard: Wastewater Treatment Plant Headworks Project / Oxnard CA.** Project manager for assessment, planning, design, construction administration assistance and start-up of a new 40 mgd headworks facility. The facility consists of mechanical bar screens, aerated grit chamber, influent pump station, odor control system and grit/screening dewatering facilities, stand-by power generators, infrastructure support systems and SCADA monitoring and control system.
- **City of Oxnard: Oxnard Wastewater Treatment Plant-Biosolids Pasteurization Project / Oxnard CA.** Project manager for planning and design of a time-temperature biosolids pasteurization facility to produce Class A biosolids at the City's 40 MGD wastewater treatment plant.

## PUBLICATIONS

Tortorici, L. D., Pastushenko, B. L., "**Chapter 7. Residual Solids Management,**" *Industrial Waste Treatment; A Field Study Training Program*, Vol. 2 (2nd edition), California State University, Sacramento CA, March 1996.

Tortorici, L. D., et al., . , "**Manual of Practice,**" Coauthor as Member of Task Force Committee on Sludge Conditioning for the Water Pollution Control Federation, 1982.

Tortorici, L. D., et al., . , "**Chapter 22. Solids Handling and Disposal,**" Coauthor of chapter in *Operation of Wastewater Treatment Plants*, Volume III, Second Edition, prepared for the U.S. Environmental Protection Agency, 1981.

Tortorici, L. D., Pastushenko, B. L., "**Overview of Thermophilic Digestion and PFRP Equivalency Requirements,**" presented at the 66th Annual Conference of the California Water Pollution Control Association, Santa Clara CA, 1994.

Tortorici, L. D., Pastushenko, B. L., "**Chapter 10. Solids Handling and Disposal,**" *Industrial Waste Treatment*, prepared for the California State University at Sacramento, 1993.

Tortorici, L. D., et al., . , "**Sludge Conditioning,**" Water Pollution Control Federation Manual of Practice FD-14, 1988.

Tortorici, L. D., LeBrun, T. , "**Thermal Treatment of Municipal Sewage Sludge,**" U.S. Environmental Protection Agency, EPA-600/S2-84-104, September 1984.

Tortorici, L. D., Haug, R. T., LeBrun, T. , "**Thermal Pre-Treatment of Sludge -- A Field Demonstration,**" *Journal*, Water Pollution Control Federation, January 1983.

Tortorici, L. D., "**Waste Activated Sludge Processing,**" prepared for the U.S. Environmental Protection Agency, submitted by the LACSD, 1980.

Tortorici, L. D., et al., . , "**Sludge Handling and Disposal: A State of the Art Review,**" Coauthor of report for the Los Angeles / Orange County Metropolitan Area Sludge Management Program (LA/OMA), April 1977.

Tortorici, L. D., "**Technical Review of Chapter 20 (Sludge Thickening and Conditioning) and Chapter 21 (Sludge Dewatering),**" *MOP/11 Operation of Wastewater Treatment Plants -- A Manual of Practice*, Water Pollution Control Federation, 1976.