

# FlowShark Pulse Exceeds Stringent Operations Requirements for Accuracy Camp Pendleton, San Diego, California

## Cross Correlation Flow Monitoring

**Camp Pendleton, CA** - The Camp Pendleton Marine Corps Base in northern San Diego County commissioned its new wastewater treatment plant in mid-2006. This new plant will consolidate flows from the other three treatment plants on the base over a period of about three years. The new plant's headworks configuration made continuous metering of total influent flows to the plant difficult. Therefore, the operator elected to install a separate influent flow monitor, the FlowShark® Pulse, in a manhole about 300 feet upstream of the plant headworks adjacent to the location of their influent water quality sampler.



### Primary accomplishments:

- Successful installation and low maintenance
- Flow accuracy in flows as low as 0.1 mgd
- Flow accuracy in depths as low as 1.5 inches
- Continuous analog signal to SCADA system

### Services Provided by ADS

- Long term flow monitoring
- Monitor installation
- Data collection integration with SCADA

### Underground Intelligence® from ADS

The challenges at this location included the requirement to install into an existing 36-inch diameter PVC pipe without physically altering the pipe. The meter would have to be capable of operating at very low flows initially (as low as 0.1 mgd at depths as low as 1.5 inches) up to an ultimate plant capacity of 5 mgd over the next few years. The meter also needed to provide a continuous analog signal to their SCADA system, provide continuous accurate operation even during excessive backwater conditions (due to headworks reconfiguration or maintenance), require no calibration, and all with very low maintenance requirements.

The Pulse Cross Correlation monitor met all of the challenges and requirements and was installed easily. It has been in trouble-free operation since October 2006. The plant manager reports that even during the most challenging first year of plant operation, when flows are lowest (about 20% of plant capacity), the influent meter reads consistent daily totals that are within 5% of his plant's effluent flow meter.



Cross correlation type depth/velocity sensor installed on stainless steel mounting ring in plant's influent pipe.

*"We weren't sure if we would find a monitor that would meet all of our challenging requirements, but this FlowShark Pulse monitor continues to work exceptionally well. So far, reported maintenance includes only an occasional scrub of the sensor head to clear debris, approximately once per month."*

**Peter Huhn**  
Plant Manager  
Camp Pendleton Marine Corps Base

## About **ADS**

ADS Environmental Services®, a division of ADS® LLC, is a leading technology and service provider and a reliable source of knowledge to the global wastewater collection system industry. ADS delivers value to its customers by providing industry-leading solutions for flow monitoring, data analysis, reporting and field services.

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