

## A Tale of...

### Digester Cleaning

NYC Wastewater Treatment Plants—New York City, New York

In 2000, [American Water Services] was awarded a three-year contract to provide digester cleaning for New York City's 14 Wastewater Treatment Plants. We developed a two-trailer unit for this project that minimized mobilization costs and reduced setup space.

In less than two years, AWS successfully completed the cleaning of more than 50 digesters, and as a result of our efficiency, completed the initial phase 12 months ahead of schedule. We were responsible for all aspects of this project and our associates received nothing but compliments from the City and the employees at the NYC treatment plants.

Due to our determined efforts and achievements on this project, we were awarded additional scope to the contract.

New York City, New York



## ...Two Cities

### Interim Dewatering

GVRD Wastewater Treatment Plants—Vancouver Annacis Island, British Columbia

[American Water Services] has provided interim dewatering for 100% of the 80 MGD Annacis Island Wastewater Treatment Plant's digested sludge production for the past decade. The scope of the project required AWS to design, build and operate an automated dewatering facility that ultimately dewatered 12,500 dry tons per year utilizing four centrifuges.

AWS has provided continuous sludge dewatering service 24 hours a day, 7 days a week, with virtually no unscheduled downtime. Throughout the duration of the project, we partnered and worked closely with Annacis operators to ensure the dewatering services adapted to changing plant process, production rates, digester cleaning, upset conditions and any emergency events, such as the transfer of 20,000 U.S. gallons per day of primary sludge from another plant. The best measure of success of this project has been the model partnership and the ongoing 10-year relationship with the Island.

Vancouver, British Columbia



## About American Water Services...

### We Deliver Peace of Mind

Your customers don't spend time worrying about water and wastewater issues. Nor should you. Growing safety concerns, budgetary issues and sensitive timelines require innovative solutions and proven operational expertise to deliver results.

Providing water and wastewater services is our business, and we offer you many advantages:

- Reduced operating costs
- Increased focus on core business activities
- Transfer and reduction of water-associated risks
- Assurance of citizen and environmental stewardship
- The ability to stay abreast of new technologies and deliver on the growing expertise required

*Our mission is to achieve winning relationships with our clients through protection of public health and safety, environmental stewardship, applied expertise, value-added services and our commitment to excellence.*



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# Mobile Residuals Services

Providing Customized Solutions for  
Digester Cleaning, Mobile Dewatering,  
Dredging and Disposal

Formerly known as  
Trimax Residuals





# American Water Services...<sup>TM</sup> How Mobile Residuals Gets Done!

American Water Services (AWS) knows there are no two situations alike when it comes to mobile residuals management. Some circumstances may require large permanent set-ups. Others might need scaled-down packages. No matter what your requirements, we can help. We have multiple technologies and a team of the most experienced professionals in the industry ready to act! It takes hard work to provide excellent services within our clients' budgetary restraints, but we're focused on accommodating their specific needs. With 25 years of client growth and satisfaction, AWS is proven by and proud of our mobile residuals track record of success.

We ensure the highest standards of quality by utilizing state-of-the-art technologies and advanced training. Every project is successfully completed in environmentally-safe and cost-effective manners. Over the past three years of operating 28 mobile units, American Water Services Mobile Residuals Group (formerly known as Trimax Residuals) has processed more than 1 billion U.S. gallons of residuals. Our mobile equipment is self-contained, complete with pumps, grinders, polymer make down systems and the latest high speed centrifuges. In addition, our units are also scalable for any size project. With our certified staff of professionals and a fleet of specialized vehicles

and equipment, we properly handle all residuals, including municipal biosolids, industrial and petrochemical by-products, biological pulp and paper sludges, and recreational watercourse management. Our centrifuges produce 35% drier cake solids, helping reduce your maintenance costs. Our key mobile residuals offerings include:

- **Digester & Tank Cleaning**
- **Mobile Dewatering & Disposal Services**
- **Lagoon & Pond Dredging Using Specialized Equipment**
- **Emergency Response**



## Mobile Services Throughout North America

American Water Services Mobile Residuals Group has completed more than 100 digester cleanouts and dewatering projects in all climates and conditions throughout North America, including...

### New York, NY

3-year contract to clean 70 digesters at 14 WWTPs

### Detroit, MI

Over 4 years of interim dewatering projects capable of 300 dry tons of residuals per day

### Everett, WA

5-year contract to dredge lagoons and dewater 20,000 dry tons of residuals

### San Diego, CA

Contracted to remove, dewater and dispose of over 10,000,000 gallons of residuals

### Escondido, CA

2-year contract providing emergency dewatering equipment

### Whitecourt, AB

2-year contract with Miller Western Pulp to thicken and dewater WAS

### Hamilton, ON

5-year contract for supply of centrifuges to dewater WWTP sludge

### Charlotte, NC

Contracted to clean digesters, storage tanks and close 3 lagoons

### Camas, WA

Contracted to dredge and dewater 4,500 dry tons of Georgia Pacific's secondary pulp sludge

### Vancouver, BC

10-year contract to design, build and operate an interim WWTP dewatering facility

### Atlanta, GA

Contracted to clean WWTP digester

## DIGESTER CLEANING

Our team of experts has successfully completed hundreds of digester cleanouts, making AWS a premier supplier of digester cleaning services in the United States and Canada. We adhere to the strictest standards of safety using the most advanced technology in the industry.

The AWS digester cleaning advantage includes:

- **Extensive experience with projects from large volume, multi-digester operations to smaller plants**
- **Specialized, self-contained mobile trailer units customized for any size project**
- **Quick response with proven, innovative technologies**
- **A variety of disposal options, including landfill, land application and incineration**
- **The driest solids in the industry, resulting in reduced haulage, storage and land application costs**

## DEWATERING

AWS is the largest mobile dewatering firm of its kind. Whether it's a lake or municipal, industrial or pulp and paper application, we offer best-in-class service. Successfully completing over 150 projects, our staff is exceptionally trained in operations and maintenance to ensure that all necessary safety and environmental precautions are made. We operate the largest fleet of mobile mechanical dewatering equipment in North America and can provide different sizes of centrifuges. Our Alfa Laval Sharples® DSX 706 4000+ G — a high speed centrifuge, provides drier cake solids and drastically reduces odors. Our dewatering process and equipment benefits you with the following:

- **Keeps production and maintenance costs low**
- **Reduces cake volumes and odors**
- **Provides cake dryness up to 35% drier than other industry technologies**
- **Reduces transportation and disposal costs**
- **Offers clean, fast and economical results**

## DREDGING

AWS uses technically-advanced dredges to remove accumulated biosolids from all types of basins, tanks and lagoons. Our operators are well trained in safety requirements for operating equipment and are in constant radio contact with the shore. We offer turnkey dredging and sludge handling solutions in a wide variety of configurations to meet your specific needs. Our dredging capabilities include:

- **Lined and unlined ponds, manned or unmanned operations, and lakes — for pulp and paper, municipal and industrial clients**
- **Working depth of up to 23 feet with variable cutter head designs**
- **An 8" hydraulic submersible pump with a discharge volume of 0-2000 GPM for sludge**
- **A 10" submersible pump with a discharge volume of 0-3000 GPM**

## EMERGENCY RESPONSE

Our specialized equipment allows us to mobilize and demobilize quickly and process large volumes of residuals in a short time. We can respond to emergencies 24 hours a day, 7 days a week. When timing is critical, AWS is the right choice.

One of our successes includes responding to an emergency call from the Hale Avenue Resource Facility in Escondido, California in 1998, just prior to the Labor Day Weekend. The dewatering equipment at its facility was down and our mobile residuals team had to react immediately. Within 72 hours our team arrived on site, set up and became fully operational, providing all of the interim services from the Centrifuge Dewatering Operations for the next four months. Our fast response and proven expertise allowed the facility to stay in operation at full capacity and supply the community with the service its citizens count on. We have since been back to support the facility with additional dewatering services.

