 

Algal Employment Assessment Survey II

Wastewater Treatment Opportunities

The Algae Foundation launched the Algae Technology Educational Consortium (ATEC) project in 2015, recognizing that algal commercialization will provide a sustainable source of biomass for feeds, foods, fuels and other bio-based products. Additionally, algae can provide ecological services including nutrient recovery and remediation of municipal and agricultural wastewaters, from oxidation ponds to advanced treatment processes. This creates additional needs and opportunities for an educated workforce with knowledge of algal biology, ecology, and cultivation. Through ATEC’s algal-based educational program, students can learn practical applications of algal cultivation and applications in the wastewater treatment industry.

ATEC members, including from universities, community colleges, wastewater treatment industry, and algae organizations collectively have more than 200 years in algal-based education, research and commercial experience. ATEC is supported by the U.S. Department of Energy and the National Renewable Energy Lab (NREL) to develop novel two-year degree and certificate programs in technician training in industrial-scale algae cultivation. This past May 2018, Santa Fe Community College’s first graduates were awarded their certificates

The following request for information is critical for ATEC’s effort to determine the current and future potential value of students trained in algal-related technologies to qualify for wastewater treatment facility jobs. The data will be used by ATEC to help develop a new course including algae as a supporting tool for wastewater treatment technologies. Community College administrators have all stated their requirement for employment potentials as a critical step in the adoption of a new curriculum program. **Your input is truly important.**

**Please take a few minutes to complete and return this short 9-question survey,** using your best estimates as to the potential of our students helping fill future positions at your facility. If you have any additional thoughts, please add them at the end of this form. Do not hesitate to contact me if you have any questions.

Thank you in advance for your survey responses.

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ATEC P.I.

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NOTE: The ATEC developed professional algae and wastewater classes will include the following experiences:

1. Laboratory standard methods analysis (VSS, nutrients, turbidity, pH, coliforms COD/BOD, etc.)

2. Microalgal and microbial mono- and poly-cultures /species used in wastewater treatment processes

3. Culture management of indoor/outdoor, closed/open cultivation systems, including oxidation ponds

4. Municipal, industrial and agricultural effluent treatment processes; harvesting of algal biomass

5. Biomass/biosolids conversion to fuels (anaerobic digestion, fermentations, thermal processes, etc.)

6. Basic process operations and maintenance (pumps, motors, electrical, plumbing and piping, etc.)

**SURVEY QUESTIONS:**

1. On a scale of 1 to 5, where 1 = unnecessary and 5 = invaluable experience, please rate how important:

a working knowledge of algal-based wastewater treatment is for your current workforce? \_\_\_\_\_\_\_\_  
In the future? \_\_\_\_\_\_\_

1. Do you see new or emerging trends in workforce needs (e.g., algal-based photosynthetic or heterotrophic cultivation, fermentation, wastewater remediation, commercial waste digestion,) in the next five years? YES / NO
2. Would your organization benefit from the algal-based curriculum and resultant skill set? YES / NO
3. Is your company interested in algal biomass or byproducts from residual / effluent waters? YES / NO
4. Are you interested in learning more about how algae may benefit your company? YES / NO
5. How many water treatment/wastewater technicians/operators does your facility currently employ?
6. How many water treatment/wastewater technicians/operators will you need to hire next year? next 5 years?
7. Do you anticipate changes in the numbers of technicians/operators due to facility’s growth or technology conversions?
8. How many of these positions are or will be filled by graduate with a two-year degree?

Please add any additional thoughts you may have on the potential employment options for a graduate with a two-year degree in Wastewater Technology and Algae Cultivation. Let us know if you like further information on ATEC algae certificate programs and classes being developed.

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Company/Institution/Agency \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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