

Template for Evidence(s) UI GreenMetric Questionnaire

University : Alexandria University
Country : Egypt
Web Address : <https://alexu.edu.eg/index.php/en/>

[3] Waste (WS)

[3.12] Sewage Disposal



The water sewage of the Aquaculture of the Faculty of Agriculture (Alexandria University, Egypt)



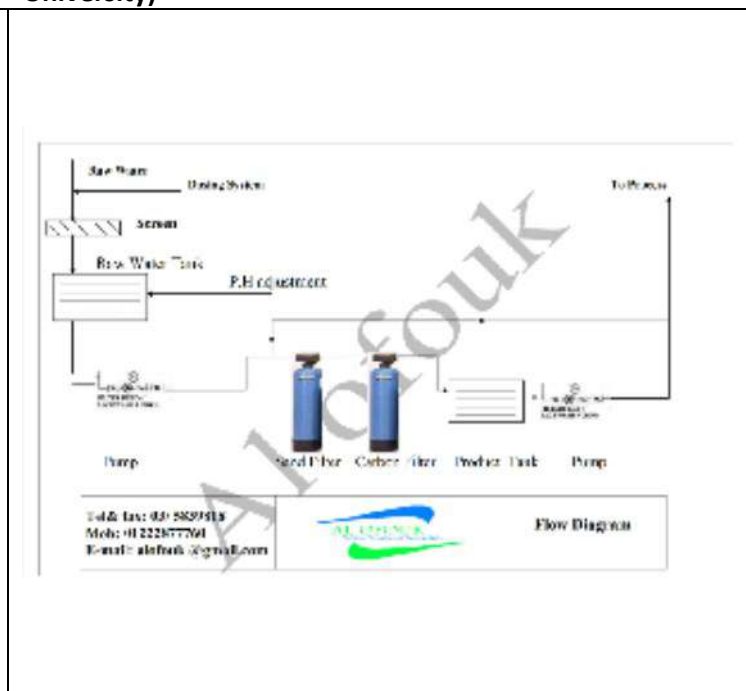
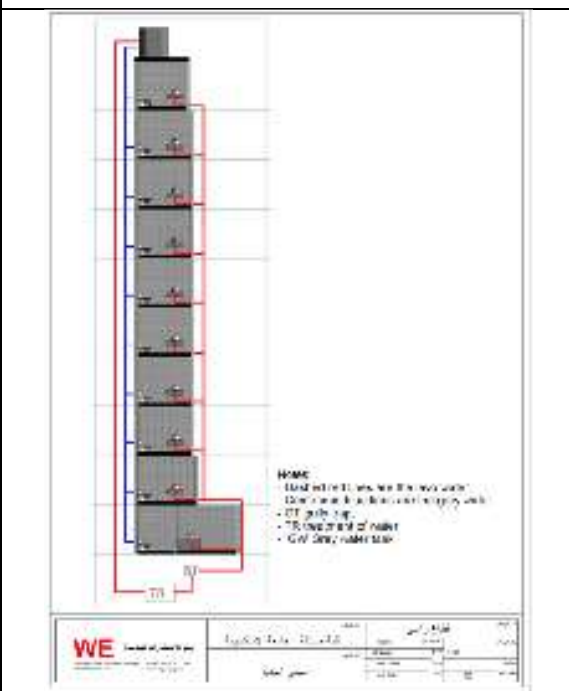
Wastewater treatment unit at Faculty of Engineering



Air conditioning water collection and reuse unit - Faculty of Engineering



The sewage water will be treated and reused in the irrigation of green areas in the project (Alexandria University)



Grey water recycling system by Faculty of Pharmacy (Alexandria University)



Second treatment of Alexandria University Sewage by Alexandria Sanitation Company



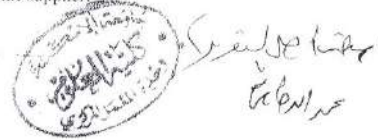
Reclaiming 800 thousand acres in the new delta using treated water from sewage

نوع العينة : ٣ عينات مياه الصرف (الزراعي والصحي).
تاريخ وقت واحضار العينات : ٢٠٢٣/١٠/٢٤.
الجهة التي تم احضار العينة منها : مسار تجمع ونقل مياه الصرف (الزراعي والصحي) لاستصلاح مساحة ٣٦٢ ألف فدان جنوب محور الضبعة (محطة رفع ١ & ٢)
اسم القائم بجمع واحضار العينة : مندوب من الشركة
اسم المشروع: مسار تجمع ونقل مياه الصرف (الزراعي والصحي) لاستصلاح مساحة ٣٦٢ ألف فدان جنوب محور الضبعة (محطة رفع ١ & ٢)
المالك: وزارة الموارد المائية والري.
جهة الاشراف والتنفيذ: الهيئة الهندسية للقوات المسلحة - ادارة المياه.
استشاري المشروع: هندرو (مكتب الدراسات الهيدرولوجية والبيئية والبنية التحتية).
المقاول العام: شركة حسن علام للإنشاءات.

	Test	Sample 1 مصرف العموم	Sample 2 مصرف العموم	Sample 3 المحطة الغربية	Concentration units
1	pH	8.33	7.96	7.62	ppm
2	TSS (Total suspended solids)	2.15	2.73	6.88	ppm
3	COD (Chemical oxygen demand)	30	49	67	ppm
4	BOD (Biological oxygen demand)	26.2	24.8	38.97	ppm
5	Free chlorine	0.01	0.25	0.38	ppm
6	SO ₄ ²⁻ (Sulphates)	116	650	91	ppm
7	Phosphates	0.02	0.618	2.18	ppm
8	NO ₃ (Nitrates)	28.9	15.7	21.8	ppm
9	F (Fluorides)	0.71	1.12	0.44	ppm
10	Total Heavy metals (Zn, Pb, As, Cd, Cu, Cr, Ni)	0.146	0.184	0.145	ppm

- ❖ This report consists of one page
- ❖ These results concern samples submitted by the supplier.

Executive Manager of Central Lab
Prof. Dr. Rehab M. I. Elsamra



Water samples from agricultural and sewage drainage were chemically analysed to ensure their suitability and safety for use in the reclamation of 362,000 Feddan south of the Dabaa area without causing environmental pollution. Faculty of Science (Central Lab)





The Center of Excellence for Water at Alexandria University is organizing a training program for scholarship students in collaboration with EPROM Company. This initiative aims to equip students with practical skills in water management including training courses about Water Treatment for Industrial Applications, and Wastewater Plant Operations and Troubleshooting, ensuring they are well-prepared for the business sector and aligned with labor market requirements (March, 2024).



Raising awareness among Alexandria University students about wastewater treatment was achieved through summer training activities conducted at Alexandria Sewerage for students from various faculties, including Science, Engineering (Civil, Mechanical, and Mechatronics), Commerce, Arts (Surveying, Mapping, and GIS), and Fine Arts (Architecture), September 2024.

Description:

Alexandria University program for Sewage Disposal

- Providing a sewage treatment plant at the university to make it suitable for irrigating green areas and gardens inside the university campus.
- The irrigated water supplied to the fish farm at the Agriculture Experimental Research Station of the Faculty of Agriculture is recycled to irrigate the crops, vegetables, and fruits of the land farm. The recycled water is rich with natural fertilizers and enhances the crops production.



- In addition, the water recycling in Fish Aquaculture of the Faculty of Agriculture, Alexandria University: The water sewage of the Aquaculture of the Faculty of Agriculture, Alexandria University which consist of eight ponds (one acre and quarter/each) in Abis region. Alexandria University used the recycled water for crops culturing in the adjacent agriculture research center in Abis.
- The use of biochar produced from Agricultural waste and waste Forests in residual removal chlorpyrifos pesticide Imidacloprid is from water agricultural drainage. Cooperation project between the Egyptian Academy of Research Science and Technology and the Czech Academy of Sciences.
- The sewage water will be treated and reused in the irrigation of green areas in Alexandria National University.
- Faculty of Pharmacy is seeking to implement a grey water (wastewater) recycling system that depends on reusing wastewater from sewage basins only (without using wastewater from laboratory basins) by repumping it into the flushing bins in the toilets after work. Filtration and primary treatment. The grey water recycling initiative has a significant impact on rationalizing water use.
Here's a rephrased version of your text:

- Agricultural and sewage drainage water samples were chemically analyzed to assess their safety and suitability for reclaiming 362,000 Feddans of land located south of the Dabaa area, as part of an initiative by the Ministry of Water Resources and Irrigation. The objective is to ensure that utilizing this water for land reclamation does not lead to environmental pollution. The analysis was carried out by the Central Laboratory of the Faculty of Science.
- The Center of Excellence for Water is organizing a training program for scholarship students. This training is conducted in collaboration between the Water Excellence Center at Alexandria University and EPROM Company to provide a course for a group of students from the Water Excellence Center. This initiative reflects Alexandria University's commitment to equipping its students with practical skills related to water management, ensuring they possess the competencies needed by the business sector while aligning their studies with labor market requirements. The Center of Excellence for Water at Alexandria University has organized a training program for students in the Water Excellence Center Scholarship and the Civil and Environmental Engineering Program. Alexandria University, EPROM Company, and the students are participating in the following two training programs:
 - **Water Treatment for Industrial Applications**
 - **Wastewater Plant Operations and Troubleshooting.**
- Raising awareness among Alexandria University students from various faculties—including Science, Engineering (Civil, Mechanical, and Mechatronics), Commerce, Arts (Surveying, mapping, and GIS), and Fine Arts (Architecture)—about wastewater treatment was achieved through summer training and periodic visits to the laboratories of the Alexandria Sewerage Company. This effort supports the achievement of the Sustainable Development Goals by enhancing partnerships for sustainable development and fostering collaborations that mobilize and share knowledge, expertise, and technology. The training aimed to provide students with essential scientific skills and practical experience to prepare them for the job market (September 2024).
 - **Faculty of Science:** Theoretical training introduced the role of the Sewerage Company, while practical training involved visits to treatment plants, central laboratories, and lectures on occupational safety and industrial sewage.
 - **Faculty of Arts (Surveying, mapping, and GIS):** Training included surveying applications, urban planning, and the practical use of leveling instruments, total stations, and GPS devices, concluding with lessons on ArcGIS and sewage system design.
 - **Engineering Colleges:** Civil Engineering students trained in network renewal and design, while Mechanical and Mechatronics students learned about pump components, welding, and electrical generators, with visits to various workshops.
 - **Fine Arts (Architecture):** Students received training on project design drawings and estimating costs.



Secondary treatment of Alexandria University wastewater by the Alexandria Sanitation Company

An amount of water of **1,240,575.5 m³** is consumed by all faculties and institutes affiliated with the Alexandria University, of which the amount of sewage is **1,116,625.26 m³**, which is lifted through a group of lifting stations to be treated through treatment stations affiliated with the Alexandria Sanitation Company.

1. Secondary biological treatment, where solid waste is separated from liquid waste.
2. **Treated water:** As for the water resulting from first treatment, it is reused within the New Delta Project (the value of the reused water for Alexandria University represents **1,116,625.26 m³**).
3. The Tertiary treatment for use in land reclamation with a design capacity of **7.3 million m³**, include **1.7 million** cubic meters of treated wastewater form the secondary treatment.

Expansion and development project of the Western Purification Treatment Plant

The Alexandria Sanitation Company participated in organizing the consultation session to present the results of the environmental and social impact assessment study for the expansion and development of the Western Sewage Treatment Plant, in the conference hall of the training centre.

Participating in the session were the Chairman of the Board of Directors of the Alexandria Sanitation Company, the Chairman of the Board of Directors of the Alexandria Drinking Water Company, the head of the Central Administration of the Environmental Affairs Agency in Alexandria, representatives of the Holding Company for Potable Water and Wastewater, representatives of the Executive Authority for Water and Sanitation Projects, executive leaders in the governorate, and professors of Alexandria University.

The presentation of the project's environmental impact assessment study was reviewed, and included an overview of the project and its importance, the methodology for evaluating environmental and social impacts, and the features and positives of the project.

Alexandria University, through its professors, has a major role in studying environmental impact assessment and in the various stages of project implementation. Which increases its role in serving the Alexandrian community.

The project to raise the efficiency of the Western Purification Plant is considered a priority for the sewage system in Alexandria due to the increase in current and future transactions coming into the plant. The project aims to increase the capacity of the Western Purification Treatment Plant, which is currently operating with a design capacity of 460,000 m³/day, to reach 850,000 m³/day in two phases to meet current and development needs until 2050, improve the quality of treated water discharged outside the plant, and improve the general environment in the region by treating Water and rehabilitating it for reuse again and achieving sustainable development goals.

The project includes implementing a digester for the Western Purification Treatment Plant to take advantage of the sludge resulting from wastewater treatment to extract methane gas and use it to generate electricity, raise the efficiency and improve the properties of the sludge after analyzing it inside the digesters, reduce environmental pollution, and achieve economic balance within the station.

Additional evidence link:

Link for Sustainable Development:

<https://alexu.edu.eg/index.php/en/sustainable-development>

<https://alexu.edu.eg/index.php/en/2015-11-24-10-38-07/ranking?id=6011>

<http://sustainability.alexu.edu.eg/>

Link for Green University:

https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5932&catid=21&lang=ar-AA

Link for Green Cycle Project:

<https://fb.watch/mzqhBHazV4/?mibextid=j8LeHn>

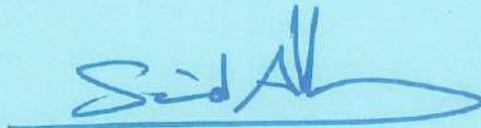
Alexandria University program for Sewage Disposal

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An amount of water of 950,694.74 m³ is consumed by all colleges and institutes affiliated with the Alexandria University, of which the amount of sewage is 870,925,266 m³, which is lifted through a group of lifting stations to be treated through treatment stations affiliated with the Alexandria Sanitation Company.

1. Secondary biological treatment, where solid waste is separated from liquid waste.
2. **Treated water:** As for the water resulting from first treatment, it is reused within the New Delta Project (the value of the reused water for Alexandria University represents 870,925.266 m³).
3. The Tertiary treatment for use in land reclamation with a design capacity of 7.3 million m³, include 1.7 million cubic meters of treated wastewater form the secondary treatment.

Sincerely,



Prof. Said Mohamed Allam
Vice PRESIDENT
Community Service & Environment Development
Alexandria University