



Zeoplant – Moisture Retaining Soil Additive

Sustainable Irrigation Water Reduction for
Existing Turf Areas

Introduction - Method Statement - Steps of works

ADDC Contract D-110642

Zeoplant - a unique mixture of many different Natural Minerals



- *Zeoplant is a natural resource and a mining product.*
- *Broken rock pieces of Zeoplant's minerals ready for crushing.*
- *Zeoplant is manufactured in Hungary.*



Environmental Impact



100% natural

In times of increasing global water scarcity, sustainable water management is of increasing importance for the landscaping and agricultural sectors. Besides extensive irrigation putting a strain on our water supply, the high usage of chemical fertilizers is threatening our environment.

Zeoplant is a water-retention agent for soil mixtures with nutritive effect.

It increases the water absorption of the soil and helps to release soil moisture more economically. It also reduces the necessary amount of synthetic fertilizers by binding the nutrition elements on its active surface, and releasing them on a controlled way according to the demand of the plants.

Zeoplant supports the biological life of the soil, the symbiosis of bacteria and plants, and the equilibrium between the biological and chemical processes of the soil. It stores and reserves what is more than enough and it releases what is missing. It combines the economic and ecological interests of project owners and developers in a sustainable form by providing solutions for environmentally friendly landscaping developments and agriculture sectors.

Zeoplant has been tested, approved and applied in some of the harshest climatic conditions in the World. In the Middle East, amidst scorching sand, high temperatures, direct sun light, high saline soils and low ground water tables, The Ministry of Agriculture of Abu Dhabi, as well as selected major developers in Dubai and Abu Dhabi, were amazed by the results Zeoplant had in greening the desert and reducing water consumption.

"Ensuring sustainable water conservation for future generations."

Soil Improvement

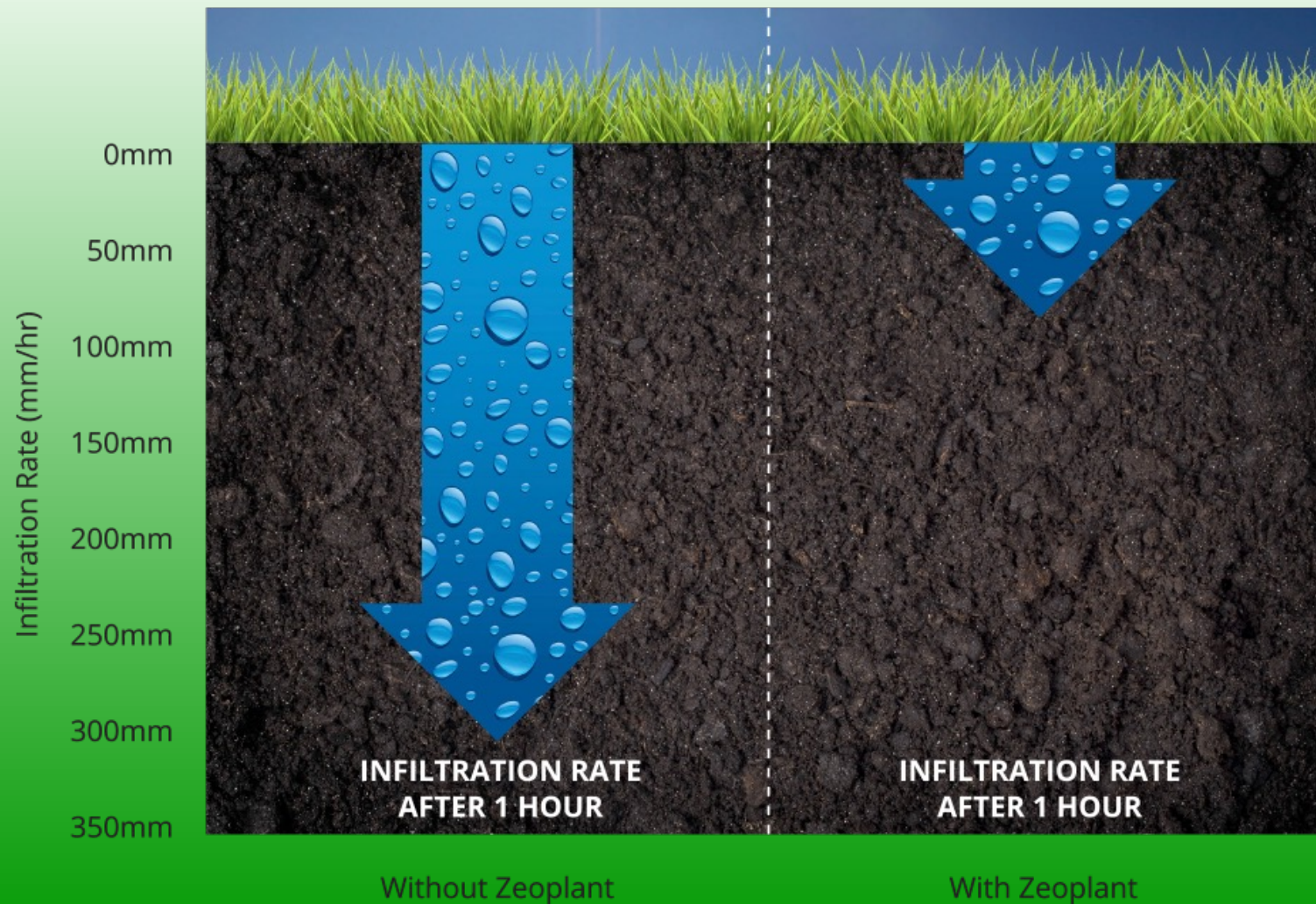


- Due to the natural structure and high Cationic Exchange Capacity (CEC), Zeoplant easily absorbs and stores a huge amount of water and dissolved nutrients, and prevents it from percolating too quickly away from the plants root level.
- This nutrition binding effect allows for the dramatic reduction of fertilizers ordinarily lost due to leaching. Additionally Zeoplant contains all necessary macro, mezzo and micro elements which are released according to the needs of the plant roots.
- From the very first day, treated areas remain humid and porous, and irrigation needs are drastically reduced. Sandy ground agglomerates, and does not blow away even in windy areas. Plants are continuously better supplied by water and fertilizers held directly in the root zone, and show a boost in their vitality after only 2 weeks. The use of compost in the soil mix can therefore be reduced by 50%, and the need for the ecologically harmful harvesting of peat moss is completely eliminated.

How does Zeoplant reduce the irrigation demand by 50% ?



The chart shows how deep the irrigation water flows down the soil within 1 hour



The Application of Sustainable Irrigation Water Reduction for Existing Turf Areas



“A good implementation mechanism has been developed to take advantage of the Zeoplant product that can be applied to existing turf areas in order to reduce the irrigation water consumption”

The Application of Sustainable Irrigation Water Reduction for Existing Turf Areas



METHODOLOGY

Soil Moisture Testing & Soil Sample Taking Before Zeoplant Application



Selection of 3 – 5 spots to test Soil Moisture and take Soil Samples for Laboratory Testing – Depth of samples not to exceed 12 cm



The same testing at these selected spots shall be repeated 12 weeks after Application

The turf area prior to Zeoplant application
100% irrigation as per standard guideline



Sprinkler uniformity and coverage to be checked before and after Zeoplant application

Step 1: Preparation before Zeoplant's application:
Hard cutting of the turf area & marking of all sprinkler heads/guns
Stop irrigation 2 days prior to Zeoplant Application to keep surface dry!



Zeoplant is packed in 500 kg bags and is delivered to site by flatbed trailers



Step 2: Lifting of the big bags by forklift or boom loader to fill the Topdresser



Step 3: Zeoplant's material application at a rate of 3 kg per m² via Topdresser



**Step 4: Aerification by tractor pulled Terraspikes equipment or Walk-behind Aerator
(18-20 mm solid tines @ 10-12 cm depth)**



Step 5: Brushing of Zeoplant material into the holes via drag mat/brushing equipment



Final Step 6: Watering the treated areas to wash the remaining Zeoplant material into the existing holes created by Aerification



The turf is fully recovered within 10-14 days

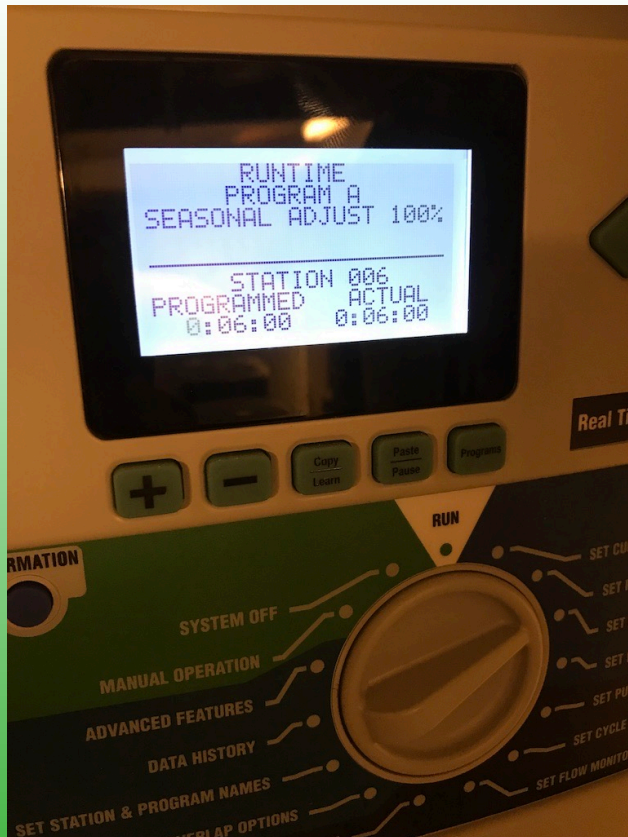


Irrigation Schedule after Zeoplant's application



- Regular irrigation application for 1 week after Zeoplant installation to recover the turf areas
- Irrigation water reduction by 50% from 2. week of installation
- Weekly Moisture testing with O&M Contractor at multiple areas before irrigation cycle starts to assure the savings are maintained and even further increased

Areas of Focus



It is important for O&M Contractor and their Team to:

- **Adjust Irrigation System to reduced needs**
- **Adhere to approved programs**
- **Periodic Maintenance and Control of the irrigation system to save Water & Money for the client !**
- **Reduce manual irrigation**
- **Check Leakages**



Zeoplant Team will assist and advise on Adjustments

The logo for 'zeoplant' features the word in a bold, green, rounded font. The letter 'o' is replaced by a blue water droplet. A green plant with three leaves grows from the top of the 'l'. The entire logo is set against a blue horizontal bar.The logo for 'zeoplant' in Arabic script, 'زئوبلانت', is written in a bold, green, rounded font. The letter 'و' is replaced by a blue water droplet. A green plant with three leaves grows from the top of the 'ل'. The entire logo is set against a blue horizontal bar.

**With everyone's unwavering Cooperation,
Goals are not just achieved but surpassed!**

The logo for 'zeoplant' features the word in a bold, green, rounded font. A blue water droplet is integrated into the letter 'o'. Above the 'l' is a green sprout with three leaves. The entire logo is set against a blue horizontal bar.

zeoplant

The logo for 'zeoplant' in Arabic script, 'زئوبلانت', is rendered in a bold, green, rounded font. It includes a blue water droplet and a green sprout with three leaves. The logo is positioned above a blue horizontal bar.

زئوبلانت

Thank you very much!