

# EFFICIENT WATER SOLUTIONS – DUBI SEGAL

## **Design parameters for ground water quality**

IMPORTANT!!! Water quality in all water sources changes all the time.

Year-to-year

From season to season

From month to month

From week to week

From day to day

And even that day,

Ground water

All on surface water sources (lakes, rivers. Reservoirs (treated sewage) of natural water, reservoirs of effluents and canals contained different type of contamination as: drift, organic matter, silt, sand.

Protecting the drip irrigation system means to remove maximum of these particles from the water

Reclaimed

Wastewater contain 98% water and only 2% organic material.

Therefore wastewater that are treated wastewater is definitely a legitimate water source for irrigation in accordance with the guidelines of health agencies in the various countries

BOD 20 means that it is necessary to add another 20 mg/l of oxygen to dismantle the organic material in the system and improve its quality.

TSS 30 means that there is a 30-mg/l of floating solids that must be cut from the water mainly through the bevel and filtration

In Israel, for example, this reclaimed quality is especially suitable for the use of tumors that are not eaten or used by certain limitations.

## **Reclaimed tertiary**

This reclaimed level is set to 10/10 this water quality and is suitable for pouring consumed vegetables from the field.

These two levels are suitable for GAD/putting, plantations and vegetables.

Public gardening added 2 more reclaimed qualities

High quality reclaimed

Quality is similar to linguistic quality but irrigation is limited to closed areas without the presence of humans.

Excellent water quality

Set as BOD 10 mg/"to" but here instead of TSS measuring the cloudiness in the water and it should be at the level of 2 NTU units measuring water turbidity.

The planning of various water sources should first know:

Water source

Preferably water analyses

Water quality

The type of crops offered

Ground

Requirements of the Ministry of Health in any country.

The points I touch in the guidelines are:

Water source Treatment

A pumping point from the various water sources

Filter in the Repository

Post-extraction filtering

Smooth head filtering

Audit filtering

Monitoring

Piping transmission from water source to area

Water distribution pipes for various plots

Irrigation system (mainly drip)

Treatments physical

Chemical treatments

Planning

Planning is the last one that is the sum of all the preceding parts

The water sources are diverse and varied and the guidelines are related to surface water sources.

Surface water resources can be lakes, rivers, reservoirs

### **River Pumping**

By pumping a river, it is necessary to make a decision according to the speed of the river flow from where it is pumping. Does it derive from the flow center where the water contains more organic material and less sand, but more susceptible to the vulnerability?

Pumping from the West Bank. Here the sand is the problematic ingredient

In both modes it is suggested to install ponds/operational reservoirs and pump the water from the top of the operational reservoir that is with a variable floating monk in depth. Should be taken into account accordingly.

The quality of the water is the size of the reservoir according to the recessed time that you want to hold 2-6 hours, depending on the volume of the operational buffer and of course the area's failure.

### **Canals**

Water supply to agricultural plots is done in most countries through canals. The speed of flow in the canals varies according to consumption and this change causes the development of algae and zooplankton (depending on water temperature).

This water source comes into the area in gravitation (low pressure watering) or pumping from a pool and the treatment of this source is similar to the handling of reservoirs.

### **Factors affecting the quality of secondary water sources**

Location of the extraction point.

The pumping point should be protected from the suspension of organic material such as leaves and more.

How to suction

General, there are two options for suction.

Pumping from the bottom of the reservoir

Pumping from the upper part of the reservoir using a floating monk

In order to gain better control over water quality it is advisable to plan pumping from the top of the reservoir using a floating, deep-variable monk .

In the reservoirs there are water-banks in the summer, without wind conditions, the upper part is warmer than the central and lower part, and when the water is heating up, the development of organic substances such as algae and Zooplankton is beginning.

Beyond the design of pumping from the top of the reservoir but from the bottom of the water is colder and no algae is recommended to design water-mixing systems that prevent algae from developing and improving the quality of water

### **Fish farming**

Raising fish in flood-water pools and benign waters is acceptable and I think that when planning, you need to know the level of oxygen in the water. Level over 0.5 mag "Oxygen" allows for fish to be increased under that impossible. Even in the reclaimed buffers involved with the flood of oxygen concentration, the metric will be measured if the fish can be raised in the reservoir .

Fish are an important ingredient in preserving the quality of water for irrigation. This is about special varieties of fish .

On the other hand, many farmers ' reservoirs want to take advantage of the water source for an additional increase such as fish to a commercial market. And, of course, the fish feeding point is close to the pumps because there is a voltage source but actually what happens when the pumping pump accumulates a large suspension of fish food, as well as fish secretions, and all that make it difficult to cope with the quality of water in reservoirs and sometimes also in lakes

Who's flushing the main filters

The simple and easy way to return the rinse water in the reservoirs where a floating monk is to connect the hose return water to the cable that holds the monk, and so the washing-up name comes back straight to the pumping point.

It is recommended that you return the rinse away from the extraction point and against the wind so that the material that comes with the rinse will be far from the extraction point and facilitate the filters in their operation

Dubi Segal

Phone: 052-5013780

E-mail: [dubiseg77@gmail.com](mailto:dubiseg77@gmail.com)