Requirements for Hydroponic Water

Before buying equipment or even land, it is necessary to have the available water supply on any site analysed for mineral content, and for any potential Bacterial problems, plus ensure there is sufficient quantity available for the crop to be grown. Any water that does not have the necessary purity of minerals and bacteria should not be used as growing problems can occur.

Water treatment may be needed, and this should be discovered before any money is spent on other materials. Water treatment is not cheap, and it has to be done correctly. When the water is analysed it can be checked against the following charts.
Crop type will determine which chart is used.

Tomato.	Limit.	Ideal.
pH	5.0 to 8.0	5.8 to 7.8
Conductivity. (CF)	6	2
Nitrate.	50	<5
Phosphorous.	20	<5
Potassium.	50	<10
Calcium.	150	<30
Magnesium.	25	<10
Sulphur.	30	<10
Sodium.	180	<20
Chloride.	100	<20
Iron.	5	<0.05
Manganese.	2	<0.09
Boron.	1.2	<0.25
Copper.	0.3	<0.15
Zinc.	0.45	<0.15
Molybdenum.	0.025	NIL.
Silicon.		40

Note; this list is only for Tomato, for other crops see crop data reports.

Water can be demineralised, and can be purified with Ozone, Hydrogen Peroxide or by other chemicals being added to the water, the total requirements for the plant have to be supplied as treated water, no untreated water should ever be used in the system as problems can occur.
You need sufficient quantity and quality of water to supply the Hydroponic venture, if this cannot be guaranteed, then the venture is doomed to fail before you start.

You can email your water analysis report for our comments and advice on any water treatment needed.

Other things to watchout for include the following;
Acidic water (Below pH 6.9) will be prone to attacking any metal fittings or tanks it comes in contact with, so Brass, Zinc Galvanizing and Steel tanks, pipes and fittings are not suitable for use in water or nutrient storage or nutrient delivery and return supply pipes to plants, as minerals can be dissolved from them and cause a toxic level to be reached in the nutrient. All water collection and storage materials should be made of a suitable plastic or stainless steel.

All plastics used should be virgin plastic; no re-cycled plastic using toxic plasticisers in their manufacture should be used. Alkathene is ideal.

Water treated with Chlorine for water purity can cause problems to some crops, Lettuces and some herbs for example do not like residual Chlorine in the water or nutrient, it can easily be removed by passing the water through a swimming pool filter, filled with Activated Carbon, this removes residual Chlorine and makes the water safe to use.