



WATER TREATMENT SOLUTIONS

SOURCE: Rain Water

RAIN WATER PROBLEM	TREATMENT SOLUTION
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PARASITES

(Including living and encysted protozoa such as amoebae, Giardia and Cryptosporidia)

BioSand Filtration

BACTERIA

(Including coliform bacteria, cholera, shigellosis, legionnaires disease and campy bacteria)

BioSand Filtration to remove suspended particles followed by Ultra Violet Disinfection.

VIRUSES

BioSand Filtration to remove suspended particles followed by Ultra Violet Disinfection.

SEDIMENTS

(Including sand silt and organic matter)

BioSand Filtration

HARDNESS

(Due to high concentrations of calcium and magnesium)

Not usually a problem.

COLOUR, TASTE, ODOUR

(Typically derived from decaying organic matter)

Pretreatment using **BioSand Filtration** to remove any sediments, Carbon Filter to remove dissolved substances responsible for colour, taste and odour, Ultra Violet Disinfection to kill any bacteria coming from the Carbon Filter.

Pilot testing on bulk sample is recommended.

DISSOLVED SOLIDS

(Normally for drinking water only - typically includes sodium, nitrate and nitrite, fluoride, and sulphates)

Not usually a problem.

TOXINS

(Normally for drinking water only - Includes byproducts of disinfection, toxins produced from blue green algae, pesticides, herbicides or industrial pollution, and a variety of heavy metals)

Not usually a problem. However, if there are concerns the following systems would be considered appropriate: Carbon Filter followed by Ultra Violet Disinfection (possibly preceded by pretreatment to remove suspended sediment if present), Distillation or a four or five stage Reverse Osmosis System (includes Micro Filter, optional Pre Carbon Filter, Reverse Osmosis Cartridge, Post Carbon Filter and Ultra Violet Disinfection to kill bacteria coming off the Post Carbon Filter). It is recommended that Ultra Violet Disinfection be used prior to a Reverse Osmosis System to reduce bio-fouling of pretreatment cartridges and membrane.

RAIN WATER PROBLEM	TREATMENT SOLUTION
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IRON	Not usually a problem.
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(Naturally present in aquifer)

MANGANESE	Not usually a problem.
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(Naturally present in aquifer)

IRON BACTERIA	Not usually a problem.
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(Also sulfide bacteria and other bacteria, living in a well casing or a water supply aquifer)

GASSES	Not usually a problem.
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(Hydrogen sulfide, methane and carbon dioxide).

ALGAE	Not usually a problem.
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(Including single and multi-cell algae).