

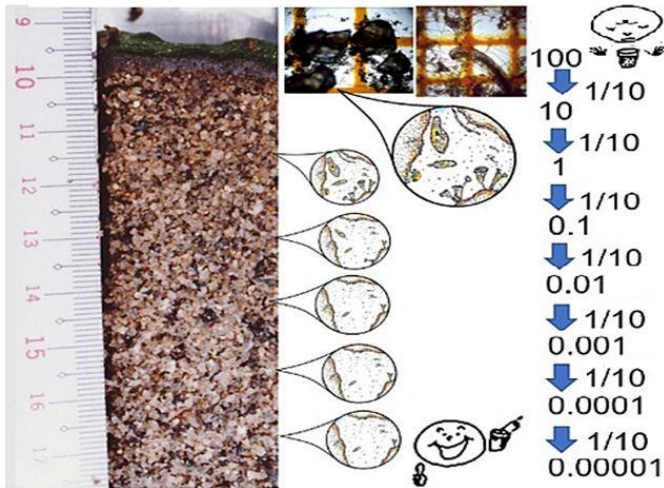


⑤

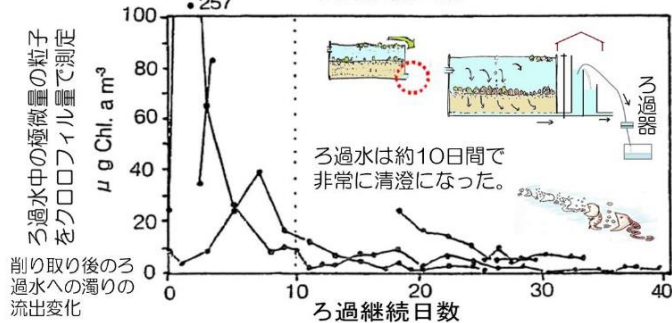
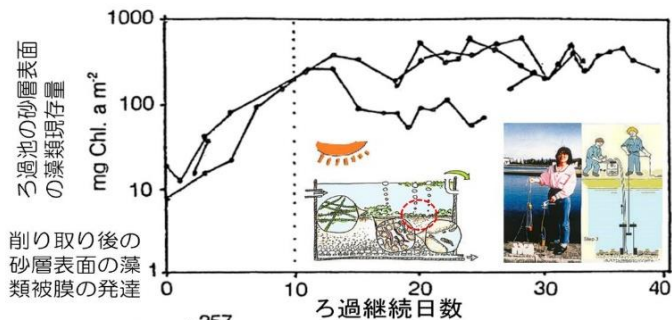
⑥

生物が活躍すると、スーパークリーンの水ができる

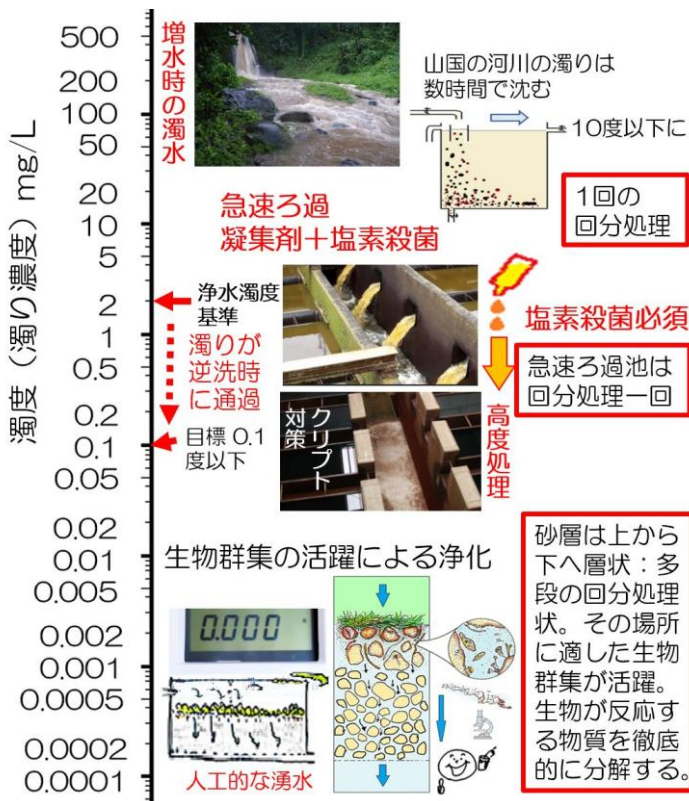
⑨



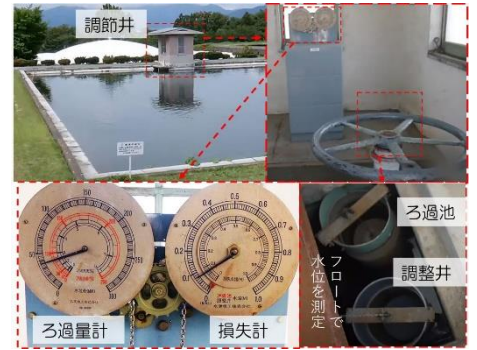
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⑪



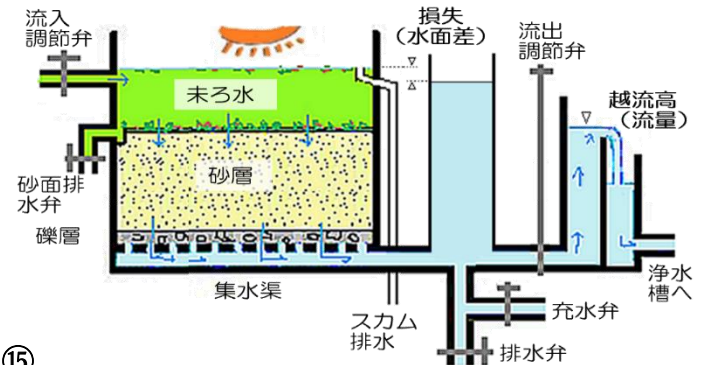
⑫



⑬



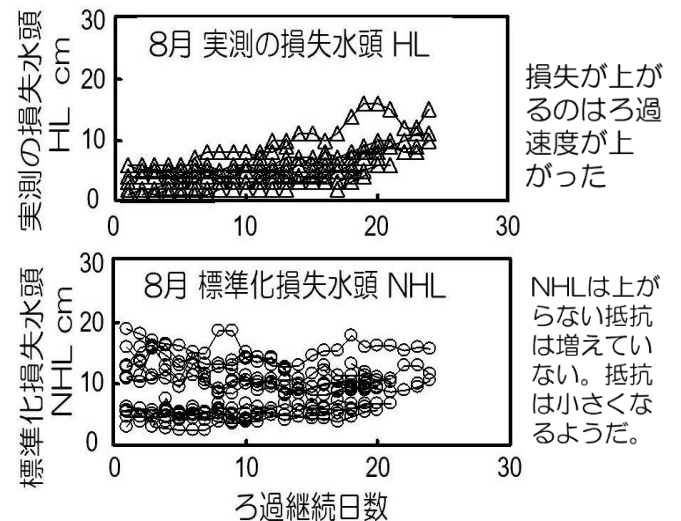
⑭



⑮

見かけの損失 (水面差) はろ過速度に比例
標準ろ過速度にした場合の損失に計算し比較：
標準化損失水頭 Normalized Head Loss : NHL

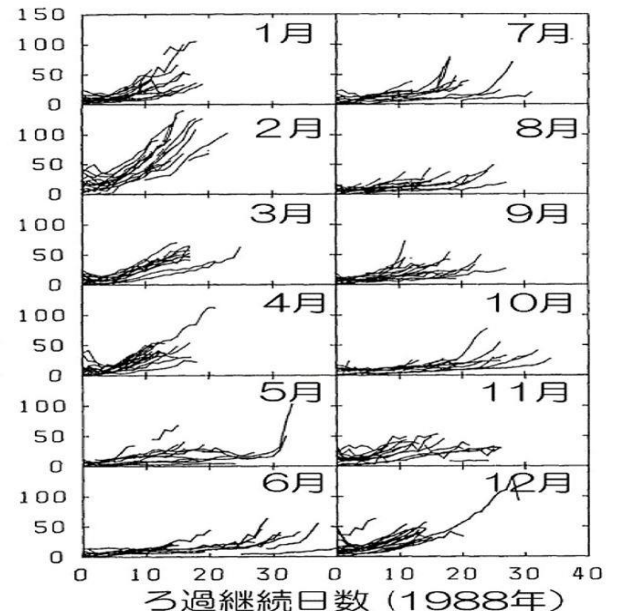
⑯



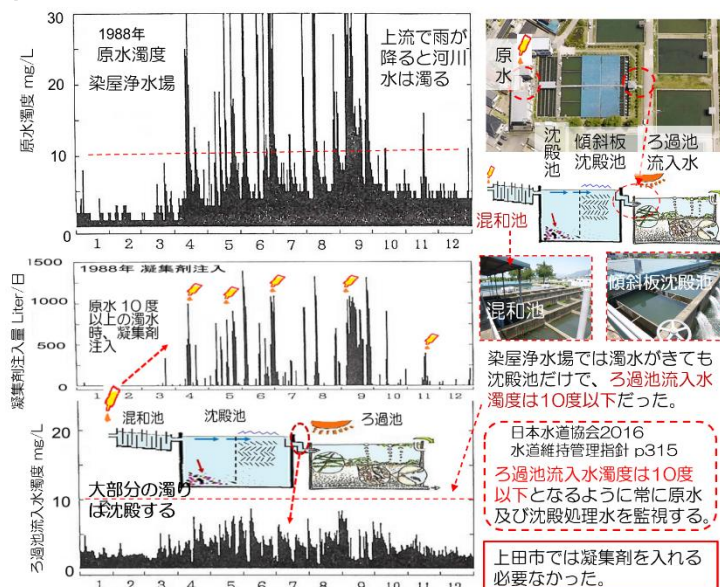
⑰

NHL (抵抗) は水温と生物活性に関係。

ろ過池の目詰まり度の指標：標準化損失水頭 NHL



⑮濁り対策で凝集剤は必要無かった



⑯省エネで水質が良い緩速ろ過を解説しない日本

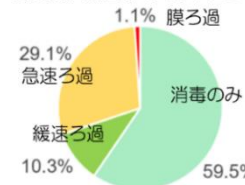
小学校から大学、マスコミも知らせない。業界の言いなり。

⑰指針に緩速ろ過の解説は殆どない。

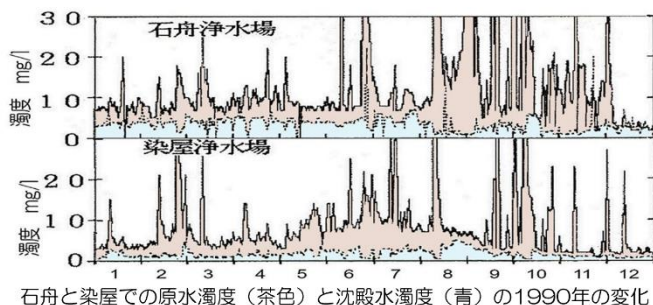
給水人口 5001 人以上の水道施設でも、山国長野県は、消毒のみ、緩速は多い



長野県 計画浄水量 H28



⑰山地河川では濁りは沈殿池で沈みやすい



⑱ペットボトルを止め、蛇口の水を

THE TIMES

Forget the bottle, for purest water turn on the tap

By Anthony Browne, Environment Editor

Tap v Cap: the soft sell

Yorkshire Water, Penrith: "Softer, purer, cheaper"

United Utilities, Lake District: "High quality, very tasty"

Highland Spring, Perthshire: "Untreated, as nature intended"

Buxton, Peak District: "Found purely in Britain"

Perrier, South of France: "Bubbles like no others"

almost perfect purity, and that water companies should take (on the bottles).

"People do not need to buy bottled water," he said. "They don't need it for health grounds, and people generally can't taste the difference."

Mr. Rouse also wants manufacturers to make fridges with jag space. He believes bottled water has an unfair advantage because people do not from the fridge, water comes out warm. United Utilities is giving away bottles of tap water, shire wants people to water by name restaurants. It is away 100,000 em bottles for custom "so they can Yorkshire water"

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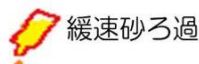
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英国のレストランで水道水を出す

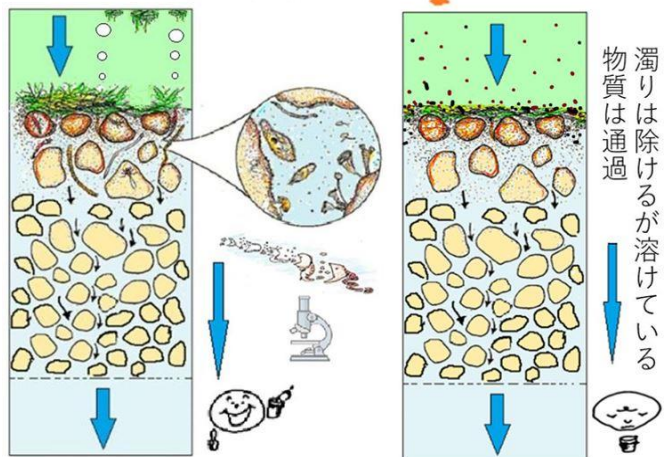
⑲薬剤添加は急速ろ過での処理



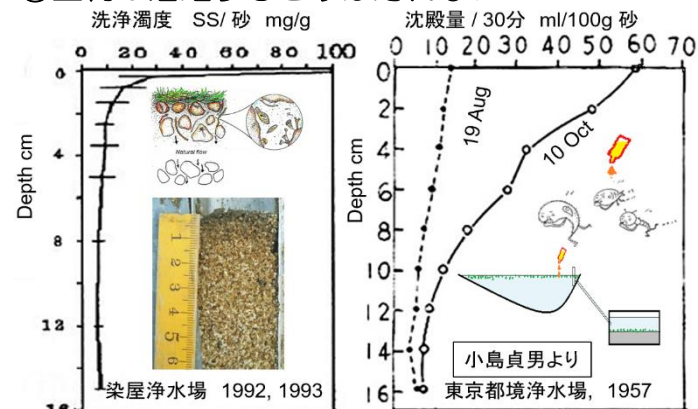
生物群集の活躍による浄化



緩速砂ろ過



⑳生物が活躍すると砂は汚れない



㉑日本で唯一の解説本

㉒長野県企業局も解説

【長野県企業局】長野県水道事業実務研修会『伝承!!緩速ろ過技術の極意』(Web会議方式)



㉓日本政府は海外へ日本発の生物浄化法をPR



㉔日本水道新聞社の月刊誌「水道公論」で2021年9月から「生物屋の緩速ろ過池研究」連載中