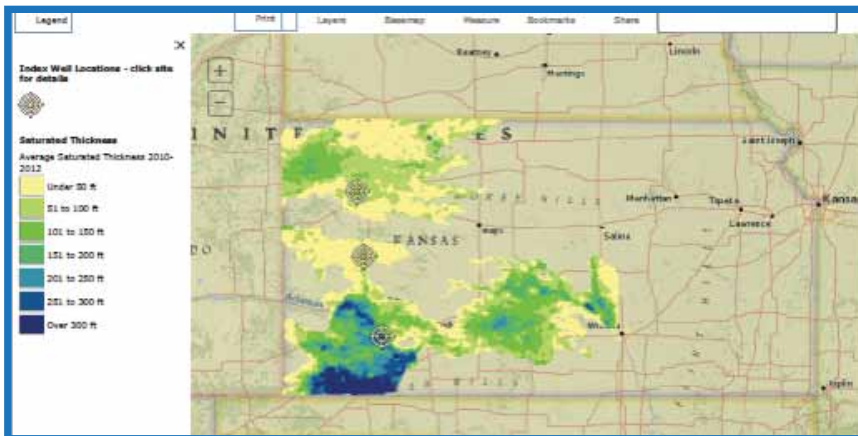


WATER TREATMENT TECHNOLOGY FOR INDUSTRIAL, COMMERCIAL & ENVIRONMENTAL APPLICATIONS

FEBRUARY 2013 - WATER TREATMENT NEWSLETTER

High Plains Aquifer – Kansas Groundwater Levels Decline as Drought Continues

The Kansas Geological Survey has reported well depths of 1400 wells in High Plains Aquifer. In Kansas this aquifer consists of portions of the Ogallala, Equus Beds and the Great Bend Prairie Aquifer in South Central and Western Kansas. The average decline in water levels for the all of the state's aquifers is over 2 feet. This data was reported by Brownie Wilson, KGS water-data manager in a report released earlier this month and consisting of January 2013 well depth monitoring. [CLICK HERE](#) for a summary of the report.



Saturated Thickness of the Great Plains Aquifer in Kansas

Oxidizing Biocide Matrix

As a companion to the “Non-oxidizing Biocide Matrix” published in last month’s Newsletter this Matrix is a valuable resource for those using oxidizing biocides for biocontrol in cooling systems or in process applications. Chlorine, chlorine dioxide, bromine, stabilized chlorine, stabilized bromine and many other oxidizing biocides are reviewed in this resource. The excel spreadsheet discusses the chemistry of each biocide and gives commercial sources and application data for biocide. The “Oxidizing Biocide Matrix” can be found at our websites [CLICK HERE](#).

FOR MORE INFO:



Kansas Water Tech
kansaswatertech.com



Remediation Services Co.
remediation-services.com



What's in Our Test Kits?

Field Water Testing is a key for water treatment monitoring and control, product selection and troubleshooting boilers, cooling towers, reverse osmosis, influent water treatment and waste water systems. The pdf file of the presentation "What's in our Test Kits?" discusses a variety of test methods including field water titrations, colorimetric testing, field water instrumentation, microbiological testing, reverse osmosis analyses and waste water testing methods. [CLICK HERE](#) for more information.



RO Dechlorination – Protecting Membranes from Premature Failure

Three methods of RO dechlorination are reviewed in the attached table. [CLICK HERE](#).

-Chemical dechlorination using sulfite, bisulfite or metabisulfite is reviewed. Theoretical and typical usage dosages are included for these three products.

-The use of activated carbon beds for chlorine and chloramine removal in RO feedwater is reviewed.

-The use of UV light to destroy chlorine and chloramine in RO feedwater is also included.

Each of these chlorine removal techniques has advantages and disadvantages that should be considered in RO system design and operation.

RO DECHLORINATION	
OPTION	NOTES
SULFITE	SULFITE 1.77 (4.5)PPM/PPM CL2 BISULFITE 1.46 (3.5) METABISULFITE .7 (2.0) *
	CAN USE ORP CONTROL TO CONTROL FEED OF SULFITE
	CAN PROMOTE ANAEROBIC ORGANISMS AFTER FEED
ACTIVATED CARBON	BECAUSE CHLORINE IS REMOVED IN TOP OF BED MICRO ORGANISM GROWTH COMMON IN LOWER BED
	ORGANICS SUCH AS TRIHALOMETHANES WILL BEGIN TO "SHED" AS AC CAP. IS USED
	SIZING MOST OFTEN BASED ON ORGANIC LOADING RATHER THAN CHLORINE/CHLORAMINE LOADING
UV DECHLOR	185 NM UV WAVELENGTH CAN BREAKDOWN CHLORINE AND CHLORAMINES IN RO FEED
	TYPICALLY OVERSIZED DUE TO SUSPENDED SOLIDS AND ORGANICS IN FEEDWATER
	ADVANTAGE OF PROVIDING ADDITIONAL UV STERILIZATION AFTER DECHLORINATION

