



University of  
**Salford**  
MANCHESTER

# Monitoring and assessment of treated river, rain, gully pot and grey waters for irrigation of *Capsicum annuum*

Al-Isawi, R, Almuktar, S and Scholz, M

<http://dx.doi.org/10.1007/s10661-016-5285-4>

<b>Title</b>	Monitoring and assessment of treated river, rain, gully pot and grey waters for irrigation of <i>Capsicum annuum</i>
<b>Authors</b>	Al-Isawi, R, Almuktar, S and Scholz, M
<b>Type</b>	Article
<b>URL</b>	This version is available at: <a href="http://usir.salford.ac.uk/id/eprint/38823/">http://usir.salford.ac.uk/id/eprint/38823/</a>
<b>Published Date</b>	2016

USIR is a digital collection of the research output of the University of Salford. Where copyright permits, full text material held in the repository is made freely available online and can be read, downloaded and copied for non-commercial private study or research purposes. Please check the manuscript for any further copyright restrictions.

For more information, including our policy and submission procedure, please contact the Repository Team at: [usir@salford.ac.uk](mailto:usir@salford.ac.uk).

**Table 4** Overview of standard references summarising typical water quality concentrations for irrigation water

Standard	Inflow source	COD <sup>a</sup> (mg/l)	BOD <sup>b</sup> (mg/l)	NH <sub>4</sub> -N <sup>c</sup> (mg/l)	NO <sub>3</sub> -N <sup>d</sup> (mg/l)	PO <sub>4</sub> -P <sup>e</sup> (mg/l)	SS <sup>f</sup> (mg/l)	Turb <sup>g</sup> (NTU)	pH (-)	EC <sup>h</sup> (µs/cm)
Recycling of wastewater for the irrigation of edible crops	RV <sup>i</sup>								7.4-8.9 <sup>f</sup>	170-690 <sup>v</sup> ; 600 <sup>r</sup>
	RA <sup>j</sup>	6-142 <sup>n</sup>		0.0-0.1 <sup>n</sup>	0.2-8.1 <sup>n</sup>			0.1-4 <sup>n</sup>	7.1-8.9 <sup>n</sup>	
	GP <sup>k</sup>									
	RG <sup>l</sup> AG <sup>m</sup>	278-435 <sup>o</sup> 702-984 <sup>q</sup>	50-300 <sup>p</sup> 280-688 <sup>q</sup>	1.2-6.2 <sup>o</sup>	1.8 <sup>t</sup> 0.0-5.8 <sup>q</sup>	<2 <sup>o</sup>	313-543 <sup>o</sup> 85-285 <sup>q</sup>	29-375 <sup>t</sup>	6.7-7.6 <sup>o</sup> 6.3-7.0 <sup>q</sup>	294-2457 <sup>s</sup> 1000-1300 <sup>q</sup>
General wastewater standards for irrigation purposes		None <sup>u</sup>	None <sup>u</sup>	<5.0 <sup>u</sup>	<30.0 <sup>u</sup>	<2 <sup>u</sup>	None <sup>u</sup>	None <sup>u</sup>	6.5-8.4 <sup>u</sup>	<3000 <sup>u</sup>

<sup>a</sup>chemical oxygen demand; <sup>b</sup>biochemical oxygen demand; <sup>c</sup>ammonia-nitrogen; <sup>d</sup>nitrate-nitrogen; <sup>e</sup>ortho-phosphate-phosphorus; <sup>f</sup>suspended solids; <sup>g</sup>nephelometric turbidity unit; <sup>h</sup>electric conductivity; <sup>i</sup>river water; <sup>j</sup>rain water; <sup>k</sup>gully pot water; <sup>l</sup>real grey water; <sup>m</sup>artificial grey water; <sup>n</sup>Radaideh et al.(2009); <sup>o</sup>Single house (Finley et al. 2009); <sup>p</sup>Domestic grey water (Sayers et al. 1998); <sup>q</sup>irrigated lettuce (Gross et al. 2007); <sup>r</sup>Banerjee & Gupta 2010; <sup>s</sup>Tsado et al. 2014; <sup>t</sup>Yu et al. 2013; <sup>u</sup>Friedler, 2004; <sup>v</sup>FAO(1994).