

Reading list

Engineering Jordan: study abroad; Water in an Arid Land

Reading schedule will coincide to match speaker and field trips. Generally, Units will be covered in order. Daily reading assignments will be distributed at the start of the course.

Unit 1. Water Cycle and Water Source

Nortcliff, Stephen, Gemma Carr, Robert B. Potter and Khadija Darmame (2008) Jordan's Water Resources: Challenges for the Future, (Geographical Paper No. 185).
<http://www.reading.ac.uk/web/FILES/geog/GP185.pdf>

Abu Qdais, H (2003) Water Demand Management – Security for the MENA Region. *Seventh International Water Technology Conference*. Egypt April 1-3, 2003.
http://www.iwtc.info/2003_pdf/01-1.pdf

Abdulla, F., T. Eshtawi and H. Assaf (2009) Assessment of the Impact of Potential Climate Change on the Water Balance of a Semi-arid Watershed, *Water Resources Management* 23(10), 2051-2068.
<http://www.springerlink.com/content/f55370q450u7112v/>
Must be logged into school library to gain access to this citation.

Abu Qdais, H. (2008) Environmental impacts of the mega desalination project: the Red-Dead Sea conveyer, *Desalination* 220(1-3), 16-23
<http://www.desline.com/articoli/8884.pdf>

Jordan a Rough Guide (**on course bookshelf**) “Azraq” p.202-204, “Death of an Oasis” p.209
(recommended: “Qasr Azraq” p.206-208) – or another similar source.

Royal Society for the Conservation of Nature (RSCN) webpage for Azraq Wetland Reserve
<http://www.rscn.org.jo/orgsite/RSCN/HelpingNature/ProtectedAreas/AzraqWetlandReserve/tabid/98/language/en-US/default.aspx>

Gafny, Sarig, Samer Talozzi, Banon Al Sheikh and Elizabeth Ya'ari (2010) Toward a Living Jordan River: An Environmental Flows Report on the Rehabilitation of the Lower Jordan River.
<http://www.globalnature.org/bausteine.net/file/showfile.aspx?downdaid=7273&domid=1011&fd=0>

Parting the Waters
<http://ngm.nationalgeographic.com/print/2010/04/parting-the-waters/belt-text>

Unit 2. Drinking water treatment and desalination

Jamal Abu-Ashour **and** Al-Sharif, Munjed (2010) An Investigation of the Linkage between Minimum Household Water Requirement and Health in the Greater Irbid Area
<http://elearning.just.edu.jo/jjce/issues/paper.php?p=105.pdf>

Mohsen, M. S. and S. Gammoh (2010) Performance evaluation of reverse osmosis desalination plant: A case study of Wadi Ma'in, Zara and Mujib Plant, *Desalination and Water Treatment* 14(1-3), 265-272.

<http://www.eis.hu.edu.jo/Deanshipfiles/pub10164909.pdf>

Al-Hadidi. Mahmoud S. (1999) Brackish water management and use in Jordan. *Desalination* 126 (1999) 41–44.

<http://www.desline.com/articoli/3773.pdf>

Unit 3. Wastewater Treatment and Reuse

Hammer, Mark J (2001) *Wastewater treatment in dry climates*, . Chapter 6. “Effects of Dry Climate on Wastewater Processes (p.53-59). (on course bookshelf)

Al-Momani, Salah S (2011) *State of the Wastewater Management in the Arab Countries: The Hashemite Kingdom of Jordan* .

<http://www.arabwatercouncil.org/administrator/Modules/CMS/Jordan-Country-Report.pdf>

Rotating Biological Contact Reactor in Metcalf and Eddy (on course bookshelf)

Hammer, Mark J (2001) *Wastewater treatment in dry climates*, . Chapter 12. “Water Reuse” (p.133 - 141). (on course bookshelf)

Carr, G., R. B. Potter and S. Nortcliff (2011) Water reuse for irrigation in Jordan: Perceptions of water quality among farmers, *Agricultural Water Management* 98(5), 847-854.

<http://www.sciencedirect.com/science/article/pii/S037837741000394X>

Must be logged into school library to gain access to this citation.

Z. Al-Ghazawi , J. Amayreh, L. Rousan and A. Hijazi (2008) *Wastewater reuse for agriculture-pilot project at the Jordan University of Science and Technology*

<http://parlezvousgreencampus.files.wordpress.com/2011/12/uniten-iccbt-08-waste-water-reuse-for-agriculture-pilot-project-at-the-jordan.pdf>

Must be logged into school library to gain access to this citation.

Unit 4. Decentralized Treatment

Halalsheh, M.M., H. Noaimat, H. Yazajeen, J. Cuello, B. Freitas, and M. Fayyad. (2011) Biodegradation and seasonal variations in septage characteristics, *Environmental Monitoring and Assessment* 172(1-4): 419-426.

Halalsheh, M.M., S. Dalahmeh, M. Sayed, W. Suleiman, M. Shareef, M. Mansour, M. Safi. (2008) *Bioresource Technology*. 99(14): 6635-6641.

Unit 5. Ancient Water Engineering

Ortloff, C. R. (2005) The water supply and distribution system of the Nabatean city of Petra (Jordan), 300 BC-AD 300, Cambridge Archaeological Journal 15(1), 93-109.
(on-line search by title)

Virtual discoveries at a wonder of the world: geophysical investigations and ancient plumbing at Petra, Jordan

<http://www.sciencedirect.com/science/article/pii/S037837741000394X>

Petra Water works

<http://nabataea.net/waterw.html>

Water In Nabateans Period

<http://muheisenz.webs.com/waterinthenabataeanp.htm>

Jerash (Jordan)

<http://www.romanaqueducts.info/aquasite/gerasa/index.html>

Gadara (Umm Qais)

<http://www.romanaqueducts.info/aquasite/index.html>