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| **Environmental Enlightenment #214** By Ami Adini - Reissued August 16, 2017   |  | | --- | | This is a SHORT, LIGHT and SIMPLE newsletter. Its purpose is to rekindle in the initiated terminology they have once learned, and enlighten the uninitiated on terms they may have heard but never knew the meaning of. | | |  | | --- | | **Power of Simplicity The EPA’s Citizen’s Guide to Cleanup Technologies**  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image002.png  **Series 13: Evapotranspiration Covers** |   See our Newsletter, [*Environmental Enlightenment #200*](http://amiadini.com/NewsletterArchive/130107-NL200/envEnl-200.html)*,* for introduction to one highly valuable, plainly written series of Citizen’s Guides published by the EPA at <http://www.clu-in.org/products/citguide>  With this issue we introduce the EPA’s *Citizen’s Guide to Evapotranspiration Covers.* You can reach it through the hyperlink under the blue header below.  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image004.png  <http://www.clu-in.org/download/Citizens/a_citizens_guide_to_evapotranspiration_covers.pdf>    *Evapotranspiration* is a made-up combination word: short for *Evaporation + Transpiration.*  Evaporation from the land + Transpiration from plants ---------------------------------------------------- =         Evapotranspiration        http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image006.png     |  |  |  | | --- | --- | --- | | Transpiration is the release of water from plant leaves.  (Perspiration is the release of water through the pores of the skin.) |  | http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image008.jpg |  |  |  |  | | --- | --- | --- | | These pictures show water vapor transpired from plant leaves after a plastic bag has been tied around the stem for about an hour. |  | http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image010.jpg |     http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image012.jpg Credit: [Ming Kei College, Hong Kong](http://cccmkc.edu.hk/~sbj-biology/CERT%20BIO/Obtaining%20essentials%20for%20life/Water%20relation%20in%20plants/Transpiration_demonstration.htm)  During a growing season, a leaf will transpire many times more water than its own weight.   An acre of corn gives off about 3,000 to 4,000 gallons of water each day.  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image014.jpg  (Credit: [USGS, Water Science for Schools](http://water.usgs.gov/edu/watercycleevapotranspiration.html))  In cases of buried contamination, if water percolates through the contamination it will leach out injurious elements and carry them down to groundwater.  Groundwater contamination Credit: [USDA](http://www.aphis.usda.gov/emergency_response/tools/on-site/htdocs/osbtc/dispop/intro0160.htm)   |  |  |  | | --- | --- | --- | | Caps provide protection from injurious elements in the environment. |  | http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image018.jpg |     ***Evapotranspiration covers*** are caps placed over contaminated material to prevent water from reaching it.  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image020.jpg    Evapotranspiration covers hold the water.  They prevent water from reaching the buried waste.  In time the cover releases the water back to the atmosphere through evaporation from the land and transpiration from the plants.  Diagram of energy balance for a growing plant. Credit:  [NASA Earth Observatory](http://earthobservatory.nasa.gov/Features/WaterWatchers/page3.php)  Evapotranspiration covers do not destroy or remove contaminants.  They isolate contaminants and keep them in place to prevent the spread of contamination.  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image024.png <http://www.clu-in.org/download/Citizens/a_citizens_guide_to_capping.pdf>    Go to the EPA’s *Citizen’s Guide to Evapotranspiration Covers* <http://www.clu-in.org/download/Citizens/a_citizens_guide_to_evapotranspiration_covers.pdf> for the rest. It is simple and fun to read.  http://amiadini.com/NewsletterArchive/170816-NL214/envEnl-214_clip_image026.jpg | | You can find past issues of our "Environmental Enlightenment" at [amiadini.com](http://www.amiadini.com/) Wealth of information about environmental site assessments in the real estate transactions and issues concerning assessment and cleanup of contamination in the subsurface soil and groundwater. |  |  | | --- | | Call me if you have any questions. There are **no obligations.**  Ami Adini Environmental Services, Inc. Environmental Consultants & General Engineering Contractors California Lic. #1009513 A B HAZ ASB **818-824-8102**; [**mail@amiadini.com**](mailto:mail@amiadini.com) [www.amiadini.com](http://amiadini.com/)  Ami Adini is a veteran environmental practitioner with over 40 years of experience. He carries a Bachelor of Science degree (B.Sc.) in Mechanical Engineering including academic credits in Nuclear and Chemical Engineering and postgraduate education in these fields. His career includes design and construction of nuclear plant facilities, chemical processing plants and hazardous wastewater treatment systems. He is a former California Registered Environmental Assessor Levels I & II in the 1988-2012 registry that certified environmental professionals in the assessment and remediation of environmentally impacted land, and a Registered Environmental Professional (REP) since 1989 with the National Registry of Environmental Professionals (NREP). He is a California Business & Professions Code Qualifying Responsible Managing Officer (RMO) in the General Engineering Contractor classification with Hazardous Substance Removal and Asbestos certifications, and president of AMI ADINI ENVIRONMENTAL SERVICES, INC. (AAES), a general engineering contractor and consulting firm specializing in environmental site assessments, rehabilitation of contaminated sites and removal of environmental risks from real-estate transactions. (Contact Ami for a complete resume.) **AAES provides practical solutions to environmental concerns using the highest standards of ethics and integrity while providing its clients with maximum return on their investments.** | |