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Nitrogen Newsletter is a summary of recent publications, news and reports related to the cycling, effects and management of nitrogen. Prepared by Mary O'Brien, contractor with ASRC Federal Primus, and Jana Compton. Contact Jana Compton with any questions (Compton.jana@epa.gov)

Please note: Most of these links are available to EPA staff through library access – not all links will be available to folks outside EPA, depending on your access to specific journals and websites.

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Special Issues

Alber M, Reed D, McGlathery K. 2013. **Special issue on coastal long term ecological research.** Oceanography 26(3). Available from: <http://www.tos.org/oceanography/issues/current.html>

Articles

Aalto SL, Kaski O, Salonen K, Pulkkinen K. 2013. **Responses of algae, bacteria, Daphnia and natural parasite fauna of Daphnia to nutrient enrichment in mesocosms.** Hydrobiologia 715(1): 5-18. Available from <http://dx.doi.org/10.1007/s10750-012-1261-3>

Abell GCJ, Ross DJ, Keane JP, Oakes JM, Eyre BD, Robert SS, Volkman JK. 2013. **Nitrifying and denitrifying microbial communities and their relationship to nutrient fluxes and sediment geochemistry in the Derwent Estuary, Tasmania.** Aquat Microb Ecol 70(1): 63-75. Available from: <http://dx.doi.org/10.3354/ame01642>

Acevedo-Trejos E, Brandt G, Merico A, Smith SL. 2013. **Biogeographical patterns of phytoplankton community size structure in the oceans.** Global Ecol Biogeogr 22(9): 1060-1070. Available from: <http://dx.doi.org/10.1111/geb.12071>

Adair K, Blazewicz SJ, Hungate BA, Hart SC, Dijkstra P, Schwartz E. 2013. **A positive relationship between the abundance of ammonia oxidizing archaea and natural abundance delta N-15 of ecosystems.** Soil Biol Biochem 65: 313-315. Available from: <http://dx.doi.org/10.1016/j.soilbio.2013.05.024>

Andrews M, Raven JA, Lea PJ. 2013. **Do plants need nitrate? The mechanisms by which nitrogen form affects plants.** Ann Appl Biol 163(2): 174-199. Available from: <http://dx.doi.org/10.1111/aab.12045>

Ardon M, Morse JL, Colman BP, Bernhardt ES. 2013. **Drought-induced saltwater incursion leads to increased wetland nitrogen export.** Global Change Biol 19(10): 2976-2985. Available from: <http://dx.doi.org/10.1111/gcb.12287>

Baker DM, Rodriguez-Martinez RE, Fogel ML. 2013. **Tourism's nitrogen footprint on a Mesoamerican coral reef.** Coral Reefs 32(3): 691-699. Available from: <http://dx.doi.org/10.1007/s00338-013-1040-2>

Bassin S, Volk M, Fuhrer J. 2013. **Species composition of subalpine grassland is sensitive to nitrogen deposition, but not to ozone, after seven years of treatment.** Ecosystems 16(6): 1105-1117. Available from: <http://dx.doi.org/10.1007/s10021-013-9670-3>

Bonanomi G, Incerti G, Allegrezza M. 2013. **Assessing the impact of land abandonment, nitrogen enrichment and fairy-ring fungi on plant diversity of Mediterranean grasslands.** Biodivers Conserv 22(10, SI): 2285-2304. Available from: <http://dx.doi.org/10.1007/s10531-013-0502-8>

Brandt J, Silver JD, Christensen JH, Andersen MS, Bonlokke JH, Sigsgaard T, Geels C, Gross A, Hansen AB, Hansen KM, et al. 2013. **Contribution from the ten major emission sectors in Europe and Denmark to the health-cost externalities of air pollution using the EVA model system - an integrated modelling approach.** Atmos Chem Phys 13(15): 7725-7746. Available from: <http://dx.doi.org/10.5194/acp-13-7725-2013>

Capone DG, Hutchins DA. 2013. **Microbial biogeochemistry of coastal upwelling regimes in a changing ocean.** Nat Geosci 6(9): 711-717. Available from: <http://dx.doi.org/10.1038/NGEO1916>

Cardenas LM, Hatch DJ, Scholefield D, Jhurrea D, Clark IM, Hirsch PR, Salazar F, Rao-Ravella S, Alfaro M.. 2013. **Potential mineralization and nitrification in volcanic grassland soils in Chile.** Soil Sci Plant Nutr 59(3): 380-391. Available from: <http://dx.doi.org/10.1080/00380768.2013.789395>

Castaldelli G, Soana E, Racchetti E, Pierobon E, Mastrocicco M, Tesini E, Fano EA, Bartoli M. 2013. **Nitrogen budget in a lowland coastal area within the Po River Basin (Northern Italy): multiple evidences of equilibrium between sources and internal sinks.** Environ Manage 52(3): 567-580. Available from: <http://dx.doi.org/10.1007/s00267-013-0052-6>

Chen HH, Li XC, Hu F, Shi W. 2013. **Soil nitrous oxide emissions following crop residue addition: a meta-analysis.** Global Change Biol 19(10): 2956-2964. Available from: <http://dx.doi.org/10.1111/gcb.12274>

Cox TJ, Rutherford JC, Kerr SC, Smeaton DC, Palliser CC. 2013. **An integrated model for simulating nitrogen trading in an agricultural catchment with complex hydrogeology.** J Environ Manage 127: 268-277. Available from: <http://dx.doi.org/10.1016/j.jenvman.2013.05.022>

De Brabandere L, Canfield DE, Dalsgaard T, Friederich GE, Revsbech NP, Ulloa O, Thamdrup B. 2013. **Vertical partitioning of nitrogen-loss processes across the oxic-anoxic interface of an oceanic oxygen minimum zone.** Environ Microbiol (Published online 30 Sep). Available from: <http://dx.doi.org/10.1111/1462-2920.12255>

Decock C, Six J. 2013. **How reliable is the intramolecular distribution of N-15 in N2O to source partition N2O emitted from soil?** Soil Biol Biochem 65: 114-127. Available from: <http://dx.doi.org/10.1016/j.soilbio.2013.05.012>

Delgado JA, Nearing MA, Rice CW. 2013. **Conservation practices for climate change adaptation.** Adv Agron 121: 47-115. Available from: <http://dx.doi.org/10.1016/B978-0-12-407685-3.00002-5>

DeLonge MS, Ryals R, Silver WL. 2013. **A lifecycle model to evaluate carbon sequestration potential and greenhouse gas dynamics of managed grasslands.** Ecosystems 16(6): 962-979. Available from: <http://dx.doi.org/10.1007/s10021-013-9660-5>

Dempsey CM, Morris DP, Peters SC. 2013. **Assessing changes in microbial respiration, bacterial growth efficiency, and bacterial production with nutrient addition to batch cultures.** J Freshwater Ecol 28(3): 411-421. Available from: <http://dx.doi.org/10.1080/02705060.2013.773463>

Dugdale RC, Wilkerson FP, Parker AE. 2013. **A biogeochemical model of phytoplankton productivity in an urban estuary: The importance of ammonium and freshwater flow.** Ecol Model 263: 291-307. Available from: <http://dx.doi.org/10.1016/j.ecolmodel.2013.05.015>

Duran J, Rodriguez A, Morse JL, Groffman PM. 2013. **Winter climate change effects on soil C and N cycles in urban grasslands.** Global Change Biol 19(9): 2826-2837. Available from: <http://dx.doi.org/10.1111/gcb.12238>

Ellis RA, Jacob DJ, Sulprizio MP, Zhang L, Holmes CD, Schichtel BA, Blett T, Porter E, Pardo LH, Lynch JA. 2013. **Present and future nitrogen deposition to national parks in the United States: critical load exceedances.** Atmos Chem Phys 13, 9083-9095. Available from: <http://dx.doi.org/10.5194/acp-13-9083-2013>

Hamonts K, Balaine N, Moltchanova E, Beare M, Thomas S, Wakelin SA, O'Callaghan M, Condron LM, Clough TJ. 2013. **Influence of soil bulk density and matric potential on**

microbial dynamics, inorganic N transformations, N₂O and N₂ fluxes following urea deposition. Soil Biol Biochem 65: 1-11. Available from: <http://dx.doi.org/10.1016/j.soilbio.2013.05.006>

Jain AK, Meiyappan P, Song Y, House JI. 2013. **CO₂ emissions from land-use change affected more by nitrogen cycle, than by the choice of land-cover data.** Global Change Biol 19(9): 2893-2906. Available from: <http://dx.doi.org/10.1111/gcb.12207>

Johnson LT, Tank JL, Hall RO, Mulholland PJ, Hamilton SK, Valett HM, Webster JR, Bernot MJ, McDowell WH, Peterson BJ, et al. 2013. **Quantifying the production of dissolved organic nitrogen in headwater streams using N-15 tracer additions.** Limnol Oceanogr 58(4): 1271-1285. Available from: <http://dx.doi.org/10.4319/lo.2013.58.4.1271>

Jones N. 2013. **Grass gets greener: plant secretion curbs greenhouse-gas emissions from soil.** Nature 501(7467): 291. Available from: <http://dx.doi.org/10.1038/501291a>

Kaushal SS, Likens GE, Utz RM, Pace ML, Grese M, Yepsen M. 2013. **Increased river alkalization in the eastern U.S.** Environ Sci Technol 47(18): 10302–10311. Available from: <http://dx.doi.org/10.1021/es401046s>

Killberg-Thoreson L, Sipler RE, Bronk DA. 2013. **Anthropogenic nutrient sources supplied to a Chesapeake Bay tributary support algal growth: a bioassay and high-resolution mass spectrometry approach.** Estuar Coast 36(5): 966-980. Available from: <http://dx.doi.org/10.1007/s12237-013-9604-5>

Knight SS, Locke MA, Smith S. 2013. **Effects of agricultural conservation practices on oxbow lake watersheds in the Mississippi River alluvial plain.** Soil Water Res 8(3): 113-123. Available from: <http://www.agriculturejournals.cz/publicFiles/97032.pdf>

Kuiper I, de Deyn GB, Thakur MP, van Groenigen JW. 2013. **Soil invertebrate fauna affect N₂O emissions from soil.** Global Change Biol 19(9): 2814-2825. Available from: <http://dx.doi.org/10.1111/gcb.12232>

Kunza LA, Hall RO. 2013. **Demographic and mutualistic responses of stream nitrogen fixers to nutrients.** Freshw Sci 32(3): 991-1004. Available from: <http://dx.doi.org/10.1899/12-102.1>

Kurtzman D, Shapira RH, Bar-Tal A, Fine P, Russo D. 2013. **Nitrate fluxes to groundwater under citrus orchards in a Mediterranean climate: Observations, calibrated models, simulations and agro-hydrological conclusions.** J Contam Hydrol 151: 93-104. Available from: <http://dx.doi.org/10.1016/j.jconhyd.2013.05.004>

Lamarque JF, Dentener F, McConnell J, Ro CU, Shaw M, Vet R, Bergmann D, Cameron-Smith P, Dalsoren S, Doherty R, et al. 2013. **Multi-model mean nitrogen and sulfur deposition from the Atmospheric Chemistry and Climate Model Intercomparison Project (ACCMIP): evaluation of historical and projected future changes.** Atmos Chem Phys 13(16): 7997-8018. Available from: <http://dx.doi.org/10.5194/acp-13-7997-2013>

Lentz AH, Ando A, Brozovic N. 2013. **Water quality trading with lumpy investments, credit stacking, and ancillary benefits.** JAWRA (Published online 28 Aug). Available from: <http://dx.doi.org/10.1111/jawr.12117>

Lockhart KM, King AM, Harter T. 2013. **Identifying sources of groundwater nitrate contamination in a large alluvial groundwater basin with highly diversified intensive agricultural production.** J Contam Hydrol 151: 140-154. Available from: <http://dx.doi.org/10.1016/j.jconhyd.2013.05.008>

Lovett GM, Arthur MA, Weathers KC, Fitzhugh RD, Templer PH. 2013. **Nitrogen addition increases carbon storage in soils, but not in trees, in an eastern U.S. deciduous forest.** Ecosystems 16(6): 980-1001. Available from: <http://dx.doi.org/10.1007/s10021-013-9662-3>

Lu XT, Reed S, Yu Q, He NP, Wang ZW, Han XG. 2013. **Convergent responses of nitrogen and phosphorus resorption to nitrogen inputs in a semiarid grassland.** Global Change Biol 19(9): 2775-2784. Available from: <http://dx.doi.org/10.1111/gcb.12235>

MacKenzie RA, Wiegner TN, Kinslow F, Cormier N, Strauch AM. 2013. **Leaf-litter inputs from an invasive nitrogen-fixing tree influence organic-matter dynamics and nitrogen inputs in a Hawaiian river.** Freshw Sci 32(3): 1036-1052. Available from: <http://dx.doi.org/10.1899/12-152.1>

Martinsen V, Grund F, Kjeve MN, de Wit HA, Austrheim G, Mysterud A, Mulder J. 2013. **Differences in the quality of seepage water and runoff caused by plant community and grazing at an alpine site in Hol, southern Norway.** Water Air Soil Poll 224(9): 1649. Available from: <http://dx.doi.org/10.1007/s11270-013-1649-3>

Mast MA, Ely D. 2013. **Effect of power plant emission reductions on a nearby wilderness area: a case study in northwestern Colorado.** Environ Monit Assess 185(9): 7081-7095. Available from: <http://dx.doi.org/10.1007/s10661-013-3086-6>

Olson JR, Hawkins CP. 2013. **Developing site-specific nutrient criteria from empirical models.** Freshw Sci 32(3): 719-740. Available from: <http://dx.doi.org/10.1899/12-113.1>

Oswald R, Behrendt T, Ermel M, Wu D, Su H, Cheng Y, Breuninger C, Moravek A, Mouglin E, Delon C, et al. 2013. **HONO emissions from soil bacteria as a major source of atmospheric reactive nitrogen.** Science 341(6151): 1233-1235. Available from: <http://dx.doi.org/10.1126/science.1242266>

Oviedo-Vargas D, Royer TV, Johnson LT. 2013. **Dissolved organic carbon manipulation reveals coupled cycling of carbon, nitrogen, and phosphorus in a nitrogen-rich stream.** Limnol Oceanogr 58(4): 1196-1206. Available from: <http://dx.doi.org/10.4319/lo.2013.58.4.1196>

Pappin AJ, Hakami A. 2013. **Source attribution of health benefits from air pollution abatement in Canada and the United States: an adjoint sensitivity analysis.** Environ Health Persp 121(5): 572-579. Available from: <http://dx.doi.org/10.1289/ehp.1205561>

Redding JE, Myers-Miller RL, Baker DM, Fogel M, Raymundo LJ, Kim K. 2013. **Link between sewage-derived nitrogen pollution and coral disease severity in Guam.** Mar Pollut Bull 73(1): 57-63. Available from: <http://dx.doi.org/10.1016/j.marpolbul.2013.06.002>

Rivera-Monroy VH, Branoff B, Meselhe E, McCorquodale A, Dortch M, Steyer GD, Visser J, Wang HQ. **Landscape-level estimation of nitrogen removal in coastal Louisiana wetlands: potential sinks under different restoration scenarios.** J Coastal Res SI 67: 75-87. Available from: http://dx.doi.org/10.2112/SI_67_6

Saathoff W, von Haaren C, Dechow R, Lovett A. 2013. **Farm-level assessment of CO₂ and N₂O emissions in Lower Saxony and comparison of implementation potentials for mitigation measures in Germany and England.** Reg Environ Change 13(4, SI): 825-841. Available from: <http://dx.doi.org/10.1007/s10113-012-0364-8>

Salmon-Monviola J, Moreau P, Benhamou C, Durand P, Merot P, Oehler F, Gascuel-Odoux C. 2013. **Effect of climate change and increased atmospheric CO₂ on hydrological and nitrogen cycling in an intensive agricultural headwater catchment in western France.** Climatic Change 120(1-2): 433-447. Available from: <http://dx.doi.org/10.1007/s10584-013-0828-y>

Sassenrath GF, Schneider JM, Gaj R, Grzebisz W, Halloran JM. 2013. **Nitrogen balance as an indicator of environmental impact: toward sustainable agricultural production.** Renew Agr Food Syst 28(3): 276-289. Available from: <http://dx.doi.org/10.1017/S1742170512000166>

Schlesinger WH. **An estimate of the global sink for nitrous oxide in soils.** Global Change Biol 19(10): 2929-2931. Available from: <http://dx.doi.org/10.1111/gcb.12239>

Scott JT, Grantz EM. 2013. **N₂ fixation exceeds internal nitrogen loading as a phytoplankton nutrient source in perpetually nitrogen-limited reservoirs.** Freshw Sci 32(3): 849-861. Available from: <http://dx.doi.org/10.1899/12-190.1>

Seok B, Helmig D, Ganzeveld L, Williams MW, Vogel CS. 2013. **Dynamics of nitrogen oxides and ozone above and within a mixed hardwood forest in northern Michigan.** Atmos Chem Phys 13(15): 7301-7320. Available from: <http://dx.doi.org/10.5194/acp-13-7301-2013>

Shinn C, Marco A, Serrano L. 2013. **Influence of low levels of water salinity on toxicity of nitrite to anuran larvae.** Chemosphere 92(9): 1154-1160. Available from: <http://dx.doi.org/10.1016/j.chemosphere.2013.01.079>

Spahni R, Joos F, Stocker BD, Steinacher M, Yu ZC. 2013. **Transient simulations of the carbon and nitrogen dynamics in northern peatlands: from the Last Glacial Maximum to**

the 21st century. Clim Past 9(3): 1287-1308. Available from: <http://dx.doi.org/10.5194/cp-9-1287-2013>

Spooner DE, Frost PC, Hillebrand H, Arts MT, Puckrin O, Xenopoulos MA. 2013. **Nutrient loading associated with agriculture land use dampens the importance of consumer-mediated niche construction.** Ecol Lett 16(9): 1115-1125. Available from: <http://dx.doi.org/10.1111/ele.12146>

Straub M, Sigman DM, Ren H, Martínez-García A, Meckler AN, Hain MP, Haug GH. 2013. **Changes in North Atlantic nitrogen fixation controlled by ocean circulation?** Nature, 501(7466): 200–203. Available from: <http://dx.doi.org/10.1038/nature12397>

Thomas RQ, Zaehle S, Templer PH, Goodale CL. 2013. **Global patterns of nitrogen limitation: confronting two global biogeochemical models with observations.** Global Change Biol 19(10): 2986-2998. Available from: <http://dx.doi.org/10.1111/gcb.12281>

Toseland A, Daines SJ, Clark JR, Kirkham A, Strauss J, Uhlig C, Lenton TM, Valentin K, Pearson GA, Moulton V, et al. 2013. **The impact of temperature on marine phytoplankton resource allocation and metabolism.** Nature Clim Change (Published online 8 Sep). Available from: <http://dx.doi.org/10.1038/nclimate1989>

Twining CW, West DC, Post DM. 2013. **Historical changes in nutrient inputs from humans and anadromous fishes in New England's coastal watersheds.** Limnol Oceanogr 58(4): 1286-1300. Available from: <http://dx.doi.org/10.4319/lo.2013.58.4.1286>

Veldkamp E, Koehler B, Corre MD. 2013. **Indications of nitrogen-limited methane uptake in tropical forest soils.** Biogeosciences 10(8): 5367-5379. Available from: <http://dx.doi.org/10.5194/bg-10-5367-2013>

Verdegem MCJ. 2013. **Nutrient discharge from aquaculture operations in function of system design and production environment.** Rev Aquacult 5(3): 158-171. Available from: <http://dx.doi.org/10.1111/raq.12011>

Wamelink GWW, de Knecht B, Pouwels R, Schuiling C, Wegman RMA, Schmidt AM, van Dobben HF, Sanders ME. 2013. **Considerable environmental bottlenecks for species listed in the Habitats and Birds Directives in the Netherlands.** Biol Conserv 165: 43-53. Available from: <http://dx.doi.org/10.1016/j.biocon.2013.05.012>

Wang BZ, Chen Z. 2013. **An intercomparison of satellite-derived ground-level NO₂ concentrations with GMSMB modeling results and in-situ measurements - a North American study.** Environ Pollut 181: 172-181. Available from: <http://dx.doi.org/10.1016/j.envpol.2013.06.037>

Wu Y, Blodau C. 2013. **PEATBOG: a biogeochemical model for analyzing coupled carbon and nitrogen dynamics in northern peatlands.** Geosci Model Dev 6(4): 1173-1207. Available from: <http://dx.doi.org/10.5194/gmd-6-1173-2013>

Ye L, Grimm NB. 2013. **Modelling potential impacts of climate change on water and nitrate export from a mid-sized, semiarid watershed in the U.S. Southwest.** Climatic Change 120(1-2): 419-431. Available from: <http://dx.doi.org/10.1007/s10584-013-0827-z>

Zhang LH, Song CC, Nkrumah PN. 2013. **Responses of ecosystem carbon dioxide exchange to nitrogen addition in a freshwater marshland in Sanjiang Plain, Northeast China.** Environ Pollut 180: 55-62. Available from: <http://dx.doi.org/10.1016/j.envpol.2013.03.055>

Zhang NY, Guo R, Song PA, Guo JX, Gao YZ. 2013. **Effects of warming and nitrogen deposition on the coupling mechanism between soil nitrogen and phosphorus in Songnen Meadow Steppe, northeastern China.** Soil Biol Biochem 65: 96-104. Available from: <http://dx.doi.org/10.1016/j.soilbio.2013.05.015>

Zona D, Janssens IA, Gioli B, Jungkunst HF, Serrano MC, Ceulemans R. 2013. **N₂O fluxes of a bio-energy poplar plantation during a two years rotation period.** GCB Bioenergy 5(5): 536-547. Available from: <http://dx.doi.org/10.1111/gcbb.12019>

News

Jackson T. **Farm crackdown could curb blooms.** Sandusky Register (Sandusky, OH) 2013 Sep 18. Available from: <http://www.sanduskyregister.com/article/4661636>

Rye C. **Stopping nitrogen escapes: farmers get serious about losing fertilizer from soil.** Messenger News (Fort Dodge, IA) 2013 Sep 15. Available from: <http://www.messengernews.net/page/content.detail/id/569806/Stopping-nitrogen-escapes.html?nav=5003>

McConnaughey J. **Correction: dead zone lawsuit story.** The Associated Press via The Wall Street Journal, 2013 Sep 23. Available from: <http://online.wsj.com/article/AP2487f967679546a68c80936888476f7b.html>

EPA says U.S. falling short in shrinking annual Gulf “Dead Zone”. The Associated Press via The Times-Picayune Greater New Orleans 2013 Sep 25. Available from: http://www.nola.com/environment/index.ssf/2013/09/epa_says_us_falling_short_in_s.html

For Bloomberg BNA subscribers (including EPA staff):

Saiyid AH. **Water pollution: court says EPA must make decision on nutrient limits in Mississippi River Basin.** Daily Environ Rep 2013 Sep 24. Available from: http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36690090&vname=dennotallissues&wsn=498635000&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=0

Day J. **Chesapeake Bay: effort to expand Bay partnership accord stirs interstate debate on goal-setting.** Daily Environ Rep 2013 Sep 24. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36690121&vname=dennotallissues&wsn=498623500&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Day J. **Chesapeake Bay: six bay states must increase efforts to meet TMDL mandates, official says.** Daily Environ Rep 2013 Sep 23. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36648185&vname=dennotallissues&wsn=498661500&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Saiyid AH. **Chesapeake Bay: federal court upholds EPA restoration plan in setback for agricultural groups.** Daily Environ Rep 2013 Sep 16. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36502312&vname=dennotallissues&wsn=498842500&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Saiyid AH. **Water pollution: EPA guidance says states may adopt combined criterion for nitrogen, phosphorus.** Daily Environ Rep 2013 Sep 16. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36502303&vname=dennotallissues&wsn=498851500&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Chesapeake Bay: innovative nutrient controls seen aiding Chesapeake. Daily Environ Rep 2013 Sep 11. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36360874&vname=dennotallissues&wsn=498963000&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Saiyid AH. **Water pollution: EPA says states should list polluted waters even in absence of numeric nutrient criteria.** Daily Environ Rep 2013 Sep 5. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36197502&vname=dennotallissues&wsn=499855000&searchid=21337660&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

Ware P. **Water pollution: increased alkalinity in U.S. rivers could threaten utilities, ecosystems, study says.** Daily Environ Rep 2013 Sep 3. Available from:
http://esweb.bna.com/eslw/1245/split_display.adp?fedfid=36102592&vname=dennotallissues&wsn=499922500&searchid=21338262&doctypeid=2&type=date&mode=doc&split=0&scm=1245&pg=1

For Greenwire subscribers (including EPA staff):

Public health: allergy-causing ragweed set to thrive in warmer climate. ClimateWire 2013 Sep 25. Available from: <http://www.eenews.net/climatewire/stories/1059987782/>

Snider A. **Mississippi River: judge orders EPA to set nutrient standards -- or explain why they're not needed.** Greenwire 2013 Sep 24. Available from: <http://www.eenews.net/greenwire/stories/1059987764/>

Water pollution: acid rain drives alkalinity jump in eastern U.S. rivers – study. Greenwire 2013 Sep 13. Available from: <http://www.eenews.net/greenwire/stories/1059987209/>

Ogburn SP. **Science: ocean warming changes chemical cycles in plankton – study.** ClimateWire 2013 Sep 9. Available from: <http://www.eenews.net/climatewire/stories/1059986874/>

Reports

Chesapeake Bay Program Scientific and Technical Advisory Committee. 2013. **Real world wastewater technologies workshop: advancing the world we live in - exploring cutting edge wastewater treatment technologies, Wednesday, May 16, 2012, Richmond, Virginia, STAC workshop report.** STAC Publ. No. 13-003. Edgewater, MD: STAC, 2013 Sep. pp. 24. Available from: http://www.chesapeake.org/pubs/303_Spano2013.pdf

Keehner D. **Information concerning 2014 Clean Water Act sections 303(d), 305(b), and 314 integrated reporting and listing decisions.** Memorandum from Denise Keehner, Director, Office of Wetlands, Oceans, and Watersheds to Water Division Directors, Regions 1 – 10; Robert Maxfield, Director, Office of Environmental Measurement and Evaluation, Region 1, September 3, 2013. Washington, DC: United States Environmental Protection Agency Office of Water, 2013. Available from: <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/2014-memo.cfm>

Web Pages

United States Environmental Protection Agency. **Nutrient pollution** [Internet]. Available from: <http://www2.epa.gov/nutrientpollution> [Last updated on September 11, 2013.]

Mississippi River Collaborative [Internet]. Available from: <http://www.msrivercollab.org/home>