

APPENDIX G. Total Nitrogen, Sedimentation/Siltation, and Other Non-Standards-Based Pollutants as Causes of Use Impairment in the Integrated 305(b)/303(d) Water-Quality Report

Background

In reporting-cycle 2008, the Illinois Environmental Protection Agency (Illinois EPA) dissociated all instances of *total nitrogen* as a cause of impairment of Aquatic Life Use from the impaired-waters list submitted to the U.S. Environmental Protection Agency (USEPA). Similarly, Illinois EPA dissociated some instances of *sedimentation/siltation* as a cause of impairment of Aquatic Life Use. As of February 2019, USEPA had deferred deciding whether to approve some of these changes. Now, USEPA and Illinois EPA have achieved resolution on these deferred decisions. Additionally, USEPA and Illinois EPA agree about how Illinois EPA can begin to address various pollutant causes, of use impairment, that remain associated with the latest "303(d)" list of impaired waters, but that are not based on Illinois water-quality standards. Such causes include—but are not necessarily limited to—phosphorus in water and each of various chemical substances in sediment. In agreement with USEPA, Illinois EPA presents the following resolution, with distinct application to reporting cycle 2018 relative to future cycles.

Reporting Cycle 2018

For the cycle-2018 integrated water-quality report, Illinois EPA adds *total nitrogen* as an observed effect for each of 66 stream segments (i.e., Assessment Units) for which USEPA deferred decision as of February 2019 (Table 1). Also, Illinois EPA adds *sedimentation/siltation* as an observed effect for each of two stream segments (Table 2).

Reporting Cycles 2020 and Later

Observed Effects

For the cycle-2020 and later integrated water-quality reports, if Aquatic Life Use becomes attained in a stream segment with which at least one of the two aforementioned observed effects is associated, then Illinois EPA will dissociate the observed effect because the use is no longer impaired. For stream segments having at least one of the observed effects and for which Aquatic Life Use remains not attained, Illinois EPA may opt to assess removal of the observed effect(s). To assess removal of the observed effects requires applying the relevant Illinois EPA cause guidelines used during reporting cycle 2006. Specifically, to justify removal of *total nitrogen* as an observed effect would require that none of the most recent, applicable results of nitrate/nitrite in water exceeds 7.8 mg/l. To justify removal of *sedimentation/siltation* as an observed effect would require that none of the most recent, applicable observations of stream-bottom composition indicate more than 50% of the stream bottom comprising silt, mud, or equivalent fine sediment. Typically, the most recent, applicable results are those from a three-year period—consistent with prevailing Illinois EPA assessment methodology. Illinois EPA will not apply these guidelines for any new identifications of observed effects or causes of impairment. However, if Illinois adopts a new, numeric water-quality standard for total nitrogen or

sedimentation/siltation (subject to USEPA approval) and Illinois EPA develops a corresponding standards-based guideline for either substance as a cause of Aquatic Life Use impairment, then the aforementioned approach for removing an observed effect no longer applies.

Non-standards-based pollutant causes of use impairment

In reporting cycle 2020, several pollutant causes of use impairment remain associated with impaired waters despite these causes lacking a basis in Illinois water-quality standards. In past reporting cycles, Illinois EPA applied various cause guidelines that were not based on Illinois water-quality standards. Illinois EPA has since stopped using these cause guidelines, yet causes remain as a result of past application. Starting in cycle 2020 and extending to later cycles, Illinois EPA may opt to dissociate (remove) these causes of impairment even if the relevant use remains not attained. To assess removal of these causes requires applying the relevant cause guidelines that Illinois EPA last used to identify these causes. Specifically, for any such cause, to justify removal would require that none of the most recent, applicable results or observations exceed the former cause guideline. Illinois EPA will not apply these former guidelines for any new identifications of causes of use impairment. However, if Illinois adopts a new, numeric water-quality standard for any of the relevant pollutants (subject to USEPA approval) and Illinois EPA develops a corresponding standards-based guideline for the pollutant as a cause of use impairment, then the aforementioned approach to remove the cause no longer applies.

Table 1. Cycle-2018 Assessment Units for which USEPA deferred decision—as of February 2019—on Illinois EPA's cycle-2008 dissociation of *total nitrogen* as a cause of Aquatic Life Use impairment. (Assessment Unit IL_MNID-C4 was formerly named IL_TM-36 in 2008.) For reporting cycle 2018, Illinois EPA adds *total nitrogen* as an observed effect for each Assessment Unit except IL_DSQ-03 and IL_GI-06, in which the relevant aquatic-life use is attained.

Assessment Unit	Name	2018 Attainment Status of Aquatic Life Use or Indigenous Aquatic Life Use
IL_BFC-11	Robinson Creek	Not supporting
IL_BFC-19	Robinson Creek	Not supporting
IL_BFC-25	Robinson Creek	Not supporting
IL_BFC-26	Robinson Creek	Not supporting
IL_CC-FF-C3	Pond Creek	Not supporting
IL_DAF-01	Taylor Creek	Not supporting
IL_DQA-01	East Bureau Creek	Not supporting
IL_DRD	Mendota Creek	Not supporting
<i>IL_DSQ-03</i>	<i>North Fork Vermilion River</i>	<i>Fully supporting</i>
IL_DSQC-01	Kelly Creek	Not supporting
IL_DT-18	Fox River	Not supporting
IL_DZZP-03	Farm Creek	Not supporting

IL_E-05	Sangamon River	Not supporting
IL_EIG-01	Lake Fork	Not supporting
IL_EL-01	Spring Creek-West	Not supporting
IL_EO-01	South Fork Sangamon River	Not supporting
IL_EO-02	South Fork Sangamon River	Not supporting
IL_G-07	Des Plaines River	Not supporting
IL_G-11	Des Plaines River	Not supporting
IL_G-15	Des Plaines River	Not supporting
IL_G-22	Des Plaines River	Not supporting
IL_G-28	Des Plaines River	Not supporting
IL_GB-11	Du Page River	Not supporting
IL_GB-16	Du Page River	Not supporting
IL_GBK-05	West Branch Du Page River	Not supporting
IL_GBL-08	East Branch Du Page River	Not supporting
IL_GBL-10	East Branch Du Page River	Not supporting
IL_GBL-11	East Branch Du Page River	Not supporting
IL_GCB	Jackson Branch	Not supporting
IL_GGF	Frankfort Trib	Not supporting
<i>IL_GI-06</i>	<i>Chicago Sanitary And Ship Canal</i>	<i>Fully supporting</i>
IL_GK-03	Flag Creek	Not supporting
IL_GL-03	Salt Creek	Not supporting
IL_GL-09	Salt Creek	Not supporting
IL_GL-10	Salt Creek	Not supporting
IL_GL-19	Salt Creek	Not supporting
IL_GLA-02	Addison Creek	Not supporting
IL_GLA-04	Addison Creek	Not supporting
IL_HB-42	Little Calumet River South	Not supporting
IL_HBD-06	Thorn Creek	Not supporting
IL_HBDC	Deer Creek	Not supporting
IL_HBDC-02	Deer Creek	Not supporting

IL_HCC-07	North Branch Chicago River	Not supporting
IL_HCCA-02	North Shore Channel	Not supporting
IL_HCCC-04	Middle Fork North Branch Chicago River	Not supporting
IL_HCCD-09	Skokie River	Not supporting
IL_IK-SP-C1A	Maxwell Creek	Not supporting
IL_JMAABA-C1	Stokey Creek	Not supporting
IL_JNA-01	Canteen Creek	Not supporting
IL_LDD-23	Cedar Creek	Not supporting
IL_LDDC	Markham Creek	Not supporting
IL_LDD-C2	Cedar Creek	Not supporting
IL_MNID-C4	Mud Run	Not supporting
IL_OC-03	Richland Creek-South	Not supporting
IL_OC-90	Richland Creek-South	Not supporting
IL_OD-06	Silver Creek	Not supporting
IL_OJCB-19	Sewer Creek	Not supporting
IL_OJK-03	Town Creek	Not supporting
IL_OT-02	West Okaw River	Not supporting
IL_PBE-01	Geneseo Creek	Not supporting
IL_PBI-03	Spring Creek	Not supporting
IL_PEE-01	Otter Creek	Not supporting
IL_PH-17	Elkhorn Creek	Not supporting
IL_PLB-C3	Beach Creek	Not supporting
IL_PQ-13	Kishwaukee River	Not supporting
IL_PQEC-C	Lawrence Creek	Not supporting
IL_PWF-W-C1	Coolidge Creek	Not supporting
IL_PWL-01	Winneshiek Creek	Not supporting

Table 2. Cycle-2018 Assessment Units for which USEPA deferred decision—as of February 2019—on Illinois EPA's cycle-2008 dissociation of *sedimentation/siltation* as a cause of Aquatic Life Use impairment. For reporting cycle 2018, Illinois EPA adds *sedimentation/siltation* as an observed effect for each of these two Assessment Units.

Assessment Unit	Name	2018 Attainment Status of Aquatic Life Use
IL_AT-05	Saline River	Not supporting
IL_ATH-02	South Fork Saline River	Not supporting