BETTER, FASTER, CHEAPER:
WATER QUALITY TRADING OPPORTUNITIES IN ILLINOIS

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Illinois has made significant strides in cleaning the state's waterways since the Clean Water Act was passed in 1972. However, future advances may prove more challenging. In the course of securing the gains in water quality to date, most of the "low hanging fruit" has already been harvested, and most cost-effective means of controlling point sources have been largely exhausted.

Reaching our water quality goals by simply continuing the conventional approach of tightening limits on point sources of water pollution will become increasingly difficult, as the cost of reductions increases substantially with ever-more expensive end-of-pipe technologies. Making sure that Illinois' waterways are clean is an essential goal. Therefore, it is worth exploring other regulatory mechanisms that offer a way to reduce pollution in a more cost-effective manner.

Over the last decade, states, industry, and environmental groups have discovered that water quality improvement goals can be met at lower cost and with greater flexibility by using a voluntary water quality trading (WQT) program. Trading leverages the reality that sources in a watershed can face very different costs to control the same pollutant. Trading programs allow facilities facing higher pollution control costs—such as wastewater treatment plants or municipalities with stormwater permits—a creative way to meet their regulatory obligations. The facilities do this by purchasing lower cost, environmentally equivalent (or superior)

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pollution reductions (or credits) from another source. These other sources include farms that use conservation practices to efficiently reduce the movement of nitrogen, phosphorus, and sediment from their fields into local waterways. For example, Virginia's nutrient trading program to offset stormwater phosphorous loads from new development has saved more than a $1 million in water quality goals while providing economic incentives to local agricultural producers to reduce soil erosion and runoff.[2]

Illinois has a proud history of using market-based methods to reduce pollution. Our leadership in sulfur dioxide (SO_2), nitrogen oxides (NO_x), and volatile organic material (VOM) trading helped Illinois businesses and consumers achieve early and sustainable emission reductions at much lower costs than traditional command and control methods. Chicago's futures exchanges pioneered the use of financial instruments to facilitate environmental trading. The first greenhouse gas trading market, the Chicago Climate Exchange, was born right here more than fifteen years ago. In the area of water quality, the Piasa Creek Watershed Project used innovative techniques to reduce silt build-up in the Mississippi River, achieving superior environmental performance at significantly reduced costs via a public-private partnership.[3]

We have the opportunity to build on this record of accomplishment in order to address our remaining critical water challenges.

This paper will explore the opportunities presented for WQT in Illinois. First, we examine where water regulation has taken us thus far, both in Illinois and around the country. Then, we discuss the basics of WQT and water quality markets. We then review existing

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[2] *See Comparison Tables of State Nutrient Trading Programs in the Chesapeake Bay Watershed*, WORLD RES. INST. (2011), *available at* http://pdf.wri.org/factsheets/comparison_tables_of_state_chesapeake_bay_nutrient_trading_programs.pdf.

[3] *See Piasa Creek Watershed Home Page*, GREAT RIVERS LAND TRUST, http://www.greatriverslandtrust.com/piasa-creek-watershed/ (last visited Oct. 2, 2016).

guidance on program design and trading programs in other states. Our conclusion: the time is right for Illinois to carefully consider WQT policies.

I. WATER QUALITY IN ILLINOIS

A. HISTORY

The Clean Water Act (CWA), enacted into law in 1972, aims to restore and maintain the chemical, physical, and biological integrity of the nation's waters.[4] The CWA delineates sources of water pollution between point sources (any discernible, confined and discrete conveyance, such as a pipe from a wastewater treatment facility) and nonpoint sources (diffuse sources such as water runoff from agricultural land). While the CWA directly controls point source pollution, it does not mandate controls for nonpoint source pollution.

Existing Illinois regulations implement the requirements on point sources of water pollution, and to good effect: 62.1% of Illinois streams, 92.8% of Illinois lakes, and all of Lake Michigan open waters are rated "good" for aquatic life use by the Illinois Environmental Protection Agency (Illinois EPA).[5] However, a variety of pollutants (including mercury, nutrients, sediments, temperature, chlorides, and low dissolved oxygen) still threaten Illinois' waters. According to a recent assessment, approximately 57.5% of the assessed stream miles and 98.7% of the assessed lake acreage is impaired, [6] mostly due to nonpoint source pollution.[7]

To address these impaired waters, Illinois has developed hundreds of total maximum daily load (TMDL) designations. These designations limit the level of pollution from all sources

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[4] 33 U.S.C. § 1251 *et seq.*

[5] *To Provide and Maintain a Healthful Environment: Biennial Report 2011–2012*, ILLINOIS EPA, at 22–23 (2013), *available at* http://www.epa.state.il.us/biennial-report/2011-2012-report.pdf.

[6] *Illinois' Nonpoint Source Management Program* ILLINOIS EPA, (2013), *available at* http://www.epa.state.il.us/water/watershed/publications/nps-management-program/index.pdf.

[7] *Illinois' Nonpoint Source Management Program*, ILLINOIS EPA, at 1 (2013), *available at* http://www.epa.state.il.us/water/watershed/publications/nps-management-program/index.pdf.

that may enter these waterbodies.[8] The task for state regulators, then, is clear: these impairments must be addressed. The question, though, is by what means?

B. ILLINOIS REGULATIONS ADDRESSING SURFACE WATER QUALITY

Illinois implements the CWA through provisions in the Illinois Environmental Protection Act and related state regulations.[9] Under these regulations, the Illinois EPA issues permits that control point source pollution discharges. For example, a permit for a water treatment system must set a numerical limit on effluent discharge.[10] The Illinois EPA does not directly control nonpoint source pollution, which is addressed through indirect management programs such as watershed-based plans, TMDL designations, and load reduction strategy implementation plans.[11] The Illinois EPA also issues grants to fund nonpoint source control activities.[12]

However, these regulations alone cannot make Illinois' water completely clean. In 1994, the Illinois Department of Energy and Natural Resources found that despite general improvement in Illinois' streams and lakes, nutrients (phosphorus and nitrite/nitrate nitrogen) from nonpoint agricultural sources significantly affected the state's waters.[13] Almost twenty-two years later, nutrient pollution from nonpoint sources still negatively affects Illinois' streams and lakes.[14] Similarly, phosphorus and nitrogen compounds from wastewater treatment facilities and storm sewers that discharge into water ways continue to present significant challenges. Additional reductions to both point and nonpoint source pollution, beyond those under existing programs, are needed to meet regulatory goals. Recent Illinois Pollution Control Board (Board) decisions

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[8] *Illinois Nutrient Loss Reduction Strategy*, ILLINOIS EPA, *et al.*, at 1–8 (2015), *available at* http://www.epa.illinois.gov/Assets/iepa/water-quality/watershed-management/nlrs/nlrs-final-revised-083115.pdf.
[9] 415 ILL. COMP. STAT 5/11 *et seq.* (2015); 35 ILL. ADMIN. CODE subtit. C (2015).
[10] 35 ILL. ADMIN. CODE § 309.141 (2015).
[11] NONPOINT SOURCE MANAGEMENT, *supra* note 7 at 49.
[12] *Id.* at 48.
[13] ILLINOIS DEP'T OF ENERGY AND NATURAL RES., THE CHANGING ILLINOIS ENVIRONMENT: CRITICAL TRENDS, VOLUME TWO 1 (summary) (1994), *available at* https://archive.org/details/changingillinois02illi.
[14] NONPOINT SOURCE MANAGEMENT, *supra* note 7 at 1.

in cases regarding the Chicago Area Waterway System are an example of these expanded requirements.[15]

These excess nutrients have adverse consequences, both local and national. Locally, these nutrients foster algae blooms that create low levels of dissolved oxygen in Illinois waterways.[16] The oxygen-depleted waters cannot sustain aquatic life, including fish, mussels and other creatures. Nationally, the same nutrients from urban sources and agricultural runoff make their way into the Gulf of Mexico, causing Gulf Hypoxia. When the nutrients reach the Gulf, they create "dead zones"—areas with low levels of dissolved oxygen and little aquatic life—covering more than 100 square miles. Illinois and surrounding states are primary contributors to the Gulf Hypoxia problem.[17] Thus, Illinois has substantial reasons to carefully consider innovative ways to reduce discharges of nutrients.

To do so, Illinois EPA expects to significantly lower discharge limits at point sources within the next ten years.[18] For example, Illinois EPA requires additional reductions from local wastewater treatment facilities as the National Pollution Discharge Elimination System permits come up for renewal.[19] However, reducing limits from these and other point sources comes at a significant cost. Illinois EPA estimates that the combined annual cost to could exceed $160 million. This will achieve only 44% of the target reduction for phosphorus discharges from point sources.[20] The remaining reductions are sure to be even more costly.

Given these mounting pressures, Illinois needs to unlock more cost-effective pollution reductions. The Illinois Nutrient Reduction Strategy recommends the promotion of WQT,

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[15] 35 ILL. ADMIN. CODE, tit. 35, §§ 302.47, 408 (2015); NONPOINT SOURCE MANAGEMENT, *supra* note 7 at 1.
[16] WATER QUALITY REPORT, *supra* note 6 at 72–81.
[17] NUTRIENT LOSS REDUCTION, *supra* note 8 at 1–8.
[18] *Id.* at 3–29.
[19] *Id.*
[20] *Id.* at 3–30.

urban/rural partnerships, or other offsets as part of watershed planning and implementation efforts.[21] We now examine the promise of WQT for achieving reductions in cost-effective nutrient discharges into Illinois waters.

II. WATER QUALITY TRADING POLICY

WQT has potential as a cost-effective means of reducing water pollution and has support in academic literature. It has been implemented in in several jurisdictions and is under active study in two neighboring states (Wisconsin and Iowa). Not all of the implemented programs have been successful; therefore, Illinois can learn from the positive and negative experiences. This section will examine the potential for cost-effective pollution reductions under such a policy, as well as the potential pitfalls to be avoided.

A. BACKGROUND PRINCIPLES

In general, WQT is a mechanism where point sources, nonpoint sources, and other parties can generate, sell, buy, trade, and retire credits that represent units of a particular pollutant allowed to be discharged into a common water body.[22] Depending on the structure of the program, these transactions can be arranged directly between participants or through an open market. The regulator's involvement is ideally limited to overseeing the authenticity of these transactions and the terms of permit compliance.

As in traditional regulatory frameworks, permit holders are still responsible for meeting overall discharge limits. However, both permit holders and others can share the burden of compliance. Dischargers with lower costs of reduction can over-control beyond their requirements, while others with higher compliance costs purchase excess reductions created by

[21] *Id.* at 5–11.

[22] James S. Shortle and Richard D. Horan, *The Economics of Water Quality Trading*, 2 INT'L REV. OF ENVT'L & RESOURCE ECONOMICS 101, 102 (2008).

lower cost compliers.[23] Entities without direct compliance requirements (e.g., nonpoint agricultural sources) can also create tradable credits by reducing nutrient runoff, using a variety of verifiable means. Trading mechanisms can be bilateral or operate via an electronic exchange on which offers to buy and sell are posted. Regulators play an important role: they ensure the integrity of the creation and retirement of the credits and verify actual reductions, as necessary. When properly designed and implemented, a WQT program can lead to environmental compliance that is better, cheaper, faster, and more sustainable. That has certainly been the case with major air trading programs.[24]

Trading works particularly well when pollution reduction strategies vary widely among dischargers (*i.e.*, both the means and costs of reducing particular pollutants). This is often true in water regulation, in that point sources typically install end-of-pipe technology or change production, while nonpoint sources (often agriculture) apply best management practices to their land.[25] A market between these parties could functionally equalize the price of effluent reductions between those with high costs and those with lower costs. Opportunities may also arise between point sources. Large wastewater treatment agencies may be able to exploit economics of scale and scope unavailable to smaller agencies. They may have financing and operational advantages as well. Creating incentives for them to over-comply may provide significant benefits for both.

WQT provides nonpoint sources with monetary incentives to implement best management practices and to contribute to water quality improvements within a watershed.

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[23] James Shortle, *Economics and Environmental Markets: Lessons from Water-Quality Trading*, 42 AGRIC. & RES. ECON. REV. 57, 66 (2013).

[24] Dallas Burtraw & Sarah Jo Szambelan, *U.S. Emissions Trading Markets for SO_2 and NO_x,* RESOURCES FOR THE FUTURE (Discussion Paper) (2009), *available at* http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-09-40.pdf.

[25] Karen Fisher-Vanden & Sheila Olmstead, *Moving Pollution Trading from Air to Water: Potential, Problems, and Prognosis*, 27 J. ECON. PERSPECTIVES 147, 161 (2013).

Collateral benefits can improve the overall return on investment, including creation of additional animal habitat, carbon dioxide emission offsets, and rural investment and jobs.[26]

B. EXISTING PROGRAMS AND PROGRAM GUIDANCE

Illinois need not start from scratch. Substantial information is already available, including guidance documents from U.S. Environmental Protection Agency and others.[27] Existing WQT markets include the Ohio River Basin nutrient trading program, the Greater Miami Watershed trading pilot program, and the Pennsylvania nutrient credit trading program.[28] Maryland and Virginia also have programs, primarily focused on improving water quality in the Chesapeake Bay.[29] The Iowa League of Cities is currently developing a framework for WQT in Iowa to support the State's Nutrient Reduction Strategy.[30] In Illinois, the State's Department of Agriculture and the Illinois Farm Bureau have a joint program that includes education about WQT opportunities.[31] Other groups, including the Nature Conservancy and the Environmental Defense Fund, are also promoting WQT as a solution that has significant environmental benefits.

1. DEFINING AND GENERATING UNITS OF TRADE

The first task is to determine how credits should be defined and generated. Agricultural producers, ranchers, and landowners can generate credits for sale in a water quality market by adopting best management practices. In the case of nutrients, these practices include livestock

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[26] *Building a Water Quality Trading Program: Options and Considerations*, WILLAMETTE PARTNERSHIP, at 49 (July 2012), *available at* http://willamettepartnership.org/wp-content/uploads/2015/06/BuildingaWQTProgram-NNWQT.pdf.

[27] 2003 USEPA Quality Trading Policy, 68 Fed. Reg. 1610 (January 13, 2003); 2015 EPA-USDA National Workshop on Water Quality Markets *, available at* http://www.oem.usda.gov/sites/default/files/CLEARED%20EPA%20USDA%20Workshop%20Report.pdf.

[28] SHORTLE, *supra* note 23, at 57, 64.

[29] CHESAPEAKE, *supra* note 2.

[30] Dustin Miller, *Overview of Water Quality Trading Programs*, IOWA LEAGUE OF CITIES, (2014), *available at* http://www.iowaagriculture.gov/WPAC/pdf/2014/WPACPowerpoint111414.pdf.

[31] NUTRIENT LOSS REDUCTION, *supra* note 8 at 1–8.

fencing, cover cropping, conservation tillage, wetland restoration, and filter strips. These water quality benefits can then be translated into tradable credits.[32]

Any source of pollution—point or nonpoint—can be eligible to engage in WQT transactions. The geographic boundaries of a trading program should generally be limited to a single waterway or waterway system, reflecting that water pollution does not generally mix across water bodies. Trading should "coincide with a watershed or TMDL boundary," such that a trade affects the same water body or stream segment.[33] Third parties could also purchase credits voluntarily, simply to create a water quality benefit. For instance, conservation groups or businesses could purchase and retire credits to improve water quality or meet corporate sustainability goals.[34]

2. DURATION OF CREDITS

There is also a temporal dimension to water quality credits, in that they may be seasonal, annual, or permanent. But a credit may only be effective during its designated life span. Certain types of pollution reduction projects may continue to generate credits for many years.[35] Some practices can generate credits immediately, such as conservation tillage. Others take longer to mature, such as filter strips and reforestation. Some trading programs account for the time delay by releasing credits in progressive stages or by coordinating program growth targets with a compliance schedule in a permit.[36]

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[32] FISHER-VANDEN, *supra* note 25, at 159.
[33] U.S. EPA, Water Quality Trading Policy, 68 Fed. Reg. 1610 (January 13, 2003); WILLAMETTE, *supra* note 26, at 21, 24, 38.
[34] WILLAMETTE, *supra* note 26, at 34.
[35] *Id.* at 95, 115.
[36] *Id.* at 111.

3. QUANTIFYING CREDITS.

With many different ways of generating credits across diverse land use and agriculture operations, establishing a uniform methodology accounting for all types of load reductions is important. In order to quantify credits, nonpoint sources may use standard calculations, confirmed by periodic sampling to establish credits that are quantifiable and creditable. Such nonpoint sources would need to consider a more complex mix of factors than a point source. This reflects the dynamics of a living system, taking into account, for example, the time it takes for a land management project to establish during a growing season and its ultimate lifespan.

Approaches to quantifying credits include modeling, use of pre-determined pollution reduction rates, and direct monitoring.[37] Pre-determined rates rely on setting standard values to reflect effectiveness of various conservation practices based on best available science. Monitoring is a direct, real-time approach to measuring water quality and pollutant load at the edge of the field and instream. Modeling, rather, uses a mathematical approach to predict performance. It can oftentimes be calibrated by field data to adapt to local conditions, such as the amount, timing, and manner of fertilizer applied to farmland. [38] Each method may be suitable to use, depending on the type of pollution reduction project.

C. POTENTIAL WATER QUALITY TRADING PROGRAM CHALLENGES

While the potential gains are sizable, several challenges face a prospective WQT program. This section will briefly discuss some notable potential issues.

1. UNCERTAINTY AND RISK IN QUANTIFYING CREDITS

Despite existing programs and guidance, challenges remain. While traditional exchange markets function reliably by trading highly standardized commodities, such as wheat or

[37] *Id.* at 66; SHORTLE, *supra* note 23, at 61.
[38] WILLAMETTE, *supra* note 26, at 66, 70-73.

industrial metals, such standardization is not yet common among water pollutants.[39] Credits from nonpoint sources cannot be measured in the same way as those from a point source. Pollutants in water from unpermitted nonpoint sources, like stormwater runoff or drainage from agricultural land, cannot be exactly measured.[40] Satisfactory methods of quantification and verification need to be developed and maintained to ensure the integrity of the trading system.

Contributions to water quality must be measured across pollutant reduction strategies, including a method of measuring risk. For instance, in the Great Miami River program, the administrators provided an insurance pool of "back-up credits" if the pollutant management projects failed.[41]

2. SETTING A TRADING RATIO

Trading ratios are another possible method to ensure environmental benefits are generated. Under this approach, more reductions from nonpoint sources are needed to offset reductions at point sources as a means to compensate for uncertainty.[42] For example, a 1.2:1 trading ratio would require 1.2 credits be generated by a nonpoint source to qualify for one credit used for compliance by a point source. Such ratios can be used to ensure the integrity of the trading program, by compensating for the inability to precisely quantify the reductions achieved by point sources.

However, care must be taken in creating such trading ratios. Taking a "belts and suspenders" approach by setting trading ratios too high or creating onerous verification requirements will create disincentives to entering into the market. Ideally, nonpoint sources

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[39] SHORTLE, *supra* note 23; James Shortle, *Water Quality Trading in Agriculture*, ORG. ECON. CO-OPERATION & DEV. (2012), *available at* https://www.oecd.org/tad/sustainable-agriculture/49849817.pdf.

[40] Sara Walker & Mindy Selman, *Addressing Risk and Uncertainty in Water Quality Trading Markets*, WORLD RES. INST. (2014), *available at* https://www.wri.org/sites/default/files/wri_issuebrief_uncertainty_3-9_final.pdf.

[41] Douglas Hall, *Great Miami River Watershed Water Quality Credit Trading Program*, MIAMI CONSERVANCY DIST. (2009), *available at* http://www.ctic.org/media/Aggregators_Dusty_Hall.pdf.

[42] FISHER-VANDEN, *supra* note 25, at 160–161.

should receive exactly the number of credits that correspond to the pollution reduction.[43] So, when possible, trading ratios should only be used in the face of actual, intransigent uncertainty. A program is more efficient when such ratios do not need to be used.

3. ENVIRONMENTAL JUSTICE

Like most environmental trading programs, WQT must carefully evaluate environmental justice concerns. Localized impacts of trading could disproportionately affect different communities, while economic advantages of trading may not be proportionately shared with landowners of lower socioeconomic means.[44] Any complete WQT policy should include provisions addressing these concerns.

However, in order to maximize the scope of a program and to encourage productive trades, the range of allowable trading locations should not be limited more than necessary. Ideally, different watersheds could be combined into a single trading program to the extent that such combinations would not undermine environmental quality and lead to hotspots.[45]

4. OTHER ISSUES

In several existing programs, disputes over the applicable limit on discharges have held back the value of credits, and therefore the volume of trades.[46] Unsurprisingly, when the value of a credit is very low or unclear, there are far fewer participants in the program. Without certainty, potential low compliance cost participants will be unlikely to invest in the creation of saleable credits. Similarly, the potential benefits of trading can be overcome by administrative complexity and costs.[47]

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[43] *Id.*
[44] WILLAMETTE, *supra* note 26, at 47.
[45] FISHER-VANDEN, *supra* note 25, at 165.
[46] *Id.* at 162.
[47] *Id.* at 164.

Some state programs have struggled to establish efficient, viable trading markets. Uncertainty about how trading works and fear of regulatory noncompliance may inhibit trading at the outset of a program.[48] Furthermore, "inadequate or poorly-enforced water quality regulations are the biggest hurdle to establishing robust markets."[49] Clearly defined goals are also essential: once the program goals are clearly defined (*i.e.*, they explicitly establish that the program is intended to meet delineated elements of water quality regulations), stakeholder engagement, education, and transparency become crucial to expanding programs and ensuring trust between participants.[50] Therefore, regulators, the program designers, administrators and other stakeholders must work closely together. Without this coordination, potential participants may not be willing to commit to the WQT program.

III. WATER QUALITY TRADING IN ILLINOIS

In developing and implementing a WQT program, Illinois would follow Oregon, the Chesapeake Bay states, and the Ohio River Basin states—all of which have created effective WQT programs.

Illinois regulators can leverage the knowledge of its wastewater and stormwater utilities, agricultural interests, environmental organizations, municipalities, citizen groups, environmental consultants, and equipment providers and operators. Fortunately, Illinois has a long and positive track record of cooperation in innovative pollution reduction programs. For example, in the Piasa Creek Watershed Project a "water utility (Illinois-American [Water Company]), the Illinois Environmental Protection Agency, the Illinois Pollution Control Board, the Great Rivers Land Trust, and the local interest groups banded together to devise creative solutions for reducing silt

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[48] Suzie Greenhalgh & Mindy Selman, *Comparing Water Quality Trading Programs: What Lessons Are There to Learn?*, 42 J. REG'L. ANALYSIS & POLICY 104, 121 (2012), *available at* http://www.jrap-journal.org/pastvolumes/2010/v42/v42_n2_a2_greenhalgh_selman.pdf.

[49] *Id.* at 122.

[50] *Id.* at 115.

in the Mississippi River."[51] To date, the Project has leveraged this cooperation with broad local community support to meet and exceed all of its pollution reduction goals.[52]

In this and other cases, the Board has granted adjusted standards to point source dischargers that have incorporated agricultural environmental projects. These projects take the form of water quality offsets, similar to potential trading provisions, recognizing that such projects would provide greater environmental benefits and be more cost effective than requiring end-of-pipe treatment. The adjusted standards were fashioned to achieve water quality offsets to result in a net zero or net reduction in pollutants entering the waterway.[53] For the Illinois-American Water Company, the Board found that an adjusted standard, along the with the environmental project, "is a much better and more cost effective way to obtain sediment loading reductions in the watershed than employing other options to remove residuals from [the facility's wastewater]."[54]

Beyond the offsets available through the Board's adjusted standard process, a full WQT program allows a broader scope of participants to interact in a new arena. Designing a trading framework, and eventually implementing a trading program, will require cooperation. Beyond achieving permit compliance, WQT may also lend itself as an avenue for environmental mitigation in enforcement and settlement cases. Similar to Supplemental Environmental Projects,

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[51] Mark W. LeChevallier, *The Piasa Creek Watershed Project: Cleaning up the muddy Mississippi*, AM. WATER WORKS ASS'N J. 30–31 (2005), *available at* http://amwater.com/files/cr-Piasa-Creek-JAWWA-article.pdf.

[52] GREAT RIVERS, *supra* note 3.

[53] Petition of Illinois American Water Company's (IAWC) Alton Public Water Supply Replacement Facility Discharge to the Mississippi River for an Adjusted Standard from 35 Ill. Adm. Code 302.203, 304.106, and 304.124, AS 99-6 (Illinois Pollution Control Board Sept. 7, 2000) (petition for an adjusted standard for offensive discharges and conditions, and discharges of total suspended solids and iron); Petition of City of East Moline and IEPA for an Adjusted Standard from 35 Ill. Adm. Code 304, AS 91-9 (Illinois Pollution Control Board May 19, 1994); Petition of City of Rock Island for an Adjusted Standard from 35 Ill. Adm. Code 304, AS 91-13 (Illinois Pollution Control Board Oct. 19, 1995).

[54] AS 99-6, *infra* note 52, slip op. at 20.

parties could potentially use a WQT marketplace to purchase and retire credits in order to mitigate environmental harm or to provide a net environmental benefit.

IV. CONCLUSION

WQT provides an opportunity for Illinois to develop innovative solutions to increasingly expensive command and control means of regulation. Harnessing the power of markets can expand the opportunities for pollution reduction, *e.g.*, from currently unregulated agricultural nutrient run-off. Financial incentives are powerful mechanisms that hold the promise of improving water quality and fostering environmental benefits, all while creating favorable financial results for both creators and purchasers of WQT credits. Additionally, Illinois stands to benefit from the opportunity to generate a new tradable commodity, create new jobs, restore habitat, and improve ecosystems. It is time for Illinois to begin the process of considering what type of trading programs would work for the benefit of its citizens and the environment.