

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO)
CLEAN CONSTRUCTION OR DEMOLITION) R12-9
DEBRIS FILL OPERATIONS (CCDD):) (Rulemaking – Land)
PROPOSED AMENDMENTS TO 35 Ill.)
Adm. Code 1100)

NOTICE OF FILING

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Attached Service List

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board the Illinois Environmental Protection Agency's Testimony of Richard P. Cobb, P.G., and Testimony of Douglas W. Clay, P.E., copies of which are herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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DATE: March 5, 2012

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PRE-FILED TESTIMONY OF RICHARD P. COBB, P.G., ON
POLLUTION CONTROL BOARD'S FIRST NOTICE PROPOSAL

My name is Richard P. Cobb. I am a licensed professional geologist and the Deputy Manager of the Division of Public Water Supplies of the Illinois Environmental Protection Agency's ("Agency") Bureau of Water ("BOW"). My primary responsibilities include managing the Groundwater and Source Water Protection, Field Operations, and the Administrative Sections of the Division. Further, I assist with administering the public water supervision program under the federal Safe Drinking Water Act ("SDWA"). Additionally, my responsibility includes the integration of source water protection with traditional water supply engineering and treatment practices, and to further assist with linking Clean Water Act, SDWA, and groundwater programs.

I also directly manage the BOW's Groundwater Section. The Groundwater Section applies Geographic Information System ("GIS") programs, global positioning system technology, hydrogeologic models (including, 3D geologic visualization, vadose zone, groundwater flow, particle tracking, solute transport, and geochemical models), and geostatistical programs for groundwater protection and remediation. I represent the BOW on the Agency's Contaminant Evaluation Group, Strategic Management Planning Team, Environmental Justice Committee, Information Management Steering Committee, GIS Steering Committee and the LEED (Leadership in Energy and Environmental Design for Existing Building (LEED-EB))

Committee. Since 1985 I have worked on the development of legislation, rules, and regulations. I have also served as a primary Agency witness at Illinois Pollution Control Board (“Board”) proceedings in the matters of groundwater quality standards, technology control regulations, regulated recharge areas, maximum setback zones, clean-up regulations, and water well setback zone exceptions. Furthermore, I have served as a primary Agency witness in enforcement cases under these laws and regulations. For further details on my qualifications I have included a copy of my Curriculum Vitae as Attachment One.

This testimony and related exhibits are in response to the Board’s decision to remove groundwater monitoring requirements from the Agency’s proposed amendments to 35 Ill. Adm. Code 1100. For the reasons set forth below, the Agency urges the Board to reconsider its decision and adopt for Second Notice the Agency’s proposed certification procedures and groundwater monitoring requirements in Subparts B and G.¹

The Board provided the following reasons for its removal of the groundwater monitoring requirements presented in the Agency’s proposal: 1) The record does not include evidence to demonstrate that CCDD or uncontaminated soil fill sites are a source of groundwater contamination; 2) the record indicates that requiring groundwater monitoring would impose potentially sizable costs that may have adverse impacts on the fill operations including closures; and 3) CCDD and uncontaminated soils are not classified as wastes, so do not require the stringent rules that exist for non-hazardous waste landfills. First Notice Opinion at 57. As an alternative to groundwater monitoring, the Board has proposed enhanced soil certification procedures for source site owner/operators based on screening and assessment procedures

¹ In this document, the Board’s First Notice Opinion and Order is cited as “First Notice Opinion [Order] at ____.” Exhibits are cited as “Exh. ____ at ____.” The transcript of the September 26, 2011, hearing is cited as “TR 1 at ____”; the transcript of the October 25, 2011, hearing is cited as Tr. 2 at ____”; the transcript of the October 26, 2011, hearing is cited as Tr. 3 at ____”; the Agency’s Statement of Reasons is cited as “SOR at ____”; the Agency’s Pre-First Notice Comments are cited as “PC#9 at ____.”

conducted in accordance with ASTM standards and accompanied by analytical testing data demonstrating compliance of soil from potentially impacted properties (“PIP”) with the maximum allowable concentrations (“MAC”) of contaminants. *Id.* at 63. The Board also proposes adoption of the Agency’s approach to establishing MACs. *Id.* at 70.

The Agency’s position is that, although important, the certification and screening procedures have their limitations and cannot be expected to carry the entire weight of protecting against groundwater contamination. Taken as a whole, even well-run CCDD and soil-only fill operations have the potential to contaminate the State’s groundwater resources. Documented proof of groundwater contamination from fill operations is not prerequisite to adopting groundwater monitoring requirements. The State’s long-standing policy is to prevent groundwater contamination and preserve the State’s groundwater resources for current and future beneficial uses. Due at least in part to limitations in the current record, the Board has not fully considered the costs of groundwater contamination and the value of preventing contamination. These points will be developed further in my testimony.

1. Potential for groundwater contamination from CCDD and soil-only fill operations

The Agency concluded very early in its discussions of regulatory development that the potential for groundwater contamination from fill operations cannot simply be dismissed and that groundwater monitoring is a necessary component of Part 1100 because of the potential for groundwater contamination. Testimony of Mr. Nightingale, Exh. 1 at 24 – 25; Tr. 1 at 67. Moreover, the Agency believes the potential is substantially the same for CCDD and soil-only fill operations because the soil rather than the CCDD is more likely to contain and transfer contaminants to groundwater. Testimony of Mr. Clay, TR. 1 at 33 – 34; PC#9 at 4.

The Agency’s position on groundwater monitoring has evolved since the first Part 1100

rulemaking in 2006 based on (1) the recently adopted statutory requirements in Sections 22.51 and 22.51a of the Act to ensure protection of groundwater resources at fill operations, and (2) the Agency's development of the MACs and its focus on the effectiveness of the certification and screening requirements to ensure compliance with the MACs. 415 ILCS 5/22.51, 22.51a (2010). In the Agency's proposal, the first two mechanisms for preventing groundwater contamination at fill operations are the establishment of the MACs at levels protective of human health (including the groundwater ingestion exposure route) and the certification and screening procedures. The third layer of protection in the Agency's proposal is the groundwater monitoring system. It will act as a check on the effectiveness of the certification and screening procedures, provide incentive for fill site owner/operators to maintain and improve their load checking practices, and serve as a protective measure by identifying groundwater contamination from fill operations and triggering corrective action before contamination reaches costly proportions.

The initial factor influencing the Agency's proposal for groundwater monitoring is the statutory command to propose and adopt standards and procedures necessary to protect groundwater. This indicates to the Agency that the legislature already has concluded there is potential for groundwater contamination from facilities accepting large quantities of soil from nearly unlimited sources and locations that may contain concentrations of contaminants. *Id.* §§ 22.51(f)(1), 22.51a(d). The only question remaining for the rulemaking is how groundwater protection will be accomplished.

Another factor influencing the Agency's proposal is the limited effectiveness of the certification and screening procedures in ensuring compliance with the MACs. If there is no groundwater monitoring, the certification and screening procedures must achieve without fail a very high level of compliance with the MACs for soil accepted at fill operations. Whether it is

the Agency's proposal or the Board's enhanced proposal, the Agency believes it is unreasonable to expect this consistently high level of performance of the certification and screening procedures. The inclusion of groundwater monitoring as a final check and preventive measure reduces the reliance on the effectiveness of the certification and screening procedures for preventing groundwater contamination. This approach also keeps more of the regulatory focus on the fill operations that are the subjects of Sections 22.51 and 22.51a and places less focus on the source-site owner/operators who are incidental to the statutory scheme. Instead of imposing additional costs and delays on thousands of source-site owner/operators for enhanced certification procedures with uncertain outcomes, the additional costs of groundwater monitoring on fewer than 200 fill operations could be allocated proportionately through tipping fees for all fill site users.

The screening procedures proposed at Section 1100.205 are based on load checking requirements using visual and olfactory observations and photo ionization detectors ("PID"). Visual and olfactory observations are useful but hardly sufficient for obvious reasons. PIDs also have their limitations including, but not limited to, detection only of certain volatile chemical constituents, susceptibility to interferences (*e.g.*, power lines, transformers, other electrical fields), and reliability under certain weather conditions (*e.g.*, high winds, high humidity, rain). The Agency considered requiring the use of X-ray fluorescence ("XRF") for the detection of metals but concluded the method was expensive and even less effective for this purpose than PIDs. The Board has requested additional information on the cost and effectiveness of XRF screening. First Notice Opinion at 70 – 71. The Agency will submit additional testimony or comment on this issue. The Board clearly shares the Agency's concerns with the limitations of the facility screening requirements, and noted that its enhanced certification procedures are

intended in part to compensate for deficiencies in these procedures. *Id.*

The Agency also believes the certification procedures are inherently flawed. As proposed by the Agency, the certification procedures were modeled on the statutory interim scheme at Section 22.51(f)(2) and 22.51a(d)(2). The Agency understands the statutory interim certification scheme as a “quick cut” for source-site owner/operators to determine property classification as a basis for exemption from further procedures and as a requirement for professional review by licensed professional engineers (“LPE”) or geologists (“LPG”) only for commercial/industrial properties. Using the property use classifications of “commercial” and “industrial” as surrogates for properties most likely to be contaminated, the statutory interim scheme allows all other properties to be certified by source-site owner/operators as contaminant-free.

Even brief reflection reveals this approach is flawed. It is at once over-inclusive and under-inclusive. Non-commercial/industrial properties (*e.g.*, residential, agricultural) are not without potential for certain types of contamination (*e.g.*, heating oil, pesticides, lead paint), especially when historic uses and uses of adjacent properties are considered. On the other hand, many commercial establishments never manage supplies or products with the potential for environmental contamination (*e.g.*, banking, insurance, most retail establishments). The source-site owner/operator certifications are based on an honor system where a combination of understanding of the requirements and motivation to achieve compliance is required and presumed, but little incentive is provided. Additional costs and delays are the “reward” for source-site owner/operators identifying a contaminated property. Certifications for commercial/industrial properties are more reliable because of the involvement of LPEs and LPGs, but the property classifications themselves often are less than clear as applied to specific

instances (e.g., rental properties, governmental properties) so that it is frequently uncertain if LPEs or LPGs even should be consulted.

Nonetheless, the Agency also understands the advantage of the “quick-cut” nature of the statutory scheme is that it places a relatively lighter portion of the compliance burden on source-site owner/operators and their contractors whose primary concerns are their construction/demolition projects and minimizing related costs and delays. Even these statutory interim procedures received strongly negative reactions from source-site owner/operators and contractors at Agency outreach meetings held shortly after enactment of the legislation. To maintain the statutory allocations of burdens, the Agency kept the dual certification scheme but changed the certifications based on property classifications as surrogates for contamination to certifications based on assessments of each property’s actual potential for contamination – “potentially impacted property.” For source-site owner/operators the Agency’s proposal remains a “quick-cut” scheme based primarily on an honor system, but the “potentially impacted property” approach should be more accurate for triggering assessments by LPEs and LPGs than the surrogate approach for identification of contaminated properties. Moreover, the Agency’s proposal does not directly shift additional costs and delays of uncontaminated soil regulation from fill operations to source-site owner/operators. When combined with groundwater monitoring systems at fill operations, the Agency believes its proposal compensates for the weaknesses of the certification and screening procedures in ensuring compliance with the MACs, and is more protective of the State’s groundwater resources than reliance on certification and screening alone.

The Board’s approach to overcoming the weaknesses of the certification and screening procedures is to strengthen the procedures for source site owner/operator certifications by

requiring the procedures to be conducted in accordance with ASTM standards and by requiring analytical testing data demonstrating compliance of soil from potentially impacted properties with the MACs. First Notice Opinion at 1, 55 – 56, 70 – 71. The Agency agreed at hearing that the ASTM procedures could provide useful guidance to both source-site owner/operators and LPE/LPGs making certification statements, but it did not believe the ASTM procedures should be made mandatory in all cases because they may be too prescriptive and reduce flexibility in many circumstances. Testimony of Mr. Clay, Tr. 3 at 8 – 11. The Agency will provide testimony by Mr. Clay on its concerns with the Board's revisions to the certification procedures. Although the Agency acknowledges the Board's enhanced procedures are likely to obtain better compliance with the MACs than the statutory interim certification procedures or the Agency's proposed certification procedures, for this testimony, it is enough to say the Agency does not share the confidence of the Board in the effectiveness of the Board's proposed revisions.

Even the Board's simplest procedure for uncontaminated soil certifications by source-site owner/operators using the ASTM E 1528-06 due diligence procedure raises the same concerns as the Agency's proposed certification requirements. This procedure is complex. Its use will result in additional costs and significant delays for the projects of source-site owner/operators that generate the soil. To achieve a high level of compliance with the MACs, it will require sophisticated users familiar with legal and environmental concepts, databases, and so forth, and who are diligent in their performance of the procedure and highly motivated to reach an accurate result. Rather than believing this standard of performance will be achieved at a consistently high level by thousands of users, the Agency's position is that groundwater monitoring provides a level of certainty that no other protective tool approaches. Its use enables the certification and screening procedures to assume a role more in keeping with their likely level of effectiveness

and reduces the costs and delays resulting from shifting primary responsibility for groundwater protection from fill operations to construction/demolition activities.

2. Documented proof of groundwater contamination is not required to adopt groundwater monitoring requirements

The Agency disagrees with the apparent conclusion of the Board that proof of groundwater contamination from CCDD or uncontaminated soil fill sites is prerequisite to the adoption of groundwater monitoring requirements for fill operations. First Notice Opinion at 53 - 54, 57. The Agency's position is that it is sufficient for the adoption of groundwater monitoring requirements to conclude that fill operations are potential sources of such contamination. The first section of my testimony has supplemented the record on the potential for groundwater contamination from fill operations. It is a long-standing policy in Illinois that groundwater is a resource of such current and future value that the State, its subdivisions, and "any person" may take legal action to prevent contamination of the resource such that current and future uses are not precluded and the beneficial uses of the resource are preserved. 415 ILCS 5/12(a), (d); 5/31(d); 5/3.315 (2010). Meeting these goals clearly requires a proactive approach to potential sources of groundwater contamination. Section 11(b) of the Environmental Protection Act ("Act") clearly states this policy of preservation and prevention:

It is the purpose of this Title [Title III: Water Pollution] to restore, maintain and enhance the purity of the waters of this State in order to protect health, welfare, property and the quality of life, and to assure that no contaminants are discharged into the waters of the State, as defined herein, . . . or from any source within the State of Illinois, without being given the degree of treatment or control necessary to prevent pollution or without being made subject to such conditions as are required to achieve and maintain compliance with State and federal law; . . .

415 ILCS 5/11(b) (2010) (emphasis added).² This policy is echoed with respect to groundwater

² "Contaminant" is any solid, liquid, or gaseous matter . . . from whatever source." 415 ILCS 5/3.170 (2010). "Waters" means all accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, which are wholly or partially within, flow through or border upon this State." *Id.* § 5/3.550.

in the Illinois Groundwater Protection Act (“IGPA”):

It is the policy of the State of Illinois to restore, protect and enhance the groundwaters of the State, as a natural and public resource. The State recognizes the essential and pervasive role of groundwater in the social and economic well-being of the people of Illinois, and its vital importance to the general health, safety, and welfare. It is further recognized as consistent with this policy that the groundwater resources of this State be utilized for beneficial and legitimate purposes; that waste and degradation of the resources be prevented; and that the underground resource be managed to allow for maximum benefit of the people of the State of Illinois.

415 ILCS 55/2(b) (2010) (emphasis added).

The policy of preservation and prevention also is expressed in both the regulatory and enforcement contexts and upheld in court opinions. For example, 35 Ill. Adm. Code 615 and 616 require groundwater monitoring for certain existing or new activities in setback zones or regulated recharge areas. Some of these activities are waste management activities while others are commercial activities in which products with potential for groundwater contamination are managed. The Agency and the Board were directed by Section 14.4 of the Act to propose and adopt regulations “for the express purpose of protecting groundwaters.” 415 ILCS 5/14.4(b) (2010). Section 14.4(d)(1) did not require the Board to adopt groundwater monitoring; it merely provided that the Board must consider “appropriate programs for groundwater monitoring, including, where appropriate, notification limitations to trigger preventive response activities.”

The Board initially promulgated the Part 615 and 616 rules in PCB R89-5.³ In its Final Opinion, the Board repeatedly mentioned or referenced the potential for contamination from the regulated sources and the preventive nature of the rules it was promulgating. The Board noted that Sections 14.4(b) and (d) prescribed the control factors it must consider as part of the rulemaking including groundwater monitoring, recordkeeping and reporting, technical standards

³ “In the Matter of: Groundwater Protection: Regulations for Existing and New Activities within Setback Zones and Regulated Recharge Areas (35 Ill. Adm. Code 601, 615, 616 and 617) (“Technical Standards”).” PCB R89-5, Final Order: Opinion and Order of the Board (December 6, 1991).

for pollution control, and requirements for closure and discontinuance of operations. PCB R89-5, Final Opinion at 18. The Board subsequently concluded that adoption of groundwater monitoring for most of these potential sources was warranted. In response to suggestions about the groundwater sampling frequency at certain facilities handling pesticides and fertilizers and whether sampling should be required at all in the absence of detection of a possible release by another “off-site sampling entity,” the Board stated:

The Board does not believe that eliminating all monitoring required for affected pesticide and fertilizer facilities is acceptable as a rule-of-general-applicability. Neither does the Board believe that it would be acceptable to require monitoring only after off-site occurrences of contamination have been recognized. Either circumstance is viewed as not compatible with the mandate of the IGPA to reduce risk to the State’s groundwaters. The Board agrees with the Agency that the monitoring component of the proposed regulations is “an essential element of the groundwater protection scheme, providing notice of contamination in its earlier stages”, and allowing for initiation of non-degradation and preventative response measures to maintain or restore the integrity of potable supplies (citation omitted). This preventative aspect of the regulations would be lost should the Board only require groundwater monitoring after contamination is discovered at an off-site location.

Id. at 29-30. This is precisely the argument the Agency is making in the current proceeding, and there are other similarities with the fill operations as well. Part 615 and 616 apply to relatively small commercial operations including existing businesses under Part 615; the underlying statute did not require monitoring but only that the Board consider it along with other listed control measures; although the Board noted there was a history of agricultural groundwater contamination, it did not conclude that all such facilities would have releases. Rather, the Board concluded “both the existence and potential for serious contamination of groundwater by pesticides and fertilizers” were grounds for the regulations. *Id.* at 17 (emphasis added).

Preservation and prevention also are recognized in the enforcement context. Section 12(a) of the Act prohibits persons from conducting activities that “cause, threaten or allow the

discharge of any contaminants into the environment . . . so as to cause or tend to cause water pollution in Illinois . . .” 415 ILCS 5/12(a). For purposes of prevention, the key words are “threaten” and “tend,” both of which, by their common meanings, refer to the potential to cause contamination rather than the fact of contamination. Thus, enforcement action is authorized if any person engages in activities that might cause groundwater pollution. It is not necessary to wait until groundwater actually becomes contaminated before taking action. The Board’s Part 620 Groundwater Quality rules use the similar “cause, threaten or allow” language in the general prohibition against use impairment in the nondegradation provisions. 35 Ill. Adm. Code 620.301.

In yet another example of the history of the policy to preserve groundwater resources and prevent contamination, the Supreme Court of Illinois acknowledged the Board’s authority to protect groundwater resources. *Central Illinois Public Service Company v. Pollution Control Board*, 116 Ill.2d 397, 507 N.E.2d 819, 107 Ill.Dec. 666 (Ill. 1987). Although this case concerned groundwater contamination in fact rather than the potential for groundwater contamination, the court agreed with the Board’s interpretation of the general scheme for the preservation and prevention under the Act. The court stated:

Under the Board’s view any contamination which prevents the State’s water resources from being usable would constitute pollution, thus allowing the Board to protect those resources from unnecessary diminishment . . . We find the Board’s interpretation preferable to CIPS’ interpretation

Id. at 116 Ill.2d 409 - 10, 507 N.E.2d 824, 107 Ill.Dec. 671. These are but a few of the sources demonstrating the long-standing policy that protection of groundwater includes, first and foremost, the prevention of groundwater contamination.

Concerning the potential for contamination, nothing in the record demonstrates that fill operations have not or cannot cause groundwater contamination. The Agency’s testimony is that

it has little evidence either way that actual contamination has or has not been caused by fill operations because data from these facilities is “virtually nonexistent.” Testimony of Mr. Purseglove and Mr. Nightingale, Tr. 1 at 27, 41, 52, 54. Certainly, no one in this proceeding has presented evidence of a systematic investigation of the issue sufficient to resolve the matter. As the Board notes, Mr. Huff provided one example of testing at private wells within one-quarter mile of an existing CCDD operation that did not identify contamination in excess of the Class I standards. First Notice Opinion at 53. On the other hand, the Agency provided testimony of a poorly run CCDD facility operating under statutory authority of Section 3.160 with limited groundwater sampling showing “levels of lead and cadmium many times higher than the groundwater standards.” An enforcement action ensued that resulted in an order requiring groundwater monitoring. Testimony of Mr. Purseglove, Tr. 1 at 27. The Agency’s position is that the potential for groundwater contamination also arises from well-run facilities, but poorly run facilities certainly increase that potential.

Mr. Purseglove also testified that sampling of fill materials from a round of compliance inspections in the infancy of the program “[found] contaminants at a variety of sites across the State.” *Id.* at 31. Enforcement cases were initiated against facilities with the higher levels of contamination. *Id.* Mr. Hock’s testimony at least partially confirms the Agency’s experience. Mr. Hock provided the most detailed data concerning contaminants in fill material. He testified that data from 44 samples collected from 44 borings at three facilities in northern Illinois with roughly 80% soil as fill material produced detections of PNAs above their respective MACs in seven of the samples and detections of metals above their respective MACs in 36 samples. Testimony of Mr. Hock, Exh. 12 at 3 – 5; Tr. 2 at 37 – 42.

To the extent anything can be concluded from these limited examples, it is that fill

operations do accept material presenting the potential for groundwater contamination. Unless the Board acts to require groundwater monitoring in this proceeding, the only way the question of groundwater contamination will be resolved conclusively is if groundwater contamination is discovered off-site and traced back to a facility or if a systematic investigation is conducted over a sufficient period of time. The legislature has not provided the resources, time and authority to resolve the matter to a greater certainty with a systematic investigation. Instead, as already stated above, the legislature assumes the facilities have the potential to cause contamination and has directed the Agency and the Board to address the potential. The Agency agrees with the Board in R89-5 that “the monitoring component of the proposed regulations is ‘an essential element of the groundwater protection scheme, providing notice of contamination in its earlier stages’, and allowing for initiation of non-degradation and preventative response measures to maintain or restore the integrity of potable supplies (citation omitted). This preventative aspect of the regulations would be lost should the Board only require groundwater monitoring after contamination is discovered at an off-site location.” PCB R89-5 at 29 - 30.

3. The Board has not fully considered the costs of groundwater contamination and the value of preventing contamination.

Due at least in part to limitations in the current record, the Board has not fully considered the costs of groundwater contamination and the value of preventing contamination. Although estimates on the costs of sampling and analysis have been provided, the Agency acknowledges the record is not well-developed on the issue of the costs per facility for designing, constructing and maintaining the proposed groundwater monitoring systems and the economic impact of these costs on the viability of facility operations. The record is not well-developed on this matter for several reasons: 1) The site-specific nature of groundwater monitoring systems is likely to result in costs varying widely from facility to facility; 2) the Department of Commerce and Economic

Opportunity declined to perform the economic impact study requested by the Board; 3) the Agency does not have the resources to conduct economic impact studies; 4) representatives of the owner/operators have testified of their conclusions that the impacts of groundwater monitoring on fill operations will be significant, but have not provided detailed, cost-based evidence to support these claims. Therefore, the Agency does not agree the record conclusively demonstrates that groundwater monitoring is costly relative to facility operations in general. In addition, the record has not been fully developed on another important economic factor that must be considered, the value of preventing groundwater contamination. The Agency takes this opportunity to provide additional perspective on this important consideration.

The Agency has stated, based on its own proposal, that the potential for groundwater contamination from fill operations cannot simply be dismissed and that groundwater monitoring is a necessary component to ensure protection of important groundwater resources throughout Illinois and especially in northeast Illinois where population density and demand for fresh water is highest and construction/demolition activity most prevalent. The Agency also has noted that the health and economic costs of such contamination to both public and private users are a concern. SOR at 6.

The value of preventing contamination always is difficult to quantify, but that value is nonetheless real and substantial.⁴ For example, the Agency has significant experience working with private well owners when groundwater contamination has migrated to commercial or residential properties relying on wells to provide potable and domestic water supplies. The costs of remediation for contaminated groundwater are high and the outcomes frequently unsatisfactory. Moreover, the owners of contaminated wells cannot wait years for an uncertain

⁴ See "In the Matter of: Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills," PCB R1988-07, Final Action: Opinion of the Board at 15 - 17 (August 17, 1990) (discussing the difficulty of valuing costs avoided and degradation of resources).

remedy. They need potable water today. Advanced treatment processes to address chemical constituents in groundwater are not feasible for private wells, and, in any case, equate to significant costs including operation and maintenance by a qualified person. These factors illustrate why the State adopted its policy of prevention.

Once a small water system well is contaminated, the primary corrective action very well may be to connect well-users to a treated community water supply (“CWS”) (e.g., Wauconda, Downers Grove, Lisle, Soper Avenue, Exelon Braidwood). Extending water mains and paying for service line connections are expensive. For example, in the recent drinking water needs survey conducted for Aurora in Kane County, the cost per lineal foot of four inch water main is \$266/foot. Under the project, the city was running 8,900 feet of water main at a cost of \$2,370,000. Once the water main has been constructed, the homeowner still **must** pay for connection to the main by a water service line. The private drinking water system wells in Downers Grove (DuPage County) were contaminated by volatile organic chemicals (“VOCs”) from the Ellsworth Industrial Park, and the remedy was to connect them to a CWS. The estimated cost for running a service line from the water main to property line and valve vault (water service shut-off) was \$1500 per home. The additional cost estimate from that point to the house was \$2500 per home (including well abandonment/sealing, which was \$1000 or less). In addition, connection to a treated CWS comes with monthly bills for service users that do not normally accompany private water systems.

A second example is Wauconda (Lake County) where private wells were contaminated with VOCs above detection levels but below numerical standards. The remedy was to connect the private water system owners to the Village of Wauconda’s CWS. A 2005 cost estimate for copper service lines from the water main to homes was estimated to be \$1,000: valve vaults cost

\$2,500; abandonment of the private drinking water system well was \$1,000; and meters cost \$600. Therefore, a cost estimate merely to run a service line from the water main to a typical home (based on 2002 – 2005 data associated with these two site-specific examples) ranges from \$1,000 to \$1,500 per home. However, the price range increases to \$4,000 to \$5,000 per home (excluding the costs of running the water main to the property and monthly service charges) when one includes the cost of running a service line to the home, the valve vault, water meter, and private well abandonment in accordance with applicable regulations (also intended to prevent contamination of groundwater resources).

Existing and potential locations of many of the fill operations covered under Part 1100 are in some of the most geologically susceptible areas of the State. Moreover, the importance of groundwater as a fresh water source within the Chicago metropolitan area can hardly be overstated. Northeastern Illinois could be facing a future shortage of supplies. The biggest driver of water use is population. In 2000, there were about 8.6 million people in Illinois' northeastern region, and that number could grow to 12 million by 2050. Based on growth trends, the metropolitan area may need as much as 50 percent more water within 40 years. *See* "Water 2050: Northeastern Illinois Regional Water Supply/Demand Plan," Chicago Metropolitan Agency for Planning, 28 – 36 (March 2010) (<http://www.cmap.illinois.gov/water-2050>) ("Water 2050"). The deeper aquifer systems have been depleted and not replenished and are high in radionuclides. The region's use of Lake Michigan water has been restricted as approved by the Supreme Court of the United States in *Wisconsin v. Illinois*, 388 U.S. 426 (1967), *modified*, 449 U.S. 48 (1980) (Lake Michigan Diversion Supreme Court Consent Decree). *See* "Water 2050" at 15. Therefore, the shallow sand and gravel and Silurian dolomite aquifer systems will be the primary source of drinking water in northeastern Illinois. The future availability of clean and

adequate sources of groundwater will be vital to the Illinois population and economy.

The Agency has prepared maps for some of the counties in northeastern Illinois with currently operating CCDD and uncontaminated soil facilities. The maps illustrate the physical relationships among the fill operations, public and private potable water supply wells, and the potential for aquifer recharge. The potential for aquifer recharge is based on Illinois' Potential for Aquifer Recharge Map, which was developed pursuant to Section 17.2 of the Act. 415 ILCS 5/17.2. The Agency will present the county maps to the Board as additional exhibits with further explanation of their preparation and content at hearing.

The Agency emphasizes it is not suggesting with these maps that any individual facilities are currently, or will become, sources of groundwater contamination. Again, the Agency's larger point is that, because of imperfect certification and screening procedures, the strong likelihood of imperfect performance of the certification and screening procedures, the acceptance of large quantities of soil over time, the nearly complete absence of technical controls to prevent contaminant migration such as liners, and the location of many such facilities in sensitive geologic areas with heavy reliance on groundwater as a current and future source of fresh water, CCDD and uncontaminated soil fill operations must be considered to have the potential to cause groundwater contamination. Because of the State's policy of preventing groundwater contamination and protecting groundwater resources for current and future beneficial uses, this potential is reason enough to justify groundwater monitoring at fill operations. This policy and the importance of the groundwater resource require that any uncertainties be resolved in favor of groundwater monitoring.

If the potential for groundwater contamination is realized in the absence of groundwater monitoring, the contamination is unlikely to be discovered unless and until the contamination

migrates to current water supplies in concentrations high enough to attract attention. CWS well operators may identify contamination through required regular testing. Because there is no program requiring the on-going monitoring of private, semi-private, and transient non-community public water supply wells, private well owners may not be aware of contamination at all even if concentrations have reached a level causing a threat to human health. By this time, discovery of the contamination would be too late to prevent human exposure and diminishment or loss of the groundwater resource. The costs of corrective action described above, in addition to the liability associated with the off-site contamination, would likely far exceed the cost of any preventive groundwater monitoring system.

The Agency's position remains that the most effective and reliable method of protecting the State's groundwater resources from the potential for contamination from fill operations is the groundwater monitoring system. The certification and screening procedures, even if implemented in good faith, provide only an uncertain level of security at the front door while no one is watching the back door.

4. "CCDD and uncontaminated soils are not classified as wastes so do not require the stringent rules that exist for non-hazardous waste landfills."

Among other reasons for striking the Agency's Subpart G groundwater monitoring requirements, the Board stated that "CCDD and uncontaminated soils are not classified as wastes, so do not require the stringent rules that exist for non-hazardous waste landfills." First Notice Opinion at 57. The Agency agrees that CCDD and uncontaminated soils are not classified as wastes -- but only if certain conditions set forth in Section 3.160 of the Act are satisfied. 415 ILCS 5/3.160 (2010). Soils that comply with the MACs and are not waste are not the reason the Agency proposed groundwater monitoring requirements for fill operations.

For purposes of Part 1100, soil that does not comply with the MACs for chemical

constituents is a contaminated medium. It contains waste and must be managed as waste. *Id.* § 3.160(c). As previously stated, the Agency's position is that soil that does not comply with the maximum allowable concentrations and is therefore waste is likely to be accepted at fill operations because of imperfect certification procedures, imperfect implementation of certification procedures, and the limitations of screening tools available to fill site owner/operators. These factors, along with the volumes of soil accepted at such facilities, the nearly complete absence of technical controls to prevent contaminant migration such as liners, and the locations of many facilities in areas geologically susceptible to groundwater contamination, will create the potential for groundwater contamination that must be addressed in accordance with the policy of the State to protect groundwater resources. Groundwater monitoring systems are the single most effective component for implementing this policy.

The Agency also agrees that the fill operations do not require the same groundwater monitoring systems and requirements that are required for non-hazardous waste landfills. That is why it proposed less stringent groundwater monitoring requirements for fill operations in Subpart G. Mr. Nightingale testified the Agency determined that groundwater monitoring requirements at 35 Ill. Adm. Code 615 for existing impoundment and storage activities in setback zones are more appropriate as a template for fill operations than groundwater monitoring requirements for non-hazardous solid waste landfills at 35 Ill. Adm. Code 811.315 – 811.320. Testimony of Mr. Nightingale, Exh. 1 at 25 – 6. Mr. Nightingale further stated the Agency recognizes the threat to groundwater from the fill operations is not of the same magnitude as that from solid waste landfills, but the threat is similar to that posed by the impoundment and storage activities. *Id.*

This concludes my testimony. I would like to thank the Board for this opportunity to

supplement the record with additional information about the importance of groundwater monitoring systems at fill operations. The Agency urges the Board to reconsider its decision in light of the additional information presented here and in other Agency testimony and to reinstate the Agency's proposed certification requirements in proposed Subpart B and the groundwater monitoring requirements at proposed Subpart G.

ATTACHMENT ONE

CURRICULUM VITAE of
RICHARD P. COBB, P.G.

Work Experience

Deputy Manager, Division of Public Water Supplies (DPWS), Bureau of Water (BOW), Illinois Environmental Protection Agency (EPA). (5/02- Present) My primary responsibilities include managing the: Groundwater Section, Field Operation Section, and the Administrative Support Unit of the Division. Further, I assist with administering the public water supervision program under the federal Safe Drinking Water Act ("SDWA") and the Wellhead Protection Program ("WHPP") approved by the United States Environmental Protection Agency ("U.S. EPA"). Additionally, my responsibility includes the integration of source water protection with traditional water supply engineering and treatment practices, and to further assist with linking Clean Water Act and SDWA programs. I also directly manage the BOW's Groundwater Section. The Groundwater Section applies Geographic Information System ("GIS") programs, global positioning system ("GPS") technology, hydrogeologic models (3D geologic visualization, vadose zone, groundwater flow, groundwater particle tracking, solute transport, and geochemical models), and geostatistical programs for groundwater protection and remediation projects. The Groundwater Section also continues to operate a statewide ambient groundwater monitoring program for the assessment of groundwater protection and restoration programs. I also do extensive coordination with federal, state and local stakeholders including the Governor appointed Groundwater Advisory Council ("GAC"), the Interagency Coordinating Committee on Groundwater ("ICCG"), four Priority Groundwater Protection Planning Committees, Illinois Source Water Protection Technical and Citizens Advisory Committee, and with the Ground Water Protection Council ("GWPC"), Association of State Drinking Water Administrators ("ASDWA"), and the Association of State and Interstate Water Pollution Control Administrators ("ASWIPCA") to develop and implement groundwater protection policy, plans, and programs. I represent the BOW on Illinois EPA's: Contaminant Evaluation Group ("CEG"); Strategic Management Planning Team; Environmental Justice Committee; GIS Steering Committee; Information Management Steering Committee; and Leadership in Energy and Environmental Design for Existing Building ("LEED-EB") Committee. Since starting with Illinois EPA in 1985, I have worked on the development of legislation, rules and regulations. I have also served as a primary Illinois EPA witness before Senate and House legislative committees, and at Illinois Pollution Control Board ("Board") proceedings in the matter of groundwater quality standards, technology control regulations, cleanup regulations, regulated recharge areas, maximum setback zone, and water well setback zone exceptions. Furthermore, I have served as primary Illinois EPA witness in enforcement matters.

Manager, Groundwater Section, DPWS, BOW, Illinois EPA. (9/92-5/02) My primary responsibilities included development and implementation of Illinois statewide groundwater quality protection, USEPA approved WHPP, and source water protection program. The Groundwater Section worked with the United States Geological Survey ("USGS") to refine Illinois EPA's ambient groundwater monitoring network using a random stratified probability based design. The Groundwater Section continued to operate a statewide ambient groundwater monitoring program for the assessment of groundwater protection and restoration programs based on the new statistically-based design. I co-authored a *Guidance Document for Conducting*

Groundwater Protection Needs Assessments with the Illinois State Water and Illinois State Geological Surveys. I also continued to conduct extensive coordination with federal, state and local stakeholders including the Governor appointed GAC, the ICCG, four Priority Groundwater Protection Planning Committees, Illinois Source Water Protection Technical and Citizens Advisory Committee, and at the national level as Co-chair of the GWPC Ground Water Division to develop and implement groundwater protection policy, plans, and programs. I also served periodically as Acting Manager for the Division of Public Water Supplies. Additionally, the Groundwater Section provided hydrogeologic technical assistance to the BOW Permit Section and Mine Pollution Control Program to implement source water protection, groundwater monitoring and aquifer evaluation and remediation programs. I continued to work on the development of legislation, rules and regulations. I also served as a primary Illinois EPA witness at Board proceedings in the matter of groundwater quality standards, technology control regulations, regulated recharge areas and water well setback zone exceptions. Furthermore, I served as an Agency witness in enforcement matters.

Acting Manager, Groundwater Section, DPWS, BOW. Illinois EPA. (7/91-9/92) My responsibilities included continued development and implementation of Illinois statewide groundwater quality protection, U.S. EPA approved WHPP, and ambient groundwater monitoring program. The Groundwater Section developed the Illinois EPA's WHPP pursuant to Section 1428 of the SDWA and was fully approved by U.S. EPA. Illinois EPA was the first state in U. S. EPA Region V to obtain this approval. I performed extensive coordination with state and local stakeholders including the Governor appointed GAC, the ICCG to develop and implement groundwater protection, plans, policy, and programs. Developed and implemented the establishment of Illinois' Priority Groundwater Protection Planning Committees. Developed and implemented Pilot Groundwater Protection Needs Assessments. The Groundwater Section also provided hydrogeologic technical assistance to the BOW Permit Section and Mine Pollution Control Program staff to develop groundwater monitoring and aquifer evaluation, remediation and/or groundwater management zone programs. I also served as a primary Agency witness at Board proceedings in the matter of groundwater quality standards and technology control regulations. Additionally, I served as an Agency total quality management ("TQM") facilitator, and TQM trainer.

Manager of the Hydrogeology Unit, Groundwater Section, DPWS, Illinois EPA (7/88-7/91) Managed a staff of geologists and geological engineers that applied hydrogeologic and groundwater modeling principals to statewide groundwater protection programs. Developed and integrated the application of GIS, GPS, geostatistical, optimization, vadose zone, solute transport, groundwater flow and particle tracking computer hardware/software into groundwater protection and remediation projects. Conducted extensive coordination with state and local stakeholders including the Governor appointed GAC and ICCG to develop and implement groundwater protection policy, plans, and programs. Developed and implemented a well site survey program to inventory potential sources of contamination adjacent to community water supply wells. Additionally, I worked on the development of rules to expand setback zones based on the lateral area of influence of community water supply wells. Furthermore, I provided administrative support to the Section manager in coordination, planning, and supervision of the groundwater program. I also assisted with the development of grant applications and subsequent management of approved projects. In addition, I assisted the section manager with regulatory

and legislative development in relation to the statewide groundwater quality protection program. I also served on the Illinois EPA's Cleanup Objectives Team ("COT").

Environmental Protection Specialist I, II, and III, Groundwater Section, DPWS, Illinois EPA. (7/85-7/88) I was the lead worker and senior geologist in the development and implementation of Illinois statewide groundwater quality protection program. I worked on the development of Illinois EPA's ambient groundwater monitoring network, and field sampling methods and procedures with the USGS. I published the first state-wide scientific paper on volatile organic compound occurrence in community water supply wells in Illinois. In addition, I assisted with the development of *A Plan for Protecting Illinois Groundwater*, and the legislation that included the *Illinois Groundwater Protection Act*.

Consulting Well Site Geologist, Geological Exploration (GX) Consultants, Denver Colorado. (3/81-12/83) I worked as a consulting well site geologist in petroleum exploration and development for major and independent oil companies. I was responsible for the geologic oversight of test drilling for the determination and presence of petroleum hydrocarbons. Prepared geologic correlations and performed analysis of geophysical logs, drilling logs and drill cuttings. Supervised and analyzed geophysical logging. Made recommendations for conducting and assisted with the analysis of drill stem tests and coring operations. In addition, I provided daily telephone reports and final written geologic reports to clients.

Undergraduate Teaching Assistant, Geology Department, Illinois State University. (3/79-3/81) I was responsible for teaching and assisting with lecture sessions, lab sessions, assignment preparation and grading for Petrology, Stratigraphy and Geologic Field Technique courses.

Undergraduate Education

B.S Geology, 1981, Illinois State University ("ISU"). Classes included field geology at South Dakota School of Mines and Technology, and Marine Ecology Paleocology at San Salvador Field Station, Bahamas

Post Graduate Education

Applied Hydrogeology, 1984, ISU Graduate Hydrogeology Program

Engineering Geology, 1984, ISU Graduate Hydrogeology Program

Geochemistry for Groundwater Systems, 1986, USGS National Training Center

Hydrogeology of Waste Disposal Sites, 1987, ISU Graduate Hydrogeology Program

Hydrogeology of Glacial Deposits in Illinois, 1995, ISU Graduate Hydrogeology Program

MODFLOW, MODPATH and MT3D groundwater modeling, 1992, USGS National Training Center

24 Hour Occupational Health & Safety Training, 1994

Computer Modeling of Groundwater Systems, 1995, ISU Graduate Hydrogeology Program

Introduction to Quality Systems Requirements and Basic Statistics, 2001, U.S. EPA

Source Water Contamination Prevention Measures, 2001, U.S.EPA, Drinking Water Academy

Fate and Transport Processes and Models, 2006, Risk Assessment and Management Group, Inc.,

National Response Framework (NRF) IS-800.b, 2010, EMI

National Response Plan (NRP), an Introduction IS-800.a, 2007, EMI

National Incident Management System (NIMS) an Introduction IS-00700, 2006, Emergency Management Institute (EMI).

Intermediate ICS for Expanding Incidents IS-00300, 2008, EMI

ICS for Single Resources and Initial Action Incidents IS-00200, 2006. EMI,

Introduction to the Incident Command System (ICS) IS-00100, 2006, EMI

License

Licensed Professional Geologist 196-000553, State of Illinois, expires 3/31/2013

Certification

Certified Professional Geologist 7455, Certified by the American Institute of Professional Geologists 4/88

Certified Total Quality Management Facilitator, 5/92, Organizational Dynamics Inc..

Summary of Computer Skills

I have utilized the following computer programs ARC VIEW, Aqtesolv, SURFER, WHPA, DREAM, AQUIFEM, MODFLOW, MODPATH, and MT3D.

Professional Representation

Illinois EPA liaison to the **GAC** and representative on the **ICCG** (1988 – present)

Senate Working Committee on Geologic Mapping.

Illinois EPA representative and subcommittee chairman, *State Certified Crop Advisory Board*, and *Ethics and Regulatory Subcommittee* established in association with the American Society of Agronomy/American Registry of Certified Professionals in Agronomy, Crops and Soils (1995 – 2001)

Illinois groundwater quality standards regulations technical work group (1988 – 1991).

ICCG State Pesticide Management Plan Subcommittee for the protection of groundwater.

Illinois EPA representative, *State task group involved with developing the siting criteria for a low level radioactive waste site in Illinois.*

Fresh Water Foundation's Groundwater Information System (GWIS) project in the great lakes basin.

Illinois EPA technical advisor, *four priority regional groundwater protection planning committees* designated by the Director to advocate groundwater protection programs at the local level (1991 – present)

Groundwater Subcommittee of the National Section 305(b) Report, of the Clean Water Act Consistency Workgroup.

Ground Water Protection Council's Wellhead Protection Subcommittee.

Co-Chair, *Groundwater Division of the GWPC* on (September 1997 to 2003)

Chairman, *Illinois' Source Water Protection Technical and Citizens Advisory Committee.*

United States Environmental Protection Agency National Ground Water Report Work Group. One of 10 state representatives serving on a work group sponsored by U.S. EPA headquarters charged with development of a national report to be submitted to the U.S. Congress on the status and needs for groundwater protection programs across the country. (January 1999 to July 2000)

Illinois EPA representative, *Northeastern Illinois Planning Commission Water Supply Task Force.* The purpose of this task force is to assist the Commission in the development of a Strategic Plan for Water Resource Management. (March 1999 to 2001)

GWPC/U.S. EPA Futures Forum Work Group providing input on source water protection for the next 25 years. (January 1999 to 2001)

GWPC/ASDWA work group providing input into the U.S. EPA Office of Ground and Drinking Water Strategic Plan for Source Water Protection. June 2000 to March 2005.

Co-Chair, *U.S. EPA Headquarters/GWPC/ASDWA/ASWIPCA workgroup to develop the second Ground Water Report to Congress.* March 2002 –present.

Chair, *ICCG Groundwater Contamination Response Subcommittee* responsible for developing a new strategy for responding to groundwater contamination and the subsequent notification of private well owners. March 2002 – April 2002.

Illinois EPA representative, *ICCG Water Quantity Planning Subcommittee* working on development of a surface and groundwater quantity- planning program for Illinois. June 2002 -- January 2003

Chair, *ICCG Right-to-Know (RTK) Subcommittee, 2006*

GWPC, Groundwater Science and Research Advisory Board, 2007

Professional Affiliation

American Institute of Professional Geologists
Illinois Groundwater Association
Ground Water Protection Council
National Groundwater Association -Association of Groundwater Scientists and Engineers
Sigma Xi – The Scientific Research Society

Honors

Sigma Xi - Elected to *Sigma Xi* The Scientific Research Society for undergraduate research conducted and presented to the Illinois Academy of Science. 4/81

Director's Commendation Award - Participation in the development of the City of Pekin, IL. Groundwater Protection Program and commitment to the protection of Illinois groundwater. 7/95

Certificate of Appreciation - Outstanding contribution to the development of the Ground Water Guidelines for the National Water Quality Inventory 1996 Report to Congress from the United States Environmental Protection Agency Office of Ground Water and Drinking Water. 8/96

Groundwater Science Achievement Award - Illinois Groundwater Association for outstanding leadership and service in the application of groundwater science to groundwater protection in Illinois and in the development of the wellhead protection program and pertinent land-use regulations. 11/97

Certificate of Appreciation - GWPC for distinguished service, remarkable dedication, valuable wisdom and outstanding contribution as a GWPC member, division co-chair and special committee member. 9/99

Drinking Water Hero Recognition - United States Environmental Protection Agency Administrator Carol Browner at the 25th Anniversary of the Federal Safe Drinking Water Act Futures Forum in Washington D.C. 12/99.

Certificate of Recognition - United States Environmental Protection Agency Region V

Administrator Fred Lyons for outstanding achievements in protecting Illinois' groundwater resources. 12/99

Exemplary Systems in Government (ESIG) Award - Nomination by the Governor's Office of Technology from the Urban and Regional Information Systems Association (URISA) for the Illinois EPA's Source Water Assessment and Protection Internet Geographic Information System. 6/01

Expert Witness Experience

IN THE MATTER OF: GROUNDWATER QUALITY STANDARDS (35 ILL. ADM. CODE 620), R89-14(B) (Rulemaking). Subject: I served as the principal witness recommending adoption of this Illinois EPA Agency proposal. R89-14(B) was adopted by the Board. The standards became effective January 1991.

STATE OIL COMPANY vs. DR. KRONE, McHENRY COUNTY and ILLINOIS EPA, PCB 90-102 (Water Well Exception). Subject: This case involved obtaining an exception from the owner of a non-community water supply well for placing new underground gasoline storage tanks within the 200-foot setback zone of well. I served as the principal witness for Illinois EPA on this case. The Board granted the exception with conditions.

People vs. AMOCO OIL COMPANY and MOBIL CORPORATION, Case no. 90-CH-79, Tenth Judicial Court, Tazewell County, Illinois. Subject: Groundwater contamination resulting from releases at above ground bulk petroleum storage terminals resulting in violation of Illinois' Groundwater Quality Standards Regulations (35 Illinois Administrative Code 620). I served as the principal Illinois EPA witness on this case. The case was settled with a penalty of \$125,000 and the requirement of a comprehensive corrective action program.

IN THE MATTER OF: GROUNDWATER PROTECTION: REGULATIONS FOR EXISTING AND NEW ACTIVITIES WITHIN SETBACK ZONES AND REGULATED RECHARGE AREAS (35 ILL. ADM. CODE 601, 615, 616 and 617), R89-5 (Rulemaking). Subject: I served as the principal Illinois EPA witness supporting adoption of this Agency proposal. R89-5 was adopted by the Board and became effective January 1992.

HOUSE BILL 171 METHYL TERTIARY BUTYL ETHER (MTBE) ELIMINATION ACT, House Environmental and Energy Committee. Subject: This law required the phase out MTBE within 3 years of enactment. I served as a principal Illinois EPA witness in support of the proposed legislation. The legislation was adopted as Public Act 92-0132 on July 24 2001. PA 92-132 required the ban of MTBE within three years.

IN THE MATTER OF: GROUNDWATER QUALITY STANDARDS (35 ILL. ADM. CODE 620), R93-27 (Rulemaking). Subject: I served as the principal Illinois EPA witness recommending amendments of new constituent standards in this Agency proposal.

SHELL OIL COMPANY vs. COUNTY of DuPAGE and THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, PCB 94-25 (Water Well Setback Exception). Subject: A new

underground gasoline storage tank was seeking an exception from the Illinois Pollution Control Board in relation to a private drinking water supply well setback zone. The DuPage County and the Illinois EPA held that the tank would be a significant hazard and opposed the exception. I served as the principal Illinois EPA witness. Shell withdrew the petition from the Board after hearings were held.

People ex rel. Ryan v. STONEHEDGE, INC., 288 Ill.App.3d 318, 223 Ill.Dec. 764, 680 N.E.2d 497 (Ill.App. 2 Dist. May 22, 1997). Subject: The State brought Environmental Protection Act action against company engaged in business of spreading deicing salt, alleging that salt stored on company's industrial property leaked into area's groundwater supply, thereby contaminating it. The Circuit Court, McHenry County, James C. Franz, J., granted company's motion for summary judgment. State appealed. The Appellate Court, Colwell, J., held that: (1) wells existing before Illinois Water Well Construction Code was enacted are not "grandfathered" in as being in compliance with Code, so as to be automatically subject to testing for groundwater contamination, and (2) fact issues precluded summary judgment on claim arising from alleged deposit of at least 50,000 pounds of salt in pile within 200 feet of two existing water supply wells. Affirmed in part and reversed in part; cause remanded.

People vs. STONEHEDGE INC. Case no. 94-CH-46, Circuit Court of the 19th Judicial Circuit, McHenry County. Subject: This case involved a violation of the potable well setback zone provisions of Section 14.2 of the Illinois Environmental Protection Act. Stonehedge Inc. placed a salt pile of greater than 50,000 pounds within the 200 foot setback of multiple private drinking water supply wells. I served as an Agency principal witness. Stonehedge Inc. was found to be guilty of violating the setback prohibition in this case and was assessed a penalty of \$1,500 and attorneys fees of \$4,500.

SALINE VALLEY CONSERVANCY DISTRICT vs. PEABODY COAL COMPANY, Case No. 99-4074-JLF, United States District Court for the Central District of Illinois. Subject: Groundwater contamination from the disposal of 12.8 million tons of coarse coal refuse, slurry and gob. Witness for the Illinois EPA. This is an on-going case.

IN THE MATTER OF: PROPOSED REGULATED RECHARGE AREAS FOR PLEASANT VALLEY PUBLIC WATER DISTRICT, PROPOSED AMENDMENTS TO (35 ILL. ADM. CODE 617), R00-17 (Rulemaking). Subject: I served as the principal Illinois EPA witness supporting adoption of this Agency proposal. The proposal was adopted on July 26, 2001 and became effective September 1, 2001.

IN THE MATTER OF: PROPOSED AMENDMENTS TO TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (35 Ill. Adm. Code 742), (R00-19(A) and R00-19(B)) (Rulemaking). Subject: I served as a supporting Illinois EPA witness recommending inclusion of MTBE in this Agency proposal.

IN THE MATTER OF: NATURAL GAS-FIRED, PEAK-LOAD ELECTRICAL GENERATION FACILITIES (PEAKER PLANTS), R01-10 (Informational Hearing) Subject: I served as a supporting Illinois EPA witness to discuss the impact of peaker plants on groundwater.

IN THE MATTER OF: GROUNDWATER QUALITY STANDARDS AND COMPLIANCE POINT AMENDMENTS (35 ILL. ADM. CODE 620), R01- 14 (Rulemaking). Subject: I served as the principal Illinois EPA witness recommending amendments of a groundwater standard for MTBE and compliance point determinations in this Agency proposal. The Board adopted the proposal unanimously on January 24, 2002.

TERESA LeCLERCQ; AL LeCLERCQ; JAN LeCLERCQ; WALT LeCLERCQ, individually; and on behalf of all persons similarly situated vs. THE LOCKFORMER COMPANY, a division of MET-COIL SYSTEMS CORPORATION, Case no. 00 C 7164, United States District Court, Northern District of Illinois. Subject: I was called as a witness by Lockformer Company to testify about a Well Site Survey prepared and published in 1989 by the Illinois EPA for Downers Grove community water supply.

TERESA LeCLERCQ; AL LeCLERCQ; JAN LeCLERCQ; WALT LeCLERCQ, individually; and on behalf of all persons similarly situated vs. THE LOCKFORMER COMPANY, a division of MET-COIL SYSTEMS CORPORATION, Case no. 00 C 7164, United States District Court, Northern District of Illinois. Subject: I was called as a witness by Lockformer Company to testify about groundwater contamination in the Lisle and Downers Grove area.

HOUSE BILL 4177 PRIVATE WELL TESTING PROPERTY TRANSFER and DISCLOSURE ACT, House Environmental and Energy Committee. Subject: Legislation to require volatile organic chemical contamination testing of private wells at the time of property transfer and reporting to the Illinois Department of Public Health and the Illinois EPA. I served as a principal Illinois EPA witness in support of the proposed legislation. The legislation was not supported due to the opposition from the realtors association.

MATTER OF PEOPLE vs. PEABODY COAL, PCB 99-134 (Enforcement). Subject: the State of Illinois developed an amended complaint against Peabody Coal Company (PCC) for violation of the groundwater quality standard for total dissolved solids, chloride, iron, manganese, and sulfate. I developed testimony to address PCC's affirmative defense of challenging the basis for the groundwater quality standards for these contaminants.

IN THE MATTER OF: PROPOSED AMENDMENTS TO TIERED APPROACH TO CORRECTIVE ACTION OBJECTIVES (35 Ill. Adm. Code 742) (TACO), (Rulemaking). Subject: I served as the Illinois EPA witness supporting amendments TACO to include wellhead protection areas. September 2004.

IN THE MATTER OF MAXIMUM SETBACK ZONES FOR MARQUETTE HEIGHTS PUBLIC WATER SUPPLY (35 ILL. ADM. CODE 618), R05-09 (Rulemaking). Subject: Pursuant to request by the Village of Marquette Heights the Illinois EPA developed a maximum setback zone for the Marquette Heights community water supply wells. I served as Illinois EPA's principal witness. The proposal was adopted on May 4, 2006.

IN THE MATTER OF: STANDARDS AND REQUIREMENTS FOR POTABLE WATER WELL SURVEYS AND FOR COMMUNITY RELATIONS ACTIVITIES PERFORMED IN CONJUNCTION WITH AGENCY NOTICES OF THREATS FROM CONTAMINATION UNDER P.A. 94-134 (35 Ill. Adm. Code 1505), R06-023 (Rulemaking), JANUARY 2006. I served as an Agency panel witness to support the adoption of the RTK regulation.

IN THE MATTER OF: PROCEDURES REQUIRED BY P. A. 94-849 FOR REPORTING RELEASES OF RADIONUCLIDES AT NUCLEAR POWER PLANTS: NEW 35 Ill. Adm. Code 1010, R07-20. I served as the Agency primary witness in this proceeding.

IN THE MATTER OF: GROUNDWATER QUALITY STANDARDS (35 ILL. ADM. CODE 620), R08-18 (Rulemaking). Subject: I served as the principal witness recommending amendments and updates to the exiting regulation. These regulatory amendments are still pending before the Board. The Board went to First Notice on October 20, 2011.

IN THE MATTER OF: IN THE MATTER OF: AMEREN ASH POND CLOSURE RULES (HUTSONVILLE POWER STATION): PROPOSED 35 ILL. ADM. CODE PART 840.101 THROUGH 840.144 (R09-21) (Rulemaking – Land) Subject: I served as the one of principal witnesses on this site specific regulation. These regulatory amendments were adopted by the Board on January 20, 2011.

PEOPLE OF THE STATE OF ILLINOIS vs., EXELON CORPORATION (No. 06 MR 248), Will County Circuit Court. Subject: I served as one of the primary Illinois EPA technical witnesses in a case where the State of Illinois and Will County sued Exelon for water pollution and exceeding groundwater standards beginning in 2001 at its Dresden Nuclear Generating Station near Morris. **Exelon will pay more than \$1 million** to resolve three civil complaints stemming from radioactive tritium leaks at the Braidwood, Bryon and Dresden nuclear power plants.

IN THE MATTER OF MAXMIUM SETBACK ZONES FOR FAYETTE WATER COMPANY PUBLIC WATER SUPPLY (35 ILL. ADM. CODE 618), R011-25 (Rulemaking). Subject: Pursuant to request by the Fayette Water Company the Illinois EPA developed a maximum setback zone for the Fayette Water Company community water supply wells. I am serving as Illinois EPA's principal witness.

Publications

Cobb, R.P., 1980. *Petrography of the Houx Limestone in Missouri*. Transactions of the Illinois Academy of Science Annual Conference, Illinois Wesleyan, Bloomington, IL.

A Plan for Protecting Illinois Groundwater, 1986, Illinois Environmental Protection Agency, January. 65 p.

Cobb, R.P., and Sinnott, C.L., 1987. *Organic Contaminants in Illinois Groundwater*. Proceedings of the American Water Resources Association, Illinois Section, Annual Conference,

Champaign, IL, April 28-29, p. 33-43.

Clarke, R.P., and Cobb, R.P., 1988. *Winnebago County Groundwater Study*. Illinois Environmental Protection Agency. 58 pp.

Groundwater in Illinois: A Threatened Resource, A Briefing Paper Regarding the Need for Groundwater Protection Legislation, April 1987, Governors Office and Illinois Environmental Protection Agency, 34 pp.

Clarke, R.P., Cobb, R.P. and C.L. Sinnott, 1988. ***A Primer Regarding Certain Provisions of the Illinois Groundwater Protection Act***. Illinois Environmental Protection Agency. 48 pp.

Cobb, R.P., etal, 1992. ***Pilot Groundwater Protection Needs Assessment for the City of Pekin***. Illinois Environmental Protection Agency. 111 pp.

Cobb, R.P., 1994. ***Briefing Paper and Executive Summary on the Illinois Groundwater Protection Act and Groundwater Protection Programs with Recommendations from the Illinois Environmental Protection Agency Regarding the Siting of a Low Level Radioactive Waste Site***. Presented to the Low Level Radioactive Waste Task Force on December 9, 1994 in Champaign-Urbana.

Cobb, R.P., 1994. ***Measuring Groundwater Protection Program Success***. In the proceedings of a national conference on Protecting Ground Water: Promoting Understanding, Accepting Responsibility, and Taking Action. Sponsored by the Terrene Institute and the United States Environmental Protection Agency in Washington D.C., December 12-13, 1994.

Cobb, R.P., Wehrman, H.A., and R.C. Berg, 1994. ***Groundwater Protection Needs Assessment Guidance Document***. Illinois Environmental Protection Agency. +94 pp.

Cobb, R.P., and Dulka, W.A., 1995. ***Illinois Prevention Efforts: The Illinois Groundwater Protection Act Provides a Unified Prevention-Oriented Process to Protect Groundwater as a Natural and Public Resource***. The AQUIFER, Journal of the Groundwater Foundation, Volume 9, Number 4, March 1995. 3pp.

Cobb, R.P., 1995. ***Integration of Source Water Protection into a Targeted Watershed Program***. In the proceedings of the Ground Water Protection Council's Annual Ground Water Protection Forum in Kansas City Missouri.

Dulka, W.A., and R.P. Cobb, 1995. ***Grassroots Group Forges Groundwater Protection Law***. American Water Works Association, Opflow, Vol. 21 No. 3. 2pp.

Cobb, R.P., 1996. ***A Three Dimensional Watershed Approach: Illinois Source Water Protection Program***. In the proceedings of the Ground Water Protection Council's Annual Ground Water Protection Forum in Minneapolis Minnesota.

Cobb, R.P., and W.A. Dulka, 1996. ***Discussion Document on the Development of a Regulated***

Recharge Area for the Pleasant Valley Public Water District. Illinois Environmental Protection Agency. pp 28.

Cobb, R.P., 1996. *Illinois Source Water Protection Initiatives-Groundwater Perspective*. In the proceedings of the American Water Works Association's Annual Conference and Exposition in Toronto Canada. pp 585- 594.

Cobb, R.P., and Dulka, W.A., 1996. *Illinois Community Examines Aquifer Protection Measures*. American Water Works Association Journal. p10.

Cobb, R.P., etal. October 1999, *Ground Water Report to Congress*, United States Environmental Protection Agency.

Cobb, R.P., December 2001. *Using An Internet Geographic Information System (GIS) to Provide Public Access to Hydrologic Data*, Association of Groundwater Scientists and Engineers, National Groundwater Association, National Conference Proceedings, Nashville, Tennessee.

Cobb, R.P., September 2001, *Regulated Recharge Area Proposal for the Pleasant Valley Public Water District*, Ground Water Protection Council Annual Forum Proceedings, Reno Nevada, 13 pp.

Wilson, S., Cobb, R.P., and K. Runkle, January 2002. *Arsenic in Illinois Groundwater*. Illinois State Water Survey, Illinois Environmental Protection Agency, and Illinois Department of Public Health. <http://www.epa.state.il.us/water/groundwater/publications/arsenic/index.html>, 7 pp.

R.P., Cobb, August 2002, *Development of Water Quantity Planning and Protection in Illinois – A New Direction*, Proceedings of the Annual Ground Water Protection Council Technical Forum, San Francisco, California, 10pp.

P.C. Mills, K.J. Halford, R.P. Cobb, and D.J. Yeskis, 2002. *Delineation of the Troy Bedrock Valley and evaluation of ground-water flow by particle tracking, Belvidere, Illinois*, U.S. Geological Survey Water-Resources Investigations Report 02-4062, 46 pp.

Illinois Environmental Protection Agency's *Homeland Security Strategy*, March 2003, 20pp.

Illinois Environmental Protection Agency' *Strategic Plan, Bureau of Water Section*, September 2003, pp.

Opinions and Conclusions of Richard Cobb for the Matter of People v. Peabody Coal, PCB 99-134 (Enforcement), May 23, 2003. 60 pp.

Cobb, R.P., Fuller, C., Neibergall, K., and M. Carson, February 2004. *Community Water Supply Well Shooting/Blasting near the Hillcrest Subdivision Lake County, Illinois Fact Sheet*. Illinois Environmental Protection Agency. 4 pp.

Cobb, R.P. and J. Konczyk, June 2011, *McCullom Lake Evaluation Report*, Illinois Environmental Protection Agency, 39 pp.,
<http://www.epa.state.il.us/water/groundwater/publications/mccullom-lake-evaluation-rpt.pdf>

Additional Legislative Publications that I Participated in Developing

A Plan for Protecting Illinois Groundwater, Illinois Environmental Protection Agency, January 1986. 65 p.

Groundwater in Illinois: A Threatened Resource. A Briefing Paper Regarding the Need for Groundwater Protection Legislation, Governors Office and Illinois Environmental Protection Agency, April 1987. 34 pp.

Illinois Groundwater Protection Act, Public Act 85-0863, September 1987. 68 pp.

Public Act 92-0132 (*MTBE Elimination Act*), July 24 2001.

Executive Order #5 - requires the ICCG to designate a subcommittee to develop an integrated groundwater and surface water resources agenda and assessment report. The report shall analyze the burden's on Illinois finite water resources. quantify Illinois' water resources, and prioritize an agenda to plan for the protection of these water resources. The Director of the Department of Natural Resources chaired this subcommittee. The ICCG and GAC shall use the subcommittee's agenda and report to establish a water-quantity planning procedure for the State. The Governor signed executive order #5 on Earth Day April 22, 2001.

Amendments to Sections 2, 3 and 4 of the Illinois Groundwater Protection Act 415 ILCS 55/2 to establish a Groundwater and Surface Water Quantity Protection Planning Program, January 2002, 3 pp. These amendments were never adopted due to opposition from the Illinois Farm Bureau.

Public Act 92 –652 (Senate Bill 2072)- Amends the Illinois Groundwater Protection Act to require the Environmental Protection Agency to notify the Department of Public Health, unless notification is already provided, of the discovery of any volatile organic compound in excess of the Board's Groundwater Quality Standards or the Safe Drinking Water Act maximum contaminant level. The Governor signed this into law as Public Act 29-652 (effective July 25, 2002).

House Bill 4177 - Amends the Illinois Groundwater Protection Act. Provides that before property that has a well used for drinking water on it can be sold, the owner must have the well water tested for volatile organic chemical groundwater contaminants. Provides that if the well water does not meet the Illinois Pollution Control Board's Groundwater Quality Standards (35 ll Adm Code Part 620), the owner shall notify the Illinois Department of Public Health (IDPH) and the prospective buyer of the property. The realtors association July 2002 opposed House Bill 4177.

House Resolution 1010 - The resolution drafted by in cooperation with Senator Patrick Dunn`

staff urge the Illinois Environmental Protection Agency to further strengthen its public outreach efforts by developing, after negotiations with individuals representing areas affected by contamination and other relevant State agencies, a procedure to notify property owners whenever the Agency has confirmed an exceedence of applicable health and safety standards, using scientifically credible data and procedures under Illinois regulations. HR 1010 was adopted by voice vote on June 1, 2004.

Public Act 94-314 (Senate Bill 0214) – This is referred to as Right-to-Know (RTK) law. The law includes providing the Illinois EPA with administrative order authority (AO), information order authority, and established the requirements for providing notices to residents or business exposed or potentially exposed to contamination. The Illinois EPA had been seeking this type of AO authority for the past 35 years. Senate Bill 0214 was unanimously passed by both the Senate and the House May 2005. The legislation was signed into law by the Governor July 27, 2005.

Public Act 94-849 (House Bill 1620) - Amends the Environmental Protection Act. Requires the owner or operator of a nuclear power plant to report to the Environmental Protection Agency any unpermitted release of a contaminant within 24 hours. The bill was signed by the Governor on June 12, 2006.

Public Act 96-0603 (Crestwood Bill) - Amends the Environmental Protection Act. This law requires the owners and operators of community water systems to maintain certain documents and to make those documents available to the Agency for inspection during normal business hours. Provides that the Agency shall provide public notice within 2 days after it refers a matter for enforcement under Section 43 or issues a seal order under subsection (a) of Section 34. Further, the bill provides that the Agency must provide notice to the owners and operators of the community water system within 5 days after taking one of these actions. Moreover, the bill requires that within 5 days after receiving that notice, the owner or operator of the community water system must send a copy of the notice to all residents and owners of premises connected to the community water system. In addition, indirect notification of institutional residents is provided. Requires the owner or operator of the community water system to provide the Agency with proof that the notices have been sent. Sets forth similar notice requirements that must be complied with when groundwater contamination poses a threat of exposure to the public above the Class I groundwater quality standards. The bill creates a civil penalty for violations of these notice requirements, and makes it a felony to make certain false, fictitious, or fraudulent statements. The bill passed both houses on May 30, 2009. The bill was sent to the Governor for signature on June 26, 2009, and was signed into law on August 24, 2009.

Public Act 096-1366 – Amends the Environmental Protection Act. This new law requires public water supplies to submit a corrective action plan to the Illinois EPA upon the Agency's issuing a right-to-know notice upon verifying that the finished public water has in fact exceeded 50% of the MCL for carcinogenic VOCs. Requires the response plan to include periodic sampling to measure and verify the effectiveness of the response plan, but also requires the Illinois EPA to take into account the technical feasibility and economic reasonableness of the response plan in approving, modifying, or denying the response plan. Signed into law on July 28, 2010; effective July 28, 2010.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO CLEAN)
CONSTRUCTION OR DEMOLITION) R12-9
DEBRIS FILL OPERATIONS (CCDD):) (Rulemaking –Land)
PROPOSED AMENDMENTS TO 35 Ill.)
Adm. Code 1100)
)

ADDITIONAL TESTIMONY OF DOUGLAS W. CLAY FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

My name is Douglas W. Clay. I am the manager of the Division of Land Pollution Control within the Bureau of Land of the Illinois Environmental Protection Agency (“Agency”). I was present and testified at the hearings held in this matter on September 26 and October 25-26, 2011. In response to the First Notice Proposal issued by the Illinois Pollution Control Board (“Board”) in this matter on February 2, 2012, the Agency offers the following testimony.

At Section 1100.205(a) the Board has added additional requirements to the source site certification that must be obtained by the fill site owners and operators. The Board at page one of its first notice proposal states its reason for strengthening soil certification and soil testing requirements is due to the elimination of the groundwater monitoring requirements for CCDD and uncontaminated soil fill sites as proposed by the Agency. The Agency believes the Board’s additional requirements for source site certifications are unworkable, unclear and prohibitively burdensome to the source site owners and operators as discussed in further analysis of the Board’s changes to Section 1100.205(a) below. The Agency believes that a consequence of these new certification requirements being adopted as set forth in the Board’s first notice proposal will result in a large portion of presumably uncontaminated soil being sent to landfills

or out-of-state, or being applied to land not subject to regulation under Part 1100, such as farm fields and low lying areas. Already, Illinois has the most restrictive requirements nationwide for disposal of CCDD and uncontaminated soil at fill sites. The Agency urges the Board to remove the new source site certification requirements set forth in the Board's first notice proposal and adopt the language the Agency proposed that provides a more balanced approach in combination with groundwater monitoring requirements for fill site owners and operators.

Section 1100.205(a)(1)(A)

At Section 1100.205(a)(1)(A) the Board's language requires that a certification from a source site owner or operator that the property is not a potentially impacted property be determined in accordance with ASTM E 1528-06. The Agency interprets the proposed language in Section 1100.205(a)(1)(A) to mean that the Board intends for a source site owner or operator to specifically obtain the ASTM standard and to perform the specific sequence of operations that the ASTM standard directs.

If the Agency's interpretation of the Board's intent is correct, the Agency believes this to be overly burdensome to the source site owners and operators. First, the copyright restriction on the ASTM standard will not allow this document to be photocopied and distributed; therefore, each source site owner or operator must purchase the ASTM standard from ASTM International and may need to purchase multiple copies for recordkeeping. Second, the ASTM standard is a technical document that might be confusing to and beyond the capabilities of persons not having a technical background. For instance, the standard requires the user to identify if any federal, state, or tribal government record system lists the source site or adjacent property within a given distance. The level of assurance that the Board seeks in requiring the ASTM standard to be

performed will not be met if the source site owner or operator does not complete all steps required by the ASTM standard due to the user's lack of expertise or motivation. The alternative of hiring an environmental professional to help complete all steps required by the ASTM standard may increase costs to the source site owners and operators beyond what is economically reasonable. As a result, source site owners and operators will find other, potentially less desirable, means of disposing of their uncontaminated soil.

For excavations without much lead time or those that span several adjacent properties, as is often the case with utility and municipal excavations (e.g., water main repairs), compliance with the ASTM standard would result in costly delays and would likely be impossible to complete before the excavation must take place. Municipalities and other service providers (landscape contractors, for example) commonly excavate small quantities of soil from multiple locations. The Board's proposal effectively disallows consolidation of soils from more than one source site that could be later evaluated by a PE or PG. Under Section 1100.205(a)(1)(B) the Board's language requires a PE or PG to certify that the soil is uncontaminated based on a Phase I Environmental Site Assessment conducted in accordance with ASTM E 1527-05. However, if the soil has been consolidated, a Phase I Environmental Site Assessment no longer makes sense and effectively removes this disposal option for consolidated soils.

The Agency's proposal offered flexible guidance to an extremely diverse group of source site owners and operators. The Agency's definition of potentially impacted property and the incorporation by reference of the ASTM standards for those who need more direction provide for a reasonable and effective screening tool. When combined with load checking and groundwater monitoring by the fill site owners and operators, the Agency's proposal spread responsibility for protecting groundwater to all parties involved in the disposal of CCDD and uncontaminated soil

at fill sites. Mandatory use of the ASTM standards, as proposed by the Board, appears to be a well-intentioned but unworkable approach to ease the regulatory burden on fill site owners and operators. Compliance with the ASTM standards would greatly increase costs and confusion among source site owners and operators, and ultimately, would reduce the amount of soil taken to CCDD and uncontaminated soil fill sites. This, in turn, may have negative environmental consequences elsewhere (e.g., the unregulated low lying areas).

Section 1100.205(a)(1)(B)

The Agency's proposal was crafted with the intent of having the incorporation by reference of the ASTM standard provide an example for a PE or PG to use as needed to establish their own procedures of evaluation of sites and soils for purposes of Part 1100. The Agency interprets the proposed language in Section 1100.205(a)(1)(B) to mean that the Board intends for a PE or PG to perform the specific sequence of operations that the ASTM standard directs. If the Agency's interpretation of the Board's intent is correct, the Agency believes this to be overly burdensome to the source site owners or operators as the costs will be excessive. Certain elements of the ASTM standard are extreme when applied generally to all potentially impacted properties. For example, compliance with the Phase I Environmental Site Assessment property title searches (ASTM Section 6.2) and interviews with past and present owners and occupants (ASTM Section 10.5).

In addition, a Phase I Environmental Site Assessment may be unnecessary if the Board is requiring a PE or PG to collect analytical samples on all potentially impacted properties per the Board's language at Section 1100.205(a)(1)(B). The Board's language at Section 1100.205(a)(1)(B) states, ". . . certification under this subsection (a)(1)(B) must include

analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to Subpart F of this Part,” which suggests that the entire list of contaminants on the MAC table must be sampled for. It is unclear whether this language is contradictory with language at Section 1100.610(a) that allows the PE or PG to narrow the list to contaminants of concern. Furthermore, there may be a contradiction between the Board’s language and ASTM E 1527-05 which allows a de minimus consideration (ASTM Section 3.2.74) and varying levels of assessment (ASTM Sections 4.5.2 and 4.5.3).

The Agency believes it would be clearer and more prudent in terms of appropriate costs and procedures to provide the ASTM standard as guidance only. The PE or PG should be allowed discretion to develop, on a site specific basis, an appropriate plan and procedure to determine whether soil is uncontaminated for purposes of Part 1100. The PE or PG should also be allowed to evaluate whether the soil testing is even necessary because the property is not a potentially impacted property. PE’s have been successfully applying their judgment to certify uncontaminated soil since July 30, 2010, when the interim standards went into effect. The Agency does not believe that testimony at the hearing showed a need in the PE certification process for the level of specificity required by the ASTM standard.

1100.205(a)(1)(C)(i)

The Agency believes the purpose of ASTM E 1528-06 is to facilitate standardized transaction screens, not to establish whether a site is a potentially impacted property. ASTM E 1528-06 does not even use the term “potentially impacted property.” Therefore, the Agency believes that it would be incorrect and misleading for the certification at Section 1100.205(a)(1)(C)(i) to state that “this site is not a potentially impacted property, as determined

in accordance with ASTM E 1528-06.” The Agency urges the Board to amend the language in Section 1100.205(a)(1)(C)(i) to require that source site owners and operators certify that the site is not a potentially impacted property and the soil is presumed to be uncontaminated soil but remove “as determined in accordance with ASTM E 1528-06.”

1100.205(a)(1)(C)(ii)

The purpose of ASTM E 1527-05 is to permit a user to conduct an inquiry designed to identify recognized environmental conditions (ASTM Section 4.1), not to establish that soil is uncontaminated. ASTM E 1527-05 does not require analytical testing to confirm the presence of contamination, nor does it provide any numerical screening values. Therefore, the Agency believes that it would be incorrect and misleading for the certification at Section 1100.205(a)(1)(C)(ii) to state that “the soil from this site is uncontaminated soil based on a site evaluation conducted in accordance with ASTM E1527-05.” The Agency urges the Board to amend the language in Section 1100.205(a)(1)(C)(ii) to require that the PE or PG certify that “the soil is uncontaminated soil based upon a site evaluation and any subsequent analytical testing performed in accordance with Subpart F of 35 Ill. Adm. Code 1100” and urges the Board to remove the language “the soil from this site is uncontaminated soil based on a site evaluation conducted in accordance with ASTM E1527-05.”

1100.205(b)(1)(A)

On Page 71 of its first notice proposal, the Board invites comments on the costs and effectiveness of using a field X-Ray Fluorescence instrument (“XRF”) as a screening device. The Agency does not believe it prudent to require the use of an XRF at fill sites as a screening

device due to the instruments high cost which the Agency believes is in the range of \$30,000 and due to the extensive training needed for the use and daily calibration of the instrument. In addition, the Agency believes the XRF is mainly used for two purposes that would not be helpful for screening loads at CCDD or uncontaminated soil fill operations. First, the XRF is used to rapidly assess site conditions. The XRF can reveal, where present, contamination patterns at a site which can form the basis for development of a more detailed study. Secondly, the XRF is used to screen a large number of soil samples to minimize the number of samples that are sent to a laboratory.

There are further limitations associated with the XRF that would make it impractical for screening loads at a CCDD or uncontaminated soil fill operation. The XRF is well-suited for investigations that involve the analysis of major elements and trace elements (>1ppm) in rock and sediments. However, in practice, commercially available field instruments are limited in their ability to precisely and accurately measure the abundance of elements that are found in most soils. USEPA's Science and Ecosystem Support Division, has published operating procedures for the use of field XRF instruments at SESDPROC-107-R2 effective 12/20/2011. This document identified several limitations with the use of field XRF instruments. It identified the three main sources of interference in XRF analysis as sample preparation error, spectral interferences and chemical matrix interferences. Each element has a signature spectrum of energy. Many elements, however, produce X-rays of similar energy and discerning which specific element is present may not be possible with the field instrument. Soil moisture biases the results to the low side so drying the samples is necessary to increase the accuracy of the instrument. Another limitation is the instruments lack of sensitivity with respect to certain elements. Because of signal peak overlaps some elements have problematically high detection

limits. One of the most common examples of this is the lead/arsenic pair. When lead and arsenic are detected the peak overlap results in detection limits that are several times higher so it is necessary to perform laboratory analysis to obtain reliable data. The USEPA document also notes that when calibrating the instrument it should measure +/- 20% of the referenced standard which acknowledges a fairly wide range in the accuracy of the element detected.

Agency field staff have access to and will utilize the XRF when conducting compliance inspections at permitted CCDD disposal sites and at sites that are accepting only soils for disposal. A decision to take enforcement would never be made solely from the data obtained from the XRF. Although the Agency does not support the required use of an XRF at fill sites as a screening device, the Agency does not discourage fill site owners and operators from using the XRF at their own discretion.

1100.205(b)(8)(C), 1100.205(c), 1100.209 and 1100.209(a)

On Page 76 of its first notice proposal, the Board expresses concern about the vagueness of the phrase “or other Agency written approval” which appears in Sections 1100.205(b)(8)(C), 1100.205(c), 1100.209 and 1100.209(a) of the draft regulations proposed by the Agency. The Board is correct in thinking that the phrase was meant to address uncontaminated soil fill operations. The subject sections prescribe default requirements that fill site owners and operators must meet, unless they have obtained written Agency approval to meet alternate requirements. CCDD fill site owners and operators can receive such approval through the Part 1100 permitting process. However, uncontaminated soil fill site owners and operators are not required to obtain Part 1100 permits and the Agency does not plan to issue permits for uncontaminated soil fill operations. Thus, the phrase “or other Agency written approval” was

included to provide uncontaminated soil fill site owners and operators with a means of obtaining relief from the default regulatory requirements.

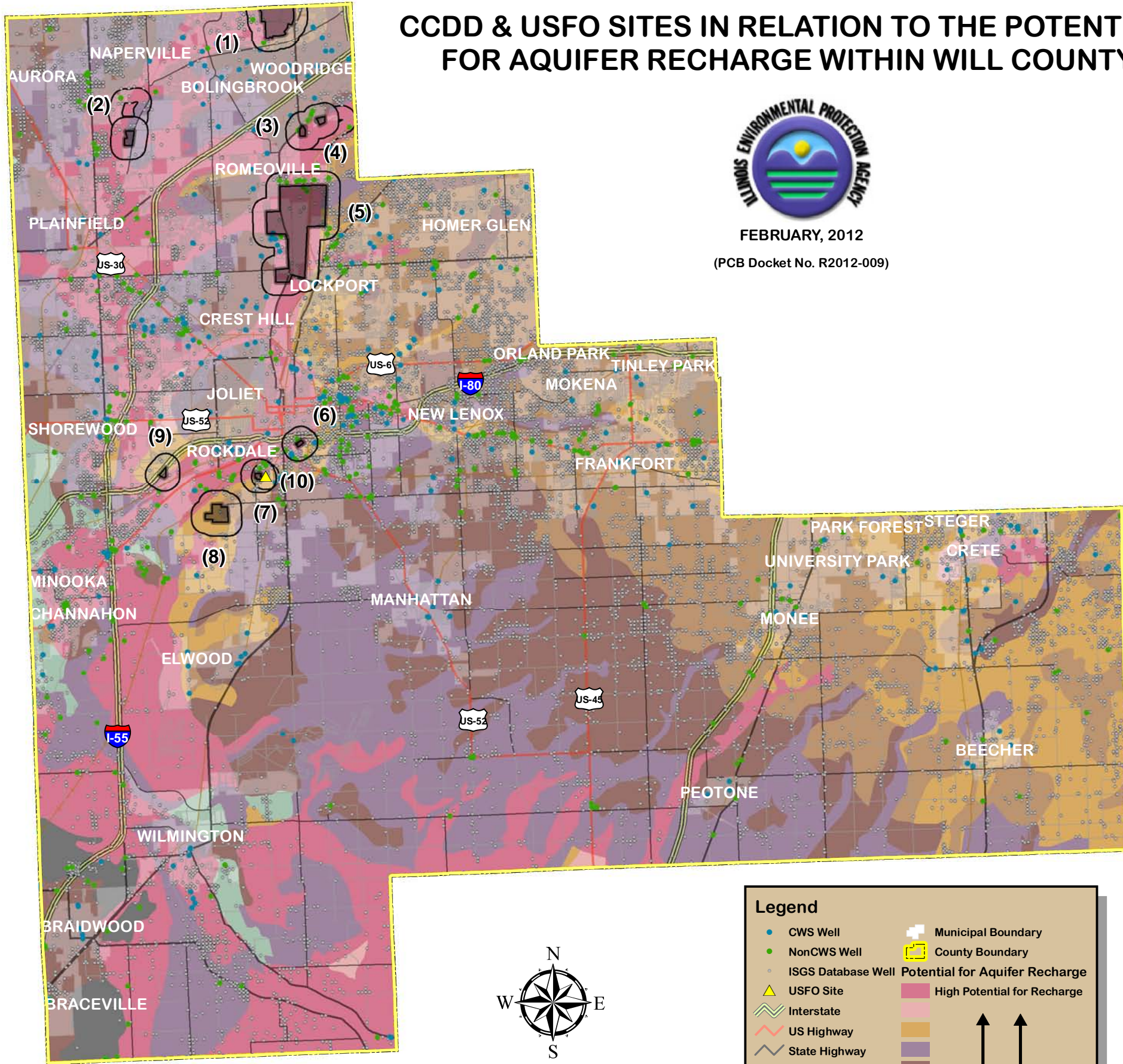
1100.605(c)(3)

On Page 76 of its first notice proposal, the Board proposes an appeal provision at Section 1100.605(c)(3). Section 1100.605(c) authorizes the Agency, upon request, to develop MACs for chemical constituents not listed in the Tier 1 tables at 35 Ill. Adm. Code 742.Appendix B, Tables A, B, or C, which provide the basis for the MAC Table prepared by the Agency under Section 1100.605(e). The Board expressed its concern that requestors for MACs developed by the Agency would have no opportunity to seek review of the Agency's MAC determinations. The Board invited comments on this provision from participants. The Agency agrees the appeal provision is appropriate and supports the Board's inclusion of the appeal language at subsection (c)(3).

CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN WILL COUNTY



FEBRUARY, 2012
(PCB Docket No. R2012-009)



Groundwater Sources Within 2500'

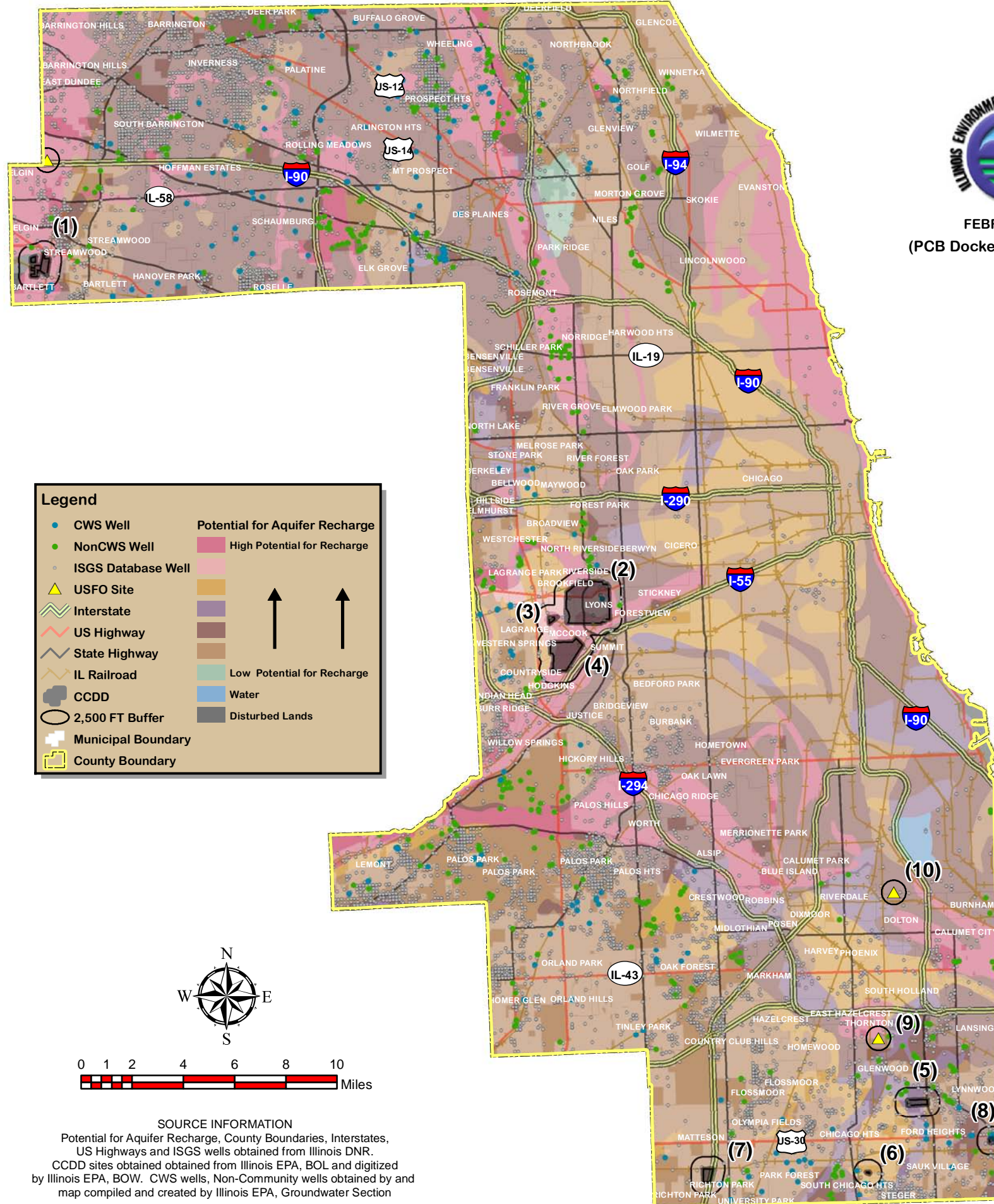
(1) Elmhurst Chicago Stone Co. Community Water Supply Wells - 0 Non-Community Supply Wells - 2 Private Water Wells - 36	(6) Richards Street Quarry Community Water Supply Wells - 3 Non-Community Supply Wells - 6 Private Water Wells - 82
(2) EF Heil Community Water Supply Wells - 0 Non-Community Supply Wells - 0 Private Water Wells - 12	(7) DEBE Land Development Community Water Supply Wells - 1 Non-Community Supply Wells - 3 Private Water Wells - 52
(3) Orange Crush Community Water Supply Wells - 0 Non-Community Supply Wells - 3 Private Water Wells - 9	(8) Laraway Recycling & Disposal Facility Community Water Supply Wells - 0 Non-Community Supply Wells - 0 Private Water Wells - 16
(4) Land & Lakes Community Water Supply Wells - 0 Non-Community Supply Wells - 3 Private Water Wells - 9	(9) FJV Community Water Supply Wells - 0 Non-Community Supply Wells - 0 Private Water Wells - 8
(5) Hanson Material Yard 61 Community Water Supply Wells - 7 Non-Community Supply Wells - 12 Private Water Wells - 128	(10) Black Forest-Zurich Community Water Supply Wells - 1 Non-Community Supply Wells - 2 Private Water Wells - 46
Totals for 9 CCDDs in Will County	
Community Water Supply Wells - 12	
Non-Community Supply Wells - 31	
Private Water Wells - 398	

CWS Groundwater Systems in Will County

SYSTEM NUMBER	SYSTEM NAME	POPULATION
IL1970020	GATEWAY MHP	884
IL1970050	BEECHER	4,011
IL1970060	AQUA ILLINOIS-VILLAGE WOODS	945
IL1970130	GODLEY PUBLIC WATER DISTRICT	601
IL1970150	BRAIDWOOD	6,191
IL1970200	CHANNAHON	8,967
IL1970250	CREST HILL	14,889
IL1970300	CRETE	7,700
IL1970350	ELWOOD	2,300
IL1970400	FRANKFORT	21,501
IL1970450	JOLIET	147,433
IL1970500	LOCKPORT	24,466
IL1970550	MANHATTAN	6,000
IL1970650	MONEE	4,901
IL1970750	PEOTONE	3,385
IL1970850	ROCKDALE	1,888
IL1970900	ROMEOVILLE	52,000
IL1975030	AQUA ILLINOIS-UNIVERSITY PARK	6,800
IL1975040	IL AMERICAN-ARBURY	1,482
IL1975080	SHOREWOOD	16,000
IL1975105	CRISWELL COURT MHP	148
IL1975170	BECKWITH COMMUNITY ASSOCIATION	70
IL1975180	BALMORAL HEIGHTS SUBDIVISION	390
IL1975195	BUSY BEE MHP #1	25
IL1975200	UTL INC-CAMELOT UTILITIES, INC.	749
IL1975210	IL AMERICAN-CENTRAL STATES DST	141
IL1975280	UTL INC-CHERRY HILL WATER COMPANY	826
IL1975376	GARDEN STREET IMPROVEMENT ASSOCIATION	54
IL1975385	PHEASANT LAKE ESTATES MHP	1,100
IL1975400	COLLEGE VIEW SUBDIVISION	570
IL1975480	CRYSTAL LAWN'S ADDITION IMPROVEMENT ASSOC	1,250
IL1975520	DIXIE ESTATES SUBDIVISION	175
IL1975600	EASTMORELAND WTR SERVICE ASSN	690
IL1975640	EAST MORELAND WATER CORPORATION	135
IL1975800	HILLVIEW SUBDIVISION	100
IL1975880	INGALLS PARK SUBDIVISION	744
IL1975930	LAKEWOOD SHORES IMPROVEMENT ASSOCIATION	868
IL1977490	SOUTHEAST JOLIET SD	2,000
IL1977690	SHAWNITA TRC WATER ASSOCIATION	291
IL1977730	SUNNYLAND SUBDIVISION	350
IL1977870	AQUA ILLINOIS-WILLOWBROOK	3,422
IL1978100	LOCKPORT TOWNSHIP WATER SYSTEM	2,706
Total	42	349,148

SOURCE INFORMATION
Potential for Aquifer Recharge, County Boundaries, Interstates, US Highways and ISGS wells obtained from Illinois DNR. CCDD sites obtained from Illinois EPA, BOL and digitized by Illinois EPA, BOW. CWS wells, Non-Community wells obtained by map compiled and created by Illinois EPA, Groundwater Section

CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN COOK COUNTY



FEBRUARY, 2012
(PCB Docket No. R2012-009)

Groundwater Sources Within 2500'

- | | |
|---|---|
| (1) Gifford East
Community Water Supply Wells - 2
Non-Community Supply Wells - 1
Private Water Wells - 37 | (7) Richton Park CCDD
Community Water Supply Wells - 1
Non-Community Supply Wells - 0
Private Water Wells - 4 |
| (2) Reliable Lyons
Community Water Supply Wells - 1
Non-Community Supply Wells - 2
Private Water Wells - 24 | (8) Village of Lynwood CCDD Fill
Community Water Supply Wells - 7
Non-Community Supply Wells - 4
Private Water Wells - 34 |
| (3) Hanson Material Service Yard 585
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 5 | (9) Hansen Material (USFO)
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 5 |
| (4) Vulcan-McCook Quarry
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 13 | (10) Rio Vista (USFO)
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 2 |
| (5) TJ Lambrecht Inc Glenwood Borrow Pits
Community Water Supply Wells - 0
Non-Community Supply Wells - 2
Private Water Wells - 19 | (11) McGrawWildlife (USFO)
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 1 |
| (6) Fitz-Mar Landfill
Community Water Supply Wells - 2
Non-Community Supply Wells - 0
Private Water Wells - 7 | Totals for 8 CCDDs and 3 USFOs in Cook County
Community Water Supply Wells - 13
Non-Community Supply Wells - 9
Private Water Wells - 157 |

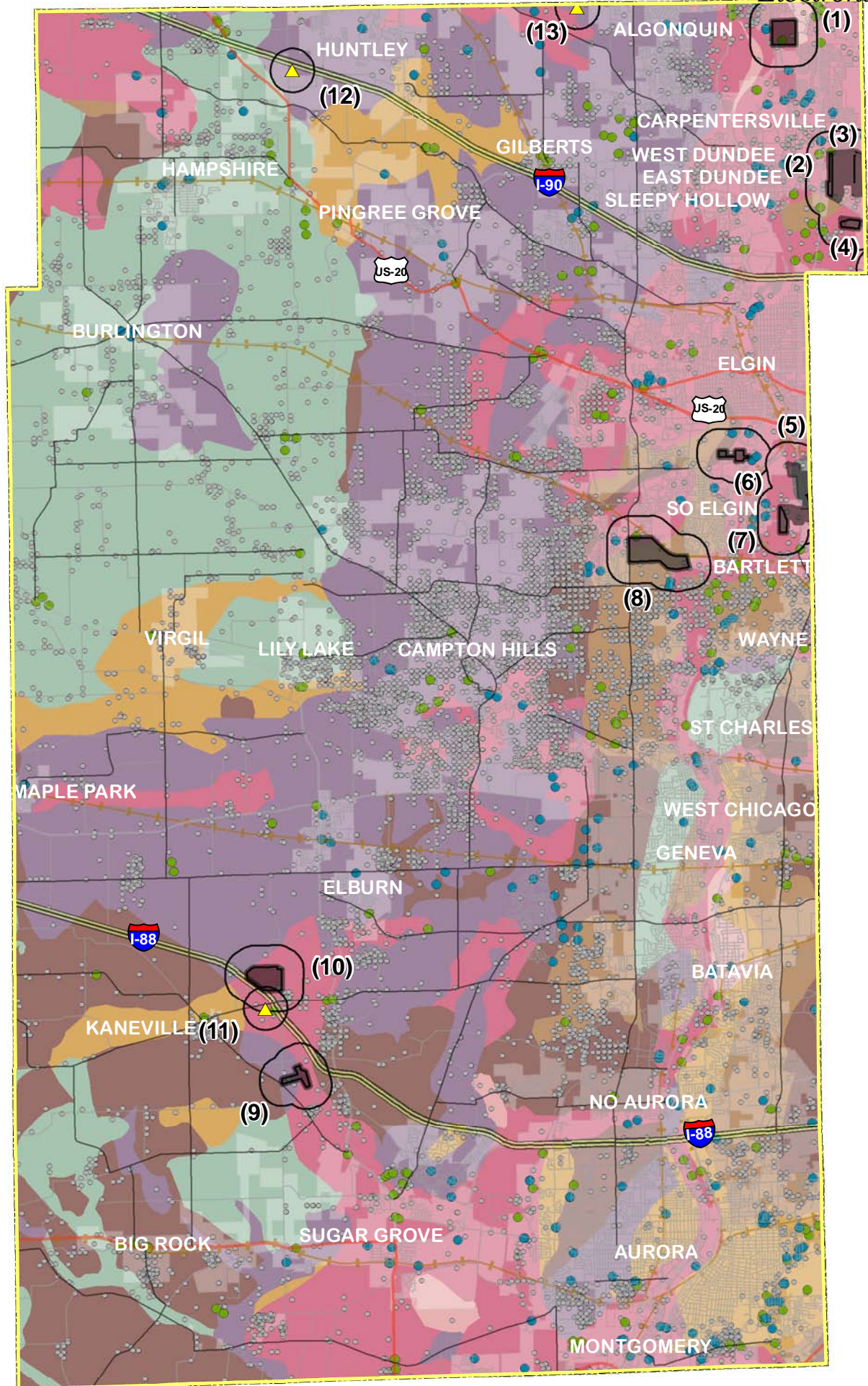
CWS Groundwater Systems in Cook County

SYTEM NUMBER	SYSTEM NAME	POPULATION
IL0310010	PARADISE MHP	693
IL0310080	SUNSET MHP	1,290
IL0310200	WOODS OF SOUTH BARRINGTON	630
IL0310260	OLYMPIA FIELDS COUNTRY CLUB	61
IL0310370	LINDENTREE TOWNHOMES	231
IL0311620	LEMONT	15,614
IL0312550	RICHTON PARK	13,646
IL0312790	SAUK	11,000
IL0313180	WESTERN SPRINGS	12,493
IL0314120	BARTLETT	41,500
IL0314740	PARK FOREST	23,462
IL0314860	STEGER	9,682
IL0315185	OASIS MHP	1,797
IL0315935	LINWAY ESTATES MHP	320
IL0317050	IL AMERICAN-MIDWEST PALOS	180
IL0317080	PLUM CREEK CONDOS	570
IL0317595	WILLOWAY TERRACE MHP	900
IL0317765	TOUHY MHP	1,088
IL0317775	DES PLAINES MHP	648
IL0317950	PLUM GROVE CONDOS	250
Total	20	136,055

CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN KANE COUNTY



FEBRUARY, 2012
(PCB Docket No. R2012-009)



Groundwater Sources Within 2500'

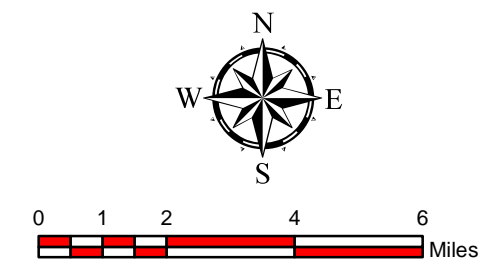
- | | |
|--|--|
| (2) Palumbo Management
Community Water Supply Wells - 3
Non-Community Supply Wells - 4
Private Water Wells - 29 | (8) Fox River Stone Co.
Community Water Supply Wells - 3
Non-Community Supply Wells - 1
Private Water Wells - 49 |
| (3) Prairie Materials Yard 92
Community Water Supply Wells - 2
Non-Community Supply Wells - 0
Private Water Wells - 24 | (9) Lakeview Estates CCDD
Community Water Supply Wells - 3
Non-Community Supply Wells - 1
Private Water Wells - 13 |
| (4) Beverly Materials
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 24 | (10) Prairie Material Sales
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 30 |
| (5) Raymond Street
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 5 | (11) Elmhurst Chicago Stone Co. USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 12 |
| (6) Blue Heron Business Park
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 12 | (12) 18N585 Brier Hill Road Co. USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 0 |
| (7) Middle Street
Community Water Supply Wells - 2
Non-Community Supply Wells - 1
Private Water Wells - 23 | (13) Square Barn Road Quarry USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 2 |
| TOTALS for 8 CCDDs in Kane County
Community Water Supply Wells - 13
Non-Community Supply Wells - 10
Private Water Wells - 223 | |

CWS Groundwater Systems in Kane County

SYSTEM NUMBER	SYSTEM NAME	POPULATION
IL0890040	SILVER GLEN ESTS	595
IL0890080	GLENWOOD SCHOOL FOR BOYS AND GIRLS	97
IL0890090	OTTER CREEK WATER RECLAMATION DISTRICT	5,025
IL0890110	WASCO SD	3,150
IL0890120	MILL CREEK WATER RECLAMATION DISTRICT	6,950
IL0890150	BURLINGTON	633
IL0890160	PINGREE GROVE	3,986
IL0890200	CARPENTERSVILLE	35,000
IL0890250	EAST DUNDEE	2,955
IL0890300	ELBURN	5,560
IL0890350	GENEVA	21,901
IL0890400	GILBERTS	4,200
IL0890450	HAMPSHIRE	5,563
IL0890500	MAPLE PARK	765
IL0890600	NORTH AURORA	16,000
IL0890800	SOUTH ELGIN	14,668
IL0890850	SUGAR GROVE	10,962
IL0890950	WEST DUNDEE	7,285
IL0894130	BATAVIA	26,000
IL0894690	MONTGOMERY	25,262
IL0894830	ST CHARLES	32,974
IL0895030	FRWRD-SKYLINE PLANT	750
IL0895149	BROADVIEW ACADEMY	23
IL0895150	IL AMERICAN-ROLLINS	261
IL0895200	UTL INC-LAKE MARIAN WATER CORPORATION	858
IL0895285	MARGARETS HI-ACRE MHP	210
IL0895300	MOECHERVILLE WATER DISTRICT	1,313
IL0895319	MOOSEHEART	600
IL0895400	OGDEN GARDENS SUBDIVISION	400
IL0895530	HIGHLAND SUBDIVISION	60
IL0895545	MARGARETS PARK VIEW ESTATES MHP	190
IL0895550	POWERS WATER CO, INC.	214
IL0895600	IL AMERICAN-RIVER GRANGE	72
IL0895750	AURORA COMMUNITY WATER ASSN	150
IL0895800	UTL INC-FERSON CREEK UTILITIES CORP	1,134
IL0895930	IL YOUTH CENTER ST CHARLES	600
IL1110050	ALGONQUIN	33,000
IL1110350	HUNTLEY	23,229
TOTALS	38 SYSTEMS	292,595

Legend

- CWS Well
- NonCWS Well
- ISGS Database Well
- Interstate
- County Road
- Local Road
- State Highway
- US Highway
- IL Railroad
- 2,500 FT Buffer
- Municipal Boundary
- County Boundary
- Potential for Aquifer Recharge**
- High Potential for Recharge
- Low Potential for Recharge
- Water
- Disturbed Lands

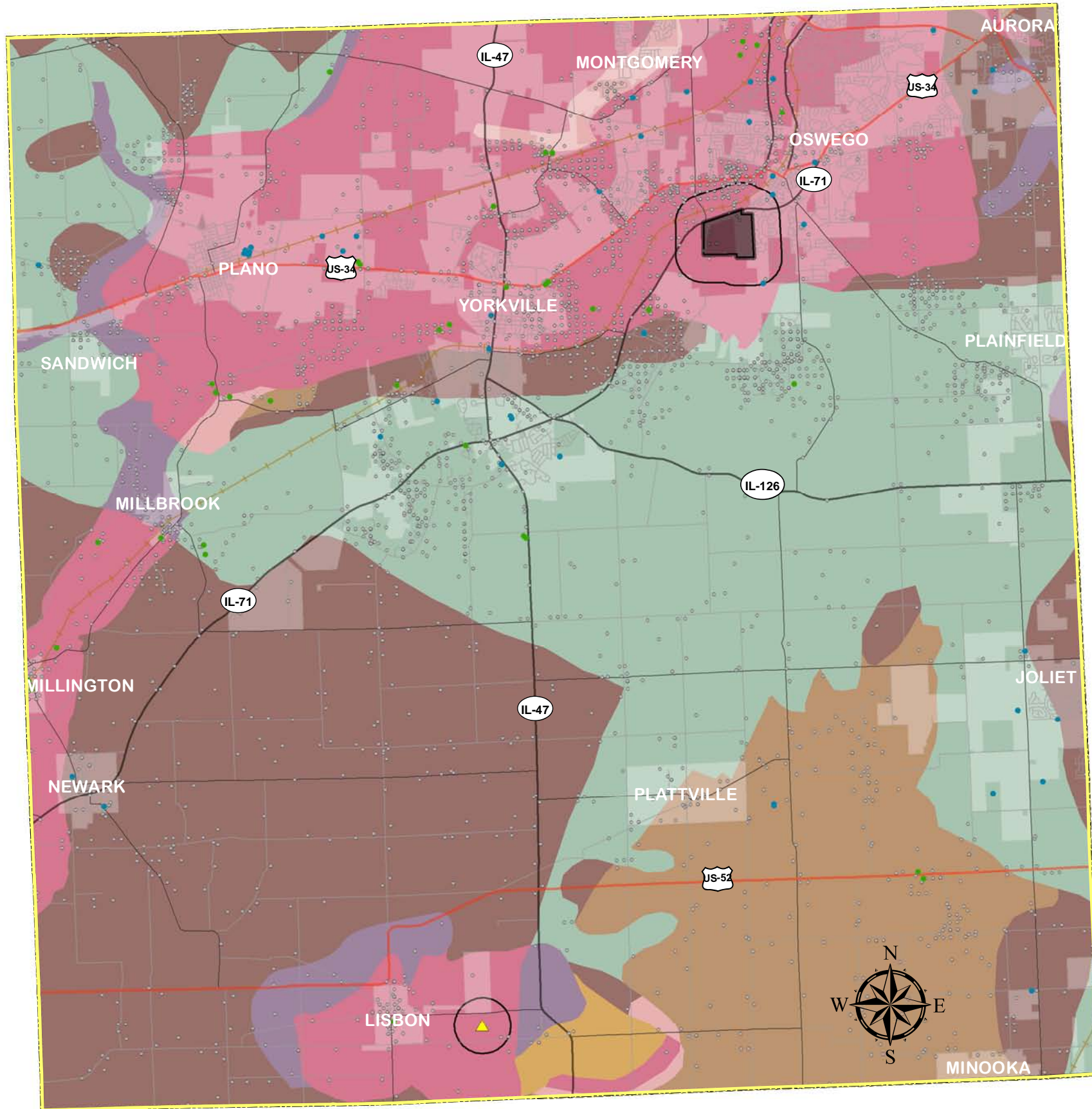


SOURCE INFORMATION
 Potential for Aquifer Recharge, County Boundaries, Interstates, US Highways and ISGS wells obtained from Illinois DNR. CCDD sites obtained from Illinois EPA, BOL and digitized by Illinois EPA, BOW. CWS wells, Non-Community wells obtained by Map compiled and created by Illinois EPA, Groundwater Section

CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN KENDALL COUNTY



FEBRUARY, 2012
(PCB Docket No. R2012-009)

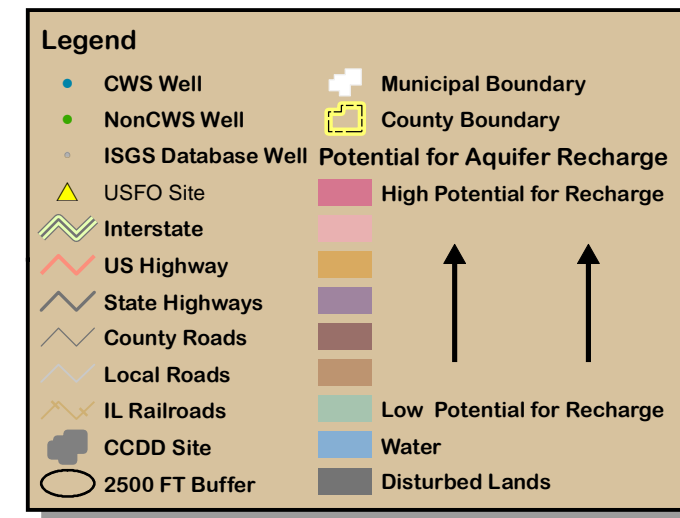


Groundwater Sources Within 2500'

- (1) Fox Ridge Stone LLC
 - Community Water Supply Wells - 1
 - Non-Community Supply Wells - 0
 - Private Water Wells - 54
- (2) Vulcan Construction Materials USFO
 - Community Water Supply Wells - 0
 - Non-Community Supply Wells - 0
 - Private Water Wells - 2
- TOTALS for 1 CCDD in Kendall County**
 - Community Water Supply Wells - 1
 - Non-Community Supply Wells - 0
 - Private Water Wells - 54

CWS Groundwater Systems in Kendall County

SYSTEM NUMBER	SYSTEM NAME	POPULATION
IL0930100	NEWARK	887
IL0930150	OSWEGO	29,012
IL0930200	PLANO	10,693
IL0930250	YORKVILLE	11,404
IL0935100	IL AMERICAN-VALLEY MARINA	1,272
IL0935140	MORGAN CREEK	66
IL0935150	FOX LAWN HOMEOWNERS WATER ASSOCIATION	238
IL0935200	IL AMERICAN-HOLLIS	123
IL0935250	STORYBOOK HIGHLANDS	100
Total	9	53,795



SOURCE INFORMATION
 Potential for Aquifer Recharge, County Boundaries, Interstates, US Highways and ISGS wells obtained from Illinois DNR. CCDD sites obtained from Illinois EPA, BOL and digitized by Illinois EPA, BOW. CWS wells, Non-Community wells obtained by and map compiled and created by Illinois EPA, Groundwater Section

CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN MCHENRY COUNTY

Electronic Filing - Final Report - Health's Office - 02/10/2012



FEBRUARY, 2012

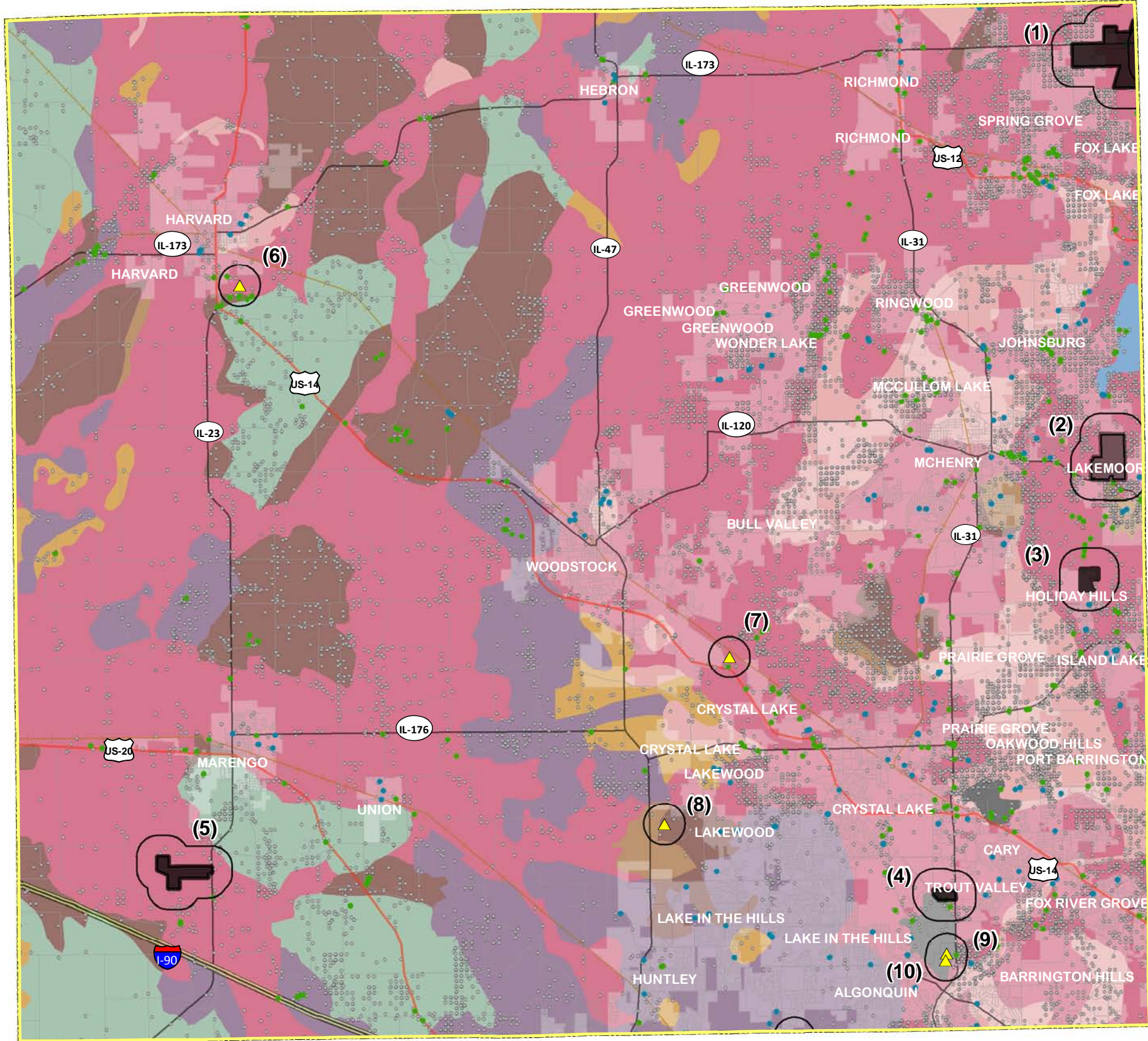
(PCB Docket No. R2012-009)

Groundwater Sources Within 2500'

- | | |
|---|---|
| (1) Thelen Sand & Gravel
Community Water Supply Wells - 0
Non-Community Supply Wells - 3
Private Water Wells - 406 | (5) Prairie Materials Sales Yd 90
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 23 |
| (2) Peterson Sand and Gravel.
Community Water Supply Wells - 2
Non-Community Supply Wells - 4
Private Water Wells - 364 | (6) McGuire Road Stone LLC USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 6
Private Water Wells - 11 |
| (3) Reliable Sand & Gravel Co.
Community Water Supply Wells - 2
Non-Community Supply Wells - 2
Private Water Wells - 36 | (7) Lily Pond Stone LLC USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 8 |
| (4) Lake in the Hills CCDD
Community Water Supply Wells - 0
Non-Community Supply Wells - 2
Private Water Wells - 34 | (8) Foster Road Quarry USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 0
Private Water Wells - 4 |
| Totals for 4 CCDDs in McHenry County
Community Water Supply Wells - 4
Non-Community Supply Wells - 19
Private Water Wells - 973 | (9 & 10) Meyer Material Co. & Hanson Material USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 1
Private Water Wells - 87 |

CWS Groundwater Systems in McHenry County

SYSTEM NUMBER	SYSTEM NAME	POPULATION
IL1110011	HARBOR LITES-PISTAKEE FSHG CL	66
IL1110040	JOHNSBURG 1	150
IL1110050	ALGONQUIN	33,000
IL1110080	IL AMERICAN-TERRA COTTA	783
IL1110100	CARY	18,681
IL1110130	WOODS CREEK WATER SUPPLY	420
IL1110150	CRYSTAL LAKE	41,072
IL1110200	FOX RIVER GROVE	4,700
IL1110250	HARVARD	9,000
IL1110300	HEBRON	1,100
IL1110350	HUNTLEY	23,229
IL1110400	LAKE IN THE HILLS	29,195
IL1110600	MC HENRY	22,020
IL1110650	MARENGO	7,355
IL1110750	RICHMOND	1,612
IL1110900	UNION	589
IL1110930	MEADOWS OF WEST BAY WATER TREATMENT	25
IL1110950	WOODSTOCK	24,658
IL1115020	MC HENRY SHORES WATER COMPANY	1,869
IL1115080	JOHNSBURG NO.2	720
IL1115125	OAKBROOK ESTATES MHP	310
IL1115145	ROYAL OAKS MHP	114
IL1115150	CRYSTAL CLEAR WATER COMPANY	885
IL1115189	VALLEY HI NURSING HOME	125
IL1115250	EASTWOOD MANOR WATER COMPANY	900
IL1115300	HIGHLAND SHORES WATER COMPANY	2,244
IL1115350	UTL INC-HOLIDAY HILLS	744
IL1115400	UTL INC-KILLARNEY WATER COMPANY	1,065
IL1115600	NUNDA UTILITIES COMPANY	570
IL1115700	UTL INC-WHISPERING HILLS WATER COMPANY	7,735
IL1115730	PRAIRIE RIDGE ASSOCIATION	130
IL1115750	WONDER LAKE WATER COMPANY	1,488
IL1115760	LAKEWOOD	2,508
IL1115800	UTL INC-WALK-UP WOODS WATER COMPANY	774
IL1115850	NORTHERN ILLINOIS UTILITIES, INC.	1,180
Total	35	241,016



Legend

- CWS Well
- NonCWS Well
- ISGS Database Well
- USFO Site
- Interstate
- US Highway
- State Highway
- County Road
- Local Road
- IL Railroad
- CCDD Site
- 2,500 FT Buffer
- Municipal Boundary
- County Boundary
- Potential for Aquifer Recharge
 - High Potential for Recharge
 - Low Potential for Recharge
 - Water
 - Disturbed Lands



SOURCE INFORMATION
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CCDD & USFO SITES IN RELATION TO THE POTENTIAL FOR AQUIFER RECHARGE WITHIN LAKE COUNTY



FEBRUARY, 2012

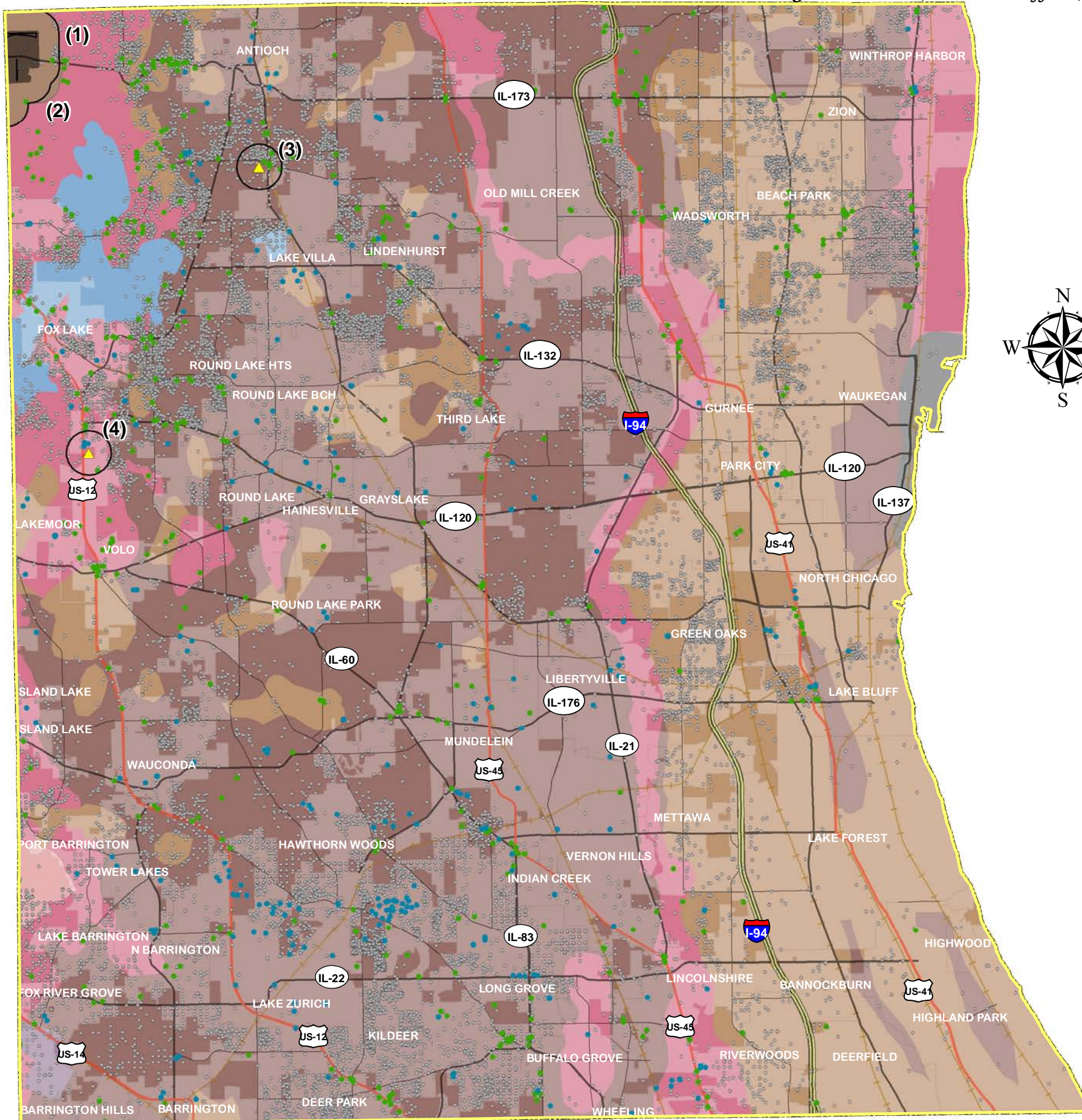
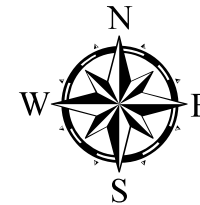
(PCB Docket No. R2012-009)

Groundwater Sources Within 2500'

- | | |
|---|--|
| (1) Thelen Sand & Gravel
Community Water Supply Wells - 0
Non-Community Supply Wells - 3
Private Water Wells - 406 | (3) Dahl Enterprises Inc-Laurel Mine USFO
Community Water Supply Wells - 0
Non-Community Supply Wells - 6
Private Water Wells - 119 |
| (2) Midwest Aggregates
Community Water Supply Wells - 0
Non-Community Supply Wells - 2
Private Water Wells - 42 | (4) Oaks USFO
Community Water Supply Wells - 3
Non-Community Supply Wells - 1
Private Water Wells - 27 |
| Community Water Supply Wells - 3
Non-Community Supply Wells - 12
Private Water Wells - 594 | |

CWS Groundwater Systems in Lake County

SYSTEM NUMBER	SYSTEM NAME	POPULATION	SYSTEM NUMBER	SYSTEM NAME	POPULATION
IL0970050	ANTIOCH	13,724	IL0975040	AQUA ILLINOIS-HAWTHORN WOODS	1,386
IL0970080	WYNSTONE WATER COMPANY	1,428	IL0975050	LAKE CO. PW - ARDEN SHORES ESTATES	69
IL0970110	ROCKWELL UTILITIES, LLC	1,618	IL0975070	AQUA ILLINOIS-RAVENNA	90
IL0970120	SADDLEBROOK FARMS	2,095	IL0975139	ALLENDALE ASSOCIATION	200
IL0970160	GLENSTONE SBDV HOA	70	IL0975165	CHAIR-O-LAKES MHP	80
IL0970170	ROYAL MELBOURNE HOMEOWNERS ASN	378	IL0975185	DIAMOND LAKE MHP	189
IL0970180	AQUA ILLINOIS-IVANHOE	795	IL0975200	COUNTRYSIDE LAKE SUBDIVISION - LAKE CO PW	1,071
IL0970200	FOX LAKE	8,600	IL0975238	HEIDEN GARDENS CONDOS	124
IL0970220	WHISPERING LAKES WATER SYSTEM, INC.	375	IL0975245	HOLLY HOCK HILL MHP	52
IL0970270	LAKEMOOR	2,433	IL0975380	D L WELL OWNERS ASSOCIATION	141
IL0970280	BROOKS FARM SUBDIVISION - LAKE COUNTY PW	1,566	IL0975450	AQUA ILLINOIS - FAIRHAVEN ESTATES	300
IL0970310	THE PRESERVE AT LONG GROVE	201	IL0975485	PAULS MHP	38
IL0970320	PROMONTORY POINTE HOMEOWNERS ASSOCIATION	91	IL0975500	FOREST LAKE ADDITION - LAKE CO PW	210
IL0970400	HAINESVILLE	2,129	IL0975520	LAKE BARRINGTON SHORES SUBDIVISION	2,360
IL0970840	LAKE VILLA	6,243	IL0975550	FOX LAKE HILLS SUBDIVISION - LAKE CO PW	2,490
IL0970850	LAKE ZURICH	19,932	IL0975585	ROCKLAND MHP	165
IL0971000	LINDENHURST	15,718	IL0975600	GRANDWOOD PARK SUBDIVISION - LAKE CO PW	7,700
IL0971050	FIELDS OF LONG GROVE	267	IL0975620	UTL INC-HARBOR RIDGE UTILITES, INC.	897
IL0971060	BRIARCREST SBDV HOMEOWNERS ASSOCIATION	207	IL0975700	HILLDALE MANOR SUBDIVISION	414
IL0971080	LAKE BARRINGTON	800	IL0975736	ELM OAK MUTUAL WATER SYSTEM	50
IL0971090	ALDEN LONG GROVE NURSING CENTER	248	IL0975750	HIGHLAND LAKE SUBDIVISION - LAKE CO PW	306
IL0971100	PROVIDENCE AT PAINTED LAKES	1,767	IL0975780	FOX LAKE PLANT 2	3,100
IL0971110	ARLINGTON REHABILITATION LIVING CENTER	180	IL0975849	MOUNT ST JOSEPH SCHOOL ICF	125
IL0971120	PORT BARRINGTON SHORES SUBDIVISION	66	IL0975900	ICPW - PEKAPA SUBDIVISION	3,579
IL0971130	TANNERON BAY HOMEOWNERS ASSOCIATION	258	IL0977050	WEST SHORELAND SUBDIVISION	189
IL0971160	PORTS SULLIVAN LAKE OWNERS ASSOCIATION	293	IL0977100	SYLVAN LAKE 1ST SUBDIVISION	210
IL0971170	UNIVERSITY ST MARY OF THE LAKE	455	IL0977150	SCHWERMANN'S 2ND AND 3RD WTR BRD	285
IL0971200	PRAIRIE TRAILS OF LONG GROVE	186	IL0977189	ALTERNATIVE BEHAVIOR TREATMENT CENTER	50
IL0971770	VOLO	2,350	IL0977250	TOWNERS SUBDIVISION	204
IL0971850	WAUCONDA	13,715	IL0977300	UTL INC-VALENTINE WATER SERVICE	213
IL0974080	BARRINGTON	10,168	IL0977320	WADSWORTH OAKS SUBDIVISION - LAKE CO PW	185
IL0974540	ISLAND LAKE	8,320	IL0977370	WEST SHORE PARK SUBDIVISION	590
IL0975010	TOWER LAKES	1,350	Total		65
					145,088



Legend

● CWS Well	Municipal Boundary
● NonCWS Well	County Boundary
● ISGS Database Well	Potential for Aquifer Recharge
▲ USFO Site	 High Potential for Recharge
Interstate	 ↑
US Highway	 ↑
State Highway	 Low Potential for Recharge
County Road	 Water
IL Railroad	 Disturbed Lands
CCDD Site	
2,500 Ft. Buffer	



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STATE OF ILLINOIS)
)
COUNTY OF SANGAMON)

PROOF OF SERVICE

I, the undersigned, on oath state that I have served the attached Illinois Environmental Protection Agency's Testimony of Richard P. Cobb, P.G., and Testimony of Douglas W. Clay, P.E., upon the persons to whom they are directed by placing copies of each in an envelope addressed to:

John T. Therriault, Clerk
Illinois Pollution Control Board
James R. Thompson Center
Suite 11-500
100 West Randolph
Chicago, Illinois 60601
(Electronic Filing)

Mitchell Cohen
Chief Legal Counsel
Illinois Dept. of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271
(First Class Mail)

Matthew J. Dunn, Chief
Environmental Enforcement/Asbestos
Litigation Division
Illinois Attorney General's Office
69 West Washington St., 18th Floor
Chicago, Illinois 60602
(First Class Mail)

Marie E. Tipsord
Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601
(Electronic Filing)

(Attached Service List – First Class Mail)

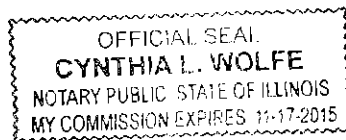
and sending or mailing them, as applicable, from Springfield, Illinois on March 5, 2012, with sufficient postage affixed as indicated above.

Mark Wight

SUBSCRIBED AND SWORN TO BEFORE ME

This 5th day of March, 2012.

Cynthia R. Wolfe
Notary Public



SERVICE LIST

<p>Claire A. Manning Brown, Hay & Stephens LLP 700 First Mercantile Bank Building 205 South Fifth St., P.O. Box 2459 Springfield, IL 62705-2459</p>	<p>John Henriksen, Executive Director Illinois Association of Aggregate Producers 1115 S. Second Street Springfield, IL 62704</p>
<p>Steven Gobelman Geologic/Waste Assessment Specialist Illinois Department of Transportation 2300 S. Dirksen Parkway Springfield, IL 62764</p>	<p>Tiffany Chappell City of Chicago Mayor's Office of Intergovernmental Affairs 121 N. LaSalle Street City Hall, Room 406 Chicago, IL 60602</p>
<p>Stephen Sylvester Assistant Attorney General Illinois Attorney General's Office 69 West Washington St., 18th Floor Chicago, IL 60602</p>	<p>James M. Morpew Sorling, Northrup, Hanna, Cullen & Cochran, Ltd. Suite 800 Illinois Building 607 East Adams, P.O. Box 5131 Springfield, IL 62705</p>
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<p>Brian Lansu, Attorney Land Reclamation & Recycling Association 2250 Southwind Blvd. Bartlett, IL 60103</p>	<p>Dennis G. Walsh Klein, Thorpe and Jenkins, Ltd. 20 North Wacker Drive Suite 1660 Chicago, IL 60606-2903</p>
<p>Gregory T. Smith Klein, Thorpe and Jenkins, Ltd. 20 North Wacker Drive Suite 1660 Chicago, IL 60606-2903</p>	<p>Dennis M. Wilt, Vice President & Area Gen Waste Management of Illinois 720 East Butterfield Road Lombard, IL 60148</p>
<p>Michelle A. Gale Waste Management of Illinois 720 East Butterfield Road Lombard, IL 60148</p>	<p>Doris McDonald Asst. Corp. Counsel Chicago Dept. of Law 30 North LaSalle St., Suite 1400 Chicago, IL 60602</p>