

ILLINOIS POLLUTION CONTROL BOARD  
May 2, 2013

ROCK RIVER WATER RECLAMATION )  
DISTRICT, )  
 )  
Petitioner, )  
 )  
v. ) PCB 13-11  
 ) (Permit Appeal - Water)  
ILLINOIS ENVIRONMENTAL )  
PROTECTION AGENCY, )  
 )  
Respondent. )

ROY M. HARSCH OF DRINKER BIDDLE & REATH LLP APPEARED ON BEHALF OF PETITIONER; and

CHRISTOPHER J. GRANT AND ROBERT W. PETTI, ASSISTANT ATTORNEYS GENERAL, APPEARED ON BEHALF OF RESPONDENT.

OPINION AND ORDER OF THE BOARD (by C. K. Zalewski):

Rock River Water Reclamation District (District) has petitioned the Board for review of the August 1, 2012 denial by the Illinois Environmental Protection Agency<sup>1</sup> (Agency or IEPA) of the District's application for a construction and operating permit under the National Pollutant Discharge Elimination System (NPDES). The District seeks to build a flow equalization or storage basin (proposed basin) adjacent to the headworks of its wastewater treatment plant at 3501 Kishwaukee Street, Rockford, Winnebago County. *See* 415 ILCS 5/40(a)(1) (2010).

The Agency denied the application on the grounds that the District failed to submit proof that the proposed facility will not cause a violation of the Environmental Protection Act (Act), 415 ILCS 5/12(a)(2010) or Board regulations. The denial letter cited Sections 12 and 39 of the Act, and 35 Ill. Adm. Code 309.241 "Terms and Conditions of NPDES Permits" and Sections 370.930(b)(4) and (d)(2)(D) of the Illinois Recommended Standards for Sewage Works (Recommended Standards)<sup>2</sup>. The District contends there is no basis in law or fact to support the denial.

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<sup>1</sup> Chad Kruse, who worked for the Illinois Environmental Protection Agency prior to joining the Board as an attorney assistant on March 19, 2013, took no part in the Board's drafting or deliberation of any order or issue in this matter.

<sup>2</sup> While the Board typically does not enforce Agency rules or look to them in the context of permit appeals, the Board granted the Agency specific authority in Board rules to adopt informational requirements, such as the Recommended Standards, for use in the NPDES permitting program. *See* 35 Ill. Adm. Code 309.103(a).

For the reasons below, the Board finds that the District has not met its burden of proof. The District has failed to demonstrate that granting the permit would not result in a violation of the water pollution prohibition of Section 12(a) of the Act. The Board therefore affirms the Agency's denial of the District's permit application.

In this opinion, the Board first sets forth the procedural history of this case and rules on pending motions. Next, the Board lays out a brief statement of the uncontested facts in this case and then the legal framework (including standard of review and burden of proof). The Board then summarizes the parties' hearing testimony and arguments, after which the Board discusses the issues and renders its decision.

## **PROCEDURAL MATTERS**

### **Procedural History**

On August 31, 2012, the District filed its petition for review of the Agency's August 1, 2012 denial of the District's requested application to issue a construction and operating permit. The Agency filed its 866-page administrative record (R.) on October 15, 2012. On November 2, 2012, the Agency filed a Motion to Supplement the Record to include an April 11, 2012 draft memorandum prepared by William Buscher of the Agency. The Board rules on this motion in the next section of this opinion.

Hearing was held<sup>3</sup> on November 28, 2012 at the City Hall in Rockford, Illinois. No members of the public attended the hearing. Tr. at 5.

As an initial matter, the parties and hearing officer took up the matter of a then-pending, fully-briefed November 20, 2013 Agency Motion *in Limine* to exclude certain materials (Mot. Lim.). The Agency's counsel made clear at hearing that

when the Agency's final action was taken, it did not rely on the groundwater anti-degradation provisions of the Part 620 regulations. The final decision, which they're bound by, is based only on section 12(a), water pollution provisions in the statute, section 39, the provisions . . .

that forbid the Agency from issuing a permit if it violates a section of the Act, and then one of their construction management guidelines in part 370. Tr. at 9-10.

Consequently, the Agency sought to have the hearing officer bar presentation of the District's proposed testimony related to the Part 620 regulations, including testimony of James Huff (which included the transcript of the Agency's Richard Cobb in the R08-18<sup>4</sup> groundwater

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<sup>3</sup> The Board cites the hearing transcript as "Tr. at \_."

<sup>4</sup> The R08-18 proceeding was initiated by an Agency proposal filed February 19, 2008, and final rules were adopted October 4, 2012. Proposed Amendments to Groundwater Quality Standards, 35 Ill. Adm. Code 620, R08-18 (October 4, 2012). The amendments added groundwater quality

standard rulemaking) and testimony of the Agency's Dana Carroll that includes quotes from a 2010 Agency letter to the General Assembly related to storm water. Mot. Lim. at 3.

The hearing officer ruled that all of the challenged material would be admitted into the record. Tr. at 16-18.<sup>5</sup> The District then presented the direct testimony of four of its own employees and consultants (Dana Carroll, Larry McFall, Gregory Droessler, and James E. Huff), as well direct testimony of two Agency employees in the NPDES permit section (Francis Burba and Amy Dragovich). Tr. 30-211. The District offered six hearing exhibits (Pet. Exh.), all of which were admitted. The exhibits include the pre-filed testimony of James E. Huff (Pet. Exh. 1), Dana L. Carroll (Pet. Exh. 2), Gregory Droessler (Pet. Exh. 3), the *curriculum vita* CV for Larry McFall (Pet. Exh. 4), an Agency Violation Notice to the District, dated November 27, 2002 (Pet. Exh. 5) and a copy of Section 370.930 from the Illinois Administrative Code (Pet. Exh. 6).

The Agency presented direct testimony of two witnesses at hearing: William Buscher of the Agency's groundwater section, and Francis Burba of the Agency's water permitting section. Tr. 211-252. The Agency offered and had admitted into evidence nine hearing exhibits. The

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(footnote 4 continued from p. 2)

standards for chemical constituents detected in Illinois groundwater that have established toxicity values or that have groundwater remediation objectives under the Tiered Approach to Corrective Action Objectives (TACO) (35 Ill. Adm. Code 742). In all, 39 chemical constituents were added, and the Class I groundwater quality standard for arsenic was revised.

The Board notes that the technical amendments pending in the recently opened R08-18(B) docket have no relevance to the issues in this permit appeal. See Technical Corrections to 35 Ill. Adm. Code 620.420, R08-18(B)(Apr. 18, 2013).

<sup>5</sup> As stated in the hearing officer's January 8, 2013 Hearing Report (Hrg. Rep.):

On November 20, 2012, the respondent filed a motion *in limine* to exclude irrelevant written testimony and documents not included in the record. The motion states that on November 15, 2012, the petitioner provided respondent with copies of written testimony for James Huff, Gregory Droessler and Dana Carroll along with attached exhibits. Mot. at 2. On November 26, 2012, the petitioner filed its response. On November 28, 2012, at the hearing, the petitioner presented to the hearing officer a corrected copy of its motion marked as Hearing Officer Exhibit A. (Tr. at 6). Oral argument was entertained. (Tr. at 7-24). [The Agency] did not have a strong objection to the written testimony since the witnesses' were present at the hearing, read their respective written testimony into the record and were cross-examined. [The Agency's] main objection to the written testimony and attachments was the reference in the documents to 35 Ill. Adm. Code 620 addressing Groundwater Quality. [The Agency] stated that the Agency did not rely on Part 620 when issuing its denial letter and, therefore, should not be considered by the Board. Over objection, [the Agency's] motion *in limine* was denied. Hrg. Rep. at 1-2.

Agency stated that these exhibits were already included in the administrative record,<sup>6</sup> including the Agency's August 1, 2013 Denial Letter (Resp. Exh. 1), Rock River Analysis data (Resp. Exh. 2), the May 24, 2011 NPDES Permit (Resp. Exh. 3), the April 2011 Buscher Memo (Resp. Exh. 4), the June 28, 2011 Huff Letter (Resp. Exh. 5), the March 3, 2011 Clark Dietz Proposal letter (Resp. Exh. 6), the CV of William E. Buscher (Resp. Exh. 7), the District's April 6, 2012 Permit Application (Resp. Exh. 8), and a Power Point Presentation given by the United States Environmental Protection Agency (USEPA) concerning a Washington, Indiana combined sewer overflow system (Resp. Exh. 9).

Consistent with hearing officer orders, on January 24, 2013, the District filed its post hearing brief (Pet. Brief). On February 15, 2013, the Agency filed its Response to the District post hearing brief (Resp. Brief.). Petitioner's response brief, due February 25, 2013, was not filed until March 4, 2013, accompanied by a still-pending motion for leave to file *instanter* (discussed immediately below).

### **Ruling on Pending Motions**

There remain two outstanding motions that the Board will address separately: the Agency's Motion to Supplement and the District's Motion to Reopen the Record and Allow the District to File its Reply Brief.

### **Uncontested Motion to Supplement Agency Record**

On November 2, 2012, the Agency filed a Motion to Supplement the record with a draft memorandum of Agency employee Bill Buscher. The draft consisted of 6 pages, marked R 867-872. The District did not file a written response, and did not make any objection at hearing.

After an appeal of the permit denial is filed, the IEPA is required to file the entire administrative record that it considered including the application, correspondence with the applicant, and any other information it relied upon in making its final decision to deny the permit. *See* 35 Ill. Adm. Code 105.102. The Board's review of the material that is the subject of the motion indicates that the Buscher Memo was produced prior to the Agency decision on the permit application, and was part of the Agency's meetings with the District concerning the application. Consequently, it is an appropriate part of the Agency record. The Board accordingly grants the motion.

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<sup>6</sup> The Board reminds the parties that it is not necessary to introduce documents already included in the Agency record as separate hearing exhibits. Simple citation to the numbered pages of the Agency record is sufficient, and prevents unnecessary duplication of paper exhibits. If the parties insist on presenting documents in the administrative records as exhibits, the Board requests that they use the Bates stamped documents from the record. Otherwise, as in this record, a full citation to all copies of the same document could require three parallel sources. (The Board has not done so here.)

**Contested Motion to Reopen Record to Allow the District to file its Reply Brief**

On March 4, 2013, the District filed its Reply Brief (Rep. Br.) along with a Motion to Reopen the Record for Leave to File Instant Petitioner's Reply to Respondent's Post-Hearing Response Brief and Waiver of Decision until May 2, 2013 (Mot. Reopen). In the Motion, the District stated that District's counsel was unable to comply with the February 25, 2013 deadline set by hearing officer order of January 31, 2013 extending the parties' original agreed briefing schedule set by order of January 10, 2013. The reason given was "being out of the office for an extended period of time for business and personal travel out of state on the Tuesday through Friday of the week preceding the due date." Mot. Reopen Record at 3.

On March 5, 2013, the Agency filed its response in opposition (Resp. to Mot. Reopen). The Agency objected, stating that the Hearing Officer Order of January 31, 2013 was unequivocal in setting the deadline for the District to file its reply, if any, by February 25, 2013. The Agency argues that the motion did not state "good cause" within the meaning of 35 Ill. Adm. Code 101.522. *See* Resp. to Mot. Reopen at 2-3. The Agency contends that counsel's consistent

lack of diligence led to two prior extensions, including a request for extension after the deadline to file the original Post Hearing Brief had passed. Petitioner's disregard for the rules should not be rewarded now that the record is closed. *Id* at 3.

The Board appreciates the Agency's frustration and objection under these circumstances. But, this case involves what the parties' characterize as a novel "green" or sustainable design project. Under these circumstances, denying the motion would frustrate the Board's desire to be fully advised of the parties' thinking. Additionally, the filing delay here was relatively short, resulting in a two-week delay of Board decision. Therefore, the Board grants the motion and accepts the District's reply brief into the record.

**FACTS**

**Rock River Water Reclamation District**

The District is a regional wastewater collection and treatment agency. Pet. Ex. 1. at Page 3, Tr. at 35. The District serves over 230,000 people in seven municipalities. *Id.* The District owns and operates the entire collection system, which includes local lateral sewers. *Id.* This system consists of over 1,100 miles of sewers, 24,000 manholes, 31 pump stations and two wastewater treatment plants (WWTP). *Id.* A significant portion of the system is over 80 years old. *Id.*

The District presently operates its municipal wastewater treatment works pursuant to NPDES Permit No. IL0027201, which allows for two discharge outfalls and requires that the District monitor its influent wastewater for 23 contaminant parameters. Resp. Exh. 3. The age of the District's infrastructure, and the way it was designed, create wet weather infiltration and inflow (I & I) issues for the District, which has historically caused the sewer system to back up and overflow. Tr. at 36.

In response to the basement backups or sewer overflows, the District has conducted sewer relief pumping in an effort to stop backups. R. 248. Some of the District's effort to address wet weather I & I issues first started in the 1980's. Tr. at 38, Pet. Exh. 2. To date the District has completed: 93 miles of mainline sewer lining, 77,000 feet of private services repair or replacement, 1,170 manholes given major rehab, or replacement, and 50 miles of annual sewer cleaning and televising. *Id.* The District states that it continues performing these types of rehabilitation projects and currently budgets \$6.3 million annually, which is approximately 40% of the District's entire annual Capital Improvement Project budget and believes that this level of work will remain for the next 50 years. Tr. at 37.

### **2002 Agency Violation Notice Issued to District**

In June 2002, the District experienced two overflow events where wastewater backed up and overflowed onto the land and into the storm sewers that discharge directly to the Rock River. Tr. at 38, 76-77, Pet. Exh. 5. On September 13, 2002, the Agency issued Violation Notice W-2002-00140 (VN) to the District concerning these events. *Id.* On November 27, 2002, the District submitted a proposed Compliance Commitment Agreement (CCA) in response to the VN. *Id.*

The Agency accepted the proposed CCA, which required, in part, that the District complete an engineering assessment of the sanitary sewer system to verify the ability to handle a 5-year storm event and identify areas that need to be corrected to enable the District to handle the influent flow volume during a ten-year storm event. Tr. at 38, Pet. Exh. 2, Attach B.

### **Proposed Constructed Wetland Excess Flow Basin Design**

The District retained Black and Veatch to perform the assessment required under the CCA. Black and Veach completed the study as part of a larger Facility Plan, which identified that the District would need to construct an excess flow basin at the treatment plant because, under some conditions, rainfall events would still result in flows exceeding WWTP treatment capacity, which would result in sewer overflows. Tr. 38, Pet. Ex. 2 at 5.

Following the determination that an excess flow basin was necessary, the District began a review of possible plans for construction of the basin, retaining Clark Dietz, Inc.; Mr. James Huff, Senior Vice President of Huff & Huff, Inc.; and Orchard Hiltz & McCliment, Inc., (the Design Team) to design the excess flow basin. Tr. at 90-91.

The Design Team settled on the concept of a constructed wetland type of basin for the excess flow basin project. Pet. Ex. 2 at 3. The key elements to the excess flow project include a pump station and a twenty-five million gallon excess flow storage basin. Tr. at 92. The design of the excess flow system calls for the pump station to draw off influent flow of untreated municipal wastewater before it arrives at the District's treatment plant. Pet. Ex. 2 p.3; and Tr. 58-59. The pump diverts the untreated municipal wastewater to the basin, where it will sit on native soils until the treatment plant has the capacity to receive this raw sewage, which can be as long as forty-eight hours. Tr. 92.

The municipal wastewater flowing to the excess flow basin receives no treatment, other than passing through a screen at the pump. Pet. Exh. 2 at 4, Tr. 104-107, 161. As stated in the District's permit application, the influent into the basin would contain contaminants including, but not limited to, human waste, suspended solids, oils, grease, and ammonia nitrate. R. at 4-10. As much as two million gallons of untreated municipal wastewater could leak from the excess flow basin into the groundwater during each forty-eight hour storage period. R. at 189-193.

**Capacity Calculations.** The required size of the basin was determined in accordance with normal engineering practices to meet what the District characterized as "a worst case design" basis using conservative input assumption based upon flow modeling results incorporating 38 years of actual precipitation and historical flow data. Tr. at 38, Pet. Exh. 2 at 5. Assuming a maximum treatment plant capacity of 80 million gallons per day (MGD), for a 10-year, 24-hour storm event, the District would need to be able to handle a storm event with a peak total flow rate of 145 MGD. *Id.* The District estimated that the design storm event would occur once every ten years, and require 65.4 MGD excess pumping capacity. *Id.* The District anticipated that the basin would be used on average for only one event per year requiring a total of two days during which the basin would be filled and then emptied. Tr. at 38-39, Pet. Exh. 2 at 5. Using a 10-year, 24-hour storm event, rather than the minimum 5-year, 24-hour storm event required by the CCA, resulted in a projected size basin of 25 MG which was a basin four to five times larger than that which would be required for a five year storm. Tr. at 55, and R. 105-114.

The previous historical actual monitored flow data does not reflect the District's ongoing I & I reduction effort, which has had a significant impact on reducing both flow rate and volume of wet weather flows and thus dramatically reduced the need to use the basin. Tr. at 51-53. As is normally done for IEPA permitting, it was also assumed that only the design maximum flow of 80 MGD of wastewater could be treated in the WWTP, with the remaining flows to be sent to the proposed basin. However, the District states it is able to treat flows in excess of this design maximum 80 MGD level, and has treated flows of between 130 to 135 MGD and still complied with its NPDES Permit limit. Tr. at 82.

After thoroughly reviewing their recommendation with the District, the Clark Dietz Design Team (Design Team) prepared a final preliminary engineering report. As set forth in this report, the District proposed to construct a wetland bottom excess flow basin. Additionally, this wetland would be irrigated during dry weather with plant effluent water thus to maintain a healthy wetland treatment system, as well as polish the effluent and reduce the amount of nutrients that the District would discharge to the Rock River. Pet. Brief at 6.

**Site constraints and resulting design.** The site for the basin is adjacent to the Rock River with the basin floor elevated three feet above typical river level. The local soils are loose silty/sandy soils, therefore groundwater level in the area nearly matches river level. Given the local river/groundwater hydraulic conditions, the basin floor will be subject to under pressure that will cause flotation of the floor in high river conditions regardless of floor construction. Pet. Brief at 6.

There are two possible solutions to this site constraint: raise the floor by six feet or use a floor design that reacts to under pressure. The cost of raising the floor of the basin six feet was estimated at \$1 million. The District believes that the only floor design that could properly react

to the under pressure is a wetland that would allow groundwater migration into the basin. The District maintains that clay, concrete, or synthetic liners would fail because they could not respond to the under pressure. In the end, the District forecasts that the constructed wetland bottom of the proposed basin will provide a sound engineering solution, that will reduce the level of contaminants in the exfiltrating wastewater under a temporary use plan very similar to a septic system, and is environmentally friendly, sustainable, and aesthetically pleasing. Pet. Brief at 6-7.

### **Discussions Between the District and the Agency Prior to the Permit Application**

Mr. Huff, of the District's Design Team, testified at hearing that he had an initial meeting with Mr. Allen Keller, Manager of the Permit Section of the Bureau of Water Pollution, in the summer of 2010, to discuss the wetland type excess flow basin. Tr. at 115. Mr. Huff related that, at the meeting,

regarding the use of a wetland-type of basin for excess flow temporary storage [,]  
Mr. Keller indicated that the Agency had permitted wetlands previously for  
wastewater treatment, and thought that this type of concept would be permitted.  
Tr. at 115, Pet. Exh. 1 at 2.

Following Mr. Huff's meeting with Mr. Keller, the District awarded the contract for the equalization basin to the Design Team (including Mr. Huff). Id. The Design Team prepared a draft Preliminary Engineering Report (PER). Following review, the District requested a meeting with the Agency. The District submitted the PER, along with extensive supporting materials, to the Agency's permit section on March 3, 2011, followed on March 7 by a proposed agenda for the scheduled March 10 meeting. Tr. at 45, R, 12, 21-147, 148-150).

The District met with Mr. Keller and others from the Agency water permit section March 10, 2011, to discuss the PER for the proposed basin, characterized by the Agency's Francis Burba at the time as a "flow equalization basin." Tr. at 120, 186 and Pet. Exh. 1. During the meeting, Mr. Keller informed the Design Team that the Agency's Groundwater Section would need to review the PER and provide comments. Pet. Exh. 1 at 4. Mr. Huff recalled that Mr. Keller asked about groundwater nitrates, and suggested that these be specifically addressed in the engineering report, but indicated that Mr. Keller was not concerned about fecal coliform, due to lack of a regulatory standard. Tr. at 120.

Finalized minutes of the meeting, including the Agency's comments were circulated on March 24, 2011. R. 162-165. Mr. Huff testified that "the Agency's initial response to the design seemed positive." Tr. at 120.

### **Buscher Memo**

The PER was submitted to the Groundwater Section on March 14, 2011. R. at 155. It was reviewed by Bill Buscher and Amy Dragovich, from the Agency's Division of Water Pollution Control. Mr. Buscher's comments are contained in an April 11, 2011 memorandum (the Buscher Memo). R. at 168-174.

The Buscher Memo addressed water pollution concerns, groundwater monitoring, and the applicability of non-degradation requirements of 35 Ill. Adm. Code 620 relating to the design of the constructed wetland for the District's excess overflow basin. R. at 168-169. More specifically, the Buscher Memo discusses the need for a seal, or "liner", to prevent or slow the rate at which untreated municipal wastewater would leak from the excess flow basin into the groundwater. *Id.* Referencing the standards for "similar" holding basins, the Buscher Memo requested that the District provide a two foot minimum thickness compacted clay layer, or similar material, in order to assure protection of the groundwater under the excess flow basin. *Id.* Further, the Buscher Memo requests that the District prepare a groundwater monitoring plan for contaminants listed in an addendum to the Buscher Memo. *Id.* The Buscher Memo was delivered to the Design Team on April 22, 2011. *Id.* at 166.

Mr. Buscher's draft memo raised to the District issues concerning demonstrating that the proposed project would not result in an increase in the concentration of pollutants in the groundwater and stated the draft plan provided "no consideration for meeting the non-degradation requirements of 35 IL (sic) Adm. Code Part 620.301 at a distance of 25 feet from the edge of the impoundment"<sup>7</sup>. R. at 168-169 and Resp. Exh 4. The Buscher Memo suggested that the District should provide further study of the fate and transport of the wastewater in the impoundment, to determine if the non-degradation water quality standards could be met at this distance, referencing 35 Ill. Adm. Code 620.301 as "background." R. at 169. The Buscher Memo also required development of a contingency plan to show how any increases in groundwater concentrations resulting from the use of the basin would be returned to the original background concentration existing prior to the use of the basin. R. 169.

When further discussions with the Permit Section were unable to resolve these issues, the District's counsel then and now, Roy Harsch, had a telephone conversation on May 13, 2011, with Ms. Marcia Willhite, Director of the Bureau of Water, to discuss the District's proposed project and the Groundwater Section's comments regarding the non-degradation requirements of 35 Ill. Adm. Code 620.301. R. at 178. Ms. Willhite sent an email to Mr. Harsch stating she had discussed the topic with her staff and they had groundwater degradation concerns related to holding sanitary sewage as well as stormwater in an unlined basin, and that the District would have to demonstrate "that the pollutant load in the basin is unlikely to cause groundwater degradation in the absence of a liner." *Id.* She also stated that while the Agency recognized the existence of a groundwater ordinance in place in the area, "it is related to [volatile organic compound or] VOC contamination, not nitrates, chlorides or other sewage constituents that may act differently in the groundwater." *Id.* Finally, she stated that the Agency welcomed a meeting and wanted the District to know these concerns in advance so as to be able to prepare for a meeting and provide helpful information. *Id.*

A second meeting between the Design Team and others at the Agency took place on June 6, 2011. Tr. at 122. Mr. Buscher said that the District would have to show that the project would not result in increased groundwater concentration above background of all Part 620 parameters, including chlorides, sulfates and total dissolved solids (TDS), not just nitrate and fecal coliform. Tr. at 122-123. Mr. Buscher passed out copies of the testimony that the

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<sup>7</sup> See, 35 Ill. Adm. Code 620.240(e)(1)(A) "Class IV: Other Groundwater" establishing 25 feet as an applicable compliance point with Class I groundwater standards.

Agency's Richard Cobb presented in the R08-18 regulatory proceeding at a hearing held in May 2008. Mr. Buscher stated that the testimony would provide the District with an understanding of the non-degradation standard the District would be held to for permitting this project. Tr. at 123 and Pet. Exh. 1 Attach. 3.

When Mr. Huff asked if the District could apply for a groundwater management zone, Mr. Buscher responded that the Agency would never establish one prior to discovering the impacts. Tr. at 123. Mr. Huff then presented a copy of a 2006 construction permit for a truck wash that used percolation ponds to treat the wash water and stormwater. Pet. Ex 1, Attach. 4 and R. 299, 300. Mr. Huff pointed out that the District had hoped that the Agency would impose in the District's permit conditions similar to those in the truck wash permit, if monitoring showed an exceedence of groundwater standard parameters in a down gradient monitoring well and would allow asking for a groundwater management zone or seeking regulatory relief as appropriate contingency measures. *Id.*, and Tr. at 299-300. It was agreed that resolution would require that Mr. Huff and Mr. Buscher have an additional discussion, and the District would then need to provide a written response to the questions raised at the meeting and to Mr. Buscher's April 2011 Memorandum.

### **Huff Letter Addressing Buscher Memo**

On June 28, 2011, Mr. Huff submitted a letter to the Agency (the Huff Letter) addressing the Buscher Memo. R. at 187-193. The Huff Letter provided calculations for the volume of untreated municipal waste water that will leak from the excess flow basin and discharge into the groundwater. *Id.* The Huff Letter also responded to the points raised in Mr. Buscher's Memorandum pertaining to monitoring wells, testing wells for inorganic parameters, statistical approach to establish background, the two foot minimum clay liner, a fate and transport model showing that background will be achieved 25 feet from the basin, and the contingency plan for addressing potential impacts in groundwater. R. at 189-192.

The Huff Letter stated that, during a 48-hour period of use, the proposed excess flow basin would leak up to two million (2,000,000) gallons of untreated wastewater during its use in a high rain event. R. at 191. Mr. Huff calculated that on an annual basis the project would equate to the raw waste BOD<sub>5</sub> load of five people, which would be less than one head of cattle. R. 26. Based upon the information in Attachment C, Mr. Huff opined that the nitrogen impact would be similar. Tr. at 126 and R. 266-267.

The Huff Letter further explained that, because the basin would be constructed immediately adjacent to the Rock River, the groundwater is correlated directly to the level in the river: during low flow periods, the groundwater flow is into the Rock River, and at high river stages, the groundwater flow is away from the river. R. at 190-191. Mr. Huff said that the hydraulic head on the basin is not the depth of the water basin, but rather the adjacent river elevation. He also presented the findings from the District's groundwater monitoring effort (in Attachment A to his letter) to show the groundwater's direct response to the river level. R. at 193, Attach. A.

The Huff Letter stated that the groundwater is hydraulically connected to the Rock River, which has fecal coliform violations during wet weather. The letter reported that, monitoring of the Rock River immediately upstream shows that during and immediately after rain events the fecal coliform count in the Rock River exceeds the water quality standard as is typical of all streams in Illinois. *Id.* Therefore, fecal coliform would be in the groundwater whenever the groundwater is recharging from the river. *Id.* Mr Huff also says that this groundwater is part of the Southeast Rockford Superfund contaminant plume that already has resulted in a groundwater use prohibition because of the toxic chlorinated solvents present, and there exists a ban on using groundwater in the area. R. at 193.

The Huff Letter contended that the proposed project will not impair the use of groundwater. R. at 193. Finally, the Huff Letter notes that the proposed project includes the appropriate number of monitoring wells, and the District is prepared to monitor for appropriate parameters associated with municipal wastewater. R. at 193, 189.

### **THE AGENCY DENIAL LETTER**

The District submitted its permit application to the Agency on April 6, 2012. On August 1, 2012, the Agency denied the District's request for a construction and operating permit to build a flow equalization or storage basin adjacent to the District's treatment plant. The Agency's denial letter states that the Agency must deny the District's requested permit because:

Sections 12 and 39 of the Environmental Protection Act (Act), 415 ILCS 5/12 and 39, prohibit the Agency from issuing a permit for any facility which would threaten, cause or allow the discharge of contaminants which might cause or tend to cause water pollution in Illinois. Section 39 of the Act also requires an applicant to submit proof to the Agency that the proposed facility will not cause a violation of the Act or the regulations adopted pursuant to the Act.

In addition to the above-cited Sections of the Act, the permit application does not fulfill the requirements of 35 Ill. Adm. Code 309.241.

The following information, clarification or corrections must be provided for us to complete our technical review and are to be considered specific reason why the Act and the regulations adopted pursuant to the Act will not be met:

A seal is required in the bottom and embankments of the excess flow storage basin per Section 370.930(d)(2)(D) of the Illinois Recommended Standards For Sewage Works. The seal shall have a permeability of less than  $1 \times 10^{(-7)}$  cm per second. Provision shall be made in the specification for demonstrating the permeability of the seal after completion of construction and prior to filing the basin.

Also, an appropriate groundwater monitoring system must be proposed, according to Ill. Adm. Code 370.930(b)(4). R. at 846-847.

## LEGAL FRAMEWORK

Under the Act (415 ILCS 5 (2010)), the Agency is the permitting authority responsible for administering Illinois' regulatory programs to protect the environment. Section 39(a) of the Act sets forth the standard concerning the Agency's authority to act upon permit applications:

When the Board has by regulation required a permit for the construction, installation, or operation of any type of facility, equipment, vehicle, vessel, or aircraft, the applicant shall apply to the Agency for such permit and it shall be the duty of the Agency to issue such a permit upon proof by the applicant that the facility, equipment, vehicle, vessel, or aircraft will not cause a violation of this Act or of regulations hereunder. 415 ILCS 5/39(a) (2010).

When the Agency denies a permit under this Section, the Agency shall provide the applicant the reasons for the denial and include:

- (i) the Sections of this Act which may be violated if the permit were granted;
- (ii) the provision of the regulations, promulgated under this Act, which may be violated if the permit were granted;
- (iii) the specific type of information, if any, which the Agency deems the applicant did not provide the Agency; and
- (iv) a statement of specific reasons why the Act and the regulations might not be met if the permit were granted. 415 ILCS 5/39(a)(2010).

The only issues relevant on appeal from denial of a permit are those related to "whether the Agency correctly interpreted and administered regulations when it denied petitioners' permit and application." City of Decatur and Sanitarr District of Decatur v. Environmental Protection Agency, 23 IPCB 127, 130 (July 22, 1976).

If the Agency denies a permit or grants one with conditions, the permit applicant may appeal the Agency's decision to the Board. See 415 ILCS 5/4, 5, 40(a)(1) (2010); 35 Ill. Adm. Code 105.Subpart D. In making its determination, the Board's scope of review is limited to the record before the Agency when it made the decision. 415 ILCS 5/40(e)(3)(2007); Citizens Utility Company v. Illinois Environmental Protection Agency, PCB 85-140, slip. op. at 3 (Mar. 9, 1989). The Board may not consider information developed by the IEPA or the permit applicant after the Agency's decision. See Alton Packaging Corp. v. PCB, 162 Ill. App. 3d 731, 738, 516 N.E.2d 275, 280 (5th Dist. 1987); Community Landfill Co. & City of Morris v. IEPA, PCB 01-170 (Dec. 6, 2001), *aff'd. sub nom. Community Landfill Co. & City of Morris v. PCB & IEPA*, 331 Ill. App. 3d 1056, 772 N.E.2d 231 (3rd Dist. 2002). The Board will not consider new information that was not before the Agency prior to its final determination regarding the issues on appeal. Kathe's Auto Service Center v. IEPA, PCB 95-43, slip op. at 14 (May 18, 1995). Instead, the Agency's denial letter frames the issues on appeal. Pulitzer Community Newspapers, Inc. v. IEPA, PCB 90-142 (Dec. 20, 1990). Accordingly, though the Board hearing affords a permit applicant the opportunity to challenge the Agency's reasons for denying or conditionally granting the permit, information developed after the Agency's decision typically is

not admitted at hearing or considered by the Board. Alton Packaging Corp., 162 Ill.App.3d at 738, 516 N.E.2d at 280.

### **STANDARD OF REVIEW AND BURDEN OF PROOF**

The standard of review in a permit appeal is preponderance of the evidence. Specifically, the Board must find that petitioner has demonstrated that the permit, if issued, would not violate the Act and Board regulations. 415 ILCS 5/40 (2010). Section 40(a)(1) of the Act and Section 105.112(a) of the Board rules place the burden of proof on the petitioner in permit appeals. 415 ILCS 5/40(a)(1)(2007); Browning-Ferris Industries of Illinois, Inc. v. PCB, 179 Ill. App. 3d 598, 534 N.E. 2d 616 (2d Dist. 1989).

### **THE BOARD'S HEARING**

A summary of the testimony of the Board's November 28, 2012 hearing follows.

#### **The District's Witnesses**

As previously stated, the District presented testimony of the following witnesses at hearing: Dana Carroll, Larry McFall, Gregory Droessler, James E. Huff, Frances Burba and Amy Dragovich. The District offered six hearing exhibits (Pet. Exh.), all of which were admitted. The exhibits include the pre-filed testimony of James E. Huff (Pet. Exh. 1), Dana L. Carroll (Pet. Exh. 2), and Gregory Droessler (Pet. Exh. 3), the CV of Larry McFall (Pet. Exh. 4), an Agency Violation Notice to the District, dated November 27, 2002 (Pet. Exh. 5) and a copy of 35 Ill. Adm. Code Section 370.930 of the Recommended Standards (Pet. Exh. 6).

#### **The District's Dana Carroll**

Dana Carroll is an engineering manager of the Rock River Water Reclamation District in Rockford, Illinois. Tr. at 30. In that role, he manages the 18-person engineering department involved in the collection system and treatment plant upgrades. He oversees the District's annual capital improvement program budget. *Id.* at 32.

Mr. Carroll testified about the various consultants involved in designing the proposed basin. He explained that the project team included Clark Dietz and Associates as the prime consultant, represented by Mr. Greg Droessler, project manager overseeing civil engineering design and permitting. Tr. at 33. Significant sub-consultants included Huff and Huff, represented by Mr. James Huff overseeing environmental impact, wetland design, and permitting assistance, and Orchard, Hiltz and McCliment, Inc., (OHM) charged with hydraulic modeling. *Id.*

Mr. Carroll characterized the project as an excess wet weather flow pump station that intercepts excess flows at the headworks of the treatment plant and pumps those flows into an earthen, vegetated basin for temporary storage until they can be returned to the plant for processing. Tr. at 34. Mr. Carroll testified that the District's treatment plant is currently rated at 40 MGD for secondary treatment and 80 MGD for hydraulic capacity but that the District can successfully manage flows greater than that with current facilities. *Id.*

The basin was designed so that once the headworks flow has reached a rate of 80 MGD, the proposed excess flow facilities would be utilized. Tr. at 34. Once headworks' flow rates decrease below 80 MGD, stored flows would be redirected to the plant until the basin is empty. *Id.* Based on the historical record and hydraulic modeling, the influent flow rates would begin to decrease to or below the 80 MGD threshold within four to six hours in a major event. The District would be able to empty the basin within 48 hours of first flow being diverted to the basin. *Id.* at 34-35.

The District's 2002 CCA required the District to evaluate its interceptor system and treatment plant ability to handle a 10-year, 24-hour storm event and to make any improvements to achieve that goal. Tr. at 38. The project consists of a 65.4 MGD maximum flow rate pump station and a 25-million-gallon vegetated retention basin to ensure 10-year, 24-hour storm event hydraulic treatment capacity in the collection system and treatment plant. Tr. at 39. Based on modeling with 38 years of rainfall data, it was determined that the 10-year, 24-hour event would produce a peak flow rate at the treatment plant of 145 MGD. Mr. Carroll testified that this storage basin would only see occasional use during wet weather flows which he estimates would be once a year. *Id.* at 40.

Mr. Carroll next testified about the different design materials the District considered in the design of the proposed basin. He explained that concrete "seemed nonefficient nor practical (sic)" since concrete in the basin would sit exposed to the elements of heat and cold extremes, which will promote cracking in the material and can cause excessive routine maintenance. Tr. at 40. A flexible liner geo-textile was also considered. However, he believes such material would suffer from deterioration from exposure to sunlight. *Id.* at 41. He claimed that "worst of all, a flexible liner, either clay or geo-textile, is very difficult if not impossible to design against flotation pressures from below as is the case here." *Id.* at 41. Mr. Carroll explained that a flexible liner basin may have to be elevated six to seven feet to avoid the flotation pressure during river flooding that would have required "significant offsite fill material at great cost." *Id.*

Therefore, the District proposed a constructed wetland concept. Tr. at 41. Mr. Carroll testified that the District also chose the wetland as the basin's bottom to further the District's commitment to implement green or sustainable features in all of its current or future projects, noting that the USEPA requires states to set aside a portion of their state revolving loan funds for "green projects". *Id.* at 41-42. Mr. Carroll explained that the District believes that the proposed basin with wetland bottom is the best choice because it would save the District \$1 million in reduced construction costs by avoiding the expense of a liner. The District also believes it is more sustainable than a concrete-lined basin that will crack and need repairs, since the location of the proposed project is already a natural setting, the District contends the wetland basin will provide greater environmental benefit over a traditional basin such as providing habitat for waterfowl using the Rock River and increasing the vegetated area in an urban environment. *Id.* at 44.

Next, Mr. Carroll testified regarding discussions and meetings with the Agency prior to submittal of the permit application. Tr. at 45. Specifically, Mr. Carroll referenced the March 10, 2011 meeting with the Agency staff to discuss the project, and the Huff and Huff letter of June 28, 2011 responding to the June 6, 2011 meeting. He explained how the District offered to

accept specific operational restrictions within the permit and routine groundwater monitoring to demonstrate the District's goodwill and allow for verifiable evaluation of the design claims that this project would comply with class one groundwater regulations. *Id.* at 45-46. Mr. Carroll believes that the groundwater section has refused to negotiate "reasonable" operational controls, as documented by various communications between the District and the Agency. *Id.* at 46. Mr. Carroll noted that the District in fact included monitoring wells in their original application. *Id.*

Mr. Carroll stated that the Agency's standards as cited in the denial letter, the Illinois Recommended Standards for Sewage Works, recognize that sanitary sewers will exfiltrate some raw wastewater and accept that limited amounts of that are not detrimental to the environment or public health. Tr. at 48. Mr. Carroll noted, within the District's system, "that could be as much as 2 million gallons per day based on an eight-inch pipe and the 240 gallons per inch diameter per mile per day standard." Tr. at 48.

Mr. Carroll explained that the District can demonstrate that the Rock River and neighboring drainage ways have very elevated in fecal coliform counts any rainfall event to levels of 25,000 colony forming units (CFU). Tr. at 49. Mr. Carroll contends that the Agency's refusal to acknowledge what is "common professional knowledge comes from bias" which is demonstrated by the Agency's "refusal to negotiate reasonable operational controls" for the proposed project. *Id.*

Mr. Carroll next provided some background about the site where the basin would be located. Tr. at 53. He explained that the area was formerly a low income area that had fallen on hard times, containing many abandoned and burnt down houses. *Id.* The District acquired the land and cleaned it up. *Id.* at 54.

Mr. Carroll expected that, as the District makes updates to the collection system, that the peak rates coming to the District would be reduced, but acknowledged that breaks or clogs in the pipes can thwart these efforts. Tr. at 65-66.

### **The District's Larry McFall**

Mr. McFall has been employed at the District for 15 years and currently serves as the plant operations manager, overseeing the wastewater treatment plant. Tr. at 75. He was involved with preparing the response to the VN and resulting CCA, and assisted in the design to the proposed basin. *Id.* at 76. Mr. McFall contended that the District chose to use a 10-year event rather than a 5-year event to design the proposed basin because the District determined that the 10-year event would give the community the best service without significant expenditures. *Id.* at 79.

Mr. McFall also testified regarding the design of the proposed basin. He characterized the 80 MGD maximum flow rate as an "engineering number" and stated that "many things may happen either before that number is reached or on occasions that number could be exceeded without causing problems." Tr. at 80-81. While, the language of the District's NPDES permit requires the District to treat water at the maximum practical flow, Mr. McFall recalls that the District has been able to handle between 130 and 135 MGD without having an effluent violation.

*Id.* at 81-82. With all units in operation and nothing shut down for maintenance or repair, Mr. McFall would expect the District to use the proposed basin less than once a year, sometimes once every two or five years, noting that long-term flows would be reduced as continued improvements are made to the collection system. *Tr.* at 82-83.

### **Clark Dietz' Gregory Droessler**

Gregory Droessler of Clark Dietz, Inc., testified on the design of the flow basin as the project manager of the Design Team. *Tr.* at 88. He is the engineer of record retained by the District for this project and affixed his professional engineering seal to the documents submitted to the Agency as part of the construction permit application. *Id.* at 90.

In the fall of 2010, the District solicited proposals for the design of the excess flow facility. *Tr.* at 90. The District awarded Clark Dietz the proposed dual function wetland system to be used for a polishing filter during most of the year as part of the secondary effluent as well as a short-term excess flow temporary storage basin during intense storm events. *Tr.* at 90.

The full design team consisted of people from three different firms: Clark Dietz, Huff & Huff, and OHM. *Tr.* at 90. Mr. Droessler explained that Clark Dietz's role was to lead the overall project design and provide project management, Huff & Huff was tasked with the design and permitting of the constructed wetland to be used for the excess flow basin as well as providing the technical background for the wetland design and coordination with the Agency, and OHM was tasked with providing statistical modeling for sizing the excess flow pump station and storage facility. *Tr.* at 91.

OHM's model included 38 years of data to predict the 10-year, 24-hour storm event. *Tr.* at 92. The plant's rated peak capacity is 80 MGD. The excess flow pump station was sized to handle 65.4 MGD with a 25-million gallon excess flow storage constructed of native soils to temporarily store the 10-year storm. *Id.* Under the design, the stored flow is to be then returned to the front end of the wastewater treatment plant within 48 hours of the event for further treatment. *Id.* Mr. Droessler testified that that the modeling performed as part of this project used "conservative assumptions" (*Id.* at 102), but notes that the use of the design maximum flow rate is a parameter that would normally be used in designs presented to the Agency. *Id.* at 111. Based on this model, the annual use of the basin would happen once per year. *Id.* at 103.

When questioned about any treatment the proposed basin provides to the wastewater, Mr. Droessler testified that any wastewater escaping the basin through infiltration of the groundwater would be untreated wastewater. *Tr.* at 105. Mr. Droessler described the proposed basin as "merely a wide spot in the pipe . . . basically allowing [the District] to temporarily store this flow and then bring it back for treatment through the treatment facility." *Id.* at 105-106. He explained that the water flows to the basin through a pipe that has clay, concrete, or poly vinyl chloride (PVC) material as a liner and that if the District could design a system where these pipes leaked at a lower rate or no rate, it would be preferable. *Id.* at 106-107.

Mr. Droessler next spoke about the "green" aspects of the project, stating that "the intent of the excess flow basin's design is to use a green or sustainable design in an effort to control

project costs and to minimize the environmental impact to the area,” and noting that the basin “was designed without a clay or synthetic liner for these very reasons” allowing “native groundwater along with treated plant effluent to create a thriving wetland environment.” Tr. at 93. He stated that the selection of the plantings was to have a high level of nitrate uptake provided by the wastewater. *Id.* at 109.

Mr. Droessler next discussed the Agency denial letter. Mr. Droessler explained that the first item cited in the denial was a seal required at the bottom of the embankment of the excess flow storage basin under Section 370.930 (d)(2)(D) of the Illinois Recommended Standards for Sewage Works. Tr. at 94. Mr. Droessler notes that this provision applies to waste stabilization ponds and aerated lagoons, neither of which are defined terms in the water pollution regulations. Tr. at 96. Mr. Droessler opined that the only possible association with this definition would possibly be a lagoon. Tr. at 96.

The second reason cited for denial was that the appropriate groundwater monitoring system must be proposed according to Ill. Adm. Code 370.930 (b)(4). Tr. at 97. Mr. Droessler takes issue with this language, since monitoring wells 20-foot deep with flanged well caps are to be installed as part of the project. *Id.* at 97-98. He explained that these wells were in addition to the three existing groundwater monitoring wells located near the southeast corner of the excess flow basin. *Id.* at 98. Mr. Droessler suggested that these wells may have been simply overlooked by the initial review as these monitoring wells were only shown on a single drawing. *Id.* Mr. Droessler noted that the Agency stated that the District had not shown that the project would result in water pollution but was not clear on the Agency’s reasoning as to why the project would threaten to cause water pollution. *Id.* at 98-99.

With regard to the liner, Mr. Droessler testified that a clay or synthetic liner is not suitable for this application due to the high groundwater table in the area the basin is proposed to be located. Tr. at 100. Rather, “a liner, if used for this application, would not only heave due to the hydraulic pressure exerted by the groundwater but would also inhibit the creation of a constructed wetland.” *Id.* In order to prevent this, the District would have to raise the entire basin, which would thwart the District’s green initiatives on this project since no deep-rooted wetland plants would be able to survive if the basin is raised. *Id.* at 107-108.

Mr. Droessler contended that Agency has developed a “bias” against this project due to the potential exfiltration from the proposed basin. Tr. at 100. He explains that this is the “definition of a sustainable project” undercutting the carbon footprint that would be associated with the project if the District imported nearly 24,000 cubic yards of clay to form a liner in the basin, meanwhile lowering the overall construction cost of the project by over \$1 million due to the financial savings experienced from reusing existing material. *Id.* at 100-101. He notes that the area where the proposed basin is intended to be built has been restored to a more natural environment, and that the District plans to continue a scenic bike path along the river almost immediately alongside the project area. *Id.* at 101.

**Huff & Huff's James E. Huff**

James E. Huff, senior vice president and part owner of Huff & Huff, Inc., an environmental consulting firm, testified on behalf of the District. He spoke on the background of the design, the project's impact on groundwater, the Agency's representation of the regulatory requirements, and his belief as to why the design is protective of human health and the environment and will not cause water pollution as defined in the Act. Tr. at 112, 114-115. He explained that he was part of the Design Team retained by the District to design a wet weather retention basin at the head end of the wastewater treatment plant. *Id.* at 114.

In an attempt to meet the District's desire to incorporate a "greener approach" to wet weather management, the Design Team proposed that a wetland floor with prairie grasses on the banks be included as part of the design. Tr. at 114. The proposed design basin was "new technology." *Id.* at 158. Mr. Huff explained that the proposed basin was not designed for treatment but was ultimately designed as an equalization basin to bring the water back through and get complete treatment through the wastewater treatment facility. But, he also stated that treatment is "associated" with the design. *Id.* at 154, 164. Mr. Huff further explained that treatment depends on the specific pollutant. *Id.* at 154. Mr. Huff said that, for example, the design provides no treatment for chlorides, whereas most of the ammonia nitrogen and fecal coliform will be consumed by the wetland plants. *Id.* at 155.

Mr. Huff next testified on his involvement with the permit application. In the summer of 2010, Mr. Huff said he had an informal discussion with the Agency's Al Keller regarding the use of a wetland-type basin for excess flow and temporary storage. Tr. at 115. Mr. Huff testified that "Mr. Keller indicated the Agency has permitted wetland previously for wastewater treatment and thought this type of concept could be permitted." *Id.* 115. In the fall of 2010, the District awarded the design of the excess flow basin to the Design Team for a "dual function wetland system, first as a polishing wetland during most of the year or part of the secondary effluent and, second, a short-term excess flow temporary storage basin during the most intense storm events." *Id.* at 115. Under the CCA, the excess flow basin was to prevent backups in the sewer system for up to a 10-year storm event. Tr. at 116.

During the modeling, Huff & Huff installed a datalogger in a monitoring well in the vicinity of the proposed basin to monitor the groundwater elevation which indicated that the groundwater is hydraulically connected to the river. Tr. at 116. Because of this hydraulic connection, under normal conditions groundwater flows toward the river, while at high river levels, the groundwater flows away from the river. *Id.* Mr. Huff testified that this is significant because "any liner, synthetic or clay, would be in jeopardy of serious damage when the river elevation increases rapidly and the basin does not have water near the same level or higher than the river." *Id.* 116-117.

Mr. Huff further explained that a clay liner would not be conducive to establishing a viable wetland community because of the inability of the roots to penetrate a compacted clay soil. Tr. at 117. Additionally, clay is not available in the Rockford area, so securing clay significantly adds to the cost of building the basin. *Id.* He explained that when the river elevation is higher than the level in the excess flow basin, the hydraulic pressure on the low

permeable soils across the 7.27 acre floor would cause the floor to literally float and eventually buckle. *Id.* While not impossible, Mr. Huff contends that in order for a clay liner to work, the District would have to put in massive dewatering pumps underneath the basin to keep the groundwater from heaving, making the project cost-prohibitive. *Id.* at 168. The District estimates that it would cost from \$800,000 to \$1 million to add a clay liner, whereas the wetland plants were budgeted at \$30,000. *Id.* at 168, 170.

Concerning the March 20, 2011 meeting between the Agency and the District, Mr. Huff stated that the Agency's "initial response to the design seemed positive." Tr. at 120. Mr. Huff stated that the "nitrogen loading is within agronomic loading rates and can be adjusted by reducing the dry weather application rate in the unlikely event the nitrates in the groundwater approach 10 milligrams per liter." *Id.* at 120-121. Mr. Huff noted that "Al Keller asked about nitrates and suggested that these be specifically addressed in the engineering report." At this meeting the District stated that the ammonia concentration during these high-flow events is in the five to eight-milligram per liter range and no nitrates are present. *Id.* at 121. Mr. Huff believed that "Mr. Keller was not concerned about fecal coliform because there is no groundwater standard." *Id.*

After this meeting, Mr. Huff recalled, the groundwater section reviewed and commented on the PER. Tr. at 121. The Agency copied the District on an April 2011 draft memo from Bill Buscher to Al Keller, regarding the proposed basin. *Id.* According to Mr. Huff, this memo contained "a number of problematic comments," including those pertaining to the misapplication of groundwater non-degradation requirements, the requirements of a liner so as not to exceed existing background concentrations in groundwater, and requiring six rounds of sampling for a list of inorganic parameters prior to putting the wetlands in service. Tr. at 122.

According to Mr. Huff, at a subsequent meeting requested by the District held on June 6, 2011, Bill Buscher from the Agency explained that in addition to demonstrating that this project meets the groundwater standards "for more than nitrate and fecal coliform," it would have to show the down gradient monitoring wells "achieve background or non-degradation." Tr. at 122. Mr. Huff contends that the Agency stated that this "would apply to all [Part] 620 [groundwater] parameters including chlorides, sulfates, and total dissolved solids." Mr. Buscher provided a copy of the Agency's Richard Cobb's R08-18 testimony from May 2008, and explained that this testimony would provide an understanding of the non-degradation standard the District would be held to on this project. *Id.* at 122-123. Mr. Huff stated that Mr. Buscher did not, however, "offer that the Board rejected this same argument in R89-14 or that this [Agency R08-18 proposal] was still a pending regulation before the Board." *Id.* at 123. The District asked whether a groundwater management zone (GMZ) could be established, and Mr. Buscher explained the Agency would never allow such a classification prior to discovering impacts. *Id.* at 123.

Mr. Huff contended that denial of the District's application and the record in these proceedings are "clearly inconsistent with the Agency's historical approach." Tr. at 125. As an example, Mr. Huff provided the Agency with a 2006 permit by the Agency that is "similar to what the District was hoping to secure." Tr. at 123, R. at 299-300. This Agency-issued construction and operating permit for a truck washing facility utilized percolation ponds for the

treatment of truck washing water and storm water. The permit required installation of monitoring wells after the operation began. Tr. at 124. The permit provided that, should groundwater quality standards be exceeded in downgradient wells due to percolation pond discharge, it would be necessary for the permittee to pursue one or more of three listed choices: provide treatment to reduce groundwater impacts below groundwater quality criteria, apply for a GMZ or a Class IV groundwater designation under 35 Ill. Adm. Code 620.240(e) or 620.250, or petition for an adjusted standard under 35 Ill. Adm. Code 620.260 or Section 28.1 of the Act. *Id.* at 124-125. So, Mr. Huff commented, in this permit “there were no permit conditions regarding non-degradation, and the Agency provided reasonable options should the groundwater become impacted.” Tr. at 125.

Mr. Huff believed that if Mr. Cobb’s interpretation of R08-18 groundwater quality standard amendments were to be uniformly applied in Illinois, “then all storm water detention basins would be prohibited if any contributed chlorides to the groundwater, all agricultural practices in Illinois would be prohibited for contributing nitrates to the ground along with herbicides such as Alachlor and Atrazine.” Tr. at 127.

Mr. Huff found the “non-degradation stance that the groundwater section is taking is particularly troublesome” claiming that “no storm water basin, cattle grazing area, fertilizer application, wastewater spray irrigation, or sludge application can meet the non-degradation standard that was being imposed.” Tr. at 125-126. On June 28, 2011, Mr. Huff submitted his Huff Letter (R. 266-267) to the Agency responding to the six comments in the draft April 2011 memo from Bill Buscher. Mr. Huff explained that fecal coliform upstream on the Rock River exceeds the water quality standard during wet weather. He further stated that the proposed wetland basin is located within the southeast Rockford contaminated plume for chlorinated solvents, so the groundwater is not suitable for water supply. He claimed the annual BOD<sub>5</sub> loading from this wetland basin is equivalent to that excreted by one cow in Illinois onto the ground. Finally, Mr. Huff stated that the requested expensive testing is far more excessive than the District’s effluent monitoring, and that monitoring six times prior to placing the basin into service is not practical. Tr. at 126-127.

Mr. Huff testified that modeling showed that a monitoring well 25 feet down gradient will see an increase in chloride concentration but not above the groundwater standard. Tr. at 130. Mr. Huff stated that, in response to the Agency request for a contingency plan in case groundwater impacts occur, that the Huff Letter proposed a GMZ as the contingency plan. But, since the District never received a written response from the Agency, the District told the Agency it would formally apply for a permit so the Agency would have to formally act. *Id.*

Mr. Huff next explained his objections to the denial letter. Tr. 131-255, citing R. 846-847. First, he took issue with the Agency’s references to the waste stabilization ponds and aerated lagoons. *Id.* at 132. Mr. Huff deduced that the Agency must have concluded that the proposed wetland basin was determined to be a waste stabilization pond since “the proposed wetland is certainly not an aerated lagoon”, since no aeration devices are proposed, and there is no intent to reduce BOD. *Id.* Mr. Huff explained that the proposed wetland basin does not meet the USEPA definition of a “stabilization pond” because it does not have two or more cells and is

not intended to “stabilize organic waste through a complex natural process involving sunlight, oxygen, water currents, algae, and bacterial action”. *Id.*

Mr. Huff agreed with the conclusion of the Agency’s Mr. Burba that the proposed basin is an equalization basin, because it does not have two or more cells, and it is not intended to treat the wastewater. Tr. at 132. Mr. Huff states that the proposed basin similarly does not meet the criteria for stabilization ponds under Section 370.930(d)(2)(D), requiring a minimum of two feet and a maximum of five feet of liquid. In contrast, the proposed wetland will have a normal liquid level of zero feet and on average once per ten years it will have a maximum of ten feet for less than 48 hours. *Id.* at 132-133. Mr. Huff testified that, as to the groundwater monitoring requirements, the District included “such monitoring” in the design. *Id.* at 133, citing R. 41.

Mr. Huff testified that the Recommended Standards for Sewage Works states in Section 370.110(a) that the standards apply to conventional design concepts for wastewater treatment facilities, and in Section 370.110(b) that for new processes the Agency will consider specific information in accordance with Section 370.520(b). Tr. at 134. Mr. Huff stated that the Agency policy under Section 370.520(b) is to

encourage rather than obstruct the development of any methods for treatment of wastewater. The lack of inclusion in these standards of some types of wastewater treatment processes should not be construed as precluding their use. *Id.* at 134-135.

Mr. Huff commented, “Unfortunately, this section was not relied upon by the Agency based on its denial letter”. *Id.* at 135.

Mr. Huff opined “because the two cited regulatory requirements [of the Illinois Recommended Standards For Sewage Works, 35 Ill. Code Sections 370.930(d)(2)(D) and 370.930(b)(4)] are clearly in error, the only remaining basis for the denial is the recitation of failure to show that the project will not result in water pollution.” Tr. at 135. Mr. Huff further contends that the “sole underlying issue in this permit denial appears to be based on the non-degradation position of the groundwater section” of the Agency that “any increase in concentration above background under the Agency’s interpretation of non-degradation is water pollution.” Tr. at 135. Mr. Huff finds this interpretation troublesome especially considering that the “Agency is fully aware that the groundwater beneath the proposed wetland basin is impacted with chlorinated solvents by the southeast Rockford Superfund sites, and that the water is not usable for potable use.” Tr. at 139-140, Hearing Ex. 5. Mr. Huff therefore argues that “there will be no nuisance or [anything to] render such waters harmful or detrimental or injurious from this project.” Tr. at 140.

On re-direct examination, Mr. Huff addressed Mr. Buscher’s concerns regarding suspended solids, grease, and ammonia. Tr. at 252-253. Mr. Huff testified that once in the basin, the wetland floor will be “very effective” in filtering out the suspended solids. *Id.* at 253. He believes that grease, because it does not migrate very well through fine openings, will also be filtered out and help seal the bottom of that basin. *Id.* He also testified that ammonia would effectively be removed in the first foot below because of its positive charge characteristics. *Id.* at

253. He also opined that wetland are “very effective” at reducing the concentrations of fecal coliform and other pathogenic organisms, and function just like a “septic tank and associated leach fields. *Id.* at 253-254.

On re-direct examination, Mr. Huff also addressed the monitoring requirements in the 2011 draft Buscher Memo. Tr. 254-257. He expressed his concern about the monitoring the Agency was requiring. *Id.* at 254. He said the six rounds of sampling over a year period before the District uses the basin effectively add a year to the whole compliance schedule, because the District cannot install those wells until after that basin is constructed because the diking and the berming would destroy the wells. *Id.* at 254-255.

Mr. Huff disagrees with Mr. Burba that the list in the Buscher Memo is the same as in the District’s NPDES permit. Tr. at 255. Mr. Huff stated that the Agency’s list of parameters is more extensive than what is monitored on the District’s WWTP flows.. *Id.* Mr. Huff stated that the District’s reservation was not so much in the monitoring or most of the parameters, it “was the extensiveness of this, the six times prior to the year and that list just seemed excessive relative to domestic wastewater.” *Id.*

In response to a question concerning chloride modeling and monitoring, Mr. Huff stated that if background concentration is monitored, shortly after an event there could well be a statistically significant increase compared to background. Tr. at 256-257. But, Mr. Huff believes the increase will be below the groundwater standard for chlorides in 35 Ill. Adm. Code Part 320. *Id.* at 256.

On re-cross examination concerning fecal coliform as an indicator organism, Mr. Huff agreed that viruses like hepatitis A and protozoans liked *cryptosporidium* and *gardia* are of concern from a human health exposure point of view, and these are not necessarily either as long-lived or short-lived as fecal coliform. Tr. 257-259. He noted that public water supplies test for total coliform as an indicator of potential pathogenic organisms. *Id.* at 259. He stated his belief that there will be no exposure of these pathogens to groundwater. Noting that there are no water supply wells in the area, it is his opinion that “there is absolutely no evidence this [sort of thing] is ever going to get to the Rock River.” *Id.* at 260. Mr. Huff did agree, however, that in the Huff Letter he stated that the groundwater flow during very heavy water is away from the proposed impoundment and as soon as the water drops, it is going towards the Rock River. *Id.* But he also reminded that travel time, degradation and filtering out would affect what was in the groundwater at that time. *Id.*

Mr. Huff reiterated that the District’s objection to the monitoring proposed by the Agency related to the excessive nature of six rounds of sampling for parameters not associated with municipal waste, and the year’s delay in putting the basin into service:

when we’re trying to protect raw sewage. . . from being discharged either illegally out of manhole and basement backups or bypassing the treatment plant under these emergencies and going directly to [the] Rock River. Tr. at 261.

As to the list of parameters to be monitored, Mr. Huff stated his belief that the list should be based on what is historically been detected in the wastewater coming into the District, instead of “saying let’s test for every inorganic metal known to man” not just once, but six times for a year. Tr. at 263 Mr. Huff stated that the Huff Letter did not state that the District refused to perform background sampling, only that the District did not test its influent this frequently for any parameters except for BOD, fecal coliform, and pH. Under the NPDES permit, Mr. Huff stated, the District tests annually for the permit’s list of inorganics. *Id.*

### **The Agency’s Francis Burba**

Francis Burba is the permit review engineer at the Agency who reviewed the proposed basin ensuring compliance with the Act, Board rules, and Recommended Standards. Tr. at 185. As previously stated, Mr. Burba was called as a witness by each party.

In response to questions from the District, Mr. Burba stated that, if there are “no deviations” from the applicable standards, Mr. Burba drafts the permit. This permit is later reviewed and approved by his unit manager, Amy Dragovich, before going to the permit manager. Tr. at 185, 194, R. at 186-187.

Mr. Burba agrees that the basin is not designed as either an extended aeration basin or a waste stabilization pond but believes that this section was referenced in the denial letter because this is the “most ample (*sic*) technology for this basin.” Tr. at 188. Where the Agency believes water pollution will occur, Mr. Burba states that it was not necessary to reference anything else as a basis for denial in addition to Sections 12 and 39 of the Act. Tr. at 195.

### **The Agency’s Amy Dragovich**

Ms. Dragovich is Mr. Burba’s supervisor at the Agency and oversees Mr. Burba’s review of the permit application and denial letter. Tr. at 196. Ms. Dragovich agrees with Mr. Burba’s assessment that the project could be characterized as an “equalization basin” but notes that this is unique in that untreated wastewater is going to infiltrate into the groundwater. Tr. at 196. She further echoed Mr. Burba’s assessment that the proposed basin is not a waste stabilization pond or aerated lagoon. Tr. at 198.

Ms. Dragovich also testified regarding a wetland designed and built in Washington, Indiana for a combined sewer overflow system capturing combined sewer overflows, which she agreed would have a function “similar” to the District’s proposed basin. *Id.* at 199. The project was presented at a July 2012 USEPA “webinar” she attended, that USEPA “put together for green infrastructure showing how a wetland could have a liner system. *Id.* at 198, discussing R 440. On cross-examination, she stated that the Indiana wetland contains wetland plants and has a 45 mil ethylene propylene diene monomer (EDPM) liner. Tr. at 201, referencing R.861. Finally, Ms. Dragovich testified that a liner like that “would “be acceptable to Illinois EPA in a situation such as what the [District] proposed.” Tr. at 201.

## The Agency's Witnesses

### The Agency's William Buscher

William Buscher is the author of the much discussed "Buscher Memo". Mr. Buscher is the manager of the hydrology and compliance unit in the Agency's Division of Public Water Supplies, that provides groundwater expertise to the Bureau of Water. Tr. at 212. Mr. Buscher reviewed the plans for the proposed basin. Tr. 212.

Mr. Buscher agreed with the final Agency permit denial on the basis of water pollution. Tr. at 213. Specifically, he stated, the groundwater would be impacted by this project with the deposition of raw sewage into the proposed basin, which the basin would not contain. This would result in pollution in the groundwater, which would eventually flow to the Rock River. *Id.* He further contends that the deposition of sewage solids into the proposed wetland would create a water pollution hazard. *Id.* at 214.

Mr. Buscher said that constituents of concern in untreated sewage include the "human waste, both liquid and solid, and pathogens that can potentially cause infections and other waste that could be in the [waste stream] due to non-human sources." Tr. at 216. While examining Resp. Exh. 2, Mr. Buscher noted that the District had reported to the Agency that the influent into its WWTP included grease, BOD, TSS, and ammonia-N, and stated that discharge of these constituents into the groundwater would create water pollution. Tr. at 217.

Referring to the Buscher Memo (Resp. Exh. 4), Mr. Buscher next testified concerning the liner issue. Mr. Buscher further testified that he proposed a two foot,  $1 \times 10^{-7}$  centimeters per second liner because it is in the Recommended Standards testified to by Mr. Burba, which Mr. Buscher agreed is "appropriate" to prevent migration of the untreated sewage in the groundwater. Tr. at 218. Mr. Buscher did not and would not recommend a concrete liner because concrete is prone to crack, and so would not "sufficiently contain the material in the basin." Tr. at 219. Finally, his reaction to the District's testimony that the groundwater could rise and float the liner was a "concern that needs to be taken into consideration in the design of the facility." He further stated that, based on his experience at the Agency and as an engineer, "there are engineering solutions to this problem". *Id.* He stated that the District had refused to install a liner. *Id.* at 219-220.

Concerning the previous testimony concerning a GMZ, Mr. Buscher stated that the Agency considers GMZs appropriate when addressing a "preexisting environmental problem," but not normally "as a condition of creating new contamination." Tr. at 220-221. Finally, Mr. Buscher expressed his opinion that "granting the permit in this instance would have resulted in an increase in human pathogens, industrial waste, and other constituents of untreated sewage into the groundwater under the basin." *Id.*

On cross-examination, Mr. Buscher next talked about his understanding of the non-degradation water quality standard. Tr. at 222, referring to Resp. Exh. 4 p. 159 at para. 5. He agreed that he espoused that the Agency should "require a demonstration that [the District's] project would not result in any increase about background." *Id.* He explained that he believed

that any “statistically significant increase above background” would be water pollution. *Id.* at 222-223.

Mr. Buscher explained that to determine what is “statistically significant” as related to the District’s proposed basin, one must first establish existing water quality of the site or any particular parameters that could be expected to show up in the basin, given the known groundwater contamination in the basin’s vicinity. Tr. at 223. Mr. Buscher stressed the importance of knowing “what the existing conditions are before you begin the operation of your basin as to make certain that if an environmental problem arises you can positively identify whether it came from the operation of the facility or whether it may have been previously-existing.” *Id.*

Still under cross-examination, Mr. Buscher testified that “a statistically significant increase” is determined after water quality is established, “based upon having taken six samples over the period of a year which would take into consideration seasonal variation in [any] particular parameter.” Tr. at 226. Mr. Buscher stated that a “statistically significant increase” is water pollution, irrespective of whether “that increase is still below the groundwater standards” stated in the regulations, since he views the Agency’s non-degradation provision as part of the standards. *Id.* at 227-228. However, Mr. Buscher “did not take issue” with Mr. Huff’s statement that it would not be statistically possible to show the chloride level was not increased. *Id.* at 225. Mr. Buscher also agreed with Mr. Huff’s testimony that the soils under the basin, the wetland plants, and root zones would reduce pollutants in the water in the basin that would infiltrate into the groundwater. *Id.* at 230. Mr. Buscher conceded that he had not been asked to review permit applications for application of wastewater to land or water supply treatment solids to land. *Id.* at 230-232.

### **The Agency’s Francis Burba**

In his direct testimony on behalf of the Agency, Mr. Burba testified about his experience and familiarity with wastewater treatment facilities and their handling of excess flows. Tr. 233-235. In his view, the purpose of an excess flow facility is to capture 100 percent of the excess flow, without leaking, before feeding it back into the treatment facility. *Id.* at 236. These excess flow facilities are not intended to include the diversion of untreated wastewater to groundwater or surface water. *Id.*

In response to a question asking for examples of Illinois excess flow facilities, Mr. Burba explained that two of the three treatment plants at the North Shore Sanitary District have excess flow basins, and that the Gurnee WWTP has a 50-million gallon concrete-lined basin. *Id.* at 237. Mr. Burba explained that the Agency applied Section 370.930(d)(2)(D) “by analogy.” *Id.* at 240. He explained that the purpose of the basin, which is to hold the raw sewage prior to bringing it back to the plant, is the same purpose for waste stabilization or aerated lagoons. *Id.*

Mr. Burba suggested the District has two reasonable options for a liner, either concrete or a synthetic liner. Tr. at 238. With regard to the District’s concerns about problems with building a liner because of the hydraulics in the area, Mr. Burba believes there are other alternate construction options that will minimize this problem. *Id.* at 241. For example, the District could

raise the elevation for the bottom of the basin so that it is above the normal groundwater. *Id.* at 241.

Mr. Burba noted that the pretreatment condition in the District's existing NPDES permit for its WWTP requires that the District perform regular testing for the 110 constituents required under the regulations, both influent and effluent (including sludge generated). Tr. at 242, discussing Resp. Exh. C. at p. 6. Mr. Burba does not agree that it is inappropriate to require the District to perform groundwater monitoring testing for these same constituents pursuant to this permit request. Tr. at 243. He notes that the District has a single permitted discharge point that is required to perform seasonal disinfection. *Id.* at 244. The District has no permit allowing for discharge of untreated sewage. *Id.*

In response to a question concerning the hydraulic loading of the plant, Mr. Burba noted that the District is applying to take on new users such as the Village of Winnebago, which is expected to increase the amount of inflow into the District's WWTP. Tr. at 245. Mr. Burba has approved the facility plan and is reviewing "the very first part of the new sewer interceptors and lift station." *Id.* He stated that, since the Winnebago system is "not new," he would expect the additional I & I in the Winebago system would increase the amount of inflow into the District's WWTP. *Id.* at 245-246.

On cross-examination, Mr. Burba noted that the Agency-adopted Recommended Standards "are part of the Board's rules." Tr. at 246-247. He acknowledged familiarity with USEPA policy or rules for combined sewer overflows (CSO), but did not remember the number of CSO events allowed per year. He testified that the District did propose a monitoring system as part of the permit application but that he never personally reviewed the system. Tr. at 246.

Mr. Burba stated he was aware that, during certain storm events, the District gets overflow from the manhole at the headworks, and that these sanitary sewer overflows must be remediated. Tr. at 248. He agreed that WWTP permits routinely contain language that allows the bypass of untreated wastewater to protect the plant in emergencies. *Id.* at 250.

On re-direct examination, Mr. Burba said that the Agency has no objection to the concept of an overflow basin at the District's facility, or to the concept of a wetland. Mr. Burba's sole exception is to the lack of a liner. Tr. at 251.

## **THE PARTIES' ARGUMENTS**

### **The District's Post-Hearing Brief**

On January 24, 2013 the District filed its post hearing brief. In its Brief, the District claims that IEPA misapplied Illinois law when it denied the permit. The District begins its brief with a general description of the Board's past precedent in permit appeals (Pet. Brief at 1-3, 18-20) and a statement of facts. *Id.* at 3-14. Following its statement of the case (*Id.* at 14-18), the District commences its specific arguments.

**The District Argues: The Agency’s Reference to Section 370.930 Is Wrong.**

The District argues that the Agency’s reference to Section 370.930 is improper. First, the District opines that the 35 Ill Adm. Code Section 370.930 does not apply, as by its terms it applies to Waste Stabilization Ponds and Aerated Lagoons. Pet. Brief at 20. The District notes that neither “waste stabilization pond” nor “aerated lagoon” is defined in the Act or water pollution regulations.

Under Section 370.110(e) of the Illinois Recommended Standards for Sewage Works, the standards and definitions of terms are to be consistent with the Glossary-Water and Wastewater Pollution Control Engineering, which is incorporated by reference. *Id.* “Waste stabilization” is defined in this document as “the treatment of organic matter so as it make it innocuous”. In its online Terminology Section<sup>8</sup>, the USEPA defines an aerated lagoon as “a holding and/or treatment pond that speeds up the natural process of biological decomposition of organic waste” and defines a stabilization pond as a “large earthen basin used for the treatment of wastewater by natural processes involving the use of both algae and bacteria”. Pet. Brief at 20-21.

The District argues “these definitions contemplate that the stabilization pond or aeration lagoon would be in use 365 days per year for handling and treating untreated wastewater” and that “in contrast, the facility at issue in this appeal is a flow equalization basin, which is anticipated to contain water on average only two day[s] per year”. Pet. Brief at 21. The District reminds that Larry McFall testified that he would expect the basin to be used less than once a year, perhaps as seldom as once every two or five years, depending upon conditions. The District contends that this testimony demonstrates that the flow equalization basin is not a waste stabilization pond or aerated lagoon. The District remarks that Mr. Burba testified and that Ms. Dragovich agreed that the equalization basin is not a waste stabilization pond or aeration lagoon. *Id.* at 21, citing Tr. 186-187, 198. The District reasons that, since a flow equalization basin is not a waste stabilization pond or aerated lagoon, the District is not required to follow the requirements of Section 370.930 and therefore groundwater monitoring wells are not required. *Id.*

Next, the District argues that the Agency improperly applied Section 370.930 “by analogy.” The District explains that Mr. Burba admitted that, despite the fact that the proposed facility is neither a waste stabilization pond nor an aerated lagoon, he applied Section 370.930 “by analogy.” Pet. Brief at 22, citing Tr. at 188-189 and 239-240. Ms. Dragovich testified that it was an Agency group decision to apply Section 370.930 liner and monitoring system requirements. *Id.*, citing Tr. at 198. The District argues that Mr. Burba’s response that the Groundwater Section was involved in the determination is “really a basic admission that this was a permitting decision made by the Groundwater Section.” Tr. at 186-187, 192.

The District argues that “the Record is completely devoid of any review or any consideration of any of the information provided by the District and its consultants” and that

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<sup>8</sup> See

[http://iaspub.epa.gov/sor\\_intemet/registry/termreg/searchandretrieve/termsandacronyms/search.d0](http://iaspub.epa.gov/sor_intemet/registry/termreg/searchandretrieve/termsandacronyms/search.d0).

“there is nothing contained in the Record to show any group consideration or decision.” Pet. Brief at 22. Instead, the District contends that the permit denial regurgitated what Mr. Buscher set forth regarding Section 370 in his memos and that these memos “clearly were based upon his opinions that the anti-degradation rules applied, and that the District must show that there would be no increase above background caused by infiltration from the basin.” *Id* at 22-23. Therefore, the District opines that “Mr. Buscher’s determination that a liner and a monitoring program were required was based on these erroneous opinions” and that “apart from the documents transmitting the first of the four Mr. Buscher’s memos, there is nothing in the Record to document that the Permit Section ever considered the memos, let alone actually made a determination by analogy that a liner and monitoring system were required.” Pet. Brief at 22-23, citing Tr. at 203. Moreover, the District observes, the permit engineer did not ever review the proposed monitoring system contained in the application. *Id*, citing Tr. at 246.

Finally, the District argues that the Agency does not have the authority to apply Section 370.930 “by analogy”. Pet. Brief at 23-24 (citations omitted). The District contends that “it is clear from the plain language of the statute that Section 370.930 applies to waste stabilization ponds and aerated lagoons only, and does not apply to flow equalization basins.” The District urges the Agency, by applying Section 370 by analogy is “engaging in *de facto* rule-making and would be exceeding its statutory authority under the Act.” Pet. Brief at 24.

**The District Argues: The References to Sections 12(a) and 39 of the Act in the Denial Are Not Proper Bases for Denial.**

The District asserts that the Agency misapplied Illinois law in its interpretation of Sections 12 and 39 of the Act, as independent bases for denial of the District’s permit alleging that “Section 12 is boilerplate and does not support the Agency’s decision to deny the requested permit modification.” Pet. Brief at 25. The District claims that it is “raising the argument although it is aware that the Board has previously refused to accept it in City of Joliet v. Illinois Environmental Protection Agency,” PCB 09-25 (May 7, 2009)<sup>9</sup>. The District attempts to distinguish Joliet on its facts, stating:

In the Joliet case, after finding that Joliet had shown that the specific cited bases for denial was not proper, the Board nevertheless refused to accept Joliet’s argument regarding boilerplate stating that “the Board cannot simply ignore it, picking and choosing which words to give effect. (*Id.*) In the *Joliet* case the Board went on to presume a meaning absent any other apparent explanation. (*Id.*) No one from the Agency appeared at the *Joliet* hearing and thus no one from the Agency was available to testify. This was not the case in the present appeal where both the permit engineer and his supervisor attended and were called as witnesses by the District. Pet. Brief at 25.

The District posits that “contrary to the State’s assertion that the Sections 12(a) and 39 represent an independent determination that the proposed basin would cause water pollution,”

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<sup>9</sup>Petitioner’s Brief contains an incorrect citation to the referenced case. The correct citation is listed here.

Mr. Burba explained and Ms. Dragovich agreed that the statutory sections are routinely included in IEPA denial letters as stock language which serves as a boilerplate denial. Pet. Brief at 25. The District contends that “such language does not connote a decision on a review of the facts and evidence presented and therefore, is not a proper basis for denial of the District’s permit application.” *Id.* at 26.

The District further argues that there exists an additional rational basis in support of its argument. Rock River explains that, unlike the denial in Joliet, the present denial letter clearly states that the District’s application does not show that Section 370 is going to be met. The District explains that Section 12(a) prohibits violation of any regulation or standard adopted by the Board and that Section 39 likewise can be read to preclude the Agency from issuing a permit where the applicant has not shown compliance with such regulations or standards. Pet. Brief at 26. The District argues that “since the Agency specifically cites that the District’s application does not show that the basin would comply with two subparts of Section 370, reading the denial in this matter (*sic*) is a proper determination that does not require the Board to presume an issue of discharging contaminants that would result in water pollution.” *Id.* at 27. Therefore, the District concludes, since “Section 370 does not apply to the proposed basin there remains no proper basis for the Agency’s denial of the District’s permit application.” *Id.* at 27.

Finally, the District argues that the Agency misapplied the statutory definition of “water pollution”. Pet. Brief at 27. The District contends that the Agency ignored that actual definition of “water pollution” under Section 3.545 of the Act and instead applying “its own standard, stating that water pollution is anything that increases the contaminant levels of the receiving waters above existing conditions” and therefore misapplying and misinterpreting Sections 12 and 39 of the Act. *Id.* at 28.

Instead, the District argues that it has proven that its proposed basin will not cause water pollution, and that Class I groundwater standards will be achieved 25 feet from the proposed basin, as shown by both the PER and Mr. Huff’s June 2011 letter. Pet. Brief at 28. Mr. Huff testified that the permit application used very conservative assumptions which assumed six inches per day for two days, or one foot of infiltration over 7.67 acres, yielding a maximum calculated 2.4 million gallons possible infiltration. Pet. Brief at 28, citing Tr. at 143.

The District explains that the infiltration rate is a function of the hydraulic head caused by the difference in elevation between the Rock River and the proposed basin. Pet. Brief at 28. Under low Rock River levels coupled with an excessive wet weather event necessitating use of the basin, infiltration will flow toward the River. *Id.* at 28-29. But, suggests the District, during excessive wet weather, the River’s elevation could reasonably become higher than that of the basin, causing a significant portion of the water infiltrated out of the basin to reverse direction and leach back into the basin, to be captured and pumped to the wastewater treatment plant for treatment. Pet. Brief at 29, citing Tr. at 143, 146. Therefore, the District argues, there would be no impact upon the Rock River in violation of Illinois water quality standards. *Id.*

The District asserts that, at times of low flow, any contaminants that might exfiltrate from the proposed basin would be reduced in concentration by natural filtration provided by the soil and wetland plants in the basin, thereby further mitigating any concerns about pollution of the

groundwater or the Rock River from this source. Pet. Brief at 29, citing Tr. at 145, 150-151, and 162-165.

Further, the District argues, the groundwater beneath the proposed basin is already unfit for public use due to the presence of a Superfund VOC plume. Pet. Brief at 29, citing Tr. at 126 and 140. The surrounding area is served by a public water supply and there are no private wells. *Id.*, citing Tr. at 140. The District contends that there is no possible use of the groundwater that might be impacted or impaired by infiltration from the basin. Pet. Brief at 30. The District states that the specific property where the basin is to be located is owned by the District, which has no intention of installing a water supply on the property. The District holds that the record contains documentation they there will be no impact on the Rock River meeting the definition of “water pollution”. *Id.*, citing 415 ILCS 5/3.545 (2010).

### **Agency’s Post-Hearing Brief**

The Agency filed its Response Brief (Resp. Brief) on February 15, 2013. After summarizing the record and stating basic permit appeal precedent, the Agency contends that this case

leaves two very basic questions for review: 1) will the discharge of untreated municipal wastewater into the groundwater cause or threaten to cause water pollution; and 2) did the Illinois EPA’s Denial Letter properly identify the basis for its denial of the Permit Application as a potential violation of Section 12 of the Act. The answer to each to these questions is, unequivocally, yes. Resp. Brief at 10.

### **The Agency Argues: The District Has Not Met its Burden of Proof**

The Agency explains that the District, as permit applicant, carries the burden of showing that approval of the Permit Application for the construction of the excess flow basin would not cause or threaten to cause a violation of Section 12 of the Act or the Board’s water quality regulations and that, upon appeal to the Board from the Agency’s denial of the permit application, the burden of proof is again on the District. Resp. Brief at 10, citing, *inter alia*, Alton Packaging Corp. v. Pollution Control Board, 162 Ill.App.3d 371, 736 (5th Dist. 1987). The Agency reminds that the District must demonstrate that all of the stated reasons for denial are inadequate to support a finding that approval of the application would cause or tend to cause a violation of the Act. *Id.*, citing Jack Pease v. IEPA, PCB 95-118 (May 18, 1995).

The Agency contends that the record reveals that absent a seal on the excess flow basin, the basin will leak as much as two million gallons of untreated wastewater into the groundwater during a high rain event. Resp. Brief at 10. Therefore, the Agency argues, “it is the District’s burden to demonstrate that the discharge of two million gallons of untreated wastewater, a contaminant, into the groundwater will not cause or tend to cause a violation of Section 12 of the Act.” *Id.*

**The Agency Argues: The Discharge of Two Million Gallons of Untreated Municipal Wastewater into the Groundwater Will Cause a Violation of Section 12 of the Act.**

The Agency characterizes the District’s appeal as relying on the proposition that, if waters of the State are contaminated, and if the contaminated waters are not presently in use, the discharge of additional contaminants cannot be water pollution.” Resp. Brief. at 11. The Agency rejects the proposition. *Id.*

Citing the Act’s definitions of “water pollution” and “contaminant”, the Agency notes that, by their terms, the sections do not support a conclusion that water pollution occurs only when a contaminant discharge interferes with the use of water. Resp. Brief at 11-12. In fact, the Agency contends, an argument nearly identical to the District’s proposition was addressed, and rejected, by the Illinois Supreme Court in Central Illinois Public Service Company v. Pollution Control Board, 116 Ill.2d 397 (1987) (CIPS). Resp. Brief at 12.

In the CIPS case, the Agency explained, CIPS argued that an adjustment of the groundwater standards would not result in water pollution, suggesting “that under the statutory definition no pollution has occurred unless actual harm to humans or crops will occur as a result of the contamination, and that thus there is no pollution if any harmful effects can be avoided by not using water.” CIPS, 116 Ill.2d at 409. CIPS argued that there would likely be no need for the affected groundwater, so water pollution would not occur. *Id.*

However, the Supreme Court accepted the Board’s interpretation of the definition of water pollution that “there is no need to show that actual harm *will* occur, only that harm *would* occur if the contaminated water were to be used. CIPS, 116 Ill.2d at 409 (emphasis in original). The Court agreed with the Board’s interpretation, expressly rejecting CIPS’ assertion that water rendered unusable by prior contamination could not be further polluted by subsequent contamination. *Id.* at 410.

The Agency reminds that the influent wastewater stored in the excess flow basin containing, “at minimum human waste, suspended solids, grease, oil, and ammonia-nitrates” is “clearly” a contaminant. Resp. Brief at 13, citing Tr. at 216-217. The Agency contends that the District’s ‘red herrings’ regarding background levels and the non-degradation standards cannot change the simple conclusion that the discharge of contaminated municipal wastewater into the groundwater is “water pollution” as defined by the Act, and supported by the Illinois Supreme Court’s interpretation of “water pollution”. Resp. Brief at 14.

**The Agency Argues: The Denial Letter Properly Advised the District of the Agency’s Basis for Denial.**

The Agency opines that the denial cannot be overturned simply because it included language citing Section 12 and 39 of the Act that is considered “boilerplate.” Resp. Brief at 15. The Agency explains that this argument was conclusively rejected by the Board in Joliet, PCB 09-25 (May 7, 2009). Resp. Brief at 15. Rather, the Agency explains that whether or not the language in the denial letter being addressed in Joliet was “boilerplate” or not is of no moment when considering the reasons stated for the denial. *Id.* The Agency argues that the District has

failed to factually distinguish this case from Joliet, and then argues that the testimony of the three Agency employees buttresses the conclusion that the permit was properly denied.

**The Agency Argues: The Regulations Cited in the Denial Letter Are the Most Applicable Standards**

The Agency refutes the District's contention that the Agency denied the permit by citing improper regulations when the Agency requested that the District include "a seal [liner] pursuant to Section 370.930(d)(2)(D) and a groundwater monitoring system pursuant to 370.930(b)(4) of the Illinois Recommended Standards for Sewage Works." Resp. Brief at 16. The Agency acknowledges that these construction standards are for waste stabilization ponds or aerated lagoons, and that Agency staff testified "that the excess flow basin is not a waste stabilization pond or an aerated lagoon." *Id.*, citing Tr. at 188. However, the Agency opines, "whether or not these standards are a basis for denial of the Permit Application is irrelevant considering the Permit Application was properly denied for its clear violation of Section 12 of the Act" and that "reference to the Standards in the Denial letter was proper because the Standards offer guidance for the prevention of water pollution in the construction of a basin that will ultimately hold contaminated wastewater." Resp. Brief at 16.

The Agency explains that the design of a constructed wetland to serve as an excess flow basin is "unconventional" and that there are no specific regulations for its design or construction. Resp. Brief at 16. After Mr. Burba reviewed the project and determined that water pollution would occur absent a seal to contain the excess flow, he determined that the Recommended Standards usually applied to the stabilization pond or aerated lagoon were the most applicable water pollution control measures. *Id.* at 17. The Agency contends that the District provides no support for its contention that the Agency is barred from applying by analogy a construction standard clearly on point with its proposed, unconventional excess flow basin, noting that the Recommended "Standards themselves contemplate Illinois EPA's review and selection of an appropriate standard." Resp. Brief at 17.

The Agency states that Section 370.110(a) of the Recommended Standards, "Scope and Applicability" provides:

- a) These design criteria apply to conventional design concepts for waste water collection and treatment systems. Where non-conventional concepts or approaches to collection and treatment, particularly for very small systems, are being considered, the Agency should be contacted for any design guidance that may be available. 35 Ill. Adm. Code 370.110.

The Agency argues that it properly exercised its discretion in applying by analogy the design standard for waste stabilization and treatment ponds, stating

stabilization and treatment ponds serve essentially the same purpose as the excess flow basin proposed by the District: holding untreated wastewater for a period of time to sending the wastewater for final treatment. In addition, the two types of basins (if in fact they are considered different in any material respect) pose the

same threat to the environment: the uncontrolled migration and contamination of groundwater in the vicinity of the basins. . . [since the] “liner is necessary for both designs to prevent them from leaking untreated wastewater.” Resp. Brief at 17-18.

The Agency rejects any conclusion that it cannot impose construction standards for sewage treatment facilities unless the facility falls into a defined category. *Id* at 18.

### **District’s Reply Brief**

In its Reply Brief (Reply), the District argues that the Agency “downplays and oversimplifies” the issues surrounding the permit denial. Reply at 1. The District insists that the “real issue” behind the IEPA denial is that the record clearly and unequivocally shows that the IEPA applied the expressed interpretation of the Groundwater Section regarding the nondegradation standard found in 35 Ill. Adm. Code Part 620.301. *Id* at 1-2. The District explains that it was told at the June 6, 2011 meeting that, before it could obtain the construction permit for the basin, it would have to show that the proposed flow equalization basin would not result in an increase above background levels for the groundwater resulting from the use of the unlined basin to hold excess flows during extremely large wet weather events currently resulting in sanitary sewer overflows. *Id* at 2, citing Tr. at 122-123.

The District argues that the permit record and the testimony by the Groundwater Section, the admitted basis for Mr. Buscher’s April 11, 2011 draft memorandum commenting upon the District’s preliminary design plan, and the subsequent May 11, 2011 meeting with Mr. Buscher show that the Groundwater Section’s interpretation of the nondegradation provisions of 35 Ill. Adm. Code Part 620-301 is the “real basis” for the IEPA decision to deny the permit. Reply at 3.

The District contends that in fact, the Agency’s brief does not refute the District’s arguments that the Permit Section did not make an independent determination or evaluation of the Groundwater Section’s determinations based upon its application of the nondegradation standard. Rep. at 3.

The District continues that, following the submittal of the application, the Permit Section does not appear to have taken any steps to actually review the application. That application contained all of the previously submitted information showing that the Groundwater Section’s interpretation of the nondegradation standard was incorrect and that the proposed equalization basin would not cause water pollution. Reply at 4. The District remarks that “[a]part from the various memoranda prepared by Mr. Buscher there are no documents in the Record showing any evaluation or support for any of the grounds for its denial.” *Id*.

Instead, the District argues, the Permit Section accepted the Groundwater Section’s conclusions regarding the applicability of the cited construction standards and prohibition on causing an increase in groundwater concentration of pollutants above background without considering any of the information submitted by the District in response to the Groundwater Section’s concerns and those raised by Ms. Wilhite. Reply at 4. For example, the District

explains, “the fact that the one basis for denial was the alleged absence of a groundwater monitoring plan when, in fact, the application included such a plan, seems to be a direct indication that the Agency did not really review the application and supporting information.” *Id.* The District contends that the Agency is now making an after-the-fact attempt to justify those findings, and is asking the Board to “accept the denial letter at its face value”. *Id.*

### **The District Argues: Minimal Effects of Proposed Constructed Wetland Excess Flow Basin Design**

The District argues that the Agency states “as if it is a given that the District’s proposed flow equalization basin will introduce two million gallons of untreated wastewater into the waters of the state for a forty-eight hour period, at least once a year.” Reply at 5. However, the District believes that the record shows that the submitted design is based on the “worst case” scenario, using very conservative criteria based on 38 years of actual precipitation and historical flow data. *Id.*

Additionally, the District asserts the superiority of its design is based on a 10-year, 24-hour storm event, which are more stringent design criteria than IEPA’s required design minimum of a 5-year, 24-hour storm. Reply at 5. The District’s own “worst case” conditions assume that once the basin fills it would take a full 48 hours to empty, the basin will be used once a year, and the WWTP can handle only 80 MGD. The District opines that these design assumptions are quite different from the real-world conditions that exist. *Id.* at 5. For example, the District says that the record shows that the District has successfully treated flows of between 130 and 135 MGD, far in excess of the 80 MGD criteria used in the design of the proposed basin, and yet remained compliant with its NPDES permit limitations. *Id.* at 5-6.

The District rejects the Agency argument that “the wastewater placed in the basin would be untreated sewage and therefore any leakage would be untreated sewage and equates such a discharge as water pollution.” Reply at 6. The District contends that wastewater that infiltrates will in fact receive treatment via the wetland bottom in the basin. The wetland bottom would be irrigated during dry weather with treatment plant effluent water to reduce nutrients discharged into Rock River. *Id.* at 6. The District explains that the “soil, roots and resulting leaf litter would be the limited layer for infiltration reducing the infiltration rate to approximately 20 percent of that of the native soils used in the design calculations and would provide substantial reduction in some pollutants due to infiltration and uptake.” *Id.*

The District claims that the “Agency is picking and choosing which facts to emphasize, and which to ignore.” Reply at 6. First, the District says, the Agency states the exfiltration flow and time duration as if they are, in fact going to happen, rather than worst-case design calculations. *Id.* Second, the District says the Agency completely ignores that any leakage from the basin floor will be subject to these hydraulic conditions. *Id.* at 7. In short, the District believes that “there is nothing in the record to demonstrate that IEPA had any meaningful consideration of these statutory provisions and reached a considered conclusion that they are pertinent.” *Id.*

**The District Argues: The District Has Met Its Burden of Proof**

The District believes that based upon all of the information and documentation submitted in support of its permit application, it has met this burden, and that the denial of the permit application was improper. Reply at 8-9. The District contends that it has shown that the wastewater that may occasionally be temporarily stored in the proposed flow equalization basin will not cause or threaten to cause water pollution, and that Section 370.930 is not applicable to the proposed basin. *Id.*

**The District Argues: The Proposed Basin Will Cause No Violation of Section 12 of the Act**

The District does not argue that the wastewater does not contain “contaminants,” as defined at 415 ILCS 5/3.165 (2010). Reply at 9. The District argues, however, that the term “water pollution,” as defined at 415 ILCS 5/3.545 (2010), clearly indicates that, in addition to containing contaminants, the discharge must cause or be likely to cause the harms enumerated in the definition. *Id.* The District believes that it has shown that the use of the proposed flow equalization basin will not cause any of the harms defined by the definition of “water pollution” under the Act especially given the current status of the groundwater in the area of the proposed basin. *Id.*

The District notes that there exists a ban on using groundwater in the area, because of the current condition of the groundwater under the basin. Reply at 10. The District contends that the property under which the affected groundwater lies is owned by the District, and will have no other use than its current use. *Id.* The District reasons that, although the wastewater discharge admittedly contains contaminants, there is no actual or potential danger of injury to public health, safety or welfare, or to any of the other uses listed in the definition of water pollution that could be caused by any leakage into the groundwater from the proposed basin, so there is no “water pollution” as defined by the Act and therefore, no violation of Section 12. *Id.* at 10.

With regard to the CIPS case, the District distinguishes this case in three ways: First, the groundwater under the CIPS property was being used to supply drinking water to the plant’s employees and thus was a potable water supply. Here, the groundwater under the District property is not used and cannot be used: it is not a potable water supply. Second, the contaminated groundwater in CIPS was never going to meet the groundwater quality standards. Here, the District contends it has shown that its groundwater will meet applicable standards within 25 feet from the basin. Third, as the use of the shallow groundwater under the District’s proposed basin has already ceased, it is not possible to “render it unusable.” *Id.* at 11.

The District again attempts to distinguish this situation from that in Joliet, where the Board heard no testimony from Agency personnel regarding the reason for citing to Section 12 in the Joliet denial letter. Reply at 12. The District observes that here, both the permit engineer and his supervisor attended the hearing and were called as witnesses by the District and testified that the denial letter is in a form that they fill in the specific reason for the denial that in this case was admittedly the two citations to the design standards. *Id.* The District contends that despite the after-the-fact attempts to read the denial letter as being based upon some independent

determination that water pollution was going to occur as a result of the proposed project, there is nothing in the record showing that the permit section actually made any such determination. *Id.*

### **The District Argues: Agency Application of Section 370.930 Was Not Proper**

The District explains that it has clearly shown that, if the permit were granted, there would be no violation of Section 12, and renews its assertions that the application of Section 370.930 standards are improper in this case. Reply at 13. The District reminds that while Section 370.930 is not applicable to the type of basin proposed in this project, both the preliminary design and the permit application did, in fact include a groundwater monitoring system. *Id.* at 13. Therefore, the District argues, the denial of the permit application for lack of groundwater monitoring system is improper. *Id.*

The District next explains why the requirement for the liner is improper. The District first takes issue with the Agency's interpretation of 35 Ill. Adm. Code Section 370.110 language stating "Where non-conventional concepts or approaches to collection and treatment, particularly for very small systems, are being considered, the Agency should be contacted for any design guidance that may be available." Reply at 13-14. The District contends that "it is quite a stretch to interpret language instructing potential applicants to seek design guidance as giving the Agency *carte blanche* to interpret a regulation any way it sees fit and to apply it to structures to which it is not applicable." *Id.* at 14. The District explains that the types of ponds covered by Section 370.930 are intended to be in use 365 days per year for handling and treating untreated wastewater. *Id.* at 14. In contrast, the District's proposed basin is a flow equalization basin, which is anticipated to contain water at most only two days, no more than once per year. *Id.*

## **DISCUSSION**

As previously stated, in a permit appeal the Board must determine, based on the record, that the permit applicant has demonstrated that issuance of the permit will not cause violation of the Act or Board rules. *See, supra*, p. 12-13 and cases cited therein.

The Agency's denial letter, which frames the issues on appeal, contains two separate grounds: violation of Sections 12 and 39 of the Act (and related violation of Section 309.241), and violation of Section 370.930 of the Illinois Recommended Standards for Sewage Works, 35 Ill. Adm. Code 370.930. The Board first turns to the latter standard, denial based on the Recommended Standards.

### **Section 370.930 Denial Ground**

The denial letter states that a seal is required under Section 370.930(d)(2)(D) and that an appropriate groundwater monitoring system must be proposed according to Section 370.930(b)(4) of the Illinois Recommended Standards for Sewage Works. *See, supra*, at 11-12, setting out the denial letter *verbatim*. For the reasons stated below, the Board finds that the Agency's citation to these standards does not support the permit denial.

The parties agree that the Recommended Standards apply by their terms to waste stabilization ponds and aerated lagoons. The District argues that the proposed basin is neither a

waste stabilization pond nor an aerated lagoon, noting that the definitions provided by the USEPA in its online Terminology Section contemplate that the stabilization pond or aeration lagoon would be in use 365 days per year for handling and treating untreated wastewater. But, says the District, the proposed basin would only contain stormwater and waterwater on average two days per year. Pet. Brief at 21. The District argues that the Agency does not have the authority to apply Section 370.930 by analogy and, by doing so, the Agency is engaging in “*de facto* rulemaking and exceeding its statutory authority under the Act.” Pet. Brief at 24.

The Agency agreed that the excess flow basin as proposed is neither a waste stabilization pond or aerated lagoon (Tr. at 188) but offers that the design of a constructed wetland serving as an excess flow basin is unconventional. The Agency believes that because there are no specific regulations for its design or construction, the Agency appropriately determined that the standards usually applied to the stabilization pond or aerated lagoon are the “most applicable water pollution control measures.” Resp. Brief at 17.

The Agency disagrees that it acted outside its authority by applying by analogy the design standard for waste stabilization and treatment ponds, noting that “stabilization and treatment ponds serve essentially the same purpose as the excess flow basin proposed by the District: holding untreated wastewater for a period of time before sending the wastewater for final treatment.” Resp. Brief at 17. Further, the Agency continues that these “two types of basins (if in fact they are considered different in any material respect) pose the same threat to the environment: the uncontrolled migration and contamination of groundwater in the vicinity of the basins” and that the liner “is necessary for both designs to prevent them from leaking untreated wastewater.” Resp. Brief at 17-18. The Agency claims “that the Illinois EPA can require no construction standard for sewage is unsupportable and absurd.” Resp. Brief at 18.

As support for the Agency’s authority to apply by analogy a standard for a nonconventional concept, the Agency reasons that the Recommended Standards themselves contemplate the Agency’s review and selection of an appropriate standard, citing 35 Ill. Adm. Code 370.110, Scope and Applicability:

- a) These design criteria apply to conventional design concepts for waste water collection and treatment systems. Where non-conventional concepts or approaches to collection and treatment, particularly for very small systems, are being considered, the Agency should be contacted for any design guidance that may be available.

The Board finds that Section 370.930 simply does not apply by its terms since, as the Agency concedes, the proposed basin is neither a waste stabilization pond nor an aerated lagoon. The Board does not read the language referenced in Section 370.110 to allow the Agency to apply Section 370.930 “by analogy.” Section 370.110 certainly allows the Agency to take guidance from other rules when considering unconventional projects<sup>10</sup>, and the Agency can

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<sup>10</sup> In this context, the Board notes Section 370.520(b)(2) “Required Engineering Data for New Process Evaluation”

- 2) To determine that such new processes and equipment have a reasonable and substantial chance of success, the Agency will require the following:

certainly suggest that potential permit applicants do so in the absence of clearly applicable rules. But, the Board finds the Agency cannot base a permit denial on the basis of rules inapplicable on their face to the project at hand.

The Board agrees with the District that application of the seal requirement here amounts to application of an unpromulgated rule. *See Joliet*, PCB 03-95, slip op. at 22-23, citing *Illinois Ayers Oil Co. v. IEPA*, PCB 03-214, slip op. at 15-16 (Apr. 1, 2004). Unless a rule is promulgated in conformity with the APA, “it is not valid or effective against any person or party and may not be invoked by an administrative agency for any purpose.” Therefore, the Board finds that denying the proposed basin under Section 370.930 is not proper. Likewise, citation to Section 370.930(b)(4) of the Recommended Standards for waste stabilization ponds and aerated lagoons as authority for denial due to lack of a groundwater monitoring plan is inappropriate.

The remaining issue for Board review, then, becomes whether the District has demonstrated that its application for the unlined proposed basin and its groundwater monitoring proposal establish that no violation of the Act would occur if the permit is granted for the remaining stated grounds.

### **Section 12 Denial Ground**

The Agency’s denial letter (R. at 846-847) also cites Sections 12 and 39 of the Act (415 ILCS 5/12, 39 (2010)). Board analysis of this issue requires parsing and interpretation of various provisions of the Act and Board rules.

Section 12 of the Act is a substantive prohibition while Section 39 provides the procedures for IEPA permit determinations. Referring to Section 12, the denial states that IEPA cannot grant a permit for a facility that “would threaten, cause or allow the discharge of contaminants which might cause or tend to cause water pollution in Illinois.” R. at 846. Referring to Section 39, the denial letter states that an applicant must “submit proof to the Agency that the proposed facility will not cause a violation of the Act.” *Id.*

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(footnote 10 continued from p. 37)

- A) Monitoring observations, including test results and engineering evaluations, demonstrating the efficiency of such processes.
- B) Detailed description of the test methods.
- C) Testing, including appropriately-composited samples, under various ranges of strength and flow rates (including diurnal variations) and waste temperatures over a sufficient length of time to demonstrate performance under climatic and other conditions which may be encountered in the area of the proposed installations.
- D) Other appropriate information.

Under this provision, it would appear that the Agency does have authority to require test results and composited samples such as those described in Section 370.520(b)(2) of the Code for projects such as this.

In addition, the denial letter cites Section 309.241 of the Board's water pollution regulations. Section 309.241(a) provides:

The Agency shall not grant any permit required by this Subpart B . . . unless the applicant submits adequate proof that the treatment works, pretreatment works, sewer, or wastewater source will be constructed, modified, or operated *so as not to cause a violation of the Act* or of this Subtitle . . . 35 Ill. Adm. Code 309.241(a) (emphasis added).

It must be presumed that the Agency referred to Section 309.241 based on its determination that Section 12 of the Act may be violated. But, neither the denial letter nor the Agency's briefs provide any other apparent explanation for the citation to this regulation.

Therefore, the Agency's decision bases denial on Section 12 of the Act, and the District's purported failure to prove that issuance of the requested permit condition would not "threaten, cause or allow the discharge of contaminants which might cause or tend to cause water pollution in Illinois." R. at 846. This language of the denial letter paraphrases a portion of Section 12(a) of the Act:

No person shall:

- (a) Cause or threaten or allow the discharge of any contaminants into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources . . . 415 ILCS 5/12(a) (2010).

"Contaminant" is defined in the Act as "any solid, liquid, or gaseous matter, any odor, or any form of energy, from whatever source." 415 ILCS 5/3.165 (2010). Under the Act, "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." 415 ILCS 5/3.550 (2010). "Groundwater" means "underground water which occurs within the saturated zone and geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure." 415 ILCS 5/3.210 3.64.

The Act defines "water pollution" as:

such alteration of the physical, thermal, chemical, biological or radioactive properties of any waters of the State, or such discharge of any contaminant into any waters of the State, as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, fish, or other aquatic life. 415 ILCS 5/3.545 (2010).

The Agency contends that the anticipated yearly discharge of two million gallons of untreated municipal wastewater into the groundwater will cause a violation of Section 12 of the Act. *See* Tr. at 216 and 217, Resp. Br. At 13. Therefore, the Agency argues that it based its denial on violation of Section 12 of the Act, and the District’s purported failure to prove that issuance of the requested permit would not “threaten, cause or allow the discharge of contaminants which might cause or tend to cause water pollution in Illinois.” R. at 846.

The District takes issue with the use of “boilerplate” language in the denial letter, stating that it does not support the Agency’s decision to deny the permit. While acknowledging the Board decision in Joliet, the District has attempted to distinguish it on the grounds that the Agency did not testify at hearing in Joliet. The District argues that here, in contrast, three Agency employees presented testimony, and none of them support the water pollution denial reason, while the record is rife with justification based on the Agency’s—but not the Board’s—interpretation of antidegradation standards as applied to groundwater.

The Board finds that the District’s attempts to distinguish Joliet establish distinctions that do not make a difference to the outcome here. Even though testimony of Agency witnesses was given here, and not in Joliet, the Board notes that the person who signed the letter on behalf of the Agency, Permit Manager Al Keller, did not testify. Whatever other Agency employees may have thought or said, these opinions do not necessarily reflect the thought processes of the person who signed the letter embodying the Agency’s institutional determination.

Moreover, the District has failed to convince the Board that, as a general proposition, a denial is necessarily improper because the Agency included language which may be considered “boilerplate.” Most legal documents, including opinions of the Board, contain standard language necessary to accomplish some statutory end, *e.g.* the appeal language preceding the Clerk’s certification of an opinion and order. In approaching what may be “boilerplate language,” as explained in Joliet, “the Board cannot simply ignore it, picking and choosing which words of the letter to give effect.” Joliet, PCB 09-25, slip op. at 23; *see* Centralia, PCB 89-170, slip op. at 8; Pulitzer, PCB 90-142, slip op. at 6. The Board must therefore examine the record to determine whether the denial is supported for the reason given.

As previously stated, at hearing the Agency’s counsel specifically did not rely on the groundwater standards of Part 620. *See, supra*, at p. 4. The Board notes that the Agency view of non-degradation espoused at hearing does not, as the District has argued, comport with the Board’s view in its original adoption of groundwater standards in the R89-14 (B) proceeding<sup>11</sup>.

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<sup>11</sup> The Board adopted the nondegradation standard in Groundwater Quality Standards (35 Ill. Adm. Code 620), R89-14(B), slip op. at 15-16 (Nov. 1991), saying:

Section 620.301 states the basic nondegradation provision of today’s rules. Its essence is a prohibition against impairment of any existing or potential use of groundwaters.

A principal area of contention in this proceeding has been whether nondegradation ought to encompass some more stringent prohibition. Alternate

Similarly, while Agency testimony in R08-18 advocated expansion of the nondegradation principle from that first enunciated, the Board did not do so.

The District argues, given the current condition of the groundwater affected by the proposed basin and that fact that the groundwater will not be used for potable water, there is no actual or potential danger or injury to the public health, safety or welfare, or to any other uses listed in the definition of water pollution that could be caused by any leakage into the groundwater from the proposed basin, so there is no “water pollution” as defined by the Act and therefore, no violation of Section 12.

As both parties have argued, the Supreme Court touched on this issue in the CIPS case. Petitioner CIPS petitioned the Agency for a permit to construct an unlined pond to be used for the disposal of fly ash and other wastes from two coal-fired units. 116 Ill.2d 397, 402. The Agency denied the permit, noting that monitoring wells revealed that maximum levels for various contaminants had already been exceeded. Thereupon, CIPS petitioned the Board for an adjusted standard to set site specific groundwater standards in excess of the water quality standards (in the absence of applicable groundwater standards). The Board denied the petition, in spite of the Agency’s recommendation to the contrary. The Supreme Court affirmed the Board, finding in that case that “there is no need to show that the harm will occur, only that the harm *would* occur if the contaminated water were to be used” and that “any contamination which prevents the State’s water resources from being used would constitute pollution, thus allowing the Board to protect those resources from unnecessary diminishment.” *Id.* at 409-410.

The District attempts to distinguish CIPS here, noting that the groundwater under the basin is owned by the District, and its use is already prohibited due to excess chloride. But, the record also reveals that construction of the excess flow basin as proposed could allow leakage of as much as two million gallons of untreated wastewater into the groundwater during a rain event, in a situation where the groundwater may flow into the Rock River. Although the District contends this is a “worst case” scenario and no pollution would occur, designers and permit writers must often look to the “worst case” scenario.

Under these conditions, then, the Board must review the record to determine what and how much of each contaminant would enter the groundwater tributary to the Rock River if the basin were to be built, and whether the District has proven that the wetland flow equalization basin will not cause or tend to cause water pollution.

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(footnote 11 continued from p. 40)

proposals have included a prohibition against causing or allowing a statistically significant alteration in groundwater chemistry, or of causing or allowing any change in groundwater chemistry.

The Board today declines to generally extend nondegradation beyond the prohibition against loss of use. (footnote 14, relating to landfill attenuation zones, omitted)

### **Information Requested by the Agency**

**Contaminants Expected in the Basin Influent.** In the Buscher Memo, the Agency stated:

[T]here has been no data provided for concentrations of contaminants that may be expected to be introduced to groundwater from the wetland. R. at 168.

The plans did not include any consideration of wetland design criteria for meeting the non-degradation requirements of 35 IL (*sic*) Adm. Code Part 620.505. R. at 168.

The applicant may wish to do further study of the fate and transport of the waste water in the impoundment to determine if the non-degradation water quality standards of 35 IL (*sic*) Adm. Code Part 620.301 (background) can be met at a distance 25 feet from the toe of the impoundment. R. at 169.

**Monitoring Wells.** In the Buscher Memo, the Agency stated:

An appropriate number of monitoring wells, including 1 up-gradient and 2 down-gradient wells at the proposed constructed wetlands, must be installed in order to determine compliance with groundwater standards at the compliance point. These wells are to be located between 30-35 feet of the edge of the berm and screened in the first water bearing zone beneath the elevation of the bottom the constructed wetlands. R. at 168-169.

**Sampling Parameters.** The Agency outlined how to establish background groundwater quality prior to use of the wetlands, and how to perform quarterly sampling thereafter. In the Buscher Memo, the Agency stated:

Monitoring wells are required to be sampled six times for the inorganic parameters listed in table A within one year prior to use of the wetlands, or as soon as construction is complete. Quarterly sampling for the parameters listed in Table B will be required once the first year of sampling has been completed. R. at 169 (Tables A and B are below.)

A statistical representation of existing water quality must be established using the method outlined in Attachment 1 for the above monitoring wells. This method should be used to determine the 95 percent confidence limit for each parameter. R. at 169.

**Table A (Initial/Background Monitoring – 6 rounds)**

<b><u>Constituent</u></b>	<b><u>Units</u></b>	<b><u>Standard</u></b>
Antimony	mg/L	0.006
Arsenic	mg/L	0.010

**Table A (Initial/Background Monitoring – 6 rounds) (continued)**

<b><u>Constituent</u></b>	<b><u>Units</u></b>	<b><u>Standard</u></b>
Barium	mg/L	2.0
Beryllium	mg/L	0.004
Boron	mg/L	2.0
Cadmium	mg/L	0.005
Chromium	mg/L	0.1
Cobalt	mg/L	1.0
Copper	mg/L	0.65
Cyanide	mg/L	0.2
Fluoride	mg/L	4.0
Iron	mg/L	5.0
Lead	mg/L	0.0075
Manganese	mg/L	0.15
Mercury	mg/L	0.002
Molybdenum <sup>12</sup>	mg/L	0.035
Nitrate	mg/L	10
Nickel	mg/L	0.1
Selenium	mg/L	0.05
Silver	mg/L	0.05
Sulfate	mg/L	400.0
Thallium	mg/L	0.002
Total Dissolved Solids (TDS)	mg/L	1,200
Vanadium	mg/L	0.049
Zinc	mg/L	5.0
pH	Standard units	6.5-9.0
Static Water Level	feet	

<sup>12</sup> There is no groundwater quality standard for molybdenum in 35 Ill. Adm. Code 620. Although a groundwater standard for molybdenum was initially proposed in R08-18, it was later withdrawn. The Board stated,

Accordingly, after originally proposing to add molybdenum and associated groundwater quality standards to Part 620, the Agency withdrew the constituent from its proposal based upon concerns raised during this rulemaking. At first notice, the Board found that by removing molybdenum from the amendments, the risk of negatively impacting corrective actions and landfill programs, as well as the beneficial use of CCB, would be avoided, while providing the opportunity to better assess the health effects and natural occurrence of the chemical. The first notice amendments did not include molybdenum. The Board added that it has not adopted TACO remediation objectives for molybdenum, though it has for arsenic and vanadium, which are discussed below.” R08-18 slip op. at 22-23 (Oct. 4, 2012).

**Table A (Initial/Background Monitoring – 6 rounds)(continued)**

<u>Constituent</u>	<u>Units</u>	<u>Standard</u>
Fecal Coliform		
Biochemical Oxygen Demand (5-day and 21-day).	R.	at 174

**Table B (Quarterly Monitoring after Operation Begins)**

Arsenic
Boron
Copper
Fecal Coliform
Iron
Lead
Mercury
Nitrate
Silver
Temperature
pH
Ammonia
Barium
Cadmium
Chromium
Cyanide
Fluoride
Manganese
Nickel
Phenols
Sulfate
Total Dissolved Solids
Static Water Level
Biochemical Oxygen Demand (5-day and 21-day) R.
at 174.

**Contingency Plan.** In the Buscher Memo, the Agency stated:

A contingency plan for addressing potential impacts to groundwater will be required. This contingency plan must include specific details on how the impacts to groundwater would be remediated and groundwater returned to the non-degradation water quality standards of 35 IL (*sic*) Adm. Code part 620.301 (background). R. at 169.

At hearing, the Agency stated it would not “normally consider granting a groundwater management zone as part of a new problem; in other words, as a condition of creating new contamination and a groundwater management zone.” Tr. at 221.

## **Groundwater Impact Information Provided by the District**

The Board has reviewed the record for information provided by the District as requested by the Agency in the Buscher Memo regarding the various contaminants which could be found in the groundwater if the proposed basin were built along with requirements for monitoring and providing a contingency plan. The following is a summary of the information provided by the District in response to the information requested in the Buscher Memo.

**Contaminants Expected in the Basin Influent.** The Board did not find information in the Record specifically identifying and quantifying concentrations of contaminants in the influent that may be expected to be introduced to groundwater from the wetland basin.

In terms of the quantity of influent that may be expected to be introduced to groundwater from the wetland basin, the District provides:

[G]roundwater is flowing across the basin at say 5 ft. per day, and we assume 10 ft. depth and 700 ft. width, that equates to groundwater rate migrating beneath the basin of 35,000 cu ft. per day, or 260,000 GPD . . . We assumed an infiltration rate of 6 inches per day from the basin, which is higher than will actually occur. Over a basin with 275,000 sq. ft. floor space, this equates to a leakage rate of 137,500 cu. Ft. per day or 1,000,000 GPD. Assuming leakage occurs over 48 hours, the basin would be adding 2,000,000 gallons to the groundwater.” R. at 191.

As to contaminants in the influent that may be expected to be in the groundwater, the Huff letter states generally,

Groundwater standards will be achieved...” R. at 190. [A]ny increases above background to the groundwater will be temporary. R. at 192.

**Monitoring Wells.** The Huff Letter states, “The preliminary design included monitoring wells, and the [District]has no objections to this requirement.” R. at 189. The PER states:

Three shallow groundwater wells are proposed, two between the constructed wetland and the Rock River, and the third on the opposite side of the constructed wetland. These wells will be installed immediately after the basin is constructed and sampled at least once prior to putting into service. R. at 41.

**Sampling Parameters.** In response to the Agency’s list of parameters in Tables A and B, the Huff Letter proposed only BOD<sub>5</sub>, fecal coliform, and pH, stating that the others “are not parameters associated with municipal wastewater or storm water and this requirement appears excessive.” R. at 189. The PER proposes monitoring the wells quarterly for: fecal coliform, total coliform, nitrates plus nitrites, ammonia, Total Kjeldahl Nitrogen, and phosphorus. R. at 41.

**Fecal coliform.** While there is no groundwater standard for fecal coliform, the Board has established a water quality standard for fecal coliform of 200 CFU per 100 ml. There are also no

groundwater quality standards for static water level, fecal coliform, or BOD<sub>5</sub> or BOD<sub>21</sub> (*see* Table A at R. 173), but the fecal coliform and BOD parameters might be indicative of municipal wastewater influences in the groundwater.

With regard to fecal coliform, the District provides that:

During and immediately after rain events, the fecal coliform count in the Rock River upstream of the treatment plant outfall exceeds that water quality standard, which is typical for all streams in Illinois. Attachment B includes water quality data from the Rock River above the [District's] outfall that clearly shows these fecal coliform spikes. This would suggest that fecal coliform in the groundwater in the location of the proposed basin would also test positive for fecal coliform during these periods when groundwater is recharging from the Rock River." R. at 188, 275-278, Tr. at 126.

The District can demonstrate that Rock River and neighboring drainage ways are very elevated on fecal coliform during rainfall event to levels of 25,000 CFU. Tr. at 119.

[B]ased on the studies above, [bacteria] impacts to groundwater would not be apparent. . . However . . . some migration downward to the water table is expected. However, the short duration of the infiltration (2 days), would limit the duration of this source . . . [F]ecal coliform has a die off rate of 0.256 day<sup>-1</sup>[per day], which is equivalent to a 99 percent reduction in eight days . . . Thus any increase in fecal coliform levels to the groundwater will be short lived." R. at 40.

Mr. Huff testified that wetlands are "very effective" (Tr. at 254) at reducing the concentrations of fecal coliform and other pathogenic organisms, however, the District provides no testing samples in the record.

**BOD<sub>5</sub> Loading from CSO in Basin.** There is no water quality or groundwater standard for BOD<sub>5</sub>, which is a measure of oxygen demanding organic loading on receiving waters. The Board has effluent standards for BOD<sub>5</sub> ranging from 4 to 30 mg/L to ensure adequate dissolved oxygen levels in receiving waters. *See* 35 Ill. Adm. Code 304.209.

Concerning BOD<sub>5</sub>, the District explains:

[T]he practice will apply 348 pounds of BOD<sub>5</sub> per year to groundwater, or at 0.2 lbs of BOD<sub>5</sub>/day/PE [population equivalent], this equates to the raw waste load of five (5) people on an annual basis....less than the annual loading from one (1) head of cattle.<sup>13</sup> R. at 189.

<sup>13</sup> The Board notes that the calculation and comparison in terms of per year or per day may not be appropriate for evaluating the impact of excess flow on groundwater. A more reasonable approach might be to evaluate the impact of BOD<sub>5</sub> based on a loading rate per event rather than using an annual loading rate.

Wet weather loading in influent wastewater: “[T]ypically BOD<sub>5</sub> will be 125 mg/L” resulting in “the soils and plants [in the basin] seeing a loading of 48 lbs BOD<sub>5</sub> per acre per event.” R at 39.

From the hydraulic modeling and assuming a very conservative average wet weather [BOD<sub>5</sub>] of 125 [mg/l] in the diverted influent flow, the organic loading on the diverted water would be annual average or 7,700 pounds per event which would occur once per year . . . The basin floor will occupy 7.27 acres. So a single diversion will load the wetland with 1,060 pounds of [BOD<sub>5</sub>] per acre per event or effectively 1,060 pounds per acre per year.” Tr. at 118-119.

**BOD<sub>5</sub> Loading from Effluent Polishing.** The District stated

[T]he District's desire to also utilize the wetlands for tertiary treatment was also an important design consideration. Applying an average two inches per week to the 7.27 acres is equivalent 56,000 gallons per day containing an average BOD five of 15 milligrams per liter equates to a loading of one pound of BOD five per acre per day and total nitrogen loading of 239 pounds per acre per year. Tr. at 119-120.

**Chlorides.**<sup>14</sup> The District provided the following information regarding chlorides, which have a Class 1 Groundwater standard of 200 mg/L and a water quality standard of 500 mg/L:

Based on the TACO modeling using R26:

80 mg/L above background beneath the basin.  
75 mg/L at 35 feet downgradient. R. at 191.

Based on a “simple mass balance . . . If the chlorides are 100 mg/L above the groundwater ‘background’ concentration . . . [t]he result will be chloride levels in the groundwater basically showing an increase of 10 mg/L reaching the well 25 feet downgradient.” R. at 191.

Simple modeling was completed that showed that a monitoring well 25 feet down gradient will see an increase in chloride concentration but not above the groundwater standard. Tr. at 130.

**Ammonia and Nitrates.** Nitrates have a Class 1 groundwater standard of 10 mg/L for nitrate as N. 35 Ill. Adm. Code 620.410(a). The District provided:

The excess flow was also assumed to have a conservative eight milligrams per liter of ammonia nitrogen plus organic nitrogen. There will be no measurable nitrites or 17

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<sup>14</sup> The Board notes that the District did not provide the background level in groundwater for chlorides in the vicinity of the proposed site to demonstrate the increase would not be above the groundwater standard.

nitrates in the diverted flow. The nitrogen loading translates into 493 pounds per event or 68 pounds per acre per year.” Tr. at 119.

The District indicated the ammonia concentration during these high-flow events is in the five to eight—milligram per liter range and no nitrates are present. Tr. at 121.

So even if all of the ammonia is oxidized to nitrates, the concentration of the infiltrated water would be below 10 milligrams per liter. Tr. at 121.

Wet weather loading in influent wastewater: “the total nitrogen will be [typically] 20 mg/L” resulting in “the soils and plants [in the basin] seeing a loading of...nitrogen of 7.5 lbs. per acre per event.” R. at 39.

**Contingency Plan.** The Huff Letter stated:

Our first contingency would be to reduce or discontinue the dry weather application should exceedences of groundwater standards occur. R. at 192.

The second would be to apply for a Groundwater Management Zone, which would be very small, given the proximity to the Rock River. R. at 192.

At hearing, Mr. Huff stated that he expected the Agency would provide a contingency plan in a permit for the District similar to that provided in an operating permit the Agency issued for a truck washing facility utilizing percolation ponds for treatment of truck washing water and storm water. Tr. at 124-125. The permit provided that, should groundwater quality standards be exceeded in downgradient wells due to percolation pond discharge, it would be necessary for the permittee to pursue one or more of three listed choices: provide treatment to reduce groundwater impacts below groundwater quality criteria, apply for a GMZ or a Class IV groundwater designation under 35 Ill. Adm. Code 620.240(e) or 620.250, or petition for an adjusted standard under 35 Ill. Adm. Code 620.260 or Section 28.1 of the Act. R. at 300.

### **Finding on Section 12 Denial Ground**

The District carries the burden of proof to show that the proposed basin, if permitted, would not cause a violation of Section 12(a). The District argues that it has proven, in both the PER and the Huff Letter, that its proposed basin will not cause water pollution. Pet. Brief at 28.

To make a determination that permit issuance is consistent with Section 12(a) of the Act, the Board must find that any leakage or other flows of filtered, but otherwise untreated, municipal wastewater from the constructed wetland flow equalization basin into ground or surface waters will not “create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to livestock, wild animals, birds, fish, or other aquatic life.” See 415 ILCS 5/3.545 (2010) “Water Pollution.” After review of this record, the Board finds that the District simply did not provide sufficient information to demonstrate that issuance of the permit would not cause or tend to cause water pollution.

Many of the conclusions the District would have the Board draw are based either on assumptions, or information the District may have in its possession but that was not contained in the permit application before the Board (or the Agency). For example, the Board observes that the District plans to do monitoring after the basin is constructed, and not before. The record indicates that the property on which the basin is to be located was formerly “a low income area that had fallen on hard times, containing many abandoned and burnt down houses.” Tr. at 53. The record states that the District acquired the land and “cleaned it up,” (*Id* at 54), but does not indicate the lingering effects, if any, of the prior use on groundwater, even after the clean-up.

Yet, the record does not include specific information on the background groundwater quality, or sufficiently quantify the expected groundwater quality based on the contribution of the influent to the constructed wetland flow equalization basin. In order for the Agency to make its permit determination, the Agency’s Buscher Memo provided instructions for establishing background (existing) groundwater quality. The Buscher Memo specifically stated the Agency was seeking data “for concentrations of contaminants that may be expected to be introduced to groundwater from the wetland,” but none was provided at the time. R. at 168. The Agency also suggested the District “do further study of the fate and transport of the waste water in the impoundment”. R. at 169. The District did not do so for the parameters listed in Tables A and B of the Buscher Memo. Instead, the District submitted the Huff Letter, generally addressing fecal coliform, BOD<sub>5</sub>, chlorides, ammonia, and nitrates assumed to be in the wastewater, and the expected incremental increase of chlorides in the groundwater.

The Board does not find sufficient data in the record specifying the concentration of contaminants in the influent to the basin. There is no information here even concerning the parameters for which the District annually samples in its wastewater. There is no information on the effect on the quality of the influent to the basin of the additional flows from the City of Winnebago which the District seeks to add to its plant. And, of course, there is little data based on the list of Agency monitoring parameters in Tables A and B.

The District maintains that groundwater quality standards will be met at a distance of 25 feet from the outermost edge of the proposed basin. But, the Board does not see sufficient actual data on the existing and expected groundwater quality for the Table A and B parameters to demonstrate that impacts on the groundwater at that distance would not cause or tend to cause water pollution. *See* 35 Ill. Adm. Code 620.240(e)(1)(A).

The District acknowledged that any influent from the basin entering the groundwater would flow toward the Rock River under certain conditions. But, the Board did not find evidence on the expected effects of such flows on the Rock River in the record, beyond brief comments in the testimony (Tr. at 260) and PER (R. at 40-41). This scant evidence is insufficient to demonstrate that the impact of constituents in the untreated basin influent on the Rock River itself would not cause or tend to cause water pollution. In so ruling, the Board notes that the Rock River already shows violations of the fecal coliform water quality standard during wet weather, although the Board agrees with the District’s observation that such wet weather exceedence is common to other Illinois surface waters.

Here, the District seeks to construct and operate an unlined basin that could leak two million gallons of municipal wastewater and stormwater for some 48 hours during each use occurrence, at a site where the groundwater flow is toward the Rock River under some circumstances. Given the shortcomings in the data presented by the District, the Board finds the Agency correctly denied the permit on the grounds that the project “might cause, or tend to cause, water pollution.”

### **CONCLUSION**

On August 1, 2012, the Agency denied the District’s application for a construction and operating permit to build a flow equalization or storage basin adjacent to the headworks of its wastewater treatment plant. The denial was based on the Agency’s determination that (1) the District’s proposal would need to include a seal and an appropriate groundwater monitoring system under section 370.930 of the Ill. Adm. Code and (2) the District did not prove that issuance of the construction and operation permit would not cause, threaten, or allow the discharge of contaminants so as to cause or tend to cause water pollution in violation of Section 12 of the Act.

The Board finds that the Agency improperly applied Section 370.930 by analogy to the proposed basin, and finds this reason does not support denial of the permit.

The Board finds that the District did not meet its burden of proof with respect to the water pollution prohibition of Section 12. The permit application did not provide enough information to prove that leakage of contaminants into the ground water or the Rock River would not cause, or tend to cause, water pollution. On that ground, the Board finds the Agency’s denial was proper and therefore affirms.

In so stating, the Board is not finding that innovative projects such as this have no merit and cannot be built. Similarly, the Board does not discount the District’s arguments that quarterly monitoring after the basin is put into operation should bear a rational relationship to the constituents of the District’s influent. It may be that certain aspects of projects of this type are more appropriately considered in the context of an adjusted standard or site specific rule proceeding, than in the context of an NPDES permitting proceeding. But, in any case, the Agency properly denied the permit based on the record before it.

This opinion constitutes the Board’s finding of fact and conclusions of law.

### **ORDER**

The Board affirms the Agency’s August 1, 2012 denial of the District’s application for a construction and operating permit to build a flow equalization or storage basin adjacent to the headworks of its wastewater treatment plant.

IT IS SO ORDERED.

Member J. A. Burke abstained.

Section 41(a) of the Environmental Protection Act provides that the final Board orders may be appeals directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a)(2010); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly review administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35. Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on May 2, 2013, by a vote of 4-0.



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John T. Therriault, Assistant Clerk  
Illinois Pollution Control Board