

Public Comments Regarding Allen-Harim Harbeson
Water Allocation Permit 89-0002-AM3 Submitted May 24, 2019
Deadline for Initial Public Comments extended to December 7, 2020
Deadline for Final Public Comments April 8, 2021

The following public comments were originally submitted by the Keep Our Wells Clean which is an association of individuals who live next to or near the location of the Allen-Harim Harbeson poultry processing facility and who are concerned, both individually and collectively, about the impacts that the proposed Water Allocation modification will have on the local groundwater availability and water quality. We do not feel that the original comments have been satisfactorily addressed by DNREC and have included additional comments that address the new EPA Lead and Copper Rule and issues related to the facility as a non-transient non-community water supply (businesses).

Public Notice: Allen Harim Foods, LLC (Harbeson) has requested a renewal of its industrial water allocation for four existing industrial wells and one existing public well. The maximum daily withdrawal is 2,300,000 gallons per day. The wells are located south of Harbeson in Sussex County, near the intersection of Harbeson Road and Lewes Georgetown Highway. Tax parcel 235-30.00-97.00.

1. Renewal versus Modification. The permit application materials provided to the public (in response to FOIA) included the DNREC Water Allocation application form. The Allen-Harim application form indicates it is for a *renewal* of the water allocation permit. However, in a document titled “Attachment 2 Requested Rates” (18 pages) it appears that Allen-Harim is requesting an increase in water allocation to address the increase in poultry production and subsequent additional water needs. The request is to increase from 67 to 70 percent of the “total volume produced by continuously pumping the well”. Does DNREC consider this request to be a modification of the original water allocation?

2. Receipt Dates for Permit Application Materials. The permit application and Attachment 1, 2, 6 and ‘pump test report’ all have hand-written receipt dates of May 24, 2019. However, the DNREC receipt stapled to the permit application form shows the permit fee was paid February 25, 2019. Where is the original application submitted on February 25, 2019 or was the date stamp on the receipt not correct? If there was an original permit application submitted on February 25, 2019 was there a letter of deficiency from DNREC to Allen-Harim that resulted in the May 24, 2019 submittal? If there is a deficiency letter, why wasn’t that letter provided with the permit application materials in response to citizen FOIA?

3. Agency Response Time. DNREC did not provide permit application materials to the public until Monday November 30, 2020 and when asked for an extension, DNREC only extended the public comment period by one week to December 7, 2020.

Why does DNREC take so long to provide necessary information to the public? This time taken by DNREC serves only to severely reduce the time the public can read and comprehend permit materials within the remaining allotted time for public comment.

There must be a better way for DNREC to roll out public comment on a permit application that reflects a sincere intent of allowing the public sufficient time to meet the requirements of 7 Del.C., §6004.

“A public hearing request shall be deemed meritorious if it exhibits a familiarity with the application and a reasoned statement of the permit’s probable impact.

4. Estimated Consumptive Use. Allen-Harim states that only 2 percent of the total withdrawal will be for consumptive use (Item 10 in the permit application form). The answer provided for Item 15 states:

“Water withdrawn from Wells #2, #4, #5, and #7 for industrial process use is treated with sodium hydroxide and zinc orthophosphate for pH control and corrosive reduction. Water withdrawn from Well #3 is used for wastewater treatment and receives no treatment prior to use.”

There is no information on the type of treatment used for water withdrawn for human consumption nor is there indication of which well would produce that water.

In Attachment 6 (Water Conservation Plan), Allen-Harim claims that:

“Water is used for many purposes at the Harbeson poultry plant including, but not limited to, boiler feedwater, sanitary use, and poultry processes such as scalding, washing, chilling, and cleanup. This currently equates to roughly 6-gallons of water per bird and over 500,000,000 gallons of water per year. All water that is not consumed in process operations is treated and subsequently discharged to Beaverdam Creek.”

No mention is made on how Allen-Harim estimated the 2 percent value for consumption use. Is that based on the number of employees or metering to the drinking fountains and café? What chemicals are used to treat the groundwater for human consumption?

5. Gallons of water per bird processed. On page 2 of Attachment 2, Allen Harim states that they processed 50 million birds using 7.5 gallons per bird and are now processing 81 million birds using 6.1 gallons per bird. The difference in total water is calculated as follows:

50 million birds/yr x 7.5 gal/bird = 375 million gallons per year
81 million birds/yr x 6.1 gal/bird = 494.1 million gallons per year

The application does not seem to have a water consumption calculation sheet or other mechanism for DNREC or the public to evaluate the reliability of the 6.1 gallons of water per bird estimate. How does DNREC know if these values are reasonable?

6. Drought Emergency Plan. Attachment 7 of the permit application is the Drought Emergency Plan as submitted by Allen-Harim. The one and half page double-spaced plan is sorely lacking in specificity. The Plan is presented in a fairly generic manner without much information that could reflect the meaningfulness of the plan, such as reference to known drought indicators, historic drought responses, and tabulations of amount of water saved during past drought events.

They should acknowledge that Delaware has online resources specifically for drought information at: <https://www.drought.gov/drought/states/delaware>. Delaware uses quantifiers to express the level and intensity of drought (e.g. D0 to D4).

The Allen-Harim Drought Emergency Plan does not acknowledge that there is a classification system used in Delaware. The Plan also does not acknowledge that there the Delaware system relies about the National Integrated Drought Information System (NIDIS): <https://www.drought.gov/drought/data-gallery/us-drought-monitor>.

The U.S. Drought Monitor is a map released every Thursday, showing parts of the U.S. that are in drought. The map uses five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe (D2), extreme (D3) and exceptional (D4): <https://droughtmonitor.unl.edu/About/WhatistheUSDM.aspx>
<https://droughtmonitor.unl.edu/About/AbouttheData/StatisticsExplanation.aspx>

One feature of the NIDIS website is that you can search past drought events for specific areas of the US, including state-wide tabulations of D0 to D4 events: <https://droughtmonitor.unl.edu/Data/DataTables.aspx>

The Allen-Harim Drought Emergency Plan does not identify known drought events that have occurred in Harbeson, Delaware over the past five years. The Plan does not include any discussion of exactly how Allen-Harim responded to any of the dozens of drought events (officially declared or not) nor does it provide proof of self-evaluation as to whether any or all of the responses were effective.

The Drought Emergency Plan claims that there will be an internal meeting within three (3) days of a regulatory declaration of drought. Why would they wait three days? The Plan says that when a regulatory agency declares a drought emergency Allen-Harim would then start to evaluate water use. Why wouldn't that system evaluation already be

done and published as accepted company protocols so that when a drought emergency is declared, they could implement a plan immediately (same day)?

There are tools available online to look at drought predictions, such as this webpage: <https://droughtmonitor.unl.edu/ConditionsOutlooks/Outlooks.aspx>

7. Pumping Test Reports. The permit application materials in Attachment 3 are supposed to satisfy the requirements of Item 13 of the permit application form, namely:

“13. For each well listed in #8 (above), attach copies of Completion Reports and pumping test reports as specified in the Well Permit. If these reports do not exist, attach all available information about the wells or intakes.”

Allen-Harim identifies five water wells contributing to the water allocation in permit application Item #8 as follows:

Well No 2	Permit No 34900	Well No 3	Permit No 48815
Well No 4	Permit No 38010	Well No 5	Permit No 40173
Well No 7	Permit No 211079		

Attachment 3 contains pumping test reports for only three of the five water wells and even those tests are 15 years to 43 years old as follows:

Pdf page 5	Well No 3	test performed 9-15-1979
Pdf page 8	Well No 5	test performed 9-15-1979
Pdf page 11	Well No 7	test performed 10-20-2005
Pdf page 15	Well No 7	test performed 2-22-2006

How could DNREC even remotely believe that a 40-year-old pump test is reflective of the current condition of the aquifer? Why would the state issue water allocation permits for wells that have no recent pumping test reports?

What data does DNREC rely upon to ensure compliance with regulations in 7 **Del.C.** §7303? Consider the following regulatory language:

3.4 Ground Water Withdrawal Limits

Withdrawals from ground waters shall be limited to those rates which will not cause:

- 3.4.1 long-term progressive lowering of water levels, except in compliance with management water levels established by the Department;
- 3.4.2 significant interference with the withdrawals of other permit holders unless compensation for such injury is provided satisfactory to the Department;
- 3.4.3 violation of water quality criteria for existing or potential water supplies;
- 3.4.4 significant permanent damage to aquifer storage and recharge capacity; or
- 3.4.5 substantial impact on the flow of perennial streams below those rates specified for surface waters in the preceding section.

How does DNREC evaluate “long-term progressive lowering of water levels” without having access to current pumping test results for all the wells included in the permitted allocation? Does DNREC make inquiries to neighboring water permit holders to see if they are having problems with their wells or ability to pump water from the same aquifers that Allen-Harim Harbeson is using?

8. Water Quality of Aquifer. Attachment 4 contains lab analysis reports for Wells 2, 4, 5, and 7 for samples taken December 18, 2018 and December 26, 2018. None of the water quality data is discussed or presented in a manner that would infer that Allen-Harim or DNREC had made side-by-side comparisons of water quality throughout the lifetime of the water allocation permit. Merely submitting lab reports for two sampling events is not an adequate amount of information if one is going to actually monitor the long-term effects of groundwater withdrawal over the span of 20 or 30 years.

Well #	Date	pH	Alkalinity	Hardness	Copper ppm	Lead ppm
2	12-18-2018	5.14	10	7.5	0.00246	0.000720
	12-26-2018	5.85	9	6	0.0135	0.00110
4	12-18-2018	5.21	8	17.5	0.000740	ND
	12-26-2018	6.09	6	16	0.0147	0.000656
5	12-18-2018	5.37	7	20	0.0040	ND
	12-26-2018	6.33	5	20	0.0302	0.00185
7	12-18-2018	5.37	15	22.5	0.0167	0.00661
	12-26-2018	6.02	11	25	0.0163	0.000887
Surge tank	12-18-2018	5.37	12	22.5		
	12-26-2018	5.90	9	20		
Fountain	12-18-2018	6.48	49	17.5		
	12-26-2018	6.80	54	19		
Café sink	12-18-2018	6.75	63	20		
	12-26-2018	6.89	60	19		

Is the change in pH from one week to the next statistically significant? Does DNREC have any additional data from the wells that they can review to evaluate the change in water quality of the supply aquifer over time? What protocol is being used by Allen-Harim when gathering grab samples? Why does DNREC only ask for a single grab sample?

What is happening in the aquifer that would cause the concentration of copper and lead to change by an order of magnitude in just one week?

9. Lead and Copper data: The permit should require copper and lead testing at the faucets used for public water supply, such as the café sink (preparing meals and drinks) and the water fountains used by employees for drinking water. The EPA’s Lead and

Copper Rule was recently updated as outlined in EPA's December 2020 Lead and Copper Rule (LCR) Fact Sheet¹:

"On December 22, 2020, U.S. Environmental Protection Agency (EPA) finalized the first major update to the Lead and Copper Rule (LCR) in nearly 30 years. EPA's new rule strengthens every aspect of the LCR to better protect children and communities from the risks of lead exposure.

Lead and copper enter drinking water mainly from the corrosion of plumbing materials containing lead and copper. Lead was widely used in plumbing materials until Congress prohibited the use or introduction into commerce of pipes and pipe fittings and fixtures that contained more than eight percent lead and solder or flux that contained more than 0.2 percent lead in 1986."

The factsheet addresses evidence of adverse health effects from low-level lead:

"Data evaluated by the National Toxicology Program (NTP, 2012) demonstrates that there is sufficient evidence to conclude that there are adverse health effects associated with low-level lead exposure. Moreover, no safe blood lead level in children has been identified.² Sources of lead include lead-based paint, drinking water, and soil contaminated by historical sources."

EPA requires different sampling methods to make sure samples represent the potential contamination from old plumbing as described in the New Lead and Copper Rule Factsheet:³

"The old rule enabled sampling techniques that could underestimate lead in drinking water. Based on better science, the new LCR requires water systems to follow new, improved tap sampling procedures that will better locate elevated levels of lead in drinking water. One key improvement in testing protocols is the new "fifth liter" sampling requirement, which captures lead that can enter drinking water from a lead service line (LSL)—a lead pipe that connects tap-water service between a water main and house or building. Under the new rule, a sampler must draw four liters of water before collecting a test sample so that the water is more likely to come from the lead service line and not the internal plumbing of a building. To get the most accurate test results, the rule also requires wide-mouth bottles for collecting samples and prohibits sampling instructions that recommend flushing and cleaning or removing the screen (called an aerator) that covers the faucet before collecting samples."

¹ See: <https://www.epa.gov/dwreginfo/lead-and-copper-rule>

² See: <https://www.cdc.gov/nceh/lead/prevention/default.htm>

³ See: <https://www.epa.gov/dwreginfo/lead-and-copper-rule>

Does the facility have old copper pipe with lead solder? It is important to know the history of the plumbing at the Allen-Harim Harbeson plant as it was originally built in the 1950's according to this 2010 news article:⁴

“Built in 1950, the Harbeson, Del. plant was acquired by Allen’s in 1988. It has grown through various expansions to its current size of 193,101 sq. ft., which includes 29,000 sq. ft. of cooler space and 56,500 sq. ft. of production space.”

According to the EPA’s Lead and Copper Rule: A Quick Reference Guide⁵, the entities that are regulated include:

“All community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) are subject to the LCR requirements.”

The Reference Guide includes information about Action Levels and minimum sampling frequency depending on size of system:

“Establishes action level (AL) of 0.015 mg/L for Pb and 1.3 mg/L for Cu based on 90th percentile level of tap water samples. An AL exceedance is not a violation but can trigger other requirements that include water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring/treatment, public education, and service line replacement (LSLR).”

10. Water Well Conditions. Four of the water supply wells are quite old (43 years, 42 years, 39 years, and 25 years) and the most recently drilled well is 15 years old. How has Allen-Harim maintained these older wells and how does DNREC ascertain that there is no pollution leakage through the wellbore? Some of these wells were located when the facility was much smaller and before the expansion of the waste treatment area and the parking lots.

Well #	WA Permit No	Date Drilled	Total Depth	Screened Interval	Description of aquifer material
2	34900	12-15-1995	88 ft	59 to 88 ft	Brown and white sand
3	48815	8-21-1981	80 ft	30 to 80 ft	No description
4	38010	6-21-1977	90 ft	60 to 90 ft	Coarse white sand
5	80173	4-25-1978	111 ft	71 to 111 ft	Coarse sand gravel
7	211079	10-21-2005	105 ft	79 to 104 ft	Coarse white sand grav

The following images from Google Earth show the approximate location of each of the water wells as shown on the topographic map in Attachment 1 of the permit application.

⁴ See: <https://www.meatpoultry.com/articles/3403-master-adapter>

⁵ See: https://www.epa.gov/sites/production/files/2019-10/documents/lcr101_factsheet_10.9.19.final_.2.pdf

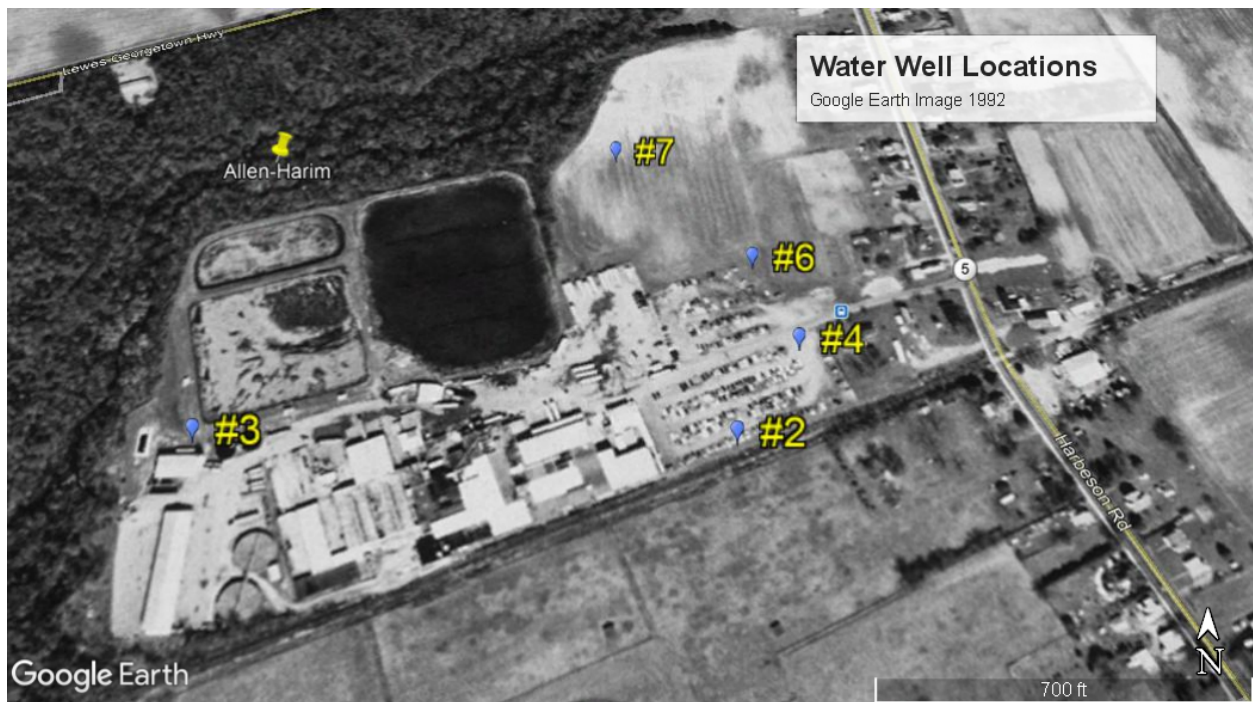


Figure 1 – Approximate locations of water wells translated from Attachment 1 topo map using 1992 facility layout.

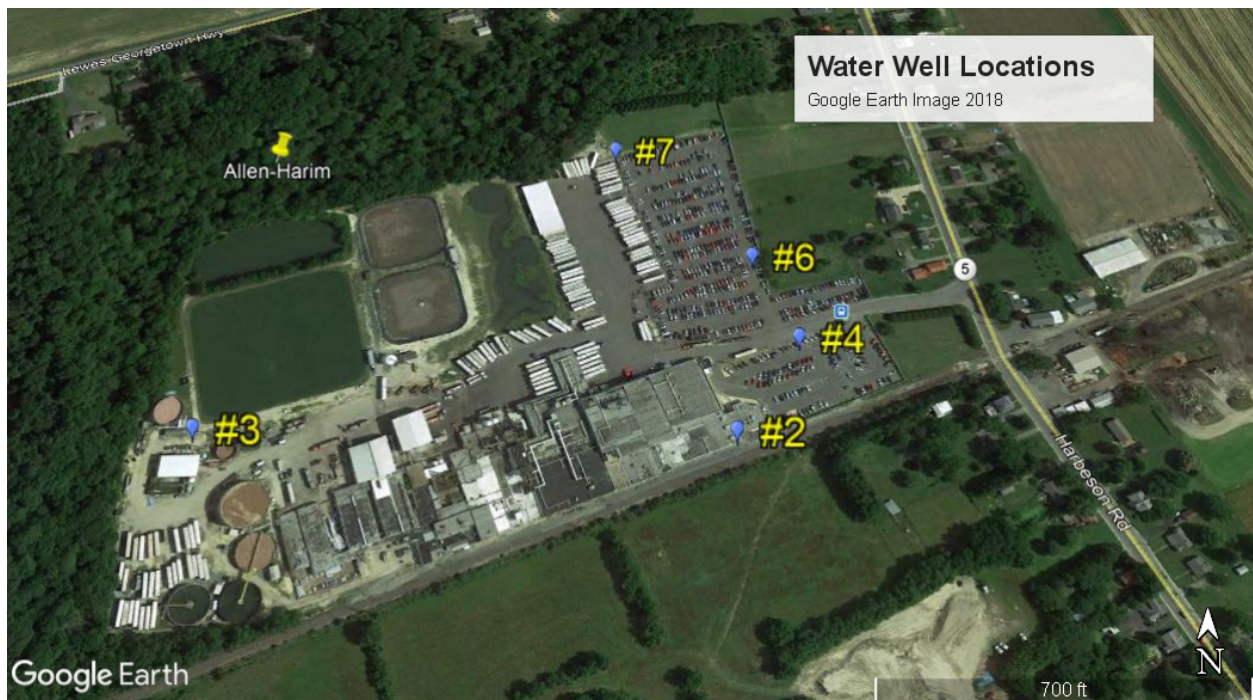


Figure 2 – Approximate locations of water wells showing 2018 facility layout.



Figure 3 – Approximate location of water well #3 on west side of facility.

11. Availability of Proposed Permit. The Allen-Harim Water Allocation Permit was not made readily available to the public for review. It was not uploaded to the website nor was it provided in response to a FOIA request for the permit application and supporting documentation. It seems particularly unreasonable of DNREC to force the public to jump through needless bureaucratic hoops during a world-wide pandemic just to have access to a permit that is out for public comment. The online open records database does not include water allocation permits as an obvious search option.

Rule 7303 lists the following items to be included in a Water Allocation Permit:

5.5 Water Allocation Permit Contents

5.5.1 Each permit shall have a fixed effective and expiration date.

5.5.2 Each permit shall specify maximum allowable withdrawal rates expressed daily, monthly, and yearly terms.

5.5.3 Permits shall require that the applicant meter water withdrawals to demonstrate compliance with the permit conditions and to file water use report with the Department at least annually on forms provided by the Department.

5.5.4 Allocation permits will require that all wells be equipped with a mechanism for recording water levels under both pumping and non-pumping conditions.

5.5.5 Each allocation permit will stipulate that representatives of the Department, the Delaware Geological Survey and the United States Geological Survey are allowed to enter the permittee's facilities or property to inspect and monitor water withdrawal.

5.5.6 Each allocation permit shall stipulate that the permittee is specifically subject to the requirements of 7 **Del.C.**, §6031 which stipulates obligations of water allocation permit holders whose use causes impairment of other existing water withdrawals.

5.5.7 Each allocation permit shall require that reasonable efforts be made to minimize unnecessary use and/or waste of water in accordance with the conservation plan submitted with the permit application.

5.5.8 Each allocation permit shall state that violations of any conditions within the permits are subject to penalties provided in 7 **Del.C.** Ch. 60.

5.5.9 Each allocation permit may also include, if appropriate, a listing of other agencies or entities that may require additional approvals such as, but not limited to, the Delaware River Basin Commission, the Division of Public Health, and the Public Service Commission.

5.5.10 In addition to the permit contents listed above, the Department may require the performance of aquifer tests, installation of monitoring wells, water quality sampling, or other conditions deemed appropriate.

How can the public determine if the permit contains these items if the permit is not available online for review? Did DNREC change anything from the existing permit language? Why did it take so long to put this permit out for public notice considering the application date is in May 2019 and we are now in December 2020?

12. Water Conservation Plan. Attachment 6 of the permit application contains the Allen-Harim Water Conservation Plan that is a little over two pages in length double-spaced. The plan lacks any specificity that would lead one to know that the plan is for a particular facility. The plan mentions water conservation training but does not include any training documents that have been used in the past for training. The plan does not contain any brochures, links to training videos, copy of checklists, examples of placards, or any other indicators that could be used to assess the adequacy of the implementation of the plan.

The plan indicates that a metric of “gpb” or gallons per bird is used at the facility on a Visual Performance Board. How does that metric translate to the varied locations and tasks where water is consumed? How does an employee operating a washdown hose know that the amount of pressure or time allotted to the task is more or less than ideal? How much of the metric is dictated by automated systems and how much is affected by manual use of water? Wouldn’t there be completely different ways of conserving water depending on the use of the water? The plan is silent to these concerns.

The DNREC 7303 regulations state:

5.5.7 Each allocation permit shall require that reasonable efforts be made to minimize unnecessary use and/or waste of water in accordance with the conservation plan submitted with the permit application.

How does DNREC use this Conservation Plan to figure out what is or is not a “reasonable effort”? How does the facility prove it is in compliance with this water allocation permit requirement when it implements the water conservation plan on a daily basis? Does DNREC have a checklist they use during compliance inspections that covers the implementation of the conservation plan?

The DNREC 7303 regulations include this section about the plan contents and demonstrations:

4.3 Water Conservation Requirements

All applicants for water allocation permits are required to submit in writing and demonstrate the existence of and commitment to a water conservation program, suitable to their particular use, as a condition of their application.

4.3.1 Establishment of a program of periodic monitoring and evaluation of water usage.

4.3.2 Establishment of a systematic leak detection and control program which, through routine maintenance and discovery of leaks, is responsive to high unaccounted for water usage rates.

4.3.3 Use of the best practical methods and devices to conserve water.

4.3.4 A plan to alert employees and customers of the need to conserve water and reduce wasteful usage.

4.3.5 Evaluation of the potential to use water of less than potable quality including the use of treated wastewater, where possible.

What part of the Allen-Harim Water Conservation Plan does DNREC consider to be a “demonstration” of the existence and commitment to a conservation program. The plan submitted is extremely generic.

Wouldn't a demonstration of a viable and dynamic comprehensive plan have some of the following components?

- a map of the location of water lines that are inspected inside and outside the facility;
- a checklist used for water line inspections;
- an actual number of water fountains on site and a map of their location;
- copy of the form used to record water meter readings;
- explanation of how typical employees interpret the water metric ‘gallon per bird’ at their various workplaces;
- pie chart or other graphical representation that shows actual volumes of water used in each water-consuming activity inside the plant and at the waste treatment area.