

HILLTOWN TOWNSHIP
BOARD OF SUPERVISORS
SPRAY IRRIGATION WORK SESSION
June 29, 1987

The work session between the Hilltown Township Supervisors and Hilltown Township Planning Commission was called to order by Chairman Robert H. Grunmeier at 7:30 P.M.

Members present were: Robert H. Grunmeier, Chairman
Betty J. Kelly, Vice Chairperson
Vincent Pischl, Supervisor

Others present were: James H. Singley, Twp. Manager
Gloria G. Neiman, Twp. Secretary
Mary C. Eberle, Twp. Solicitor
C. Robert Wynn, Twp. Engineer

Planning Commission: Jack Fox
John Murphey
Charles Barclay
John Brennan
Kenneth Bennington (7:50 P.M.)
Kenneth Beer (7:59 P.M.)

Water & Sewer Authority: John Roberts
Harry Maurer

Chairman Grunmeier announced that Mrs. Eberle will be Acting Solicitor for the Township due to the absence of Mr. Grabowski.

Mrs. Eberle presented the following two items for the Board's direction:

1. Perkasie Borough Authority Subdivision: Mrs. Eberle advised that Mr. Wynn has requested Perkasie Borough to submit plans to the Township and they have failed to do so. Perkasie Borough Authority attorney forwarded a copy of the plan to Mr. Wynn and advised that, since the plan does not represent subdivision in Hilltown Township, there would not be a submission to the Hilltown Planning Commission. Mrs. Eberle recommended, since there has been no contact between the Solicitor's office and PBA's attorney, that Mr. Grabowski's office contact their attorney (to require H.T. review of plans). After some discussion regarding Middletown's court case, the Board unanimously agreed to have the Township Solicitor's office pursue this.

2. Knob Hill Subdivision: Mr. Wynn reported that no plans have been submitted; he forwarded correspondence to Perkasie Borough and Knob Hill advising them of potential submission to Hilltown Township. Letter has been received from the developer's attorney, stating that his client will not alter any lot lines within Hilltown Township and no subdivision of Hilltown Township land and; therefore, he concluded that there would be no submission to H.T. Mr. Wynn drew a sketch, indicating position of this subdivision in relation to H.T.; indicating that two sides of the property border Township open space of Pleasant Meadows. Applicant requested provision that there be a right-of-way for future subdivision of the property; but has refused to bring plans before the P.C. for consideration. Mrs. Eberle indicated that, since they are creating a new lot which lies in Hilltown Township, this should be reviewed by our Planning Commission. After further discussion, the Board unanimously agreed to have the Township Solicitor's office pursue this.



SPRAY IRRIGATION DISCUSSION:

Chairman Grunmeier requested Mr. John Brennan, a member of the Planning Commission, to give a brief synopsis of a spray irrigation system. Mr. Brennan indicated that design criteria for spray irrigation could take 1½ hours. As a brief synopsis, he stated that "It is a mechanical system, an aerated system and a chlorinated system that is blowing into the environment." He stated that spray irrigation is an alternative to areas that will not perk in the Township; that the real concern is not in the system itself but in how it operates. Mr. Brennan referred to a draft of a memo (dated 5/6/87) which has not been completed. Mr. Grunmeier questioned if this was the same "packet" which he referenced in the P.C. minutes of 5/18/87 and was told it was. Mr. Brennan further indicated that he spoke with Tim Kohler, member of the BCPC, and was given information regarding spray irrigation and its cost. In answer to Mr. Grunmeier's question, Mr. Brennan stated that cost varies from \$7,500 to \$10,000. He indicated that, basically, a spray irrigation system is a self-contained sewage treatment plant on a small scale.

At this point, Mr. Fox interjected that this is a work session; more informal than a meeting. He stated, "We have been through this; . . . P.C. has had two days of the public listening to us; the Supervisors have had one day; it was voted to be adopted; was advertised; and is now sitting tabled." Mr. Grunmeier answered, "That is why we are here tonight . . . to have questions of the Supervisors answered by you; that is why it was tabled."

Chairman Grunmeier proceeded with review of the Ordinance as follows:

Section 100 INTENT - All were in agreement on Items A, B and C of this section. Item D - Chairman Grunmeier questioned why there was nothing pertaining to commercial systems. Mrs. Eberle indicated that this ordinance has been drafted for single family systems; Mr. Grunmeier then indicated that commercial systems should also be addressed. Mr. Brennan stated that the design criteria would then have to be changed. Mr. Fox commented that commercial would have to be in an industrial area which would require public sewage. Mr. Grunmeier questioned if a mobile home park would be considered a commercial operation; Mr. Fox answered affirmatively. There followed a discussion between Mr. Fox and Mr. Grunmeier regarding inspections performed by DER. Mr. Fox compared spray irrigation systems to direct stream discharge, indicating that with direct stream discharge, an engineering company must be hired and DER checks system within 30 days; whereas, with spray irrigation, DER inspections are every 6 months (if they are able to). Chairman Grunmeier indicated that he spoke with Maria Taberrini of DER who indicated that, once the system is installed DER will inspect once a year.

At this point Mrs. Eberle discussed the effect of the Township's proposed regulations. She indicated that there are regulations regarding all sewage treatment facilities contained in Chapters 71 and 73 of the Pennsylvania Code (including standards for experimental and alternate systems). Mrs. Eberle cited a recent PA Supreme Court Case (Middletown Township) which held that "municipalities can regulate concurrently with DER under the Sewage Facilities Act, as long as those regulations are not inconsistent with DER regulations". There followed a discussion between Mr. Fox and Mrs. Eberle regarding interpretation of spray irrigation litigation. Mr. Fox stated that the Township could be in litigation if someone were infected because the system was not working; Mrs. Eberle answered that the Township could not be held liable for failure to enact regulations for spray irrigation systems. Mr. Fox read a section from a Supreme Court ruling regarding the municipalities roll in regulating

the systems. Mrs. Eberle answered that municipalities can regulate as long as those regulations are not inconsistent with those of DER. In answer to Mr. Brennan's question, Mrs. Eberle stated that design criteria is covered in DER's spray irrigation guidelines. There followed a discussion regarding those guidelines. Mrs. Eberle stated, "I am just trying to give the Board and the Planning Commission both sides of this coin; I am not saying that any regulations will be struck down; I am saying that there is a threat of that and you have to consider that when you are adopting regulations. . . DER is going to argue to you; is going to try to stop you from enforcing your regulations because they say they are inconsistent. . . It's a matter that is going to have to be litigated; and it will probably be litigated in the first Township to enact regulations".

Mr. Pischl referenced a subdivision in 1979 which proposed spray irrigation on 14 acres (433 homes) and indicated that BCPC recommended review of Co-op 208 (study by Federal Government regarding pure drinking water in any creek by year 2000). Co-Op 208 study recommended that DER draw up a model ordinance to insure that all municipalities would have the same control on the same types of systems. Mr. Pischl asked if this ordinance was submitted to DER for their input; Mrs. Eberle replied that it was, because it is similar in nature to the design guidelines adopted by Haycock Township. Mr. Fox disagreed, stating there is a difference between Haycock's ordinance and Hilltown's proposed ordinance and cited length of time required for holding tank; he asked, "Are you stating ours is as restrictive as theirs?" Mrs. Eberle replied, "We didn't even get to that point; we were struck down on site suitability". Mr. Fox indicated that five other municipalities were used in writing the ordinance and they have not been sued. Mrs. Eberle replied that the Township would be the ones to instigate litigation (to file an appeal to DER's plan) in order to have the Township's guidelines enforced.

At this point, Chairman Grunmeier stated, "We are all here to work something out; the Supervisors want to make sure that these systems, when put in, are kept up as far as maintenance".

Chairman Grunmeier questioned the following sections (noting page numbers of the proposed ordinance):

Page 3 of 9 - Section 300.2/Site Requirements - Item c-5: Why 1,000 ft. from public buildings -- West Rockhill's is 250 ft. from their municipal building Mr. Brennan replied, "You wouldn't want it near a school . . . a lot of the materials that are blown out are not chlorinated". Mr. Grunmeier also questioned the amount of ground needed for a spray irrigation system for a municipal building. He further questioned Items c-4 (250 ft. from occupied buildings); Item c-9 (550 ft. from dug wells); Items c-10 and c-11 and why the difference between 550 feet and 500 feet on each item. He asked if the water that comes out is supposed to be pure. Mr. Fox answered, "If it works". Mr. Grunmeier stated, "We don't need all of this if we have a maintenance agreement".

Page 4 of 9 - Section 300.3/Spray Area Requirements - Item h: "not experience a seasonally high groundwater table of 3 feet or less" - Mr. Grunmeier questioned the meaning; Mr. Fox replied that the water never drops less than 3 feet. Mr. Wynn corrected this statement and explained, ". . . It means sometime during the year the groundwater rises within 3 feet of the surface . . . at one time; maybe one day a year . . . not that its lowest point is 3 feet; but that its highest point is 3 feet". Mr. Fox was in agreement to this explanation and indicated that there is an error in the print and it should be corrected. Mr. Pischl questioned if there were only certain soils in the Township which could be used for spray irrigation.

Mr. Wynn explained that if groundwater is present that never reaches the height of 3 feet from the surface, that is one of the standards for a conventional sewage system.

Page 4 of 9 - Section 400.2 - Treated Wastewater Storage Facility - Items a & b: Mr. Grunmeier questioned the size of tank that would be needed for the requirement of Item a, "75 gallons per residence capita per day for 80 days". He stated that this would require a 6,000 gallon tank per individual (5 people would require a 30,000 gallon tank). Mr. Fox indicated that this would be too much. Mr. Grunmeier then questioned Item b "300 gallons/day for 80 days" which would amount to 24,000 gallons. He asked if the P.C. knew how much a 24,000 gallon tank would cost and quoted the following costs he received from All-Steel Fabricators, Inc., Philadelphia:

24,000 gal. 5/16 steel basic tank	\$10,800
Manhole	130
Coal tar treatment	3,750
Straps to anchor into ground	700
Total Cost	\$15,380

Mr. Grunmeier further indicated that the tank size would be 10'6" in diameter, 39' long and weigh 11 Tons. Mr. Brennan stated, "For the record, if you want to get into specifications here, I can do that". Mr. Grunmeier stated, "You have to get into specifications if you are going to pass an ordinance. . .". Mr. Fox stated, "You are saying if they put the tank in, it is going to cost them a lot of money . . . what happens if they don't put the tank in; during the winter months they don't use their water". Mr. Grunmeier answered that he toured the West Rockhill building and spoke with their officials, he stated, "They have a 1,000 gallon tank; they have a spray irrigation system . . . and they have no problems with it". There followed a discussion between Mr. Fox and Mr. Grunmeier regarding West Rockhill's system. Mr. Fox indicated he was informed that they were not satisfied with the system. Mr. Grunmeier stated, "We are trying to work out something that would be practical (if you wanted to put this system in) with safeguards that the Township could implement to make sure that the system is run properly. . . Why not use a sewage treatment and system maintenance agreement like West Rockhill . . . they have escrow monies put into an account (a West Rockhill official told me it is an interest bearing account) and when they do inspections, the money comes out of that escrow agreement and when that escrow agreement drops to below \$2,000, it is replenished". Mr. Fox and Mr. Brennan questioned how it could be guaranteed that the system would work, especially in the winter. Mr. Grunmeier answered that if conditions are not right, under DER regulations, the system could not be placed there. Mrs. Eberle stated, "I think, if you are talking about something that doubles the cost of the system, that could be considered exclusionary and could cause problems . . . DER has permitted these systems on two acre lots and you can't do anything to exclude them". Mr. Fox stated, "We are not trying to exclude them, but we are trying to think of the safety of the neighbors . . . what happens if you get a whole development where nothing works . . . (they are) 150 feet apart or less)". Mrs. Eberle replied that having money in escrow would take care of this. There followed a discussion regarding how residents would be aware of a system that is not working. Mr. Pischl asked if these systems would be similar to sand mounds. Mr. Brennan explained that it is a 3 stage system, similar to Penridge Wastewater Treatment on a small scale: solid separation; effluent aerated and chemically agitate; final step is chlorination which

is blown out into the environment (he stated, "You could drink the water, if it's chlorinated"). Mr. Pischl asked if DER recommends a storage tank. Mr. Wynn replied a minimum 1,000 gallon storage tank is required. Mr. Brennan stated, "I think 75 gallons per capita should read 75 gallons per residence". Mr. Wynn stated that 75 gallons per residence per day for 80 days would require a 3,200 gallon tank which would be a more reasonable figure.

Page 6 of 9 - Section 400.4 - Buffer Area - Item e: "include an uphill berm which will direct upland drainage away from the spray irrigation area". Mr. Grunmeier questioned the meaning of this requirement. Mr. Brennan stated, "When you blow stuff out . . . you get mist and droplets. Droplets will end up, hopefully, in your envelope. What happens with those is that they'll evaporate; berm is so that you don't build up a high concentration of effluent and have an opportunity for the stuff to evaporate". Mr. Grunmeier suggested that the height of berm should be indicated; Mr. Brennan agreed. Mr. Wynn explained the difference between a downhill berm and uphill berm and stated that height of berm would depend on amount of water running downhill to the spray area.

Page 6 of 9 - Section 400.5 - Additional Design Features - Item a: "3 monitoring wells located downhill of the buffer area" and Item b: "2 monitoring wells located uphill of the buffer area" - Mr. Grunmeier questioned the meaning of these items. Mr. Fox stated, "Once they start to spray, the water should be tested . . . in the neighboring wells in the area". Mr. Grunmeier stated, "That is not what it says here . . . you are going to test the neighbor's well; how are you going to get permission to go there and test it? Mrs. Eberle indicated that "monitoring" of the well would have to be interpreted by the Township Engineer. Mr. Brennan stated, "You are talking about digging a monitoring well to make sure the effluent that is going out there into this berm . . . is not getting into neighbor's groundwater and contaminating their well". Mr. Grunmeier stated, "You're telling me they dig a well; is that what you're telling me". Mr. Pischl asked, "If someone puts spray irrigation in the backyard of their residence, they are going to have to dig five wells? Are you talking about digging wells - neighbor's wells?" Mr. Brennan answered affirmatively that monitoring wells should be dug. Mr. Fox stated that existing wells in the area should be tested. Mr. Wynn indicated this could cause a problem because there would be no way of knowing if, how, or when the well was contaminated. Mr. Fox stated, "We are talking about when the system is turned on and used (for a period of time), will it affect the neighbor's well (the head direction may have to be changed and the height of the spray itself)".

Mr. Grunmeier indicated that he had no further questions and asked if any of the Supervisors or anyone present had questions pertaining to any sections of the Ordinance.

Scott Tagg, 1120 Fairhill Road, Sellersville, PA - Mr. Tagg stated that he hasn't read the proposal but asked who monitors chlorination, holding tank, and monitoring of wells and who is supposed to do that if DER doesn't (the Township?). Mr. Fox answered, "That is Phase 2 . . . we have got to find somebody who can come in periodically . . . if the system doesn't work . . . then those people should correct the situation; but there still should be someone coming in every so many months . . . could be two people . . . could hire someone (an outside firm) or the Water & Sewer Authority (they have employees and they will have more employees) and they could do that . . . on a need basis". Mr. Tagg stated, "There is a lot of on-site sewage in this Township . . . sand mound, septic systems . . . all I'm saying is, to date, we have no means, method, personnel or money to monitor the existing systems; so I don't see how you can say that we are going

to have this (spray irrigation monitoring) available through DER, the Township or the Water & Sewer Authority". Mr. Fox agreed with Mr. Tagg and stated that Bucks County Health Department (every so many years) investigates failing systems and shows these areas on a map. At this point, Mr. Grunmeier indicated that he talked to Mr. David Noll of the BCHD who stated that once the system is installed, they come out one time per year, or upon request of the Township, or upon request of a resident. Mr. Grunmeier stated, "They said the best thing to do when you get the person that is going to put in the spray irrigation system, (is to) sign a maintenance contract; in that maintenance contract, the Township will get reports of how this system is operating under the maintenance agreement. That is why I brought up earlier, that West Rockhill has a maintenance agreement with its people". Mr. Wynn stated, "On existing systems (as opposed to other counties), in Bucks County, the Bucks County Health Department is the Sewage Enforcement Officer, county wide; they do not routinely go out and cite people for failing systems; they will respond to a complaint in writing (Township has a complaint form) and they do follow up on that . . . but routinely they don't go out and cite people."

Mr. Grunmeier stated, "That is what everyone is worried about -- maintenance, to make sure it is maintained properly; I think we are in agreement that the system works". Mr. Tagg indicated that he is in the chlorination business and stated that a spray irrigation system is a more efficient system than sand mounds or a sewage system; but that it has to be controlled. Mr. Brennan disagreed with this and stated that if you get involved with population that is at risk (residents with allergies, etc.) there may be lawsuits. Mr. Pischl stated, "DER states you can spray all year round (they say it evaporates). What is the intent -- do we want to control it further than what DER does; or do we want to tell the people how to put their system and what to use and attempt to supercede DER. Do we want to guarantee that the system is going to work." Mr. Fox stated, "We want a guarantee that the system is going to work and we are not superceding DER". Mr. Pischl stated, "Wouldn't it be more feasible to have some type of an escrow account . . . to make sure that the system is completely maintained". Mr. Brennan answered, "No, you don't really need that because if you implement certain design criteria, it has to be maintained or it's not operational". Mr. Pischl indicated that a maintenance agreement would have to be handed down from homeowner to homeowner (when the property is sold). Mrs. Eberle stated that to insure this, the maintenance agreement should be recorded (with the deed).

Mr. Brennan questioned, "What happens when you get 2 or 3 of these systems that are contiguous; is there more that we need to look at? We haven't really addressed cluster systems." The Rosenberger subdivision was referenced; Mr. Wynn stated, "If you have criteria that establishes that that lot is not going to affect the adjoining lot, I don't think it will make any difference". Mr. Grunmeier stated, "As I see it, an on-site system is your first alternative (if you are going to build), then you go to a sand mound system (if BCHD gives approval); if on-site and sand mound are not feasible for that property, then you would go to a spray irrigation system". Mr. Fox indicated a public sewage system is the best and Mr. Grunmeier agreed (if available). Mr. Grunmeier indicated that the cost of the spray irrigation system is higher than the other two systems. Mr. Fox indicated that direct stream discharge is more expensive than spray.



Mr. Grunmeier questioned (with parameters set by this ordinance) the minimum lot size that would be needed. Mr. Fox stated that 3 acres should be sufficient. Mr. Grunmeier stated, "If someone has 50 acres of ground and he put his house in the center, under the criteria set down, that would be feasible?" Mr. Brennan stated that he would be exempt under the Rural Residency exemption but was told that there is no longer a Rural Residency exemption. Mr. Grunmeier stated that he had an engineer perform a hypothetical case on 57 acres of ground as follows:

"A resident has 50 acres of land (in a square shape). He would like to build a home 24' x 50' in the center of his land. He also will be constructing a barn 24' x 35'; a swimming pool 20' x 40'; a patio 60' x 30'; and a cabana 15' x 15'. Question: Could a spray irrigation system be placed on this property under the proposed spray irrigation ordinance or DER requirements?" Mr. Grunmeier stated, "According to the engineer, it cannot be done with your parameters".

"On 2 acres of ground, "L-shaped" home - 24' x 40' x 24' x 24'. The home is located 125' from centerline of the road. The rear yard contains a swimming pool 17' x 34'; a 3' walk-around and a patio 60' x 23'." Mr. Grunmeier stated the engineer advised it could not be done with the proposed ordinance parameters. Mr. Fox asked, "Why don't you look at it . . . and start from the other side . . . how can we make them (residents) feel safer?" Mr. Grunmeier replied, "I think the best way to make them feel safer (as far as spray irrigation system) is to have a proper maintenance agreement with an escrow. . . if they have a maintenance agreement with a company and the company is supposed to come out and check it periodically (say every quarter), we would know about it . . . you are not going to control anything in this world 100%". Mr. Brennan questioned why the 57 acres would not meet the criteria; Mr. Grunmeier replied because of the buffer yard and 550 ft. and that he would provide him with a copy of the engineer's figures. Mr. Wynn indicated that the minimum lot requirement would be 10 acres (due to the 550 ft. from on-site high use areas requirement). There followed a discussion regarding this requirement.

At this time, Mr. Grunmeier asked if there were any questions of the Planning Commission regarding spray irrigation.

Mr. Kenneth Bennington stated, "I have a real problem with the proceedings as they are going tonight. We had a joint meeting several months ago when you had this ordinance in front of you, Frank was sitting where Mary is sitting right now, and you had your chance to ask your questions at that time. Frank reviewed the ordinance; it was brought before the public at a public meeting; it was brought before the Supervisors to vote on. Now, I can't understand why you are asking these questions after the fact, if Frank reviewed the ordinance." Mr. Grunmeier replied, "If you remember, at that time, we had four ordinances before us . . . that was a lot at that time . . . we decided to table this, according to the minutes, Mrs. Kelly didn't fully understand; it is in the record and we decided to have another meeting."

Mr. Grunmeier asked, "Any other comments from any Planning Commission or Sewer Authority members; if not, this is open to public comment". Mr. Fox indicated that there were no penalties put into the ordinance and there should be some type of penalties required. Mr. Grunmeier acknowledged this.



There being no comments from the Planning Commission or HTWSA members present, Mr. Grunmeier stated, "Now, we will go on to public comment (we allot 30 minutes) does anyone from the public have anything to say -- anyone?" Mr. Bennington asked, "What are your long range planning rules for the Township. Mr. Grunmeier stated, "We are discussing spray irrigation and anything pertaining to spray irrigation that you would like to discuss. We already asked you if you had any other comments and you said no; we have moved onto public comment". Mr. Bennington indicated that he hadn't said no. Mr. Grunmeier stated, "We are now on spray irrigation". Mr. Bennington objected; Mr. Grunmeier called him in order and indicated that the chair did not recognize him. Mr. Grunmeier stated, "We are at public comment for residents of this Township; Planning Commission and Sewer Authority have already had their time." He then asked if any members of the public had further comment.

Mr. Scott Tagg questioned the envelope of spray for a single family residence. Mr. Fox replied that it depends on the nozzle and spray and that he heard it can go 40 feet. Mr. Jack Hetherington asked what the radius would be. Mr. Fox replied that would also depend on the nozzle.

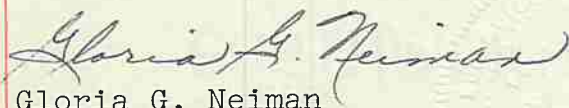
Mr. Grunmeier read from an article which appeared in the North Penn Reporter which stated that, according to David Noll of BCHD, the properties could be as small as one or two acres and that the irrigation system would be allowed for residential land owners who are unable to obtain permission from the County for on-site sewage. Further, that DER would issue the permit and BCHD would enforce maintenance. Each property using this waste system would have a holding tank where effluent would be pumped in and added to a chlorinated filtering system, once treated the water would be distributed over the yard through nozzles located at least 100 ft. from the home. Approximately 350 gal. would be used per home per day; pumped twice a day, about 1/2 hour at a time; single family systems usually have 6 or 10 nozzles per home; each spray unit would have a 25 ft. radius. Answer to Mr. Tagg's question is, 25 ft. radius.

Mr. Grunmeier asked for further questions of public:
Mr. Jimmy Kemmerer asked how many people at the meeting have actually seen a low flow single residence spray irrigation while working. Mr. Grunmeier indicated that he had (West Rockhill); Mr. Wynn, Mrs. Eberle, Mr. Roberts and Mrs. Kelly indicated that they also had witnessed a system in operation. Mr. Kemmerer suggested that everyone who has an input should at least see what is being talked about (to be more cognizant of DER guidelines). He indicated that he has worked on several of these systems, and that BCHD does investigate once a year; that the systems are generally maintained fairly well by the owners.

Mr. Grunmeier stated, "Basically, you will have to admit that maintenance is a problem that has to be looked at". Mr. Kemmerer agreed but indicated it is his feeling that there isn't much of a maintenance problem. Mr. Grunmeier asked if whoever installs the system would have a maintenance agreement which the purchaser of the system could obtain. Mr. Kemmerer answered affirmatively. Mr. Grunmeier asked if there are companies that specifically go out and maintain the systems. Mr. Kemmerer replied, "If it is their system, yes".

Mr. Grunmeier asked if there was any other public comment or questions from the press; there being none, this work session was adjourned at 9:17 P.M.

Respectfully submitted,



Gloria G. Neiman
Township Secretary