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Sept. 25, 1984

Letter Report to · Seagull Builder's re: Water for Proposed 800 Unit Development
with supporting letter from NJ Dept. of Environmental Protection.

Pg. 5

Report Author: David R. Monie of GPM Assoc. Inc.

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GPM associates, Inc.
WATER ENGINEERING and MANAGEMENT CONSULTANTS

Red Fern Lane • P.O. Box 334 • Westville, N.J. 08093 • 609-456-7135

September 25, 1984

Mr. James Gordon
Seagull Builders
20 White Road
Shrewsbury, NJ 07701

Re: Water For Proposed
800 Unit Development

Dear Mr. Gordon:

At your request, we have looked into the feasibility of supplying public water supply to your proposed 800 unit development in Colts Neck, Monmouth County, New Jersey. We are writing to summarize our findings to date in this regard.

In order to meet all applicable standards and in order to provide safe, adequate and proper service, the water system should consist of two wells, a storage tank, and a distribution system. Since the project does not cover an extensive area, the two wells and the storage tank can be located on the same piece of property. The following is a brief description of each of the component parts of the water system, including any regulatory approvals which must be obtained:

(1) Distribution System: The distribution system will include pipes ranging in size from 12" to 6". Fire hydrants will be located at appropriate points to meet all local fire company requirements. Service pipes will come off of the distribution system to serve the individual condominium units in the project. Bureau of Potable Water approval is necessary for the distribution system and such approval is routine as long as the requirements of the Bureau of Potable Water are met. These requirements are not overly stringent and our design would meet all of the requirements of the Bureau of Potable Water.

(2) Storage Tank: The Bureau of Potable Water requires that one average day of useable storage be provided for all community public water supplies, such as the one which will serve this development. We have estimated that the average daily requirement for the proposed development will be 200 gallons per unit per day. This consumption is relatively low for two reasons. First, the project is a condominium project with a significant part of the project being multi-family type construction; and second, most of the lawn sprinkling requirements will be met by surface water on site being utilized by the

Condominium Association. Conservation devices will also be installed to save water in the facilities. Based on an average daily consumption of 200 gallons per day per unit and a development consisting of 800 units, the total storage requiement would be 160,000 gallons. This storage could be accomplished by either using an elevated storage tank with a capacity of 160,000 gallons or by using a 300,000 gallon standpipe which would be approximately 22 feet in diameter and 112 feet high. Approvals will be needed for the construction of this standpipe by the Bureau of Potable Water and such approval is routine as long as the requirements of the Bureau are met. Our design would meet all requirements for storage of the Bureau of Potable Water.

(3) Water Supply: Our design for water supply for the proposed development would consist of two wells, each with a capacity of approximately 280 gallons per minute. Each well should be able to meet the maximum requirements for the system. The second well would, therefore, be strictly a stand-by well to assure the reliablility of water supply. The capacity is based on meeting the maximum daily demands of the system which are estimated at 400,000 gallons per day for the 800 unit development. One 280 gallon per minute well would meet this maximum day requirement. There are two potential aquifers capable of supplying this water requirement; namely, the Englishtown Formation and the Raritan Formation. There is little doubt that either formation would be capable of meeting the demands of this development. In order to utilize this water, well drilling permits must be obtained. The well drilling permits are easily obtained by the well drilling contractor. Once more than 100,000 gallons per day average during any month were diverted by the development, a water diversion permit from the Department of Environmental Protection would be required. We have attached a letter dated September 21, 1984 from Mr. Ernest Hardin of the D.E.P. in connection with water diversion approval for this development. Mr. Hardin mentions two possible sources for water supply for this development, in addition to confirming the 100,000 gallon per day threshold limit. It should be noted that approximately 333 units could be constructed prior to exceeding the 100,000 gallons per day during a maximum month (this is based on an average day of 300 gallons per unit during the maximum month). Mr. Hardin recommended that the wells be drilled into the Englishtown Formation. We concur with that recommendation, since the Englishtown Formation has high quality water and has not been utilized to a great extent in the Colts Neck area. Prior to the consumption exceeding 3.1 million gallons per month, an application will

have to be submitted for diversion rights for this project. It is our estimate that the overall diversion right request would be approximately 7.5 million gallons per month. Prior to the actual filing of the application, information will be obtained from the wells drilled into the Englishtown Formation that serve the development in its first stages. It is anticipated that such data could form the basis for the statutory requirements of the diversion application. In the event that the Englishtown Formation is not found suitable for meeting all of the needs of the proposed development, alternate sources of supply will exist. Mr. Hardin, on page 2 of his letter, alludes to two of these possible sources. Matchaponix Water Supply Company has received diversion rights for five million gallons per day of surface water in the region. The ownership of Matchaponix Water Supply Company is similar to, but not identical to, the ownership of G.P.M. Associates, Inc. Mr. August C. Schultes, III, and the undersigned are both principle owners of Matchaponix Water Supply Company and G.P.M. Associates, Inc. The purpose of the Matchaponix Water Supply Company is to provide an alternative surface supply to augment the water currently being discharged from the Raritan Formation. The Raritan Formation, although able to meet the requirements of this proposed development, has been determined to be overstressed in this area and it is likely that this development would not be allowed additional diversion from the Raritan Formation. It is, in our opinion, feasible for the Matchaponix Water Supply Company to recharge water to the Raritan Formation under an arrangement with your development and then pump water at the location of your development from the Raritan Formation in an amount that does not exceed the recharge from Matchaponix Water Supply Company. In summary, water supply for your development is available from two different formations and it is likely that diversion permits can be obtained by one of the two methods mentioned.

We hope that this information is satisfactory and we look forward to working with you on the design phase and construction phase of the proposed water facilities.

Very truly yours,

G.P.M. ASSOCIATES, INC.

David R. Monie

David R. Monie, P.E.
President

DRM:mw
Enclosure
cc: Mr. August C. Schultes, III, P.E.

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State of New Jersey

JOHN W. GASTON JR., P.E.
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

September 21, 1984

David R. Monie
GPM Associates, Inc.
P.O. Box 334
Westville, NJ 07093

Dear Mr. Monie:

This is to confirm our discussion on September 17, 1984 regarding a proposed Mount Laurel development in Colts Neck. I had previously been contacted by Mr. Jim Gordon. Under the current regulations, a person may divert up to 100,000 gallons of water per day without a water allocation permit. If he elects to construct a well supply for the development, we suggest that the Englishtown aquifer was less stressed in the Colts Neck area and would be a feasible choice.

You asked about the possibility of obtaining a water allocation permit if the needs of the project exceeded 100,000 gallons per day. The developer is free to apply for a permit in accordance with the regulations. At that time, we would review the application in terms of the statutory requirements which include the following:

1. That the plans are in the public interest;

2. That the diversion shall not unduly interfere with other existing supplies;

3. That the diversion shall not exceed the natural replenishment...of the water resources...;

4. That the plans are just and equitable to other water users;

5. That the proposed diversion does not lie within a cone of depression where the aquifer is overstressed or threatened by saline intrusion or hazardous waste.

I cannot prejudge our determination in this case. The applicant would be expected to provide technical data and an analysis by a hydrogeologist. In this case, he will have the advantage of being able to use the data collected during the first phase of the project.

In addition to the above, there may be alternate sources of water available. For example, on this date the permit for the Matchaponix Water Supply Company was approved, which will provide an additional 5 million gallons per day (mgd) for the region. The Manasquan Reservoir when completed will provide a safe yield of 31 mgd.

In summary, I see a number of possibilities for meeting the future needs of the Colts Neck project, assuming, of course, that here is regional cooperation.

Very truly yours,

Ernest L. Hardin, Chief
Bureau of Water Allocation