

CA - Cranbury

12/21/84

Memorandum outlining response of Cranbury
Land Co. towards Stonybrook Millstone
Watershed Assoc. Report entitled
Cranbury, Mt Laurel II and Water Resources

P 6

CA002604D

TO: Carl Bisgaier✓
FROM: Richard Preiss
RE: Response to Stonybrook-Millstone Watershed Association
(SBMWA) Report
DATE: 21 December 1984

The following memorandum outlines the response of the Cranbury Land Company (CLC) towards the Stonybrook Millstone Watershed Association Report entitled Cranbury, Mount Laurel II and Water Resouses, dated November 21, 1984 and amended as of December 7, 1984.

With respect to the first objective of maintaining the proportion of precipitation which is recharged into the groundwater, CLC endorses the following recommendations:

- 1) reducing the required size of parking bays both for standard automobiles (8 1/2' x 17') and for compact cars (7 1/2' x 15');
- 2) reducing the requirements for curbing streets;
- 3) reducing the requirements for the width of sidewalks to a maximum of 4' in width;
- 4) reduce requirement for sidewalks to be only on one side of a street or not to be required at all;
- 5) to encourage or require the use of porous paving;
- 6) to encourage or require the augmentation of recharge through various techniques such as the use of recharge basins, trenches and swales, rooftop detention, etc.

In fact, the proposed site plan for the CLC site has 40 percent of the site covered by low intensive uses - single family homes on large lots and land in the floodplain. Very little of this area of the site is actually covered by impervious surfaces, and therefore the amount of runoff from these areas will increase very little with development. Of the remainder of the site, where multi-family developments at higher densities are planned, only 41% of the net area is covered by impervious surfaces - i.e. structures, roads and parking lots. These areas can be adequately drained using the measures recommended by the SBMWA - trenches, swales, dry wells, rooftop detention devices, retention basins, etc., such that very little stormwater runoff will actually leave the site. Of course, Cranbury Township will have to permit CLC to utilize these methods in place of the current traditional types of improvements.

A further measure which could be adopted to increase recharge is the use of porous paving. In fact, if Cranbury asserts that groundwater recharge is a major public concern, the Township will have to assist all new developments in relaxing cost-generating standards, such that the additional costs of using porous paving and other technologies can be afforded.

CLC has the following comments on some of the items under this goal.

Restricting the impervious surface coverage of high density residential developments to 20% or thereabouts is impossible to achieve. High or medium density residential developments are the only means whereby Mt. Laurel housing can be subsidized. Such developments normally have large areas of on-site parking, access roads and driveways in addition to housing and accessory structures. Impervious surface coverage for the CLC proposed development with a gross density of only 5 units per acre which includes a variety of types of units at various net densities is slightly above 40%. Higher density developments would require a higher percentage of impervious surface coverage.

Although the CLC proposed development provides over 50% of the site as common open space (as defined by the SBMWA); restrictions of having over 20% of the site for such space may be cost-generating and thus conflict with the mandate of Mt. Laurel II. In addition, requiring 10% of the gross area of development to be retained in natural open space over and above lands in floodways and wetlands is excessive. Such lands should be included within this requirement.

With respect to the second objective of maintaining the amount of waste water charged to groundwater, CLC has the following comments.

A further measure which could be adopted to increase recharge is the use of porous paving. In fact, if Cranbury asserts that groundwater recharge is a major public concern, the Township will have to assist all new developments in relaxing cost-generating standards, such that the additional costs of using porous paving and other technologies can be afforded.

CLC has the following comments on some of the items under this goal.

Restricting the impervious surface coverage of high density residential developments to 20% or thereabouts is impossible to achieve. High or medium density residential developments are the only means whereby Mt. Laurel housing can be subsidized. Such developments normally have large areas of on-site parking, access roads and driveways in addition to housing and accessory structures. Impervious surface coverage for the CLC proposed development with a gross density of only 5 units per acre which includes a variety of types of units at various net densities is slightly above 40%. Higher density developments would require a higher percentage of impervious surface coverage.

Although the CLC proposed development provides over 50% of the site as common open space (as defined by the SBMWA); restrictions of having over 20% of the site for such space may be cost-generating and thus conflict with the mandate of Mt. Laurel II. In addition, requiring 10% of the gross area of development to be retained in natural open space over and above lands in floodways and wetlands is excessive. Such lands should be included within this requirement.

With respect to the second objective of maintaining the amount of waste water charged to groundwater, CLC has the following comments.

The best way of accomplishing such an objective would be for Cranbury Township to establish a sewer treatment facility within Cranbury which could recharge the aquifer with the treated waste water within the municipality. This would automatically limit pumpage of such water to areas outside of Cranbury, a prospect which most Mt. Laurel developers are now facing.

CLC is exploring the possibility of hooking into the neighboring East Windsor Municipal Utility Authority plant. This facility recharges the aquifer with treated water by means of spray irrigation, although in the winter months some of this water is discharged into the Millstone River. In this way the CLC would be partially meeting the above objective, i.e. the wastewater from the CLC development would be recharged within the Raritan Magothy Aquifer - about one mile from the site. Another alternative would be for permission to be granted for CLC to build a small on-site package plant, and to sell the wastewater and collected storm water runoff to farmers in Cranbury for spray irrigation. This would also depend upon whether a market for such water exists among Cranbury's farmers and how economically feasible this would be. This solution would also meet all of the other SBMWA goals of reusing gray water, recharging through irrigation, and limiting discharge into streams and surface water bodies. The final recommendation under this objective - using on-site septics and composting toilets - would only be appropriate for low density developments. Parts of the CLC site have been reserved for developments at densities where such systems would be appropriate. CLC would go along with this recommendation in these areas.

With respect to the objective of maintaining or decreasing groundwater withdrawal rates, CLC has the following comments.

This is probably the most difficult objective to attain, because the SBMWA recommendations of banning all new wells and limiting the importation of water supplies from other areas would make all new

developments impossible. There are no other viable alternatives for supplying water to Cranbury other than these two methods, unless a source other than the Elizabethtown Water Company can be found. Certainly building new surface water supplies and adopting water conservation methods would help, but neither of these are the answer to this dilemma.

Again, the recommendation that Cranbury build a waste water treatment facility within the municipality and adopt methods of recharging the groundwater would be the most effective method for maintaining the amount of groundwater in Cranbury from which new wells could draw their water supplies. This, of course, would have to be supplemented by water importation from elsewhere, even from the Elizabethtown Water Company, until regional solutions to the Raritan Magothy aquifer recharge problem and the region's water supply problem are found. In this respect, the burden of meeting SBMWA objectives should be shared not only by CLC, but all developments in Cranbury, and not by Cranbury alone, but all municipalities in the watershed and Raritan Magothy aquifer region as well.

The nature of agricultural activity in Cranbury is such that it cannot compete economically with the pressures for new development. One of the ways in which agriculture may remain viable in a setting which becomes increasingly urbanized is a switch to more intensive crops. These intensive crops have higher dollar yields per acre than the less intensive crops being cultivated at present, and have a much better chance of remaining economically viable within Cranbury in the future. However, intensive crops depend upon a steady and reliable supply of water, both through rainfall and irrigation, for their success. The establishment of a reservoir close to those areas which are most worthy of preservation is the most reliable method of ensuring a steady water supply for the intensive agriculture. The establishment of a municipal sewage treatment plant in Western Cranbury - the area most viable for agricultural preservation - from which a reliable body of treated water could be used

for spray irrigaion - would go a long way towards helping Cranbury to preserve agricultural lands in the face of intensive development pressures.

With respect to objective four, of protecting stream corridors, CLC has in its proposed site plan applied the recommendation to that land which is adjacent to the tributary of the Millstone and the Millstone River itself, both of which run through CLC land. The recommended setbacks for development (25 to 50 feet on intermittent streams and 100 feet for large streams) have been met, and within them much of the natural vegetation will be conserved. In fact, the proposed site plans show setbacks even further than that proposed by the SBMWA.

In summary, CLC is supportive of many of the recommendations that have been advocated by the SBMWA as well as the overall intent and purpose of the Association in protecting the quantity and quality of Cranbury's groundwater. Many of the solutions, however, particularly the two major problems of supplying new developments with water that is neither drawn from wells in the Township or imported via the Elizabethtown Water Company, and the discharge of treated waste water outside of Cranbury, should be dealt with on a municipal and regional level, rather than relying on individual developers to come up with solutions. In this regard, CLC would also be willing to support the solutions proposed by the SBMWA, particularly that of building a new sewage treatment plant within the Township.

RP:jr