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REPORT ON PROPOSED COMPREHENSIVE PLAN FOR WIRELESS COMMUNICATION FACILITIES

August 21, 1998

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I. INTRODUCTION

a. **Background**

Since 1981, when the Pinelands Comprehensive Management Plan (CMP) went into effect, the construction of tall structures has been discouraged throughout much of the Pinelands Area. These regulatory limitations, which incorporated a 35-foot height limit in N.J.A.C. 7:50-5.4, were intended to prevent the littering of the Pinelands skyline with structures that significantly detract from the scenic qualities which federal and state Pinelands legislation called upon the Pinelands Commission to protect. There were, of course, exceptions to this requirement: certain structures were allowed to exceed 35 feet in height; and no restrictions were placed on height within the two most development-oriented Pinelands land management areas - Regional Growth Areas and Pinelands Towns.

However, in 1994, as the Pinelands Commission was nearing the end of its second full review of the CMP, representatives of the cellular telephone industry requested that the Commission take note of the growing need for portable telephone communications and the associated need for the placement of antennas higher than 35 feet in all parts of the Pinelands Area. To accommodate what it felt was a legitimate need, the Pinelands Commission in 1995 amended N.J.A.C. 7:50-5.4 to permit local communications facilities to exceed the 35-foot height limit if a comprehensive plan for the entire Pinelands is first prepared and approved by the Pinelands Commission. The regulations recognized that: local communications systems rely on a network of facilities to



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receive and transmit radio signals; the location of each cell within this network has an effect on the location of other cells; and a well designed and integrated network can avoid the proliferation of towers throughout the entire Pinelands Area, and, most importantly, in its most conservation-oriented areas. Once a comprehensive plan is approved, the regulations anticipate that site specific siting decisions will be made and that individual development applications will be submitted and evaluated against a series of site specific development standards. These regulations were adopted by the Commission in June 1995 and went into effect on August 21, 1995.

b. Appendices to this Report

There are several appendices to this report. A list of them follows:

- Appendix A - The cellular companies' proposed plan (hereinafter referred to as the Plan);
- Appendix B - The Commission's technical consultants' (Bruce Eisenstein, Ph.D., P.E., Moshe Kam, Ph.D. and P. M. Shankar, Ph.D.) review of the plan;
- Appendix C - Assistant Director Stokes' June 12, 1998 memorandum that distributed the Plan to Pinelands mayors and county officials. Two tables that were prepared by Commission staff are attached to that memorandum.
- Appendix D - Assistant Director Stokes' June 24, 1998 letter to the companies seeking clarification of two policy related matters and the companies' July 1, 1998 reply;
- Appendix E - Transcript of the public hearing; and
- Appendix F - Written comments on the Plan that were received during the public review process.

c. Submission of the Plan

On November 6, 1997, the Executive Director issued a report on a "Comprehensive Plan for Cellular Telephone Facilities," which had been deemed complete for purposes of Commission review earlier in 1997. The Pinelands Commission considered the Executive Director's recommendation for disapproval at its meeting of November 14, 1997. The applicants - Bell Atlantic Mobile (BAM), Comcast/Cellular One (Comcast) and Nextel Communications, Inc. (NEXTEL) - requested that the Commission not act on the plan at that meeting. Rather, they requested an extension of the period in which the Pinelands Commission was required to act; an extension was approved through January 16, 1998. This extension was to enable the applicants to meet with an ad hoc committee of the Commission and the staff to discuss in more detail the plan's deficiencies and ways to remedy them. The ad hoc committee, staff and applicant representatives met on November 26, 1997 and December 19, 1997. Follow-up meetings between the Commission's staff, the Commission's technical consultants and the companies' representatives were also scheduled and held over the course of the next few months to further discuss plan deficiencies and to review technical information regarding the need for various facilities. Several other requests to extend the plan review period were made by the applicants and approved by the Executive Director during this time.

As a result of those discussions, the applicants submitted a revised plan, which is now titled “Comprehensive Plan for Wireless Communications Facilities in the Pinelands” and dated March 12, 1998. Since this revised Plan supersedes in its entirety the 1997 plan submission, that earlier submission and the Executive Director’s November 6, 1997 report are not appended to this report.

On June 2, 1998, upon receipt of a revised map, a revised summary chart and two revised pages of narrative, the industry’s Plan was deemed complete for purposes of Commission review. A completeness determination in no way implies that a well documented and approvable plan has been submitted; rather, it is an acknowledgment that there is sufficient information upon which to begin the formal review process. It is also important to note that signaling information was submitted to the Commission’s technical consultants to aid them in their review of facility need and aerial photographs were submitted to, and reviewed by, the Commission’s staff to help determine if siting requirements for six proposed facilities could be met.

Subsequent to the completeness determination, a meeting was held with representatives of the company on June 23, 1998 to discuss two policy matters related to the Plan. Assistant Director Stokes then wrote to the companies on June 24, 1998 seeking formal written clarification of these matters. The companies responded by letter dated July 1, 1998. These letters are included in Appendix D.

A public hearing was duly advertised and held on July 9, 1998. The public comment period was initially set to end on July 17, 1998 but was extended through July 31, 1998. This extension and the public review process is more particularly described in Section III of this report. Relevant information obtained through the public review process has contributed to the Executive Director’s review of the proposed Plan.

d. Summary of Plan’s Facility Siting Proposals

The plan proposes 33 new cellular facilities (a location where one or more antennas is housed) in the Pinelands, 10 of which are to be located on existing structures. The remaining 23 new facilities are proposed to be developed as follows:

* 7 proposed facilities which **may be located on existing structures**; and

* 16 proposed facilities which are **unlikely** to be located on existing structures and which **will likely require the construction of new tower facilities**.

These are in addition to 23 existing facilities which the three companies already operate within the Pinelands and for which no changes are recommended.

This proposal is quite different than that presented in the 1997 plan. There are now a total of 33 facilities being proposed as compared to an estimated 35 facilities in the 1997 plan. Proposed

facility locations have also changed in an attempt to comport with CMP standards and, unlike the 1997 plan, many of the proposed facilities have been proposed in areas where they may be located on existing structures, thereby reducing the possible need for new towers in the Pinelands from 25 or 26 (as proposed in the 1997 plan) to as few as 16, or possibly even less. More information on these siting proposals and their consistency with Comprehensive Management Plan standards is presented in the following section.

II. CONFORMANCE WITH THE COMPREHENSIVE MANAGEMENT PLAN

a. Introduction

N.J.A.C. 7:50-5.4 contains the standards against which this Plan is to be judged. If these standards are met, the Commission must approve the plan. If the standards are not met, the Commission cannot approve the plan but may conditionally approve or disapprove it, depending on the extent and severity of the plan's deficiencies.

For purposes of review, the standards of N.J.A.C. 7:50-5.4 have been separated into ten criteria. A discussion of each and the plan's conformance to it follows. To aid in the staff's review of the plan, Bruce Eisenstein, Ph.D., P.E., Moshe Kam, Ph.D. and P. M. Shankar, Ph.D. were retained for their expertise in communications technology. Their review is appended to this report as Appendix B and is reflected, as appropriate, in the findings which follow. Furthermore, information which was elicited through the public review process is also reflected, as appropriate, in these findings.

b. Standards

- 1. The plan must be agreed to and submitted by all providers of the same type of service, where feasible. N.J.A.C. 7:50-5.4(c)6.** This requirement is intended to ensure that the greatest possible degree of coordinated planning occurs to minimize the number of new structures in the Pinelands Area. If less than all providers of the same type of service submit the plan, there must be evidence that participation and endorsement was sought from the other providers, along with a clear and reasonable explanation why full participation was not obtained.

The three applicants - Bell Atlantic Mobile (BAM), Comcast/Cellular One (Comcast) and Nextel Communications (NEXTEL) - state in their Plan that providers of like services are defined as those carriers providing fully duplexed voice and data service in the 800 MHz range. BAM and Comcast are the two federally licensed cellular providers for the Pinelands Area while NEXTEL is a Specialized Mobile Radio (SMR) provider. As such, the applicants maintain that they are the only providers in the Pinelands who meet this definition. Although the Executive Director's November 6, 1997 report questioned whether other SMR providers should be signatories to the plan, the Commission's technical consultants have reviewed the applicant's definition and agree with it. Since

there is no technical basis upon which to disagree with the definition set forth in this Plan and CMP regulations only require that it be jointly submitted by companies providing the “same type of service,” **the Executive Director concludes that this standard has been met.**

In making this finding, the Executive Director recognizes that other SMR providers may need to submit a separate plan, as may other wireless communication companies, which include pager services and personal communication services (PCS). Although one fully coordinated plan addressing all wireless needs would be preferable, that type of approach seems to be impractical because different wireless providers are at different stages of their network design and have different network design requirements. Moreover, it is not technically required by CMP regulations. Nevertheless, other wireless providers will be expected to minimize the number of new towers in the Pinelands by relying upon the cellular Plan’s facility proposals, wherever appropriate.

2. **The plan must review alternate technologies that may become available for use in the near future. N.J.A.C. 7:50-5.4(c)6.** The purpose of this standard is to identify those other technologies which should at the very least be considered as the pending plan is reviewed.

The Plan briefly describes other technologies which may affect the cellular telephone industry and this Plan. It would have been helpful for the applicants to more fully describe them and their possible implications on this Plan, particularly on the number and location of facilities, but that is not required by the standard. The information is nevertheless helpful in evaluating the CMP standard requiring that new structures (e.g., towers) be designed to accommodate the needs of any other local communications provider. That matter is more fully discussed in subsection 9, below.

The Executive Director concludes that this standard has been met.

3. **The plan must show the approximate location of all proposed facilities. N.J.A.C. 7:50-5.4(c)6.** In order to evaluate how well the plan meets other standards (such as those presented in subsections 5, 6 and 7 below) which are intended to minimize the number of new structures (e.g., towers) in the Pinelands Area, it is essential that there be a clear and unambiguous identification of all proposed facilities, including those which will utilize existing structures and those which will require new ones.

The Plan graphically presents the approximate location of all facilities on a map titled “Comprehensive Map of Cellular Facilities in the Pinelands Area.” Although the map is dated March 1998, a revised map was received on June 1, 1998 which illustrated a new location for Facility 55. The Plan also describes each proposed facility in narrative form (indicating whether it will or may or may not be located on an existing structure), the

municipality in which it is to be located and whether it will be located within what the companies refer to as “unrestricted,” “height restricted,” or “height and least number of structures restricted” areas. Commission staff also estimated the approximate geographic coordinates for the proposed facilities (Appendix C) so as to minimize future questions regarding the approximate locations proposed by the companies. These coordinates were distributed to the companies, local officials and interested parties and were publicized in the Commission’s WEB page to aid others in their review of the Plan. It should be noted at this point that the three companies have submitted various tower development applications over the years, some of which have yet to be approved or constructed. Only the applications listed below relate to the proposals in this Plan. If this Plan is approved, any other application will be considered to be effectively withdrawn from further consideration unless the applicant expressly requests that it be reactivated.

<u>Facility Number</u>	<u>Application Number</u>	<u>Type of Proposed Facility</u>
5	98-0304.01	New tower
7	80-0014.02	New tower
9	98-0272.01	New tower
12	88-1031.03	New tower
16	97-0528.01	New tower
20	87-1143.02	Antenna on existing structure
24	92-0901.01	Antenna on existing structure
25	83-9286.01	Antenna on existing structure
28	97-0726.01	Antenna on existing structure
30	81-0288.01	Antenna on existing structure
33	89-1045.02	Antenna on existing structure
41	81-0153.02	Antenna on existing structure
54	83-5650.02	Antenna on existing structure
56	83-6355.07	New tower

The Plan also references a five-mile radius around every proposed facility’s approximate location. Since this might raise a question as to how reliable the locations are, the Commission’s staff sought clarification of this reference from the companies and they have confirmed the Commission staff’s interpretation (Appendix D). To properly apply the CMP’s standards within the context of this Plan, if approved, the Executive Director

recommends that the following procedure be used when the companies seek to finalize these approximate locations.

1. Except as otherwise specifically noted in this report, there will be a general presumption that a facility's final location will be within the immediate area of the location proposed in this Plan, i.e., the Pinelands management area group and municipality described in the Plan as further defined using the geographic coordinates prepared by the Commission's staff. If it proves to be infeasible to site the facility on an existing, suitable structure (i.e., one that does not require a change in mass or height which significantly alters its appearance), the use of other existing structures or, as appropriate, eligible sites which meet the standards in N.J.A.C. 7:50-5.4(c)4 will be considered. The company's feasibility assessment will need to include confirmation from other parties to this Plan who are slated to share the facility that the selected site meets their needs.
2. If siting of the facility within the immediate area of the Plan location is infeasible, the company will broaden its search area consistent with the service need for the facility and in conformity with other appropriate technical considerations, but in no case will that area extend beyond a five-mile radius. This will require consultation with other parties to this Plan who are slated to share the facility to ensure that any new location meets their needs.
3. Within that broader search area, consideration will first be given to locating the needed antenna on an existing, suitable structure if that structure does not require a change in mass or height that significantly alters its appearance.
4. Failing that, the use of other existing structures that may require a significant change in mass or height (if appropriate in view of the CMP's standards, including those related to visual impacts) or sites for a new structure within the search area will be evaluated. Only those structures or sites which meet the requirements of N.J.A.C. 7:50-5.4(c)4. and other applicable CMP standards will be selected. If that broader search area crosses the boundaries of the Pinelands Area or its management areas, the company will seek to site the facility in the following order of preference:
 - a. Outside the Pinelands;
 - b. Pinelands Regional Growth Areas, Pinelands Towns and the developed portions of Military and Federal Installation Areas;
 - c. Pinelands Rural Development Areas, Agricultural Production Areas, undeveloped portions of Military and Federal Installation Areas and Pinelands Villages other than those expressly identified in N.J.A.C. 7:50-5.4(c)6; and
 - d. Pinelands Preservation Area District, Special Agricultural Production Areas, Forest Areas and the Pinelands Villages expressly identified in N.J.A.C. 7:50-5.4(c)6.
5. If no feasible structures or sites are found, the company should reexamine the surrounding facility network and propose an amendment to this Plan which conforms to

CMP standards. Of course, the company retains its right to seek a waiver of strict compliance from the standards of the CMP, although the Executive Director notes that the tests will be difficult to meet.

Taking into account the procedure which the Commission's staff will follow when applying this Plan and the relevant CMP standards to specific development applications, **the Executive Director can conclude that this standard has been met.**

4. **The plan must include five and ten year horizons. N.J.A.C. 7:50-5.4(c)6.** This standard is important insofar as the Commission, local governments and the public can rely on the plan as a blueprint of industry needs beyond the immediate future. This is not to imply that the plan cannot be amended if needs change - the CMP expressly recognizes this - but the network of facilities should be planned to meet anticipated needs over a ten year period.

The Plan's narrative description of each proposed facility identifies whether it is likely to be constructed within five or ten years. The Plan anticipates that 21 of the 33 proposed facilities (or 11 of the 16 facilities which are most likely to require the construction of new towers) might be built within the next five years. It is important to note, however, that these are projections which might change over time.

As pointed out in the report of the Commission's technical consultants (see Appendix B), there are portions of Route 47 in Cape May and Cumberland Counties, areas around the Routes 70/206 intersection and a stretch along Route 557 in Atlantic County in which cellular service may not be adequate, even considering this Plan's proposals. Although it is possible that the cellular providers may propose to improve service there within the ten-year period, it is the Commission's consultants' and the Executive Director's belief that the facilities along Route 47 and at the Routes 70/206 intersection need not be located within the Pinelands. If the companies later decide that improved service along other parts of Route 557 is warranted, they may propose an amendment to this Plan.

Since the Plan does include five and ten year horizons, **the Executive Director concludes that this standard has been met.**

5. **The plan must demonstrate that every facility proposed in the Pinelands Area is needed to provide adequate service. N.J.A.C. 7:50-5.4(c)1.** There are two important elements to this standard-the first is the purpose for the plan, which is to provide "adequate" service, and the second is that every proposed facility must be judged against that test.

- a. Adequate Service

The term adequate service is used in N.J.A.C. 7:50-5.4 three times. The simple reason was to leave no doubt that the goal for cellular telephone service in the Pinelands Area was to provide “adequate” service, not necessarily optimal, excellent or outstanding service. Specifically at N.J.A.C. 7:50-5.4(c)1, adequate service is described as that which “serves the local communication needs of the Pinelands, including those related to public health and safety.” It was recognized at the outset that this distinction could play an important role in determining both the number and location of cellular facilities in the Pinelands Area because the height and proximity of cells exerts a tremendous influence on the quality of service, particularly the capacity of the system to handle calls during peak periods.

To judge, as is required by this CMP standard, whether every facility proposed in the Pinelands is needed, an objective definition of adequate service is necessary. Without it, one cannot impartially evaluate need and justify a decision to include in or exclude from a plan a proposed facility.

The applicants address this matter in their Plan. They describe what are called “three widely recognized parameters” that are used in the industry to define service levels. These three parameters are (1) signal to interference ratio at audio, (2) dropped call rate and (3) blocked call rate. In presenting this information, the applicants describe but do not quantify the parameters and note their belief that the technical need for service is within the sole province of the Federal Communications Commission.

Although this lack of quantification does not, itself, yield an objective measure for defining service levels, the Executive Director does not consider this to be a fatal flaw in the Plan for two reasons. First, the Commission’s technical consultants quantified service levels (see Appendix B) and reviewed the proposed facilities on that basis. Second, the companies expressly acknowledge in their Plan that they must again demonstrate need if amendments to the Plan are proposed in the future.

b. Need for every facility in the Pinelands Area

The companies’ Plan describes the general need for each proposed facility, with the exception of Facility 41, as “coverage” or “coverage and capacity.” All but two facilities (numbers 18 and 19) satisfy coverage needs only. Both of the “coverage and capacity” facilities are located in Regional Growth Areas and may be located on existing structures.

The Commission’s technical consultants evaluated the need for every proposed facility, including those that were added since the 1997 plan and, when a question arose, reviewed detailed technical information on the equipment planned for use in the Pinelands and on signal levels expected from the planned sites. In some cases, the Commission’s consultants measured existing signal levels using their own cellular phone equipment. The Commission’s consultants have concluded that each of the 33 proposed facilities is justified on the basis of service levels as they have quantified them.

As is evident from the following discussion of several facilities for which specific questions arose, the consultants not only evaluated the question of need from the perspective of service levels, they also evaluated the ability of the cellular providers to satisfy an acknowledged need by locating the facility outside the Pinelands, by locating it on an existing structure if a suitable one was located nearby or by co-locating it on another nearby facility.

Facilities 1 and 3. A question was posed at the public hearing as to whether these two facilities (Comcast site 142 and BAM site 29 in the 1997 plan) could be co-located. The Commission's technical consultants report that co-location of these facilities is not possible because a coverage deficiency would still exist along Routes 530/539.

Facility 2. This was identified as site 583 (BAM) in the 1997 plan and was questioned in the Executive Director's November 6, 1997 report because the Commission's consultants were uncertain whether it could be co-located with a nearby facility being proposed by Comcast. The Comcast facility (site 144 in the 1997 plan) has been eliminated and both companies' antennas are to be located on this proposed BAM facility. Siting of this facility is further discussed in subsection 8.

Facility 5. A question was posed during the public comment period about the need for this facility (BAM and Comcast site 56 in the 1997 plan, Application 98-0304.01 just recently submitted to the Commission). The Commission's consultants conclude that the need is justified. Siting of this facility, which is located in the Pine Plains area, is further discussed in subsection 8.

Facility 7. This was identified as site 18 (BAM and Comcast) in the 1997 plan, was questioned in the Executive Director's November 6, 1997 report because the Commission's consultants were uncertain whether a facility at the intersection of Routes 70 and 206 might suffice. It also received a local approval (Application 80-0014.01) which has been held in abeyance pending action on a comprehensive plan. The companies have now provided detailed signaling information and the Commission's consultants independently measured signal levels along Route 70. The consultants have concluded that there is a stretch of 5 miles along Route 70 where the present service level is inadequate. A two and one half mile segment receives no service at all and the balance suffers from a high dropped call rate. The consultants further conclude that this need cannot be satisfied by locating a facility at the intersection of Routes 70 and 206, although they do believe that another facility at that intersection may be needed in the future. If a facility is needed near that intersection, it can be constructed outside the Pinelands. The need for facility 7 was also questioned during the public review period and the detailed signaling information which the technical consultants reviewed was requested by and made available to several interested parties. Although one written comment still questioned the need for this facility on the basis of the commenter's own field test, the staff's independent checks using the Comcast system supports the Commission's consultants' findings.

Facility 9. The need for and location of this facility (BAM site 59 in the 1997 plan) was questioned at the public hearing and in many written comments. Although the Commission's technical consultants conclude that there is a need for the facility, there are siting issues which are discussed in subsection 8.

Facility 12. This was identified as site 582 (BAM) in the 1997 plan and was questioned in the Executive Director's November 6, 1997 report because the staff was uncertain whether it might be able to be co-located with one of two other nearby facilities being proposed by Comcast. There is a need for service in this area but the BAM facility has been moved to the south and will be shared with Comcast. This is further discussed in subsection 8.

Facility 14. This was identified as site 52 (BAM and Comcast) in the 1997 plan and was evaluated to see if the need could be met in a location which would not impact upon the Great Egg Harbor River. Similar concerns were expressed during the public review period. Although there is a need for service in this area, the results of the locational review are more particularly described in subsection 8.

Facility 16. This was identified as site 33 (BAM and Comcast) in the 1997 plan and was evaluated to see if the need could be met at a location which would not impact upon the Mullica River. An application (97-0528.01) for a specific site has been filed and concerns were expressed at the public hearing and in written comments about this proposed facility. Although there is a need for service in this area, the results of the locational review are more particularly described in subsection 8.

Facility 18. This was identified as site 584 (BAM) in the 1997 plan and was questioned in the Executive Director's November 6, 1997 report because the Commission's consultants initially thought that co-location with an existing Comcast facility might be feasible. The Commission's consultants have since learned that the Comcast cell is a roof top installation and co-location is not possible. Nevertheless, the Plan notes that facility 18 might be able to be located on another suitable structure in the area.

Facility 20. This was identified as site 48 (Comcast) in the 1997 plan and was questioned in the Executive Director's November 6, 1997 report because the Commission's consultants were uncertain whether coverage in the western facing sector might be satisfied by locating a new facility outside the Pinelands. Based upon the additional technical information provided by the industry, the Commission's consultants have concluded that the Plan's proposed location will improve service to an acceptable level along some but not necessarily the entire stretch of roadway (Route 557) and that its location inside the Pinelands is warranted. It is identified in the Plan as a facility which will definitely be located on an existing structure.

Facilities 21 and 22. These were identified as sites 576 (Comcast) and 47 (Comcast) in the 1997 plan and were questioned in the Executive Director's November 6, 1997 report because of siting concerns. While the siting issues are discussed in subsection 8 of this report, the Commission's consultants did review the need for these facilities and concluded that the proposed facilities will provide borderline service.

Facility 23. This was identified as site 45 (BAM and Comcast) in the 1997 plan and was the subject of a development application (95-1116.01); however, it was proposed at a location which did not meet CMP siting standards. Consequently, the need for and location of this site were again evaluated. The companies have proposed a slight change in the facility's location to meet CMP siting standards and, based upon additional technical information, the Commission's technical consultants have concluded that the need is justified, primarily to provide localized service in the Woodbine area. However, the consultants also note that it does not completely solve coverage problems along Route 47 and that another facility might be needed in the future. If such a facility is needed, it should be able to be located outside the Pinelands.

The Borough of Woodbine has questioned whether a new tower is needed by BAM or Comcast in light of NEXTEL's apparent agreement to locate its antenna on an existing water tower. The Commission's technical consultants note that NEXTEL utilizes a higher power radiation level in its equipment than does BAM or Comcast and that a new facility to the south of the water tower will probably be needed for the latter two companies. However, should BAM and/or Comcast propose a new facility at the location proposed in this Plan, they will need to again confirm that their needs cannot be met through the use of an existing structure.

Lastly, questions were raised during the public review process about the Plan's adherence to this standard because the detailed technical information reviewed by the Commission's consultants was not published by the companies as part of their Plan. Reportedly, the companies' decision is based on their belief that much of the information is proprietary in nature and cannot be made available by the Commission to the public. Although the Executive Director does not agree with that view and would have preferred that it be included in the Plan, its absence does not appear to represent a fatal flaw. As is the case with many documents similar to this plan, background information is often not formally published but is made available for public review if requested. Based upon advice from the Commission's Deputy Attorney General, the release of this type of information was evaluated as requests were made. Ultimately, each request was accommodated. (See Section III for details.)

Since the Commission's consultants have determined that all of the facilities proposed in the Pinelands are needed to provide adequate service, **the Executive Director concludes that this standard has been met.**

6. **The plan must demonstrate that the facilities to be located in the Preservation Area District, the Forest Area, the Special Agricultural Production Area and 17 specific Pinelands Villages are the least number to provide adequate service, taking into consideration the location of facilities outside the Pinelands. N.J.A.C. 7:50-5.4(c)6.** One of the key CMP provisions, the purpose of this standard is to very closely scrutinize new facilities proposed in these conservation-oriented land management areas of the Pinelands and to do so considering the location of facilities outside of these areas. Since the cellular system represents a network of facilities, each of which affects the location of other facilities in the system, the location of facilities outside these conservation-oriented land management areas is important in evaluating the need for new facilities within the areas.

The Plan refers to these conservation oriented management areas as the “height and least number of structures restricted” area. The proposed network of 56 existing and new facilities within the Pinelands includes 14 in these most conservation-oriented land management areas. Of the 14, two are existing cellular facilities with no changes, five represent antennas which will definitely be located on existing structures and two others are facilities which may be located on existing structures. This leaves five facilities which are likely to require the construction of new towers. It was unclear how many new towers the 1997 plan proposed in these areas (the best estimate is 8) but this Plan clearly proposes fewer new towers.

The Commission’s technical consultants not only reviewed the need for the proposed facilities within the Pinelands in relation to facilities in the surrounding areas, they and Commission staff also evaluated the possibility of locating those that are needed here in other, less sensitive parts of the Pinelands. As a result of this review, the companies have proposed in this Plan to relocate two facilities, numbers 11 and 12 (sites 9 and 582, respectively, in the 1997 plan) from the Preservation Area District to Agricultural Production Areas. The need for and location of other facilities proposed in these areas are discussed in subsections 5 and 8.

The Commission’s consultants and staff are now convinced that, when taking the need for each facility into account, there is effectively no opportunity for eliminating any of the remaining facilities proposed in the most conservation oriented areas of the Pinelands. However, the Plan does refer to a five-mile radius surrounding the approximate locations of all proposed facilities, even those proposed in the less sensitive parts of the Pinelands. Although this appears to be a rather innocuous reference, the Commission’s staff sought confirmation from the companies that this was not intended as an open-ended exception to the Plan’s siting recommendations. Such an interpretation would have the effect of rendering the Plan meaningless because a five-mile change in facility location could theoretically result in every facility being “relocated” into the most sensitive parts of the

Pinelands. As the correspondence in Appendix D confirms, the companies agree that the reference is not intended to be interpreted in such an illogical manner.

The Executive Director concludes that this standard has been met, taking into account the procedure presented in subsection 3 which will be followed when the companies conduct more detailed siting analyses.

7. **The plan must demonstrate that the antenna utilizes an existing communications or other structure, to the extent practicable. N.J.A.C. 7:50-5.4(c)3.** One of the key CMP provisions, this standard is intended to ensure that the fewest possible number of new towers are constructed throughout the Pinelands Area.

In response to the concerns expressed in the Executive Director's November 6, 1997 report that the companies did not design their proposed network of facilities to take advantage of siting opportunities on existing structures, several steps have since been taken to examine these opportunities. Some might argue that this Plan is still not based upon a comprehensive planning approach which sites facilities after inventorying existing structures because many of the proposed facilities in this Plan were preliminarily identified in 1997, before much analysis of existing structures was done by the companies. Nevertheless, the companies did assemble and analyze new information on existing structures, including inventories from the three electric utility companies which service the Pinelands and the Federal Aviation Administration (FAA), the results of their own visual surveys of potential sites in the most conservation oriented parts of the Pinelands, and the results of Pinelands Commission staff windshield surveys of potential sites in the remainder of the Pinelands. The Plan also summarizes the data provided by the utilities and the FAA.

To present the results of this effort, the Plan describes proposed facilities in one of three categories: (1) those which will be located on existing structures, (2) those which may be located on existing structures and (3) those which are unlikely to be located on existing structures. For example, Facility 10 (Comcast site 10 in the 1997 plan and the subject of a prior development application- 85-0093.04) had been proposed as a new tower in a Rural Development (height restricted) area but has now been proposed as a facility which may be located on an existing structure at a new location within a Regional Growth (unrestricted) area. As many as 17 of the 33 proposed facilities may be located on suitable, existing structures. This is a vast improvement over the 1997 plan which may have resulted in as few as seven existing structures being utilized. Moreover, the Plan states, and CMP regulations require, that the companies still conduct another detailed search for suitable structures when final siting of all facilities (including those which now do not appear to be able to be located on an existing structure) is pursued.

Two cautionary notes are in order. First, as some commenters have indicated, it is possible that some of the existing structures which the companies indicate may be suitable for

cellular facilities may be ultimately found to be unsuitable due to technical or other considerations. Second, it is possible that disputes may periodically arise when a cellular provider argues that a particular structure, although suitable from an availability and construction standpoint, is not situated so as to service its need. However, it is unrealistic to expect that detailed technical analyses of all potentially usable structures be completed as part of this Plan for facilities which the companies may not attempt to build for several or more years and that lease agreements for them be executed prior to the Commission's approval of this Plan, particularly when one considers that the CMP regulations themselves contemplate that individual development applications must still be evaluated against this standard. **Therefore, the Executive Director concludes that this standard, insofar as it applies to this Plan, has been met.**

8. **The plan must demonstrate or note the need to demonstrate when the actual siting of facilities is proposed that, if a new supporting structure (tower) with antenna is to be constructed, it can *probably* be sited according to the six criteria in N.J.A.C. 7:50-5.4(c)4. These criteria deal with satisfying technical operating requirements; minimizing visual impacts from public areas, wild and scenic rivers and special scenic corridors, the Pine Plains, the Forked River Mountains and residential areas; and, if proposed in the Preservation Area District, Forest Area, Special Agricultural Area, or Rural Development Area, locating the facility in non-residential zones, non-conservation public lands, mines, first aid or fire stations, and landfills.** It is the Executive Director's opinion that, while it is acceptable for a plan to note the need to demonstrate adherence to these siting criteria when individual facilities are proposed, there must also be a reasonable expectation when the plan is approved that the proposed facilities can, in fact, be sited. Without this expectation, the plan is meaningless because there can be no confidence that the proposed facility network is realistic. This does not require the same type of comprehensive analysis required at the time a specific development application is filed; rather, it is a planning review to ensure that there is a reasonable probability that qualifying sites exist.

In the 1997 plan, six proposed sites were questioned because there was reason to doubt that they could be sited in accordance with CMP standards. Other sites were questioned because of the CMP's visual impact standards and still others were questioned at the public hearing. These are discussed, as follows:

Facility 2. This facility now combines two of the questioned 1997 sites, 583 (BAM) which had been proposed in the Forest Area or Preservation Area District and 144 (Comcast). Analyses of aerial photographs and other information discloses that more than one eligible site for a new facility exists within one and one-quarter mile of the approximate location. It is presumed that the final location will be one of these eligible sites.

Facility 5. This was identified as site 56 (BAM and Comcast) in the 1997 plan and is proposed in the Preservation Area District. Questions were also raised during the public review period about this facility's potential impact upon the Pine Plains. Through analyses of aerial photography and other information, several possibly eligible sites have been identified in the area, up to one and one-half mile from the Plan's approximate location. Since some are located outside of the Pine Plains and its buffer, yet still within the specific area identified by the companies as being in need of service, it is expected that this facility will not be located in the Pine Plains or its buffer area. A recently submitted development application (98-0304.01) confirms this expectation, although the specific site proposed in the application does not appear to meet CMP siting standards. If this Plan is approved, detailed review of the application will likely result in the facility's relocation to a nearby, eligible site.

Facility 6. This was identified as site 579 (BAM and Comcast) in the 1997 plan and was proposed in or near the Special Agricultural Production Area. This facility was also questioned at the public hearing. Although no eligible sites were identified within the Special Agricultural Production Area, at least one existing structure exists within a mile of the approximate location. The Plan now anticipates that the facility can be located on an existing structure.

Facility 9. An application to develop a new BAM tower on Block 66, Lots 1.01 and 1.02 in Evesham Township has been filed with the Commission and has prompted testimony and written comment in opposition to its location. Although approval of this Plan in no way implies approval of any facility at a specific location, the Executive Director does note that the site proposed in the application does not meet specific CMP siting requirements. Since the Commission's technical consultants note that some other, potential sites to the south and west will not meet the identified service need, the applicant will have to explore other eligible sites in the more immediate area.

Facility 12. This was identified as site 582 (BAM) in the 1997 plan and was proposed in the Preservation Area District. Because no eligible sites were found, the proposed location was moved to an Agricultural Production Area. The next facility in the network (former 9, now 11) has also been moved out of the Preservation Area District to an Agricultural Production Area.

Facility 14. This was identified as site 52 (BAM and Comcast) in the 1997 plan and was reviewed because of its proximity to the Great Egg Harbor River. The National Park Service also questioned the possible impact a new tower might have on this federally designated river. The 1998 Plan proposes this facility to the south of its earlier location, approximately two and one-half miles from the river. There is no reason to think this will have any effect on the river designation.

Facility 16. This was identified as site 33 (BAM and Comcast) in the 1997 plan and was reviewed by the Commission staff because of its proximity to the Mullica River. It was also questioned at the public hearing because a specific site had since been identified which a commenter felt was too close to the Mullica River. Although approval of this Plan does not imply approval of any facility at a specific location, the Executive Director does note that a development application (97-0528.01) has been submitted and will be reviewed in detail by Commission staff if this Plan is approved. It does appear that the tower is being proposed at an eligible site more than 600 hundred feet from the river but the visual impacts still must be considered. If those impacts are significant and another location is available which satisfies the service need, use of the alternative will be pursued.

Facility 20. This was identified as site 48 (Comcast) in the 1997 plan and was reviewed because of its potential impact upon the Tuckahoe River. The 1998 Plan now proposes that this facility be located on an existing tower.

Facility 21. This was identified as site 576 (Comcast) in the 1997 plan and was reviewed because of its proximity to the Manumuskin River. The National Park Service also questioned the possible impact a new tower could have on this federally designated river. Based upon the Commission staff's review of this Plan, it is highly unlikely that a new tower will need to be located within the federal river corridor because 80% of the eligible sites are located well beyond the corridor. Furthermore, a specific development application, when submitted, will also be reviewed to ensure that CMP visual impact standards are met.

Facility 22. This was identified as site 47(Comcast) in the 1997 plan and was proposed in the Forest Area. It and a nearby facility (site 21) were reviewed to determine if a different configuration was possible. Possible visual impacts upon the Maurice River were also reviewed. Although the configuration remains basically unchanged, site 22 is now proposed as a facility which may be able to be located on an existing structure which, according to the staff's analysis, is located about three miles from the approximate location identified in this Plan. If it is ultimately determined that this existing structure cannot be used, it is unlikely that a facility can be located in this area.

Facility 23. The siting questions surrounding this facility are discussed in subsection 5.

Since a reasonable expectation now exists that the proposed facilities can be sited and in view of the finding that Facility 5 can and will be sited such that it is not located within the Pine Plains, **the Executive Director finds that this standard has been met.**

- 9. The plan must demonstrate or note the need to demonstrate when the actual siting of facilities is proposed that supporting structures (towers) are designed to accommodate the needs of any other local communications provider which has identified a need to locate a facility within an overlapping service area. N.J.A.C.**

7:50-5.4(c)2. A closely related CMP standard also requires that the plan must demonstrate or note the need to demonstrate when the actual siting of facilities is proposed that the supporting structure, if initially constructed at a height less than 200 feet, can be increased to 200 feet to accommodate other local communications facilities in the future. N.J.A.C. 7:50-5.4(c)5. Another closely related standard in N.J.A.C. 7:50-5.4(c)6. requires that the plan must provide for joint construction and use of the supporting structures (towers). For purposes of this report, these three standards, which are intended to facilitate co-location of cellular and other types of local communications facilities, will be reviewed together.

The Plan addresses these “co-location” requirements in several ways. First, it identifies joint use of proposed facilities by the three companies that are parties to this Plan. Second, it commits the companies to design and construct all new structures such that they can be increased in height to 200 feet if necessary to accommodate other communications providers. And third, it includes a policy describing how co-location arrangements will be handled for all licensed wireless providers in the Pinelands.

Even though each of the three parties to this Plan must work from their existing network design, there has been a concerted effort to propose facilities in locations where more than one company can utilize them. Of the 16 facilities which the companies believe will require new towers, nine will be shared amongst at least two of them. Eight of the 17 facilities which will or may utilize existing structures will be shared. To ensure that these facility sharing opportunities are not adversely affected by virtue of an inappropriate site selection, the Commission’s staff will ensure that each Plan participant that is shown as a co-locator agrees with the site selected and proposed in a formal development application.

The companies have also made a serious attempt to affirmatively address co-location issues affecting other wireless providers. The co-location policy included in the Plan sets forth a five-part approach, addressing equal access, market value pricing, design of the towers, access and utilities, and the procedures for making co-location arrangements. The Commission’s technical consultants have reviewed the policy and conclude that it will provide an effective framework to facilitate co-location; thereby reducing the need for additional tower construction in the Pinelands to satisfy other providers. However, the consultants also stress that this is a policy; it is not intended to describe detailed arrangements which are appropriate to include in specific contracts and agreements between wireless companies. Moreover, the Executive Director notes that the co-location policy does not allow companies who are not parties to this Plan to construct new towers in the restricted areas of the Pinelands unless they are authorized to act as the agent of the appropriate cellular company or have incorporated the site into their own approved local communications facilities plan.

Undoubtedly, the co-location policy will not resolve all potential issues or disagreements between wireless companies. Indeed, it would be naive to think there will not be periodic

disputes about the meaning of one of the policies or about a company's actions in honoring the policy. For example, the three cellular companies have already expressed concern that, if other wireless providers are able to co-locate on cellular towers that the cellular companies construct in the "restricted" areas of the Pinelands and that the cellular companies' flexibility is unduly constrained by virtue of the Plan amendment procedures (see Section III.c.), the cellular companies will be placed at a competitive disadvantage. The Executive Director disagrees with this position and expects wireless providers to cooperatively implement the co-location policies, resolving most issues amongst themselves. However, there may be occasions where the Commission gets drawn into a dispute because the outcome could determine if an additional tower is or is not permitted in the Pinelands. In those instances, the Commission's decision on allowing or not allowing a new tower will be based, in large part, on whether joint use of the existing structure is feasible.

The co-location policy proposed by the companies represents a workable framework to facilitate joint use of communication towers. **Therefore, the Executive Director concludes that these standards have been met.**

10. **If it reduces the number of facilities to be developed, shared service shall be part of the plan unless precluded by federal law. N.J.A.C. 7:50-5.4(c)6.** This standard was intended to encourage companies to consider single server coverage. For example, it might result in either the A or B cellular channel service provider covering the other channel within overlapping service areas if it would avoid the need for new towers to be constructed.

The Plan states that federal regulations are intended to create competition among the providers and, therefore, do not, and should not, provide for the sharing of service. Additionally, the applicants represent that even if sharing of service was technically and legally feasible, it would not significantly reduce the number of proposed facilities. The Plan does not contain any documentation or information from the FCC to confirm this position; however, Commission staff wrote to the FCC regarding this issue last year but have yet to receive a written response.

At a meeting held last year, FCC staff verbally indicated to Commission staff that shared service may be inconsistent with FCC rules but that a petition could be made for such service on an individual site if it would make a difference in the total number of towers. A review of the Plan indicates that shared service seems to make no difference in the number of proposed new towers, just the number of cells. It may make a difference in the future if a tower cannot accommodate any additional cells. Thus, it is possible that this issue may be of concern to the Commission in the future, particularly as other providers such as PCS companies seek to locate on the same structures. **Although shared service may become an issue in the future, the plan now pending before the Commission meets this standard.**

c. Plan Amendments

N.J.A.C. 7:50-5.4(c) anticipates the need for changes to an approved local communications plan and describes the procedure for plan amendments. However, the companies describe in the first paragraph of page one of the Plan Introduction and the last paragraph of page one of the Code Compliance section the circumstances under which they believe this Plan would or would not need to be amended. Since the Commission's staff did not believe these statements accurately reflected the terms and intent of the CMP's regulations, clarification was sought (Appendix D) as to whether the companies were merely stating their position or whether they were seeking Commission endorsement of that position through approval of this Plan. This distinction is important because the Executive Director could not recommend Commission approval of this Plan if it endorsed a Plan amendment policy which could have the effect of destroying the underpinnings of the Plan and the CMP's regulations. The companies did confirm that they were not seeking Commission endorsement of their position. Since this is not an issue before the Commission at this time, it need not influence the decision on this Plan.

However, it is still advisable for the Executive Director's report to discuss this matter so that, if and when a specific question arises as to the need for a Plan amendment, the companies are aware of the policy which will guide the Executive Director when recommending a course of action to the companies and the Commission. The companies' position that new towers not contemplated in this Plan can be constructed in Regional Growth Areas and Pinelands Towns without regard to the Plan or that cellular facilities can be added to existing structures anywhere ignores two fundamental principles of the CMP regulations. They are that (1) every facility proposed in the Pinelands must be justified on the basis of need and this Plan is required to demonstrate that need and (2) the cellular communications system is a network of facilities where the location of one affects others and where the addition of facilities in some areas can have a ripple effect on the need for and location of facilities in other areas. If the Commission was to accept the companies' position, the network designed in this Plan, which is based upon the use of existing structures where possible and is also greatly influenced by the location of facilities in Regional Growth Areas and Pinelands Towns, could be significantly altered without considering (1) whether other facilities called for in this Plan are still needed, (2) whether other facilities proposed in this Plan may need to be relocated, and, most importantly, (3) whether the number and location of facilities in the most conservation oriented areas of the Pinelands might change. This is obviously contrary to the CMP's regulations and cannot be recommended by the Executive Director.

On the other hand, the Executive Director does not believe the intent of the CMP's regulations is to create a system where every conceivable situation, no matter how inconsequential, must be expressly anticipated in the Plan. Common sense dictates that unanticipated situations be evaluated as they arise to determine if they have an effect on the Plan and, if they do, the proper course of action is to pursue a Plan amendment. However, if they do not, there should be no need to pursue a Plan amendment. In applying this common sense test, the Executive Director will be aided by the following guidelines:

1. Within Regional Growth Areas, Pinelands Town management areas and the developed portions of Military and Federal Installation Areas, a new tower or the use of an existing structure which was not contemplated in this Plan will be permitted without the need for a Plan amendment if it is clear that the newly proposed facility does not materially affect the need for or location of other facilities contemplated in Rural Development Areas, Agricultural Production Areas, undeveloped portions of Military and Federal Installation Areas, Villages, Forest Areas, Special Agricultural Production Areas or the Preservation Area District. This evaluation will consider the direct effect a newly proposed facility may have on surrounding facility proposals and will also consider the potential secondary effects it may have on other proposed facilities in the cellular network

2. In Rural Development Areas, Agricultural Production Areas, undeveloped portions of Military and Federal Installation Areas, Villages, Forest Areas, Special Agricultural Production Areas or the Preservation Area District, a new antenna can be placed on an existing communication tower not contemplated in this Plan without the need for a Plan amendment if (1) it is clear that the newly proposed facility does not materially affect the need for or location of other facilities contemplated in these areas and (2) the existing tower otherwise complies with the CMP standards, i.e., the tower was constructed pursuant to another approved local communications plan or qualifies for expansion under N.J.A.C. 7:50-5.2(a). If a new facility is proposed on a structure other than an existing communications tower, that structure must meet the first of the two tests noted above and be able to accommodate the antenna without a change in its mass or height that significantly alters its appearance.

It is important to note that proposed facilities which do not meet these guidelines are not automatically disapproved; rather, they need to be evaluated within the context of an amendment to the approved cellular facilities plan. And finally, any new facility, whether or not a Plan amendment is needed, must meet all other relevant CMP standards.

III. PUBLIC HEARING AND REVIEW PROCESS

The public review period actually began on June 12, 1998 when the proposed Plan was distributed to interested parties and publicized on the Commission's WEB page. The public review period was initially scheduled to end on July 17, 1998 but a request was received on July 16, 1998 to review the detailed information used to establish the need for facility 7. This information was retrieved from the Commission's technical consultants and, to give the requesting party time to review and comment on it, the comment period was extended through July 31, 1998. Three days before the extended comment period was due to end another party requested similar information on other facilities which, after discussion with the Commission's Deputy Attorney General, were identified as facilities 2, 5, 6, 7, 14, 16, 21 and 22. Although the Executive Director has been of the opinion that all of this information should be available to the public, the companies maintain that the technical information relating to facilities for which local zoning applications have not been submitted (in this case facilities 2, 5, 6, 14, 21 and 22) is

proprietary in nature and should not be released publicly. To avoid litigation on this matter, the Commission's staff offered to trace from two regional maps that the companies had prepared showing existing and proposed facilities, the radio signaling information for existing facilities surrounding the eight facilities noted above. The companies and the requesting party agreed to this approach on July 30 and the map was prepared and given to the requesting party on July 31. On August 3, the same party asked for all technical information on need but later narrowed the request to radio signaling information on all existing facilities in the Pinelands. The Commission's staff again traced the information and provided it to the requesting party.

A public hearing on the proposed Plan was duly advertised, noticed, and held on Thursday, July 9, 1998, beginning at 7:00 p.m., at the Hamilton Township Municipal Building in Mays Landing, New Jersey. It was attended by approximately 75 people. Testimony addressed many topics. Among the more general comments were opposition to any communication towers in the Pinelands and support for the proposed Plan because of improved emergency and public safety communication. More specific comments dealt with concerns about the need for or location of several proposed facilities (numbers 1, 3, 5, 6, 7, 9 and 16), the lack of supporting information in the Plan regarding the need for any of the proposed facilities, the lack of analyses of visual impacts and the lack of a comprehensive assessment of the use of existing structures. Appendix E is a transcript of the hearing.

Appendix F includes written testimony. These comments elaborate on many of the matters discussed at the hearing but also address other matters, including concerns about five other proposed facilities (numbers 2, 14, 21, 22 and 23). The companies' formal responses to some of the issues raised are contained in two letters, dated July 16 and 30, 1998.

All of these oral and written comments were considered in the analysis of the pending Plan if they were pertinent to CMP standards. However, some issues, such as electromagnetic impacts, are beyond the scope of the Commission's regulations while others, such as specific tower design suggestions, are appropriate considerations for municipalities, and in some cases the Pinelands Commission, to consider when individual facilities are proposed to be constructed.

IV. CONCLUSION

As previously stated, the Plan now before the Commission is quite different than the 1997 plan in many important respects. For example:

1. It reduces the number of new facilities proposed in the Pinelands from 35 to 33;
2. It reduces the number of new towers which are likely to be built from as many as 26 to as few as 16, or perhaps even less;
3. It reduces the number of new towers which are likely to be built in the most sensitive portions of the Pinelands from eight to as few as five, or perhaps less;
4. It relocated four proposed facilities to meet CMP siting requirements; and
5. It presents a co-location policy to encourage joint use of new towers.

These and other changes were made in direct response to the standards of the CMP. As the foregoing analyses indicates, the Plan now meets the standards of the CMP and can be recommended for Commission approval. However, it does not mean that the companies' plan is perfect. New towers will be built in sensitive areas of the Pinelands. More visual clutter will detract from the vistas that characterize the Pinelands. Residents are concerned about towers located close to their homes. Disagreements between the cellular companies, municipalities and the Commission regarding the final location of new towers are possible. Disagreements between cellular companies and other wireless providers about the co-location policy are possible. Disagreements between the cellular companies and the Commission regarding the need for Plan amendments is also possible. And finally, the Plan does not cover all wireless needs in the Pinelands. Yet, even considering these shortcomings, the Plan does establish a blueprint which, if successfully implemented, will provide for adequate communications service in the Pinelands and will result in less visual pollution than is likely in other parts of the State and country.

Therefore, the Executive Director recommends that the Pinelands Commission approve the "Comprehensive Plan for Wireless Communication Facilities in the Pinelands." In doing so, the Executive Director also recommends that the Commission affirm the procedure described in Section II.b.3. of this report to apply the Plan's general siting proposals to specific development applications in a manner consistent with Pinelands Comprehensive Management Plan requirements. Lastly, the Executive Director recommends that the Commission not endorse the Companies' discussion of their rights following plan approval and acknowledge that the Executive Director shall advise the Commission of the need for amendments as specific circumstances warrant.