

APPENDIX D

CONCENTRATIONS OF PERSONS PER ACRE STANDARD

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Uses are compatible if they do not result in a gathering of individuals in an area that would result in an average density of greater than 25 persons per acre per hour during a 24 hour period, not to exceed 50 persons per acre at any time.

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- 1) Average densities of persons per acre per hour during a 24 hour period are determined by calculating the number of persons per acre expected on a site, multiplying by the number of hours they will be on the site, and dividing the total by 24.

Example #1: One 8 hour shift of 30 workers on a one acre site

$$30 \text{ persons expected} \times 8 \text{ hours on site} = 240$$

$$\frac{240}{24 \text{ hours}} = \text{average density of 10 persons per acre per hour during a 24 hour period}$$

Example #2: Two 8 hour shifts of 30 workers on a one acre site

$$30 \text{ persons expected} \times 16 \text{ hours on site} = 480$$

$$\frac{480}{24 \text{ hours}} = \text{average density of 20 persons per acre per hour during a 24 hour period}$$

- 2) The maximum number of persons allowed per acre per hour is calculated by dividing the number of hours persons will be on the site by 24 hours, and then dividing 25 persons per acre per hour by the result. The resulting number is the maximum number of persons allowed per acre per hour, provided it does not exceed 50. 50 persons per acre at any one time is the maximum number of persons allowed under the standard.

Example: A use on a one acre site has two 8 hour shifts.

$$25 \frac{16 \text{ hours}}{24 \text{ hours}} = 37.5 \text{ maximum persons per acre per hour allowed}$$

Application of this formula results in the following table which specifies the maximum persons per acre per hour for the duration of time that persons are expected to be on site during a 24 hour period.

Hours of Operation Per Day	Maximum Persons Allowed Per Acre/During Each Hour
24	25
23	26
22	27
21	28
20	30
19	31
18	33
17	35
16	37
15	40
14	42
13	46
12 or less	50*

Note: Fractions in the maximum persons allowed column are rounded to the lowest whole number.

\* Concentrations of persons per acre cannot exceed 50 persons per acre at any time.