SHORELAND PLANNED UNIT DEVELOPMENT
BASE DENSITY CALCULATION

The following information is provided to assist in base density calculation for residential shoreland planned unit developments. Chapter 517.07 of the Rice County Zoning Ordinance provides the legal requirements for base density calculation.

Step 1 - Define total project boundary and locate appropriate tier depths for the specific shoreland zoning district of the project.

	1st Tier	2nd Tier	3rd Tier
GDS	200 ft. from ohwl*	267 ft. from 1st tier	Remaining project area
RDS	267 ft. from ohwl*	267 ft. from 1st tier	Remaining project area
NES	400 ft. from ohwl*	400 ft. from 1st tier	Remaining project area

*ordinary high water level

Step 2 - Delineate "Suitable Area" within project boundary. "Suitable Area" is the area remaining on a lot or parcel of land after bluffs, areas with slopes greater than 25 percent, all easements and rights-of-way, wetlands, land below ordinary high water level, road setbacks and ordinary high water setback are subtracted.

Step 3 - Calculate total tier area and suitable area for each tier within the project boundary.

Step 4 - Calculate 1st and 2nd tier base density. Divide minimum lot size of appropriate shoreland district for 1st and 2nd tiers into total tier area of 1st and 2nd tiers. As a separate calculation divide the minimum suitable area per lot of the appropriate shoreland district for 1st and 2nd tiers into the suitable area of 1st and 2nd tiers. Compare total area calculation to suitable area calculation of 1st and 2nd tiers. Whichever calculation produces the lowest density is the base density of that tier.

	1st tier min. lot size (sq.ft.)	1st tier min. suitable area (sq.ft.)	2nd tier min. lot size (sq.ft.)	2nd tier min. suitable area (sq.ft.)
GDS	20,000	12,000	40,000	20,000
RDS	40,000	16,000	40,000	20,000
NES	80,000	40,000	80,000	40,000

Step 5 - Calculate 3rd tier base density. Determine what percentage of the total area within the 3rd tier that is suitable. If percentage of suitable area is less than 10% the base density for the 3rd tier is zero (0). If percentage of suitable area is over ten percent (10%) divide the total 3rd tier area by 20 acres to determine 3rd tier density.

Step 6 - Calculate total base density for project. Add density from 1st , 2nd, and 3rd tiers to determine base density for project.