

SECTION 11300 – SEWER GRADE VARIANCES

GENERAL

- BCWS will review and approve all plans for the extension of the public sanitary sewer system, prior to issuing authorization to construct. Public sanitary sewers shall be constructed in strict accordance with the approved plans. All variations from approved alignments or grades must be identified and submitted to BCWS for review, consideration and approval **prior** to acceptance of the sewer extension as a part of the public sanitary sewer system. In no instance shall a sewer be installed at a grade less than that recommended by the “Ten States Standards” as submitted by the Wastewater Committee of the Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers.

REQUIRED SEWER CAPACITY (CRITICAL GRADE)

- BCWS requires that the sanitary sewers be sized and placed on a grade that will provide adequate carrying capacity to serve the total upstream watershed, at full development and at peak flow conditions. Sewers installed at less than the established critical grade increase the risk of sewer surcharge, sewer overflows and basement flooding.

MINIMUM SEWER GRADES

- BCWS has established minimum sanitary sewer grades for each sewer size and for limited service sewer sections based on the required grades to keep solids flowing (minimum cleansing velocity of two (2.0) feet per second). Sewers installed at less than minimum grades increase the risk of sewer blockages and necessitate more frequent cleaning schedules.

VARIATIONS FROM APPROVED GRADES

- Should a sanitary sewer be installed at less than the approved critical grade, as defined above or less than the Ten States Standards minimum grade, the sewer will not be accepted. BCWS shall require the sewer to be replaced at the approved critical grade or the pipe size to be increased to provide the required sewer capacity, meet Ten States Standards requirements and maintain adequate cleansing velocities as determined by BCWS.
- Should a sanitary sewer be installed at less than the BCWS established minimum grade, as defined above, BCWS will require one of the following:
 1. The sewer shall be replaced at the required grade.
 2. The sewer pipe size shall be increased.
 3. Payment of supplemental cleaning fees or surcharge control fees and additional protective measures, depending on the degree of variation.

The basis of these actions will be in accordance with the following:

| <u>Percent Negative Variance</u> | <u>Consequence</u> |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. 0 – 10.0 percent | Acceptable variation |
| 2. 10.01 – 15.0 percent | \$15.00 per foot of violating sewer span for Cleaning Allowance or Surcharge Control |
| 3. 15.01 – 20.0 percent | \$25.00 per foot of violating sewer span for Cleaning Allowance or Surcharge Control, plus increase from 4-foot to 5-foot minimum vertical separation for all buildings connecting to sewers with this degree of variance. |
| 4. Over 20.01 percent | Replaced Sewer |

END OF SECTION