

**WAC 173-173-160 Under what conditions is the use of power consumption data acceptable to the department?** (1) Use of power consumption data may be substituted for more direct flow measurement methods, provided:

- (a) Use of the method is approved in writing by the department;
- (b) Installation of a water meter would be unduly burdensome to the water user;
- (c) The water system maintains a constant or near constant pumping or diversion rate;
- (d) The power meter is dedicated to one diversion or withdrawal;
- (e) A pump test is conducted for a minimum duration of two hours and is conducted under normal operating conditions;
- (f) The diversion or withdrawal is not a flowing artesian well.

(2) The equation below shall be used when relying upon electrical power consumption to estimate volume or flow rate. This equation also may be used to estimate flow during short periods of meter repair or maintenance if the department finds that reasonable estimates of pump and motor efficiency are available:

$$V = \frac{318,600(kWh)(P_{eff})(M_{eff})}{TDH}$$

Where: V = volume of water pumped in gallons;  
318,600 = conversion factor;  
kWh = number of kilowatt-hours for the time period in question;  
e.g., irrigation season, year or minutes;  
P<sub>eff</sub> = pump efficiency as a decimal;  
M<sub>eff</sub> = motor efficiency as a decimal; and  
TDH = total dynamic head of the system in feet.

[Statutory Authority: RCW 90.03.360, 90.44.050, [90.44.]250, [90.44.]450 and chapter 43.21A RCW. WSR 02-02-017 (Order 00-01), § 173-173-160, filed 12/21/01, effective 1/21/02.]