

(b) Typical values at plants currently in operation

This is the increased value applied to eliminate problems.

| Plant name                       | Type of problem <sup>a</sup> | Plant flow, L/s <sup>b</sup> | BOD <sub>5</sub> loading, kg/m <sup>2</sup> ·d <sup>c</sup> | Filter size, number - diameter × depth, m × m <sup>d</sup> | Media type | Mode <sup>e</sup> | Average hydraulic rate (Q+R), m <sup>3</sup> /m <sup>2</sup> ·h <sup>f</sup> | SK, mm/pass | Rotational speed, min/rev <sup>g</sup> |
|----------------------------------|------------------------------|------------------------------|---|--|------------|-------------------|--|-------------|--|
| Cedar Rapids, Iowa               | 1,2,3,4                      | 1530                         | 0.80  | 4 - 42.7 × 7.3   | VFC        | C & CN            | 1.8  | 112         | 15                                     |
| Independence, Iowa <sup>h</sup>  | 1,2,3,4                      | 75                           | 0.70  | 2 - 16.2 × 6.7   | RA         | C                 | 2.1  | 90          | 10                                     |
| Huntingdon, Pa.                  | 3,6                          | 70                           | 0.15  | 2 - 25.9 × 6.7   | XF         | CN                | 1.8  | 95          | 3                                      |
| Clarksville, Ind.                | 1,3,6                        | 110                          | 0.27  | 2 - 20.9 × 7.3   | XF         | CN                | 1.0  | 40          | 4-5                                    |
| "Baby Food," N.C. <sup>h</sup>   | 1,2,3                        | 120                          | >5.0  | 1 - 25.9 × 6.1   | VFC        | RF                | 1.8  | 670         | 45                                     |
| Cargill Inc., Iowa <sup>h</sup>  | 1,2,3,4                      | 110                          | 2.0   | 2 - 18.6 × 9.1   | XF         | RF                | 2.5  | >620        | >40                                    |
| Hayward, Calif.                  | 2                            | 440                          | 0.55  | 1 - 54.9 × 7.3   | XF         | C                 | 0.67   | 47          | 17                                     |
| Montgomery Co., Ohio             | 3,4                          | 440                          | 0.09  | 3 - 32.9 × 8.5   | XF         | CN                | 1.8  | 29          | 4                                      |
| Auckland, N.Z.                   | 1,2,3,4                      | 3660                         | 0.65  | 4 - 53.4 × 7.3   | RA         | C                 | 2.9  | 250         | 28                                     |
| Des Moines, Iowa                 | 2,4                          | 2060                         | 0.72  | 12 - 46.3 × 2.1  | RO         | C                 | 0.44   | 15          | 4                                      |
| Wyoming, Mich.                   | 1-4                          | 570                          | 0.21  | 4 - 59.5 × 2.1   | RO         | C & CN            | 0.21   | 27          | 30                                     |
| Novato, Calif.                   | 3,4,6                        | 70                           | 0.11  | 1 - 22 × 6.1   | XF         | CN                | 2.50   | 14          | 1.3                                    |
| Central Valley, Utah             | 1,2,3                        | 2190                         | 0.53  | 3 - 51.8 × 4.3   | XF         | C & CN            | 2.0  | 100         | 12                                     |
| Ojai Valley, Calif. <sup>h</sup> | 1,4                          | 80                           | 0.65  | 3 - 12.8 × 4.9   | RA         | RF                | 3.2  | 133         | 5                                      |
| Manteca, Calif.                  | 3                            | 200                          | 1.1   | 2 - 16.8 × 6.1   | XF         | C                 | 3.7  | 62          | 4                                      |

<sup>a</sup> Type of problem: 1 = fouling/plugging; 2 = odors; 3 = excessive sloughing cycles; 4 = performance reduction; 5 = filter flies; 6 = snails; and \* = remaining problems.

<sup>b</sup> L/s × 0.0228 = mgd.

<sup>c</sup> kg/m<sup>2</sup>·d × 62.4 = lb/d/1000 cu ft.

<sup>d</sup> m × 3.28 l = ft.

<sup>e</sup> RF = roughing; C = CBOD<sub>5R</sub>; and CN = CBOD<sub>5R</sub> + NOD<sub>R</sub>; N = NOD<sub>R</sub>.

<sup>f</sup> m<sup>3</sup>/m<sup>2</sup>·h × 0.41 = gpm/sq ft.

<sup>g</sup> Electrically driven distributor.

Note units.  
Not 'rev/min'