

Multiple Intake Drafting Procedures

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Utilizing multiple intakes will always result in higher fire flows when drafting. Functionality should always be the primary factor when deciding how to initially set your system up. It is also extremely important to remember that the **“Twin Tube Setup”** is the fastest and most efficient way for engine companies operating in the rural environment to increase their flow capabilities. What follows is our “order of operations” for placing a Twin Tube Setup in service based on your initial intake selection.

Front Intake Initial In-Service, Side Intake Secondary In-Service

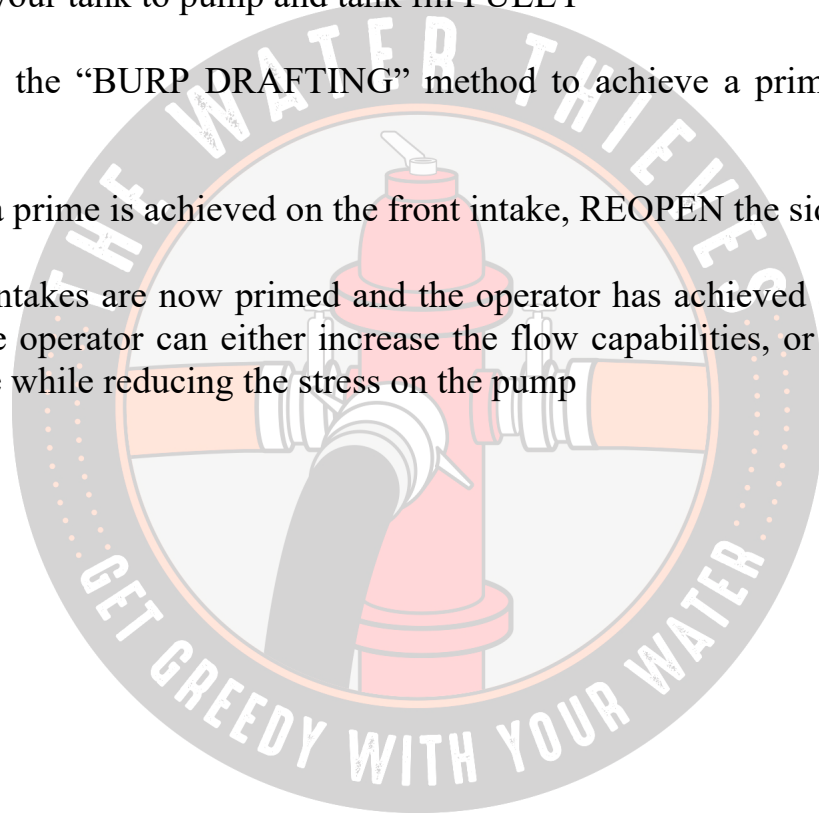
1. Position the rig appropriately so that the front intake can be utilized to its best advantage
2. Engage the pump and begin recirculating water
3. Assemble the necessary hard sleeves and strainer, ensuring all gaskets are present and all connections are air tight
4. Once all the equipment is connected and you are ready to draft, achieve your prime on the FRONT INTAKE utilizing the “BURP DRATING” method
5. After achieving your prime, begin supplying water
6. If the decision is made to establish a twin tube setup, begin acquiring and assembling the needed hard sleeves and strainers to connect to the second intake
7. The assembly process of the second intake should take place while you are flowing water from the front intake
8. Ideally, the strainer connected to the second intake should have a jet siphon attachment on it. This allows the second intake to be primed utilizing the “Pressurized Prime” method, and does not interrupt the flow through the initial intake.

9. When the second intake is connected and ready, achieve your prime utilizing the “Pressurized Prime” method
10. Once all the air has been bled from the second intake, the operator can open the intake valve of the second intake
11. The operator has now achieved a twin tube set up and can either increase the flow capabilities, or flow the same volume while reducing the stress on the pump

Side Intake Initial In-Service, Front Intake Secondary In-Service

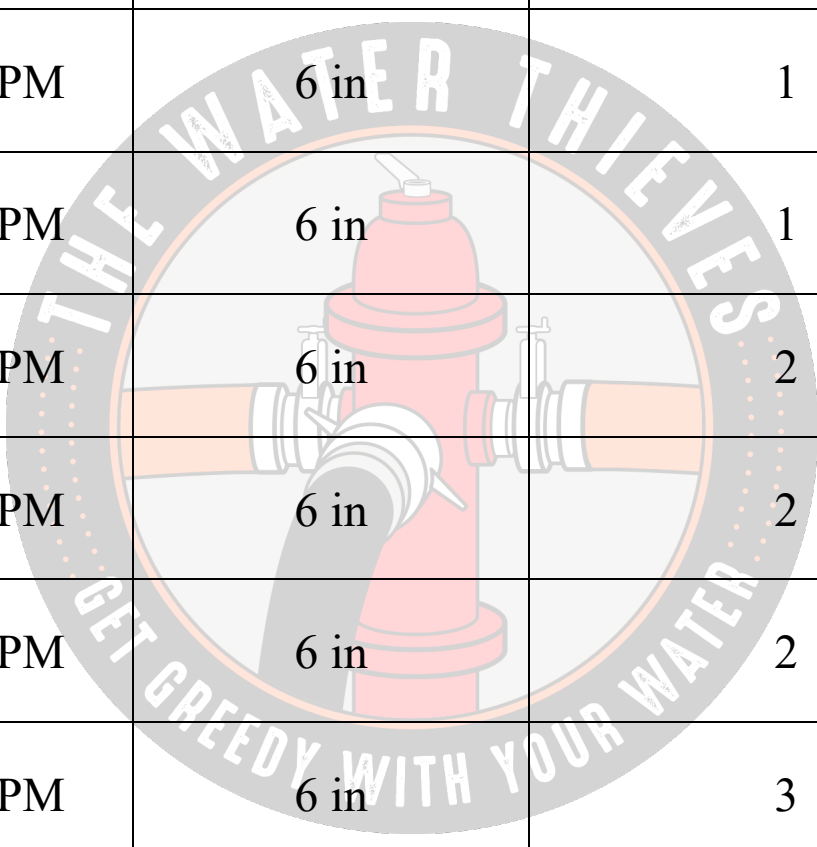
1. Position the rig appropriately so that the side intake can be utilized to its best advantage
2. Engage the pump and begin recirculating water
3. Assemble the necessary hard sleeves and strainer, ensuring all gaskets are present and all connections are air tight
4. Once all the equipment is connected and you are ready to draft, achieve your prime on the SIDE INTAKE utilizing either the “Burp Drafting” or “Pressurized Prime” methods (side intakes are more forgiving than front intakes)
5. After achieving your prime, begin supplying water
6. If the decision is made to establish a twin tube setup, begin acquiring and assembling the needed hard sleeves and strainers to connect to the second intake (front intake in this scenario)
7. The assembly process for the front intake should take place while you are flowing water from the side intake
8. Remember, the most efficient way to achieve a prime on a front intake is via the “Burp Drafting” method – “Pressurized Prime” is not as effective because too much air gets trapped in the high points of the plumbing

9. Once all hard sleeves and the second strainer are connected to the front intake, radio to whomever you are supplying and inform them that you are “momentarily shutting down their supply to establish a twin tube set up.”
10. After notification has been made and acknowledged, close the discharge feeding the next pumper
11. Close the side intake valve. The prime will be held between the valve and the surface of the water during this transition phase (we promise)
12. Open your tank to pump and tank fill FULLY
13. Utilize the “BURP DRAFTING” method to achieve a prime on the front intake
14. Once a prime is achieved on the front intake, REOPEN the side intake
15. Both intakes are now primed and the operator has achieved a twin tube set up. The operator can either increase the flow capabilities, or flow the same volume while reducing the stress on the pump



Pump Rating Chart from NFPA 1900

| <u>Rated Pump Capacity</u> | <u>Max Suction Hose Size</u> | <u>Max Number of Suction Lines</u> |
|----------------------------|------------------------------|------------------------------------|
| 750 GPM | 4.5 in | 1 |
| 1,000 GPM | 6 in | 1 |
| 1,250 GPM | 6 in | 1 |
| 1,500 GPM | 6 in | 2 |
| 1,750 GPM | 6 in | 2 |
| 2,000 GPM | 6 in | 2 |
| 2,250 GPM | 6 in | 3 |
| 2,500 GPM | 6 in | 3 |
| 3,000 GPM | 6 in | 4 |

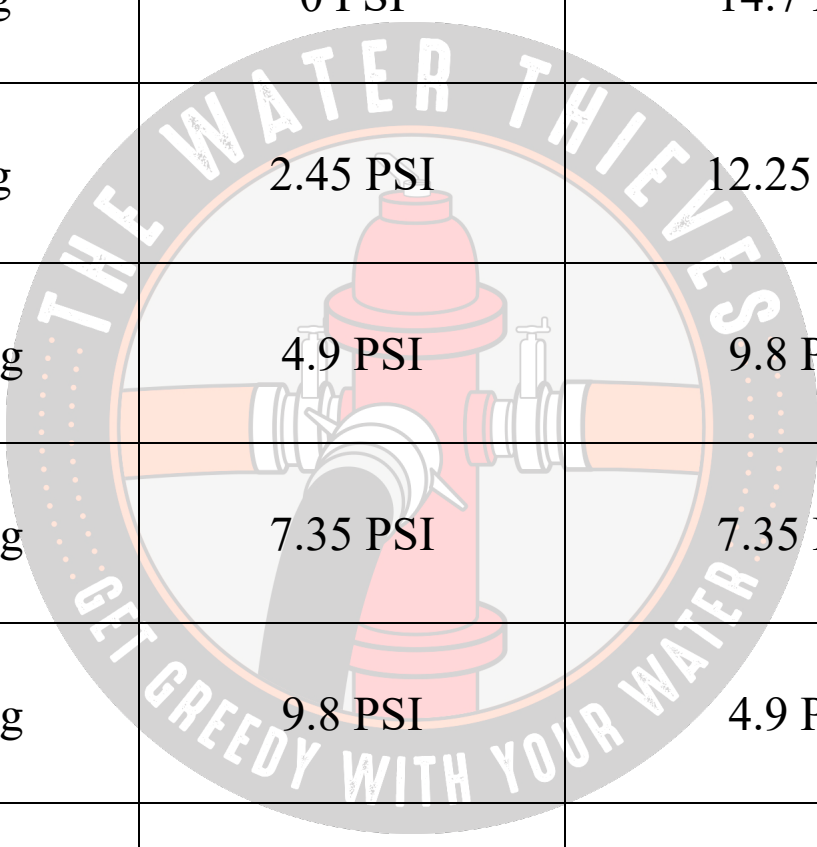
A watermark logo is centered over the table. It features a red fire hydrant with two orange hoses extending horizontally. The hydrant is set against a circular background with the text "THE WATER THIEVES" at the top and "GET GREEDY WITH YOUR WATER" at the bottom. The logo is semi-transparent.

Hard Sleeve & Strainer Friction Loss Values from NFPA 1900

| <u>Flow Rate</u> | <u>FL Through One 6 in, 20 Feet Long & Strainer</u> | <u>FL Through Two 6 in, 20 Feet Long & Strainers</u> |
|------------------|---|--|
| 750 GPM | 0.833 PSI | - |
| 1,000 GPM | 1.47 PSI | - |
| 1,250 GPM | 2.303 PSI | - |
| 1,500 GPM | 3.283 PSI | 0.833 PSI |
| 1,750 GPM | 4.557 PSI | 1.127 PSI |
| 2,000 GPM | - | 1.47 PSI |
| 2,250 GPM | - | 1.862 PSI |
| 2,500 GPM | - | 2.303 PSI |
| 3,000 GPM | - | 3.283 PSI |

Vacuum Reading Conversion Chart

| <u>Vacuum Reading</u> | <u>Conversion to PSI</u> | <u>PSIA Value</u> |
|-----------------------|--------------------------|-------------------|
| 0 inHg | 0 PSI | 14.7 PSIA |
| 5 inHg | 2.45 PSI | 12.25 PSIA |
| 10 inHg | 4.9 PSI | 9.8 PSIA |
| 15 inHg | 7.35 PSI | 7.35 PSIA |
| 20 inHg | 9.8 PSI | 4.9 PSIA |
| 22 inHg | 10.78 PSI | 3.92 PSIA |
| 30 inHg | 14.7 PSI | 0 PSIA |



Tanker Continuous Flow Rates & Number of Needed Tankers at Various Distances & Needed Fire Flows

| <u>Tanker Capacity</u> | <u>Tanker Fill Rate</u> | <u>Needed Fire Flow</u> | <u>1 Mile Roundtrip</u> | <u>2 Miles Roundtrip</u> | <u>3 Miles Roundtrip</u> | <u>4 Miles Roundtrip</u> | <u>5 Miles Roundtrip</u> | <u>10 Miles Roundtrip</u> | <u>15 Miles Roundtrip</u> | <u>20 Miles Roundtrip</u> |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 1,500 Gallons | 1,000 GPM | Continuous Tanker Flow | 213 GPM | 168 GPM | 138 GPM | 118 GPM | 103 GPM | 62 GPM | 45 GPM | 35 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 8 Tankers | 12 Tankers | 15 Tankers |
| | | 1,000 GPM | 5 Tankers | 6 Tankers | 8 Tankers | 9 Tankers | 10 Tankers | 16 Tankers | 23 Tankers | 29 Tankers |
| 2,000 Gallons | 1,000 GPM | Continuous Tanker Flow | 245 GPM | 199 GPM | 167 GPM | 145 GPM | 127 GPM | 79 GPM | 58 GPM | 45 GPM |
| | | 500 GPM | 2 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 7 Tankers | 9 Tankers | 11 Tankers |
| | | 1,000 GPM | 5 Tankers | 5 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 13 Tankers | 18 Tankers | 22 Tankers |
| 2,500 Gallons | 1,000 GPM | Continuous Tanker Flow | 269 GPM | 224 GPM | 191 GPM | 167 GPM | 149 GPM | 95 GPM | 70 GPM | 55 GPM |
| | | 500 GPM | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 6 Tankers | 8 Tankers | 9 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 11 Tankers | 15 Tankers | 19 Tankers |
| 3,000 Gallons | 1,000 GPM | Continuous Tanker Flow | 289 GPM | 244 GPM | 212 GPM | 187 GPM | 167 GPM | 110 GPM | 81 GPM | 65 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 5 Tankers | 7 Tankers | 8 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 10 Tankers | 13 Tankers | 16 Tankers |
| 3,500 Gallons | 1,000 GPM | Continuous Tanker Flow | 304 GPM | 261 GPM | 229 GPM | 204 GPM | 184 GPM | 123 GPM | 92 GPM | 74 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 5 Tankers | 6 Tankers | 7 Tankers |
| | | 1,000 GPM | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 9 Tankers | 11 Tankers | 14 Tankers |
| 4,000 Gallons | 1,000 GPM | Continuous Tanker Flow | 317 GPM | 276 GPM | 244 GPM | 219 GPM | 198 GPM | 135 GPM | 102 GPM | 82 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 7 Tankers |
| | | 1,000 GPM | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 5 Tankers | 8 Tankers | 10 Tankers | 13 Tankers |
| 4,500 Gallons | 1,000 GPM | Continuous Tanker Flow | 328 GPM | 288 GPM | 257 GPM | 232 GPM | 211 GPM | 146 GPM | 112 GPM | 91 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 7 Tankers | 9 Tankers | 11 Tankers |
| 5,000 Gallons | 1,000 GPM | Continuous Tanker Flow | 337 GPM | 299 GPM | 269 GPM | 244 GPM | 223 GPM | 157 GPM | 121 GPM | 99 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 7 Tankers | 9 Tankers | 11 Tankers |
| 5,500 Gallons | 1,000 GPM | Continuous Tanker Flow | 345 GPM | 308 GPM | 279 GPM | 254 GPM | 234 GPM | 167 GPM | 130 GPM | 106 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers |
| | | 1,000 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 8 Tankers | 10 Tankers |

| <u>Tanker Capacity</u> | <u>Tanker Fill Rate</u> | <u>Needed Fire Flow</u> | <u>1 Mile Roundtrip</u> | <u>2 Miles Roundtrip</u> | <u>3 Miles Roundtrip</u> | <u>4 Miles Roundtrip</u> | <u>5 Miles Roundtrip</u> | <u>10 Miles Roundtrip</u> | <u>15 Miles Roundtrip</u> | <u>20 Miles Roundtrip</u> |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 1,500 Gallons | 750 GPM | Continuous Tanker Flow | 184 GPM | 149 GPM | 126 GPM | 108 GPM | 95 GPM | 60 GPM | 43 GPM | 34 GPM |
| | | 500 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 9 Tankers | 12 Tankers | 15 Tankers |
| | | 1,000 GPM | 6 Tankers | 7 Tankers | 8 Tankers | 10 Tankers | 11 Tankers | 17 Tankers | 24 Tankers | 30 Tankers |
| 2,000 Gallons | 750 GPM | Continuous Tanker Flow | 207 GPM | 173 GPM | 149 GPM | 131 GPM | 116 GPM | 75 GPM | 55 GPM | 44 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 7 Tankers | 9 Tankers | 12 Tankers |
| | | 1,000 GPM | 5 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 9 Tankers | 14 Tankers | 18 Tankers | 23 Tankers |
| 2,500 Gallons | 750 GPM | Continuous Tanker Flow | 225 GPM | 192 GPM | 168 GPM | 149 GPM | 134 GPM | 89 GPM | 67 GPM | 53 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 6 Tankers | 8 Tankers | 10 Tankers |
| | | 1,000 GPM | 5 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 12 Tankers | 15 Tankers | 19 Tankers |
| 3,000 Gallons | 750 GPM | Continuous Tanker Flow | 238 GPM | 207 GPM | 183 GPM | 164 GPM | 149 GPM | 101 GPM | 77 GPM | 62 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 7 Tankers | 9 Tankers |
| | | 1,000 GPM | 5 Tankers | 5 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 10 Tankers | 13 Tankers | 17 Tankers |
| 3,500 Gallons | 750 GPM | Continuous Tanker Flow | 248 GPM | 219 GPM | 196 GPM | 177 GPM | 162 GPM | 113 GPM | 86 GPM | 70 GPM |
| | | 500 GPM | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 8 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 9 Tankers | 12 Tankers | 15 Tankers |
| 4,000 Gallons | 750 GPM | Continuous Tanker Flow | 257 GPM | 229 GPM | 207 GPM | 188 GPM | 173 GPM | 123 GPM | 95 GPM | 78 GPM |
| | | 500 GPM | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 5 Tankers | 6 Tankers | 7 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 9 Tankers | 11 Tankers | 13 Tankers |
| 4,500 Gallons | 750 GPM | Continuous Tanker Flow | 264 GPM | 238 GPM | 216 GPM | 198 GPM | 183 GPM | 132 GPM | 103 GPM | 85 GPM |
| | | 500 GPM | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 8 Tankers | 10 Tankers | 12 Tankers |
| 5,000 Gallons | 750 GPM | Continuous Tanker Flow | 270 GPM | 245 GPM | 224 GPM | 207 GPM | 192 GPM | 141 GPM | 111 GPM | 92 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 4 Tankers | 5 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 8 Tankers | 9 Tankers | 11 Tankers |
| 5,500 Gallons | 750 GPM | Continuous Tanker Flow | 275 GPM | 251 GPM | 231 GPM | 214 GPM | 199 GPM | 149 GPM | 118 GPM | 98 GPM |
| | | 500 GPM | 2 Tankers | 2 Tankers | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 5 Tankers | 7 Tankers | 9 Tankers | 11 Tankers |

| <u>Tanker Capacity</u> | <u>Tanker Fill Rate</u> | <u>Needed Fire Flow</u> | <u>1 Mile Roundtrip</u> | <u>2 Miles Roundtrip</u> | <u>3 Miles Roundtrip</u> | <u>4 Miles Roundtrip</u> | <u>5 Miles Roundtrip</u> | <u>10 Miles Roundtrip</u> | <u>15 Miles Roundtrip</u> | <u>20 Miles Roundtrip</u> |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 1,500 Gallons | 500 GPM | Continuous Tanker Flow | 144 GPM | 122 GPM | 106 GPM | 93 GPM | 84 GPM | 55 GPM | 41 GPM | 32 GPM |
| | | 500 GPM | 4 Tankers | 5 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 10 Tankers | 13 Tankers | 16 Tankers |
| | | 1,000 GPM | 7 Tankers | 9 Tankers | 10 Tankers | 11 Tankers | 12 Tankers | 19 Tankers | 25 Tankers | 31 Tankers |
| 2,000 Gallons | 500 GPM | Continuous Tanker Flow | 159 GPM | 138 GPM | 122 GPM | 109 GPM | 99 GPM | 68 GPM | 51 GPM | 41 GPM |
| | | 500 GPM | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 5 Tankers | 8 Tankers | 10 Tankers | 13 Tankers |
| | | 1,000 GPM | 7 Tankers | 8 Tankers | 9 Tankers | 10 Tankers | 11 Tankers | 15 Tankers | 20 Tankers | 25 Tankers |
| 2,500 Gallons | 500 GPM | Continuous Tanker Flow | 169 GPM | 150 GPM | 134 GPM | 122 GPM | 112 GPM | 79 GPM | 61 GPM | 49 GPM |
| | | 500 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 7 Tankers | 9 Tankers | 11 Tankers |
| | | 1,000 GPM | 6 Tankers | 7 Tankers | 8 Tankers | 9 Tankers | 9 Tankers | 13 Tankers | 17 Tankers | 21 Tankers |
| 3,000 Gallons | 500 GPM | Continuous Tanker Flow | 176 GPM | 158 GPM | 144 GPM | 132 GPM | 122 GPM | 88 GPM | 69 GPM | 57 GPM |
| | | 500 GPM | 3 Tankers | 4 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 8 Tankers | 9 Tankers |
| | | 1,000 GPM | 6 Tankers | 7 Tankers | 7 Tankers | 8 Tankers | 9 Tankers | 12 Tankers | 15 Tankers | 18 Tankers |
| 3,500 Gallons | 500 GPM | Continuous Tanker Flow | 182 GPM | 165 GPM | 152 GPM | 140 GPM | 130 GPM | 96 GPM | 77 GPM | 63 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 4 Tankers | 6 Tankers | 7 Tankers | 8 Tankers |
| | | 1,000 GPM | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 8 Tankers | 11 Tankers | 14 Tankers | 16 Tankers |
| 4,000 Gallons | 500 GPM | Continuous Tanker Flow | 186 GPM | 171 GPM | 158 GPM | 147 GPM | 138 GPM | 104 GPM | 83 GPM | 70 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 8 Tankers |
| | | 1,000 GPM | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 8 Tankers | 10 Tankers | 12 Tankers | 15 Tankers |
| 4,500 Gallons | 500 GPM | Continuous Tanker Flow | 190 GPM | 176 GPM | 164 GPM | 153 GPM | 144 GPM | 111 GPM | 90 GPM | 75 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 7 Tankers |
| | | 1,000 GPM | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 7 Tankers | 9 Tankers | 12 Tankers | 14 Tankers |
| 5,000 Gallons | 500 GPM | Continuous Tanker Flow | 193 GPM | 180 GPM | 168 GPM | 158 GPM | 149 GPM | 116 GPM | 95 GPM | 81 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 6 Tankers | 7 Tankers |
| | | 1,000 GPM | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 9 Tankers | 11 Tankers | 13 Tankers |
| 5,500 Gallons | 500 GPM | Continuous Tanker Flow | 195 GPM | 183 GPM | 172 GPM | 163 GPM | 154 GPM | 122 GPM | 101 GPM | 86 GPM |
| | | 500 GPM | 3 Tankers | 3 Tankers | 3 Tankers | 4 Tankers | 4 Tankers | 5 Tankers | 5 Tankers | 6 Tankers |
| | | 1,000 GPM | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 9 Tankers | 10 Tankers | 12 Tankers |

| <u>Tanker Capacity</u> | <u>Tanker Fill Rate</u> | <u>Needed Fire Flow</u> | <u>1 Mile Roundtrip</u> | <u>2 Miles Roundtrip</u> | <u>3 Miles Roundtrip</u> | <u>4 Miles Roundtrip</u> | <u>5 Miles Roundtrip</u> | <u>10 Miles Roundtrip</u> | <u>15 Miles Roundtrip</u> | <u>20 Miles Roundtrip</u> |
|------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|---------------------------|
| 1,500 Gallons | 250 GPM | Continuous Tanker Flow | 88 GPM | 79 GPM | 72 GPM | 66 GPM | 61 GPM | 44 GPM | 34 GPM | 28 GPM |
| | | 500 GPM | 6 Tankers | 7 Tankers | 8 Tankers | 8 Tankers | 9 Tankers | 12 Tankers | 15 Tankers | 18 Tankers |
| | | 1,000 GPM | 12 Tankers | 13 Tankers | 14 Tankers | 16 Tankers | 17 Tankers | 23 Tankers | 30 Tankers | 36 Tankers |
| 2,000 Gallons | 250 GPM | Continuous Tanker Flow | 93 GPM | 86 GPM | 79 GPM | 74 GPM | 69 GPM | 52 GPM | 42 GPM | 35 GPM |
| | | 500 GPM | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 8 Tankers | 10 Tankers | 12 Tankers | 15 Tankers |
| | | 1,000 GPM | 11 Tankers | 12 Tankers | 13 Tankers | 14 Tankers | 15 Tankers | 20 Tankers | 24 Tankers | 29 Tankers |
| 2,500 Gallons | 250 GPM | Continuous Tanker Flow | 96 GPM | 90 GPM | 84 GPM | 79 GPM | 75 GPM | 58 GPM | 48 GPM | 40 GPM |
| | | 500 GPM | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 7 Tankers | 9 Tankers | 11 Tankers | 13 Tankers |
| | | 1,000 GPM | 11 Tankers | 12 Tankers | 12 Tankers | 13 Tankers | 14 Tankers | 18 Tankers | 21 Tankers | 25 Tankers |
| 3,000 Gallons | 250 GPM | Continuous Tanker Flow | 99 GPM | 93 GPM | 88 GPM | 83 GPM | 79 GPM | 63 GPM | 53 GPM | 45 GPM |
| | | 500 GPM | 6 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 10 Tankers | 11 Tankers |
| | | 1,000 GPM | 11 Tankers | 11 Tankers | 12 Tankers | 12 Tankers | 13 Tankers | 16 Tankers | 19 Tankers | 23 Tankers |
| 3,500 Gallons | 250 GPM | Continuous Tanker Flow | 100 GPM | 95 GPM | 91 GPM | 86 GPM | 83 GPM | 68 GPM | 57 GPM | 49 GPM |
| | | 500 GPM | 5 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 9 Tankers | 11 Tankers |
| | | 1,000 GPM | 10 Tankers | 11 Tankers | 11 Tankers | 12 Tankers | 13 Tankers | 15 Tankers | 18 Tankers | 21 Tankers |
| 4,000 Gallons | 250 GPM | Continuous Tanker Flow | 102 GPM | 97 GPM | 93 GPM | 89 GPM | 85 GPM | 71 GPM | 61 GPM | 53 GPM |
| | | 500 GPM | 5 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 9 Tankers | 10 Tankers |
| | | 1,000 GPM | 10 Tankers | 11 Tankers | 11 Tankers | 12 Tankers | 12 Tankers | 15 Tankers | 17 Tankers | 19 Tankers |
| 4,500 Gallons | 250 GPM | Continuous Tanker Flow | 103 GPM | 99 GPM | 95 GPM | 91 GPM | 88 GPM | 74 GPM | 64 GPM | 57 GPM |
| | | 500 GPM | 5 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 9 Tankers |
| | | 1,000 GPM | 10 Tankers | 11 Tankers | 11 Tankers | 11 Tankers | 12 Tankers | 14 Tankers | 16 Tankers | 18 Tankers |
| 5,000 Gallons | 250 GPM | Continuous Tanker Flow | 104 GPM | 100 GPM | 96 GPM | 93 GPM | 90 GPM | 77 GPM | 67 GPM | 59 GPM |
| | | 500 GPM | 5 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 9 Tankers |
| | | 1,000 GPM | 10 Tankers | 10 Tankers | 11 Tankers | 11 Tankers | 12 Tankers | 13 Tankers | 15 Tankers | 17 Tankers |
| 5,500 Gallons | 250 GPM | Continuous Tanker Flow | 105 GPM | 101 GPM | 98 GPM | 94 GPM | 91 GPM | 79 GPM | 70 GPM | 62 GPM |
| | | 500 GPM | 5 Tankers | 5 Tankers | 6 Tankers | 6 Tankers | 6 Tankers | 7 Tankers | 8 Tankers | 8 Tankers |
| | | 1,000 GPM | 10 Tankers | 10 Tankers | 11 Tankers | 11 Tankers | 11 Tankers | 13 Tankers | 15 Tankers | 17 Tankers |