



# Irrigation Assessment Worksheet - Efficiency Guidelines

| Guidelines for Addressing Common Irrigation Issues  |                  |  |  |
|---|------------------|--|--|
| Type  | Issue            | Description  | Solution   |
| <b>Urgent Issues</b> should be addressed immediately to limit excessive water waste and to ensure the system is in operating order.   | Leaks            | Any leak in irrigation system, including mainline, lateral line, valve/solenoid, or drip line  | All leaks should be addressed immediately. Not only is it a direct waste of water, but a significant leak can cause a drop in pressure, causing the entire zone or system to malfunction.  |
|   | Broken Equipment | Any broken sprinkler head equipment, which might include the nozzle, stem, or main body.   | Replacing the a broken nozzle or entire sprinkler head will ensure the zone is receiving good watering coverage.   |
| <b>Efficiency Maintenance</b> can be thought of as a "tune-up" for the existing sprinkler equipment. These repairs typically require minimal effort for a good efficiency pay off.                                      | Blocked          | Sprinkler heads can often be blocked by overgrown vegetation, play structures, posts, rocks, etc.  | Removing the obstruction or re-positioning the sprinkler head will ensure the zone is receiving good coverage.   |
|   | Misaligned       | Misaligned sprinkler heads refer to any sprinkler head that is tilted or sunken to such a degree that the uniformity of the spray pattern is affected.   | Sprinkler heads can easily be dug up and re-positioned correctly such that the base of the sprinkler is level and perpendicular to the ground. Since soil shifts seasonally, it is normal to see this issues occurring every year. |
|   | Overspray        | Refers to sprinklers watering non-landscaped areas like sidewalks, asphalt, fences, patio, etc.  | Spray patterns can be corrected by adjusting both the arc and radius of the emitter. In some cases, replacing with a variable-arc nozzle may be the most effective method of fixing.   |
| <b>Design Issues</b> are harder to correct because the issue may require retrofits to existing sprinkler heads and spacing. These repairs are more costly but can be an effective way of achieving significant savings. | Poor Coverage    | Refers to poor head spacing, causing areas to go unwatered   | Coverage can be corrected by utilizing sprinkler heads with a larger radius, or installing additional sprinkler heads.   |
|   | Mixed            | Refers to zones with varying head types, like spray heads and rotor heads for example. Because sprinkler heads emit water at different rates, mixed zones cause uneven coverage, leaving areas too dry or too wet. | An irrigation system can have multiple different head types, but they should not be used on the same zone. Each zone should have utilize the same head type, with uniform application rates.                                       |
|   | Wrong Head Type  | Refers to improper sprinkler head type for the type of landscaping.  | Spray and rotor heads are designed to water turfgrass. Trees, shrubs, and flowers are best watered by a drip irrigation zone   |

| Guidelines for Efficient Watering Schedules  |            |               |                     |   |  |
|--|------------|---------------|---------------------|---|--|
| <b>Watering Guidelines for Fixed Spray Heads</b>   |            |               |                     | <p><b>"Cycle and Soak"</b> is an industry-identified best management practices for efficient watering. A cycle and soak schedule breaks up watering times into 3 consecutive intervals with a short break in between each. This type of watering schedule encourages deep root growth, keeping the grass more drought and disease resistant. Additionally, a cycle and soak schedule allows time for the irrigation water to be absorbed by the clay soils that are common in the Front Range, eliminating excess run-off onto streets or sidewalks. The schedule provided can be used as a guideline for creating seasonal watering schedules.</p> <p>Please note that this schedule was calculated by using estimated precipitation rates (PR), which can vary significantly from system to system. The watering times are calculated to deliver 1/2 inch of supplemental irrigation per watering day, which is an industry standard method, assuming an ET rate of 27 inches per year. This schedule does not account for any environmental factors like sun exposure, which may affect the watering needs of a given area. Please make adjustments accordingly.</p> |  |
| <b>Seasonal Adjustments</b>  | May / June | July / August | September / October |   |  |
| <b>Total Runtime / Week:</b>   | 40 mins    | 60 mins       | 40 mins             |   |  |
| <b>Watering Days / Week:</b>   | 2          | 3             | 2                   |   |  |
| <b>Minutes / Cycle (3):</b>  | 6-7 mins   | 6-7 mins      | 6-7 mins            |   |  |
| <i>*Calculated using a default PR = 1.5" in / hr. Please check manufacturer specs for more accurate figures.</i> |            |               |                     |   |  |
| <b>Watering Guidelines for Rotor Heads</b>   |            |               |                     |   |  |
| <b>Seasonal Adjustments</b>  | May / June | July / August | September / October |   |  |
| <b>Total Runtime / Week:</b>   | 60 mins    | 90 mins       | 60 mins             |   |  |
| <b>Watering Days / Week:</b>   | 2          | 3             | 2                   |   |  |
| <b>Minutes / Cycle (3):</b>  | 10 mins    | 10 mins       | 10 mins             |   |  |
| <i>*Calculated using a default PR = 1.0" in / hr. Please check manufacturer specs for more accurate figures.</i> |            |               |                     |   |  |
| <b>Watering Guidelines for High Efficiency Nozzles</b>   |            |               |                     |   |  |
| <b>Seasonal Adjustments</b>  | May / June | July / August | September / October |   |  |
| <b>Total Runtime / Week:</b>   | 86 mins    | 130 mins      | 86 mins             |   |  |
| <b>Watering Days / Week:</b>   | 2          | 3             | 2                   |   |  |
| <b>Minutes / Cycle (3):</b>  | 14-15 mins | 14-15 mins    | 14-15 mins          |   |  |
| <i>*Calculated using a default PR = 0.7" in / hr. Please check manufacturer specs for more accurate figures.</i> |            |               |                     |   |  |