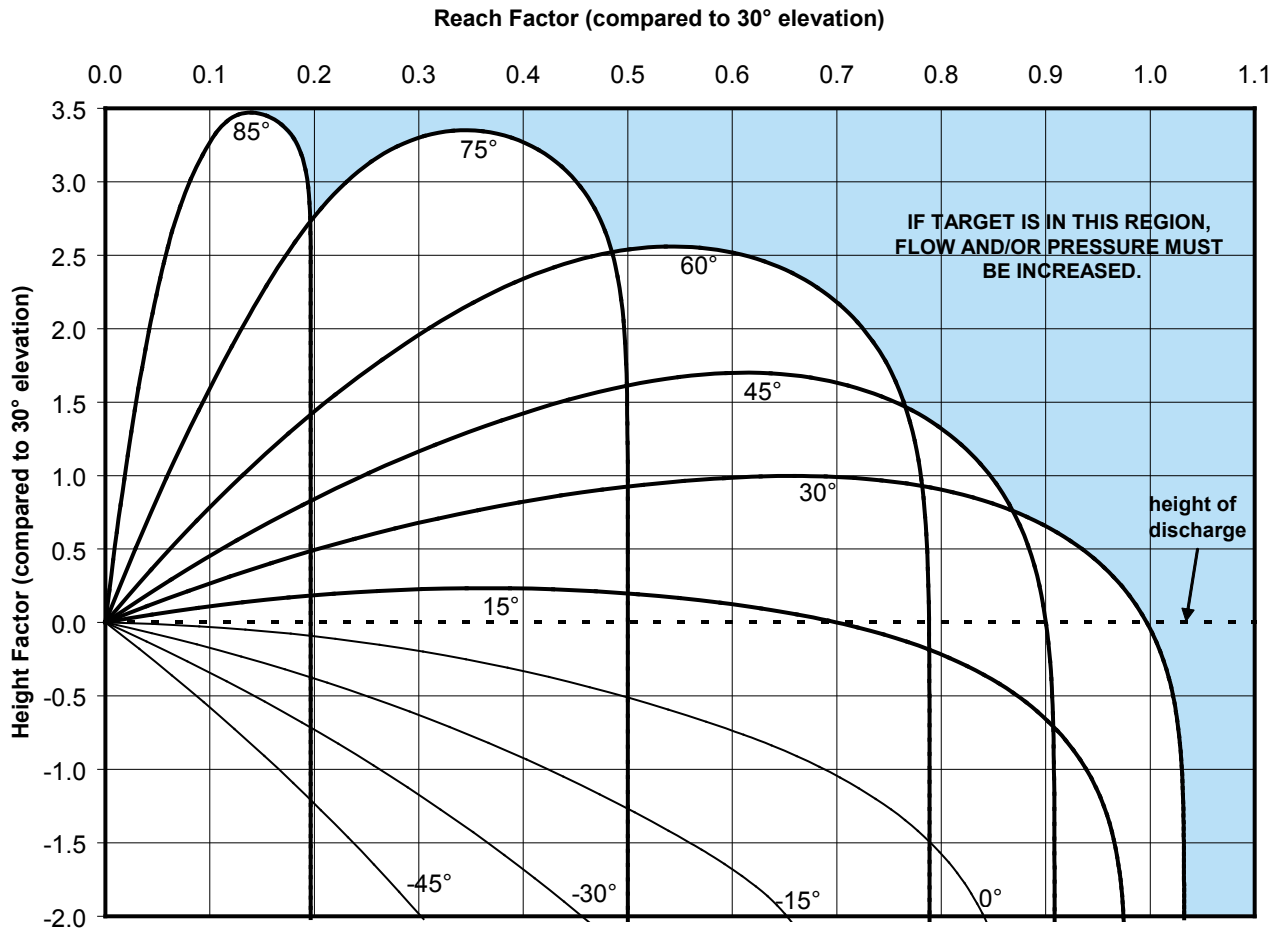


NOZZLE TRAJECTORY ELEVATION FACTORS



Stream reach and height at non-optimal elevations can be estimated as a factor of the performance at the optimal 30° elevation. Refer to LIM-030 and LIM-035 for effective stream trajectories of Task Force Tips Masterstream nozzles at 30° elevation. This graph cannot be used to estimate maximum reach for elevation angles below 30°.

1.0 To estimate elevation angle when vertical and horizontal distances to target are known:

- 1.1 Find the maximum height and reach at 30° from the appropriate trajectory curve in LIM-030 or LIM-035.
- 1.2 Calculate the Height Factor by dividing the vertical distance to the target by maximum height from step 1.1.
- 1.3 Calculate the Reach Factor by dividing the horizontal distance to the target by maximum reach from step 1.1.
- 1.4 On the graph of nozzle trajectory elevation factors, plot the intersection of the Height Factor and Reach factor from steps 1.2 and 1.3. If this point lies on or between the curves given, estimate the appropriate elevation angle. If this point lies within the shaded region of the graph, then a higher flow or pressure must be used to reach the target.

2.0 To estimate maximum reach for a given elevation angle above 0°:

- 2.1 From the graph of nozzle trajectory elevation factors, choose the trajectory curve for the desired elevation angle.
- 2.2 Find the point where this trajectory curve intersects the height of discharge (zero height line).
- 2.3 Estimate the Reach Factor at this point using the scale across the top of the graph.
- 2.4 Multiply this Reach Factor by the reach at 30° elevation from the appropriate trajectory curve in LIM-030 or LIM-035.

3.0 To estimate maximum height for a given elevation angle above 0°:

- 3.1 From the graph of nozzle trajectory elevation factors, choose the trajectory curve for the desired elevation angle.
- 3.2 Find the maximum height on this trajectory curve.
- 3.3 Estimate the Height Factor at the maximum height using the scale on the left side of the graph.
- 3.4 Multiply this Height Factor by the height at 30° elevation from the appropriate trajectory curve in LIM-030 or LIM-035.