

Sand Amendment & Rootzone Assessment Checklist

- Confirm project type: golf green, stadium, sportsfield, or sand-capped surface.
- Obtain full Particle Size Distribution (PSD) for sand and amendment.
- Record bulk density (ρ_b) and total porosity of rootzone.
- Confirm water retention curve: 0, -1/-3, -10, -33, -1500 kPa.
- Obtain saturated hydraulic conductivity (K_{sat}) using ASTM D2434.
- Check fines percentage (<0.15 mm) and ensure it is within specification.
- Test amendment PSD and ensure compatibility with parent sand.
- Record amendment bulk density, OM%, PAW gain, and K_{sat} reduction per 1% v/v.
- Check chemical limits: EC, pH, bicarbonate, sodium.
- Identify max declared safe v/v rate from lab/manufacturer.
- Set targets for OM and PAW based on intended sport/usage.
- Confirm minimum acceptable K_{sat} for selected hydraulic standard.
- Enter data into Sand Amendment Calculator.
- Review v/v rate limits for OM, PAW, K_{sat} , AFP, and declared max.
- Assess irrigation interval changes (current vs amended).
- Check recommended application mass: t/ha, kg/m², kg/m³.
- Review hydraulic rating (HRI) pre- and post-amendment.
- Use blend test data (if available) to validate model assumptions.
- Plan application method: rotary incorporation, blending, or surface amendment.
- Verify post-construction performance with infiltration and soil moisture sensors.