FEATURES

Superintendent profile

22 HEAD OF THE CLASS
From top student to chapter president, Joe Livingston stands out in the Lone Star state.

COVER STORY:
Water management

32 WASTE NOT, WANT NOT
Superintendents face the new realities of water quantity and quality.

Career management

63 THE BIG STEP UP
There's a lot at stake for young assistant superintendents who transition into a head role.

Product focus: seed

72 BEEN THERE, DONE THAT
Richard Haas, CGCS, settles in Montana to perfect his grow-in know-how with cool-season grasses.

75 A-OK
In his first superintendent job, an Oregon native seeds a course close to home and reaps the rewards.

Course construction

78 POLISHING AN OLD GEM
A restoration at Olympia Fields refines the South Course.

RESEARCH

84 WHAT LIES BENEATH
TDR-tension infiltrometer tests root-zone materials and monitors putting green performance.

SPECIAL SUPPLEMENT:
SMART IRRIGATION

Facing page 34

S3 LESS IS MORE
Superintendents downsize water consumption by upgrading efficiency.

S10 MAKING HISTORY
A new superintendent facilitates a new irrigation system at the oldest 18-hole private golf course west of the Mississippi.

S16 IT'S NOT A DIRTY WORD
Effluent water is becoming a more common irrigation source.

S22 WATER PRECISELY
Amendments contribute to water efficiency when they fit course conditions.
Twenty-two acres of tent space were created for Ryder Cup corporate events, merchandise, concessions and media coverage.