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Will Summer 2005 Finish Drier, and Hotter, Than 1988? Stay Tuned . . .

On Thursday, July 7th, the National Weather Service, USDA and NOAA raised the drought level to "extreme" and are comparing this year's weather conditions to historical landmarks such as the dust bowl years (1935-36 and 1939-40), and more recently, the hot and dry summer of 1988. If you remember the heat and drought of '88, it looks like this year will be even worse for most regions of northern and central Illinois. Hot and dry conditions have prevailed since early June, which followed a predominantly cool and dry spring. Rainfall deficits for '05 are running as much as 8" (!) below normal as of the second week in July, and many areas have had less than 1" of precipitation since mid-to-late May. (See Table 1 for rainfall summary.) Also, we have had more 90°F-plus days so far in June and July than the last two years combined, and could easily get as many as 40 days over 90°F for the season.

Photos by Dan Dinelli

These images of a localized dry spot at North Shore Country Club's nursery demonstrate the difference in cooling ability (12 degrees) between a functioning plant with proper soil moisture versus a plant under moisture stress from hydrophobic soils.

The difference in surface temperature between active, well-irrigated turf and dormant turf is dramatic.

Table 1.
June rainfall totals for several golf courses around the Chicago area.

Individual Golf Course Sites	June '05 Precip.	Normal Precip.	Percent of Normal
Orland Park	1.16	4.16	28%
Aurora	0.83	3.63	23%
Naperville	0.87	3.63	24%
Libertyville	0.33	3.86	9%
North Barrington	0.39	3.63	11%
Beach Park	trace	3.70	<1%

We really haven't had much good turf-growing weather so far in 2005, and for many superintendents on the north and northwest sides of Chicago (and into southern Wisconsin), this follows a severe winter that injured *Poa annua* and other cold/ice-sensitive species. The hot air mass/high-pressure systems we have been "stuck" under have been accompanied by very dry air and very low relative humidity—desert-like conditions that are reminiscent of the summer of '88. (The June 24th afternoon radio report, for instance, indicated 95°F with 15% relative humidity at O'Hare.) The heat and dry air puts a strain on a plant's water-conducting and cooling systems, but timely irrigation cooling can keep plants from entering a permanent wilt situation or physiological heat stress.

So, in assessing the impact of this extreme weather on area golf turf, the main questions to answer seem to be: "How much water do you have available to use for irrigation?" and "What is your capacity/ability to pump it out and distribute it where needed?" Most "experienced" superintendents will tell you that they prefer a hot and dry summer to a hot and wet summer, because they can control irrigation water/soil-moisture levels and stay away from serious problems like Pythium blight, brown patch and wet wilt. Of course, *Poa annua* will struggle to get through the hottest periods of weather this summer (especially *Poa* trying to recover from winter injury!), but if you have the wherewithal to keep it cool and moist with syringes or hand-watering, it should get through all but the worst conditions.