

Desert Mountain Club



GOLF IS GREEN – GREEN IS GOOD

Presented by

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Irrigation by the Numbers

1. Irrigation Delivery System
2. Turfgrass Varieties
3. Soil Conditions / Types
4. Irrigation Water Quality
5. Environmental Conditions
6. Using Technology



Irrigation by the Numbers

Irrigation Delivery System

- **Gallons per Minute**
- **Gallons per Kilowatt**
- **Precipitation Rate (*/E.T.*)**
- **Cycle Time**

Irrigation by the Numbers

Irrigation Delivery System

- Uniformity
- Spacing
- Pressure
- Arc (part circles)

Irrigation by the Numbers

Turfgrass Varieties

- Cool Season
- Warm Season
- Height of Cut / Clipping Yield

Irrigation by the Numbers

Soil Condition

- Sand / Silt / Clay
- Infiltration Rates
- Moisture Retention
- Nutrient Holding Capacity
- Monitoring / Trend Analysis

Irrigation by the Numbers

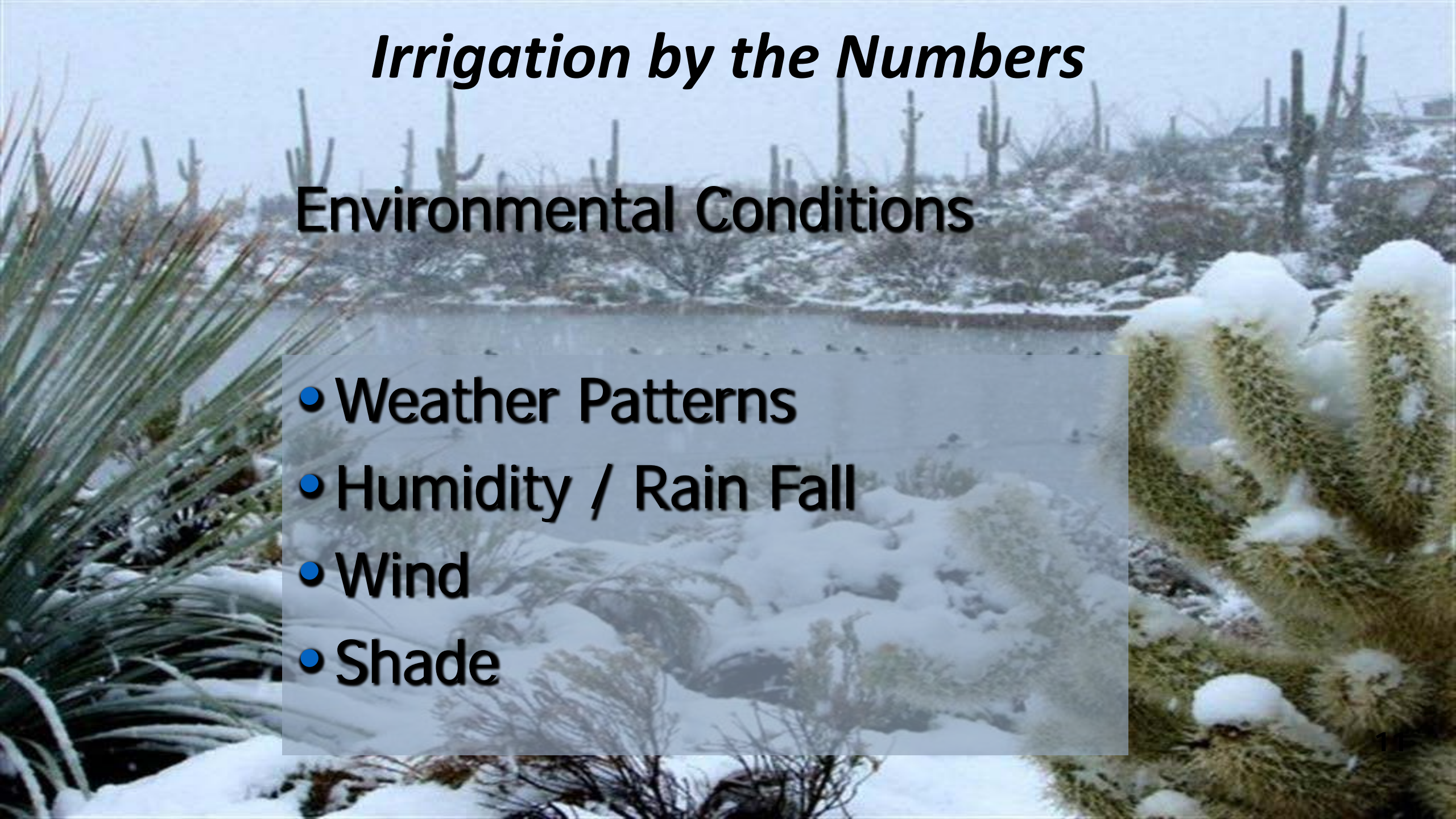
Irrigation Water Quality

- Water Source
 - Reclaimed / Ground / Potable
- Elemental Content
 - TDS, Nutrients, Salts, Sodium

Irrigation by the Numbers

Environmental Conditions

- Weather Patterns
- Humidity / Rain Fall
- Wind
- Shade



Irrigation by the Numbers

Technology

- **Monitoring**
 - Irrigation Platform (software)
 - Moisture meter
 - Firmness meter

Irrigation by the Numbers

- Irrigation Platform
 - Weather station
 - Irrigation computer
 - Sensor readings
 - Playable conditions
 - Trufirm
 - Ball speed

Irrigation by the Numbers

Technology

- **Targets**
 - Determine Optimal for your Course
 - Alerts on trend data
 - Consistency of practices

Irrigation by the Numbers

Irrigation Water Quality

- Na ~ 290 ppm vs. 125 ppm
–4 tons of Sodium Chloride – ac/yr

Irrigation Numbers

- 19,000,000,000
- 3,000 gpm
- 2,000 heads / course
- 6 hr. duration
- 0.75 in. hr.
- 2,000,000 g/ac (overseeded)
- 1,500,000 g/ac (non-overseeded)

Irrigation Numbers

- 55 ft. spacing
- Full / Part
- 1 vs. 3 individual vs. block
- 0.4 e.t.
- 12% ~ 24%
- 6 ~ 15 min. cycle
- 90 acres
- 4.9 ac.ft.
 - 325,851



Thank You!