



Irrigation Association

# HDPE Pipe for Golf Course Irrigation Applications

Speaker 1: Bill Spence, The Country Club

Speaker 2: David Taylor, Bryant Taylor Gordon Golf

Speaker 3: Bill Bartels, Tanto Irrigation

Speaker 4: John Riordan, Harco Fittings

Moderator: Paul McMahon, Hydro Designs, Inc.



# **HDPE**

## **A Contractor View**



# MOBILIZATION

## HDPE

- Material more expensive
- Material availability can be a challenge
- 40 or 50 foot lengths – deflection

## PVC

- Material less expensive
- Readily available
- 20 Foot Lengths - rigid



# MOBILIZATION

## Telehandler





# MOBILIZATION

## HDPE

- Material more expensive
- Material availability can be a challenge
- 40 or 50 foot lengths – deflection
- More plumbing equipment needed with electrical component

## PVC

- Material less expensive
- Readily Available
- 20 Foot Lengths Rigid



# EQUIPMENT

## HDPE

- Specialized Equipment

## PVC

- No Specialized Equipment



# EQUIPMENT

## Butt Fusion





# EQUIPMENT

## Butt Fusion







# EQUIPMENT

## HDPE

- Specialized Equipment
- Butt Fusion
- Electrofusion

## PVC

- No Specialized Equipment



# EQUIPMENT

## Electrofusion





# EQUIPMENT

## HDPE

- Specialized Equipment
- Butt Fusion
- Electrofusion
- Extended Pipe Trailers

## PVC

- No Specialized Equipment



# EQUIPMENT

## Extended Pipe Trailers





# EQUIPMENT

## HDPE

- Specialized Equipment
- Butt Fusion
- Electrofusion
- Extended Pipe Trailers
- Generators
- Additional Utility Vehicles

## PVC

- No Specialized Equipment



# INSTALLATION

## HDPE

- Movement onsite more challenging
- Suited for difficult ground conditions (Rock, landfills, marshland, changing soil)
- Monolithic
- No thrust blocks generally
- Variation of coverage
- ML valve configuration, Deep Tine
- Change of Direction w/o fittings (deflection dependent/green loop)

## PVC

- Movement onsite less challenging
- Better suited for stable ground conditions
- Segmented
- Thrust blocks/Joint restraints
- Minimum cover requirements
- 24-36 ML and 12-18 L
- Change of Direction with fittings (rubber gasket dependent)



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# INSTALLATION

## HDPE

- Plumb above ground in cleaner conditions

## PVC

- Must be fitted in place



# INSTALLATION





# INSTALLATION





# INSTALLATION

## HDPE

- Plumb above ground in cleaner conditions
- Above ground runs
- Same day charge and flush (Pre-bury)
- Directional Boring Capability - less disturbance (More expensive)

## PVC

- Must be fitted in place
- Must be buried or secured
- Must wait for curing (Glue/Cement TB) (Post-bury)
- Must Be Open Cut - more disturbance (Less expensive)



# OTHER CONSIDERATIONS

- Hybrid systems will increase your repair parts inventory and need for product knowledge
- Long-term pipe leaks rare (Show up quickly)
- Pipe resins
- Pipe (SDR) Standard Dimension Ratio
- Fitting types
- Straight pipe versus coiled pipe
- Multiple Connection/fusion options
- Important to note that in most cases, installation componentry for HDPE has caught up to PVC
- Continuing education important as new componentry is incorporated



# AT THE END OF THE DAY...

- This is not a comprehensive representation of all the variables you will need to consider
- For this very reason, our suggestion is to always educate yourself as early in the process the best you can. Hire a qualified irrigation consultant that will help you evaluate site conditions, water source/need, create design philosophy and establish product and contractor selection criteria
- Make these choices match your goals and objectives. Base them on a predetermined value structure. Make sure all those you associate yourself with in this process have the same value structure that you, your Club or Ownership have.
- There are some absolutes in this process, but not any one right answer for all situations.