



*At the Lab. In the Field.  
By Your Side.*

## TALENT IRRIGATION SHOTCRETE CANAL TALENT, OREGON, USA



**CONCRETE  
WATERPROOFING**

Page 1 of 2

QUESTIONS: 1-800-267-8280 or [www.kryton.com](http://www.kryton.com)

### CHALLENGE

To provide secure winter storage and facilitate fish recapture, TID built an artificial pond. The 119,000 gallon pond has a surface area of 80' x 47' with a depth of 8' and a recessed tank in the bottom. The recessed tank aids in capturing the fish for restocking the canals in spring. A problem occurred as a result of the excavated pond being located on unstable soil with subsequent subsidence. Two previous attempts to seal the facility with shotcrete failed due to cracking and major leakage.

### PERFORMANCE

Rock 'N' Ready Mix turned to Kryton International Inc. to supply KIM for the third attempt to repair the canal. The KIM enhanced shotcrete not only sealed the original cracks but kept the concrete watertight when the pond inevitably cracked again. The carp can now winter safely in the pond until they are captured in a recessed tank at the bottom to be returned to the canals in spring.



PROJECT CASE STUDY

#### PRODUCT

KIM within shotcrete mix

#### LOCATION

Talent, Oregon, USA

#### OWNER

Talent Irrigation District (TID)

#### SHOTCRETE MIX SUPPLIER

Rock 'N' Ready Mix

#### ENGINEER

Dick Biery, Civil Engineer

#### DISTRIBUTOR

Comar Enterprises Ltd.

**“The crack had sealed itself. KIM is the only product we’ve seen that will guarantee waterproofing in the ready-mix industry”**  
**Dick Biery, Civil Engineer with Rock 'N' Ready**

#### The Kryton Group of Companies

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## THERE'S SOMETHING FISHY HERE

A creek spill involving chemicals used to control vegetative growth in irrigation canals caused the Talent Irrigation District (TID) in Talent, Oregon to try an alternative approach to aquatic vegetation control utilizing fish.

The fish are Grass Carp, native to China. During the irrigation season, the fish keep the canals clean as a result of eating up to their weight in "veggies" each day. However, at the end of the irrigation season, they must be caught and transported to a winter home while the canals are drained.

To provide secure winter storage and facilitate fish recapture, TID built an artificial pond. As these fish can grow to be 200 pounds, the 119,000 gallon pond has a surface area of 80' x 47' with a depth of 8', and a recessed tank in the bottom. As the pond water is drawn down in the spring, the fish can be captured in the tank for restocking the refilled canals.

A problem occurred as a result of the excavated pond being located on unstable soil with subsequent subsidence. After shotcreting the pond twice with resultant major leakage through the cracked concrete, a creative solution was needed.

A local ready-mix supplier, Rock 'N' Ready Mix, suggested a solution involving two products: one for integral waterproofing, and the other for crack control. "Nycon" nylon fibres were to be added to the concrete to reduce plastic as well as drying shrinkage cracking, and to minimize crack widths. And "KIM" would be added to the concrete to "heal" what few small cracks might occur. Its "crystalline growth" effectively seals cracks and other potential voids.

The third shot was the charm, using the mix. No membranes, mastics or other external "waterproofers", which are vulnerable to abrasion and disintegration, were used. An inspection several months later revealed that a crack had subsequently developed, but appeared to be healed below the water line.

The simple addition of these two non-toxic products into the concrete solved the problem without having to use labor-intensive external "waterproofing" systems of questionable value.

TID shot their problem - - and the fish now rest in peace.

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