

As 2010 draws to an end, we at COLETANCHE® look back on our achievements and plan for the future. We first want to thank all the engineers, contractors, operators, and owners who invited us to present our product and describe the myriad uses for our superior geomembrane.

COLETANCHE® marks its 10th year in the North American market and over that period we have installed more than 25 million square feet. In November, we visited one of our first installations (2000) at the Ochoco Canal in Oregon. The geomembrane looked as good as new despite 10 years of exposure to the elements and the harsh weather of Central Washington. By lining the canal, the Ochoco Water District has undoubtedly saved millions of gallons of water, an incredibly valuable resource.



Our ongoing projects include:



#### Bay Area, Oakland, California

COLETANCHE® was selected to construct an original final cover for an abandoned landfill partially built out in a wetland connected to the San Francisco Bay system. Some of the waste is under water. COLETANCHE® will be left exposed in the tidal zone and buried under 1.5 foot of vegetative cover in the area of the landfill not subject to tidal influence. This design eliminates the need to extend the cover beyond the footprint of the waste, destroying more wetland. Using COLETANCHE® resulted in a reduction of soil import and a substantial financial savings as well as an immeasurable ecological protection for both groundwater and carbon dioxide production through the elimination of 52,000 truck-miles.

#### Los Angeles area

COLETANCHE® is being considered for construction of a separator layer under a new concrete water reservoir. It will separate groundwater from potential leaks. Seismic design consideration requires a higher friction angle than compacted clay, or common flexible geomembrane can provide. Furthermore, common flexible geomembranes are susceptible to puncture if placed within a gravel layer. By contrast, COLETANCHE® has a very high puncture resistance and an interface friction angle with sand and gravel higher than that of common flexible geomembrane. Consequently, COLETANCHE® will be placed within a gravel layer to provide for an impervious barrier displaying an adequate friction angle.

#### Washington, California and Arizona

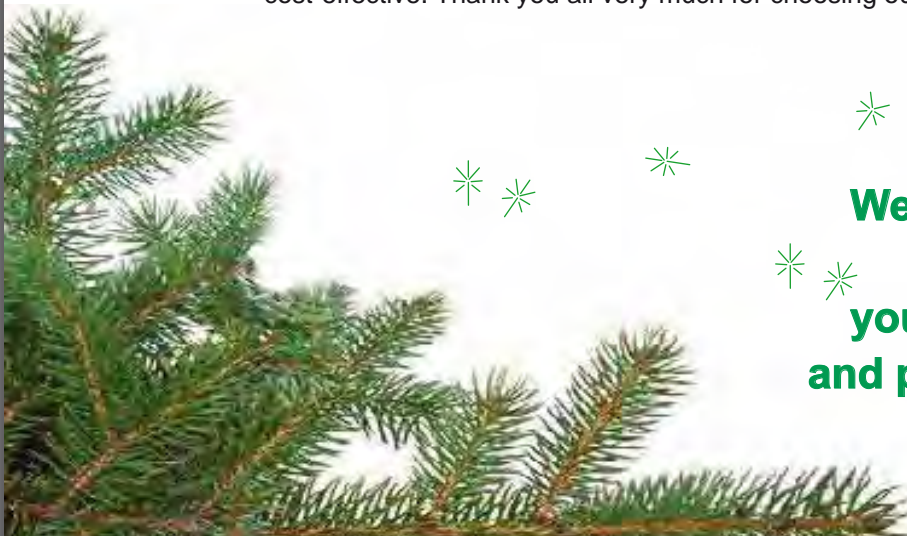
Miles of canals lined to protect resources due to:

- The ease of installation by their own maintenance team even in February,
- The ability to leave the bituminous liner exposed thanks to its robustness and its good UV resistance maintaining its excellent Manning coefficient,
- The ease of bonding with concrete or with rock which allows an adaptability at the various geometry along canal: entry of tunnel, siphon or bridge abutment

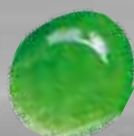
#### Northern Canada

COLETANCHE® was chosen to cap a 3 million sq. ft. heap leach mine waste pad because it met the tough requirements for temperature (-20 F) and difficult installation conditions imposed by snow and mist, as well as high winds.

We look forward to new projects in 2011. With our group of American and Canadian engineers we are readily available for ongoing technical support and developing innovative solutions for new projects, always with the goal of protecting the environment, meeting your operational requirements, while being cost-effective. Thank you all very much for choosing our product.



**We at COLETANCHE®  
wish you and  
your families a happy  
and prosperous New Year.**



For more technical information or to organize a brown bag presentation please contact Axter Coletanche Inc.  
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