



# MISSOURI DEPARTMENT OF NATURAL RESOURCES

## Dock Foam Issue Still Afloat

Fact Sheet

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Division of Environmental Quality  
Solid Waste Management Program

In 1995, AmerenUE (formerly Union Electric) banned the use of unencapsulated Expanded Polystyrene (EPS) as flotation material for boat docks on the Lake of the Ozarks. This has resulted in a noticeable generation of expanded polystyrene solid waste on shore, in the woods and in area landfills. Similar problems with EPS have been reported on other Missouri lakes where boat docks are prevalent.

The ban was prompted by the breakup of these foam floats due to passing boat traffic or seasonal rising and lowering of the water level due to routine hydro electrical generation practices. The floating foam pieces became a hazard to boat traffic and a blight along the shore, especially noticeable during the annual winter and early spring drawdown.

AmerenUE works closely with area dock builders through an association that sets construction and materials standards for new docks being built along the 1,500 or so miles of shoreline. As old docks are dismantled, the waterlogged foam is taken away.

In 1992, an organized effort to clean up 50 years worth of accumulation of trash and floating foam from the shoreline emerged as the Adopt The Shoreline program. This, linked to the annual spring Shoreline Beautification Project, has gathered EPS at on-shore collection sites. These sites range from isolated dumps near marinas or at the end of wooded coves, stacks near old boat yards and those established by commercial solid waste handling firms.

For the most part, foam picked up by these commercial entities is delivered to area landfills for burial. However, due to their waterlogged condition, the foam pieces are very heavy and costly as landfill tipping fees are applied. Some effort has been made to reduce this weight by employing local laborers to cut the foam into manageable size and stack them to dry before they are hauled away.

The cost of cutting and drying is offset by the savings in tipping fees. There is some concern about the environmental impact of such cutting sites where smaller foam pieces could escape disposal and re-enter the surface water.

Recently a company has circulated invitations to dock builders to bring their polystyrene foam to a recycling center located near Rocky Mount, in the eastern corner of Morgan County. However, because there is presently no commercial recycling use for the foam being collected, the dock builders and AmerenUE are watching the development with interest and caution.

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A review of solid waste publications and plastics industry newsletters, as well as Internet information sites, reveals no commercial market for polystyrene dock foam. However, some interest has been expressed in recycling clean foam as packing material or soiled foam as gravel supplement in septic tank drain fields.

AmerenUE officials have tried mixing ground-up foam with paper to use as a waste-to-energy fuel in its electrical generation system, but the correct mixture has not yet been found. A firm that had hoped to grind the foam for use in potting soil has rejected the proposal due to the saturation of the material with waterborne petroleum products. The foam soaks up the spilled gasoline and oils left by heavy boat traffic and retains the smell. The effectiveness of the foam as a petroleum filtering medium has not been fully investigated.

A limited-use project currently ongoing in the Lake of the Ozarks area is a business building an urban environment or obstacle course for use by paint ball enthusiasts.

At present there is ongoing research into the dock foam solid waste issue by the Mid-America Manufacturing Technology Center at University of Missouri - Rolla, by AmerenUE and by several private businesses. The local solid waste management district is also encouraging the application for grant money to support recycling and research efforts in the lake area.

Missouri plastic recyclers have expressed interest in studying the dock foam recycling issue. They are looking at the feasibility of blending clean dock foam with polyethylene (PET) for use in new dock flotation product. One suggestion is squeezing the water and marine fuel residue from the old foam in a "car crusher," then encapsulating the resulting EPS blocks so they can be used as insulated building material. The proper disposal of used dock foam is currently expensive within the recycling industry.

Landowners with foam deposits on their property can get rid of the accumulation by breaking it up for complete drying and arranging for its hauling with a commercial solid waste handling company. As the supplies of foam become more economically attractive to plastic recyclers, a non-landfill disposal alternative will hopefully emerge.

For more information call or write  
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