



Focus

Ecology Proposes to Approve the Aquatic Herbicide Diquat Dibromide for Use in Washington State

Issue

The Washington State Department of Ecology (Ecology) Water Quality Program has completed the *Draft Supplemental Environmental Impact Statement (DSEIS) for Diquat Dibromide*. Diquat dibromide (label name Reward[®]) is an aquatic-contact herbicide and algaecide. Ecology proposes to approve diquat as a tool available to control aquatic nuisance and noxious plants in the public waterbodies of Washington state. The DSEIS is meant to assess and summarize the potential harm that diquat may have on the environment and propose measures to mitigate the harm. The mitigation measures are being proposed for permit conditions in two general permits regulating herbicide use for controlling aquatic noxious and nuisance plants. The DSEIS is now ready for public comments.

Background

In 1980, Ecology completed the *Environmental Impact Statement (EIS) for Aquatic Plant Management* to evaluate and mitigate the effects of aquatic herbicides that are used to control aquatic vegetation in waters of the state. Permit writers use the document to decide whether to approve, deny or add conditions to permits related to the use of aquatic herbicides. In 1992 the *Final Supplemental Environmental Impact Statement for Aquatic Plant Management* evaluated several herbicides and was updated again in 2001 to include 2,4-D and endosulfan. Diquat was neither permitted at that time nor in 1980 due to lack of crucial information. Since then, risk assessments for diquat were compiled and significant questions were answered. Based on those risk assessments and the subsequent DSEIS, Ecology is reconsidering diquat for use in Washington.

What are the benefits of diquat?

As a contact herbicide, diquat has the ability to burn back noxious and nuisance aquatic plants. Noxious plants are non-native and invasive to the natural environment. Nuisance plants are natural to a healthy environment but are undesirable to some people because of the way they look or other various reasons. Diquat is especially effective on Brazilian elodea (*Egeria densa*), a commonly found aquatic noxious weed that has been difficult to control with the herbicides currently approved. Diquat is eliminated from the waterbody quickly and is relatively inexpensive compared to other chemical weed-control methods. Diquat is effective for spot treatment.

What are the drawbacks of diquat?

As with most chemical methods of aquatic weed control, diquat could cause significant environmental harm. The DSEIS explains the potential harm and includes the mitigations necessary to alleviate those risks.

Because diquat is a non-selective herbicide, it affects target as well as non-target plants. Diquat must be monitored closely because it accumulates in sediment and soil after each

application; however, the most current risk assessments indicate that diquat is not available to most living things when bound to sediment and soil. In addition, diquat is highly toxic to some invertebrates and moderately toxic to birds and amphibians. However, if diquat is applied at standard rates and the mitigations included in the DSEIS are followed, diquat is relatively safe to most living things in the environment.

Other Considerations

Some gaps remain regarding diquat. Toxicology studies have not been completed for many aquatic species native to Washington including the state listed western pond turtle and other significant species such as the spotted frog, northern leopard frog and Woodhouse toad. A timing table from the state Department of Fish and Wildlife (WDFW) is a crucial mitigation tool expected to protect anadromous species but it is not yet completed. WDFW anticipates the timing table will be ready in 2003. Data are available for 40 years regarding diquat's effect on the environment over time.

Current Situation

The public has the opportunity to comment on the DSEIS from September 30 through November 6, 2002. Comments taken during the 37-day comment period will be incorporated into the *Final Supplemental Environmental Impact Statement (FSEIS) for Diquat Dibromide* and the minor modifications to the National Pollutant Discharge Elimination System (NPDES) permits for noxious and nuisance plant control in lakes. It is anticipated that both the final SEIS and the permit modifications will be released in time for the 2003 growing season. Please send comments to Jessica Andreoletti, at the contact information provided below.

For More Information:

To obtain a copy of the DSEIS or the risk assessments for diquat, please contact Jessica Andreoletti at jean461@ecy.wa.gov or at P.O. Box 47600, Olympia, WA 98504-7600, or by telephone at (360) 407-6482.

FIRST CLASS
U.S. POSTAGE PAID
WASHINGTON STATE
DEPT. OF PRINTING

Department of Ecology
Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600
ECY
WASHINGTON STATE
DEPARTMENT OF

