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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Date: 4/30/07

Chemical: 129121
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331595,331519, 331593, 329522, 314530, 332424, 325983, 326009, 326000, 325999, 325997, 325990, 326003, 331867, 314530, 322414, 314197, 331714, 331713, 313295, 331872, 335805

Subject: Ecological Risk Assessment for Fipronil Uses
(Addendum 2: providing additional time series output for onion seed)

To: Ann Sibold
Insecticides Branch
Reregistration Division (7508P)

From: Edward Odenkirchen, Ph.D., Senior Science Advisor
Nancy Andrews, Ph.D. Branch Chief
Environmental Risk Branch I
Environmental Fate and Effects Division (7507P)

Nancy K. Andrews 4/30/07

James Hetrick, Ph.D., Senior Science Advisor
Environmental Risk Branch III
Environmental Fate and Effects Division (7507P)

James A. Hetrick 4/30/07

The Environmental Fate and Effects and Registration Divisions (EFED and RD) met in March to discuss the results of the 2007 ecological risk assessment for new Section 3 and conditional registrations for fipronil. The Chief of RD requested additional information regarding the frequency and magnitude of the potential risks to aquatic invertebrates associated with proposed use as a seed treatment for onions. EFED agreed to provide RD with information regarding the distribution of risk quotients (RQs) for the entire time series of modeled surface water concentrations. In addition EFED also agreed to provide these results using a Northwestern states use scenario more closely matching use sites in that region.

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The following figures present the results of the combined effects of buffers and alternative application rates on the distribution of RQs for the total time series of PRZM/EXAMS model runs. The first eight figures represent the distributions of RQs for both the typical and low application rates and considering a new model scenario with an Idaho meteorological file and soil profile more specific to the northwestern states. The second eight are RQ distributions for the previously modeled Georgia onion scenario. The effects of low and upper bound buffer efficiencies are presented on each graph. These are reverse cumulative distributions and the interpolation of X-axis RQ value on the Y-axis is interpreted as the fraction of all predicted EECs that meet or exceed the selected X-axis value.

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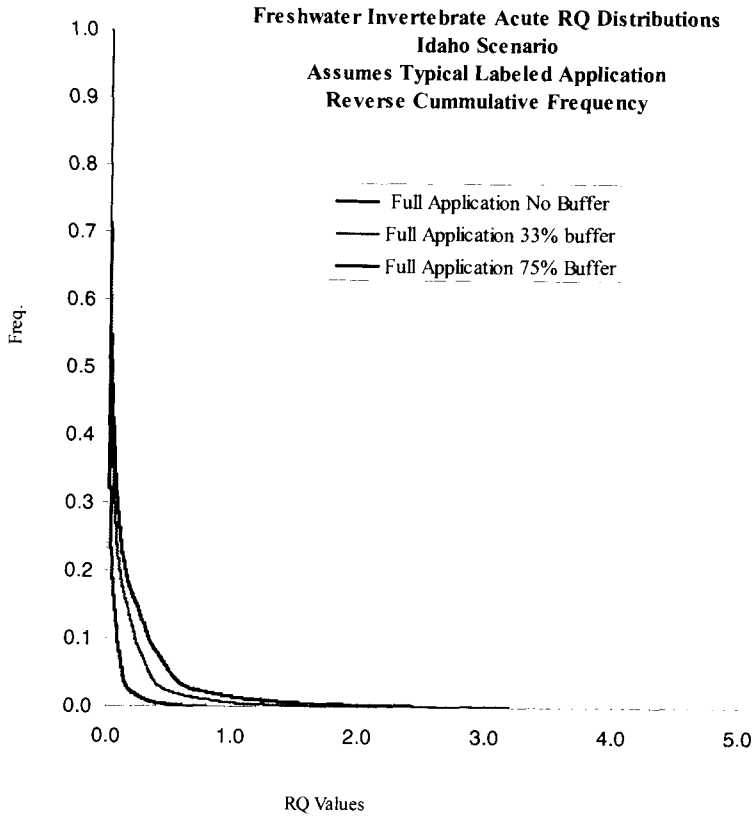

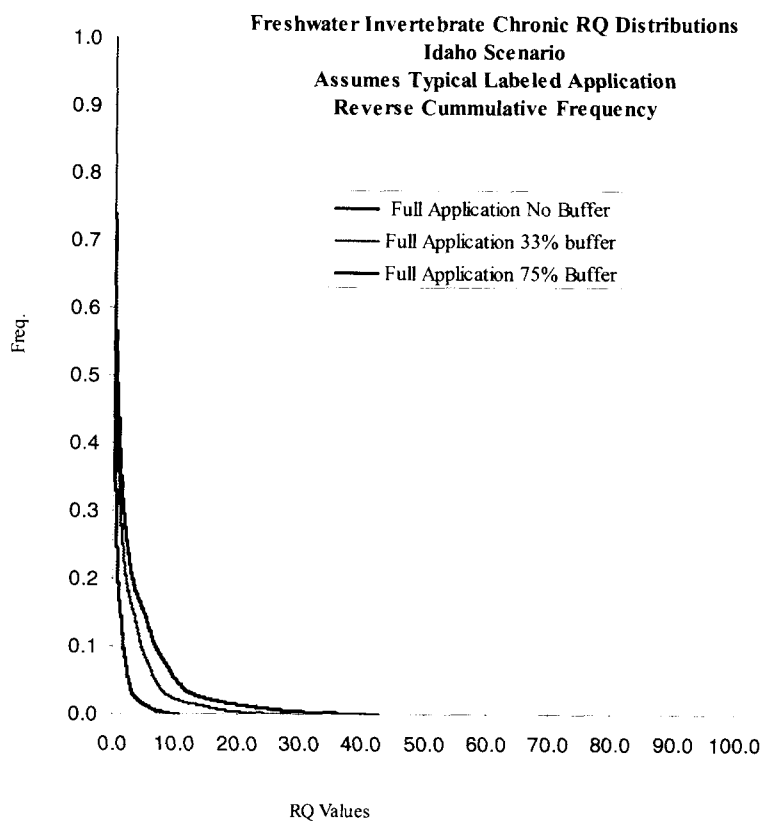

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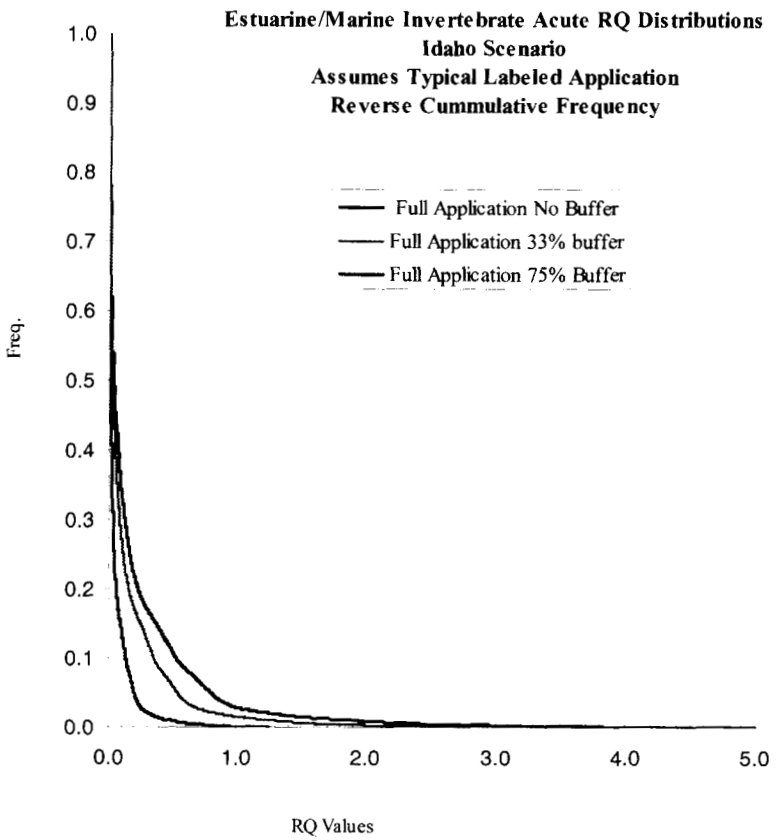

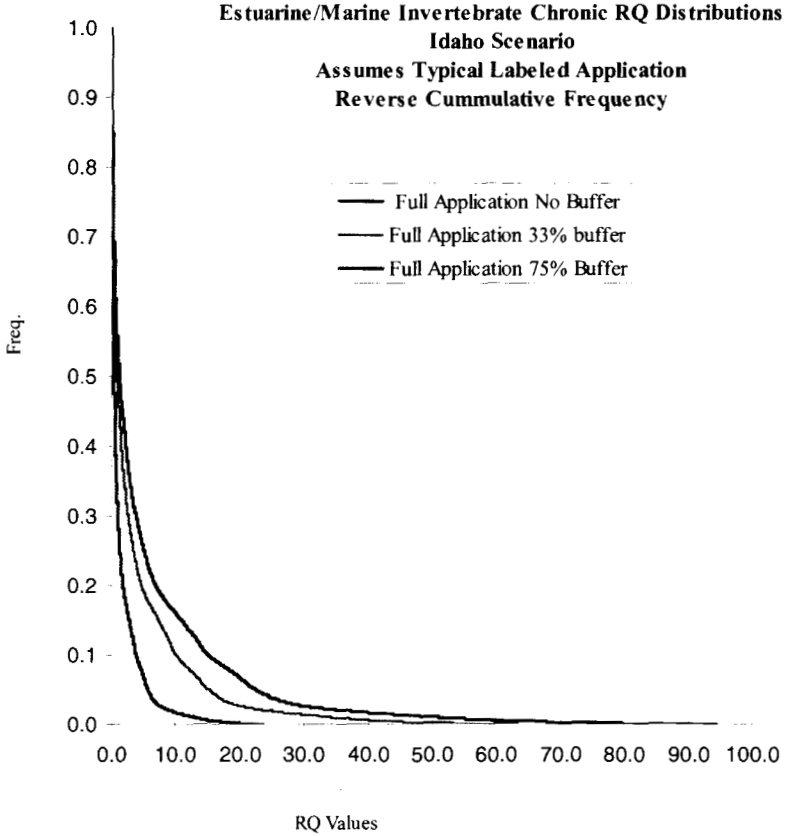

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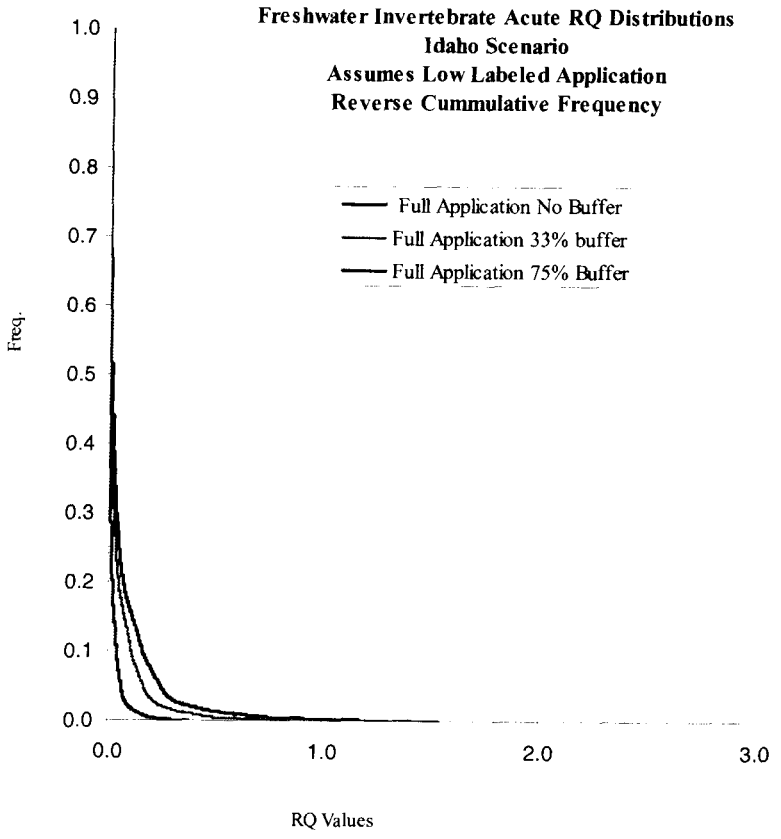

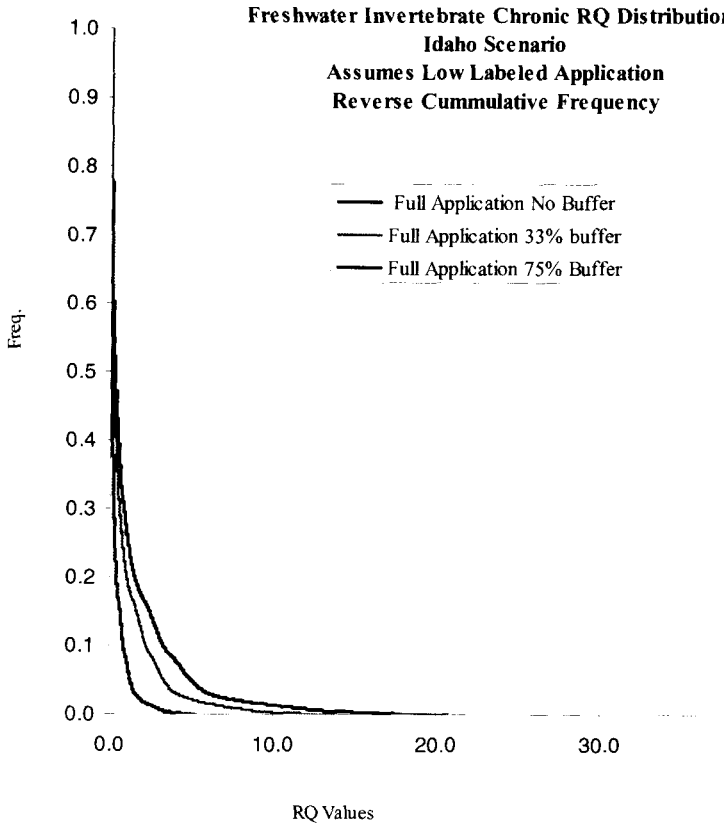

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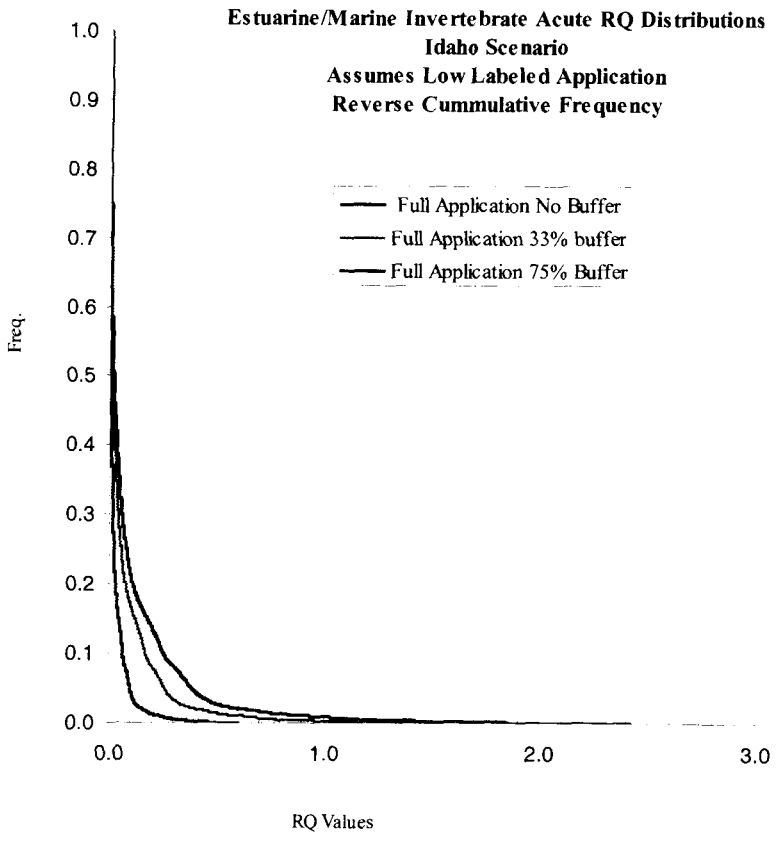

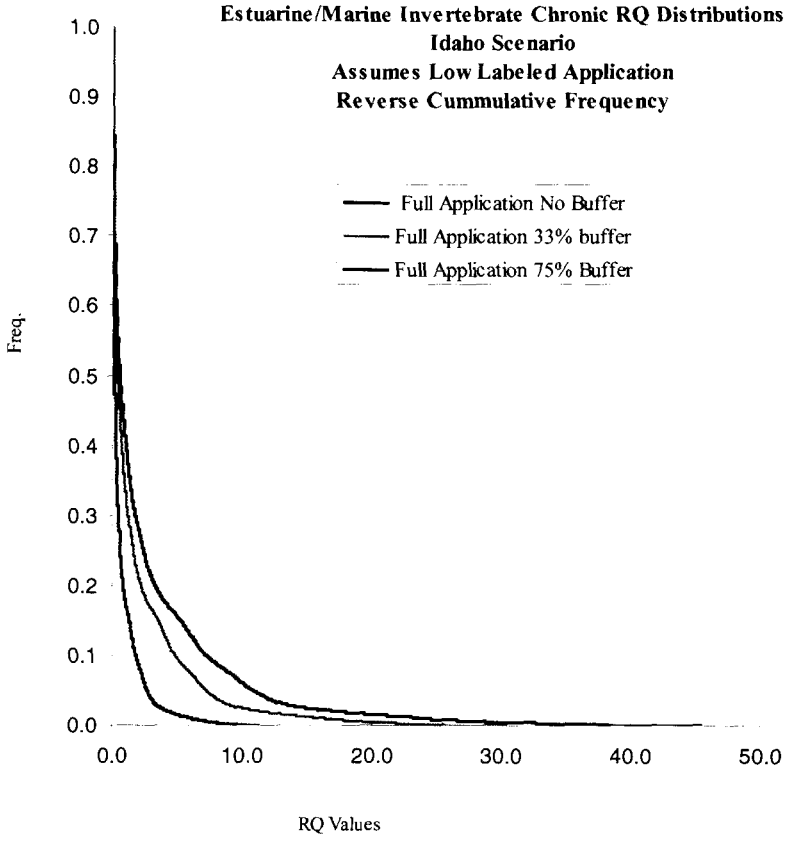

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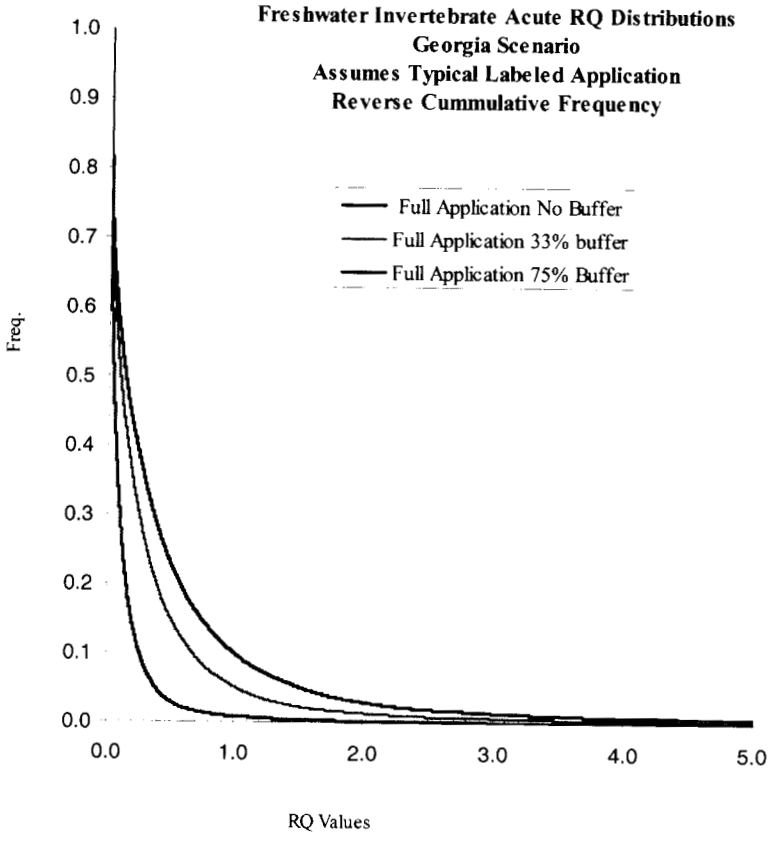

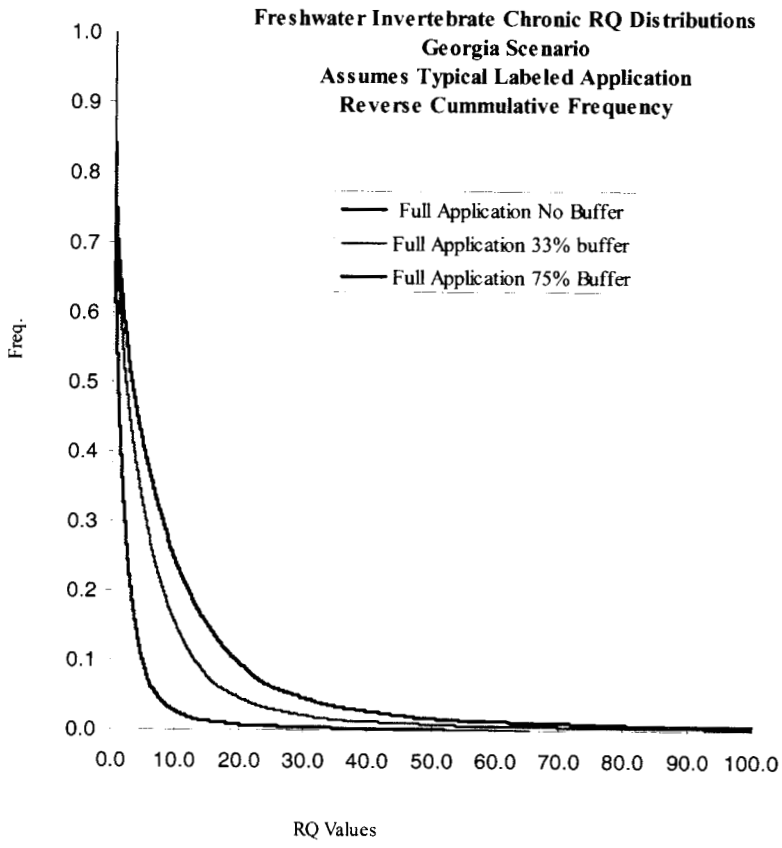

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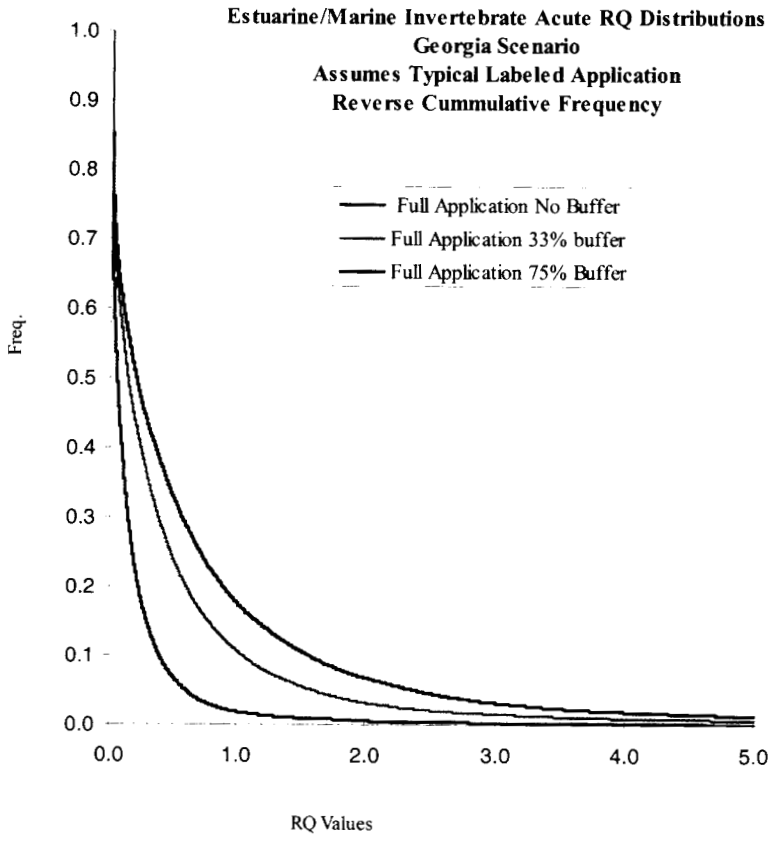
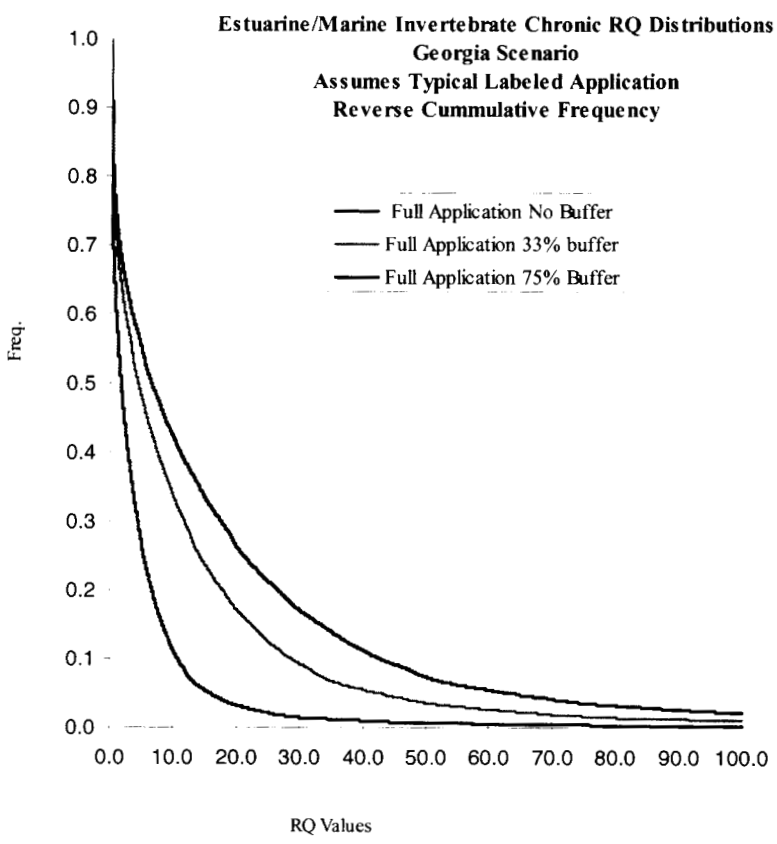
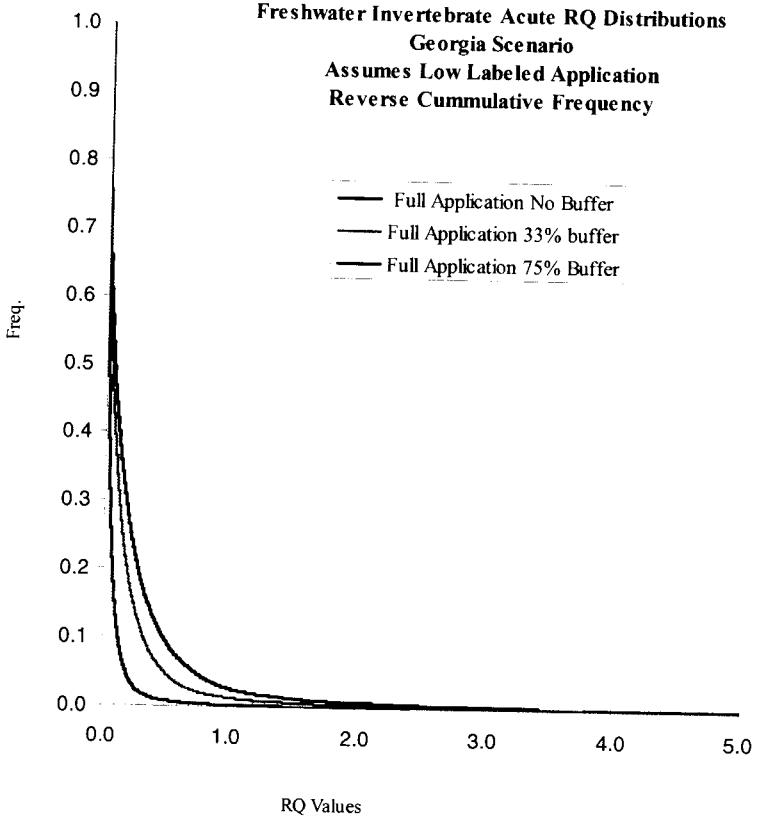
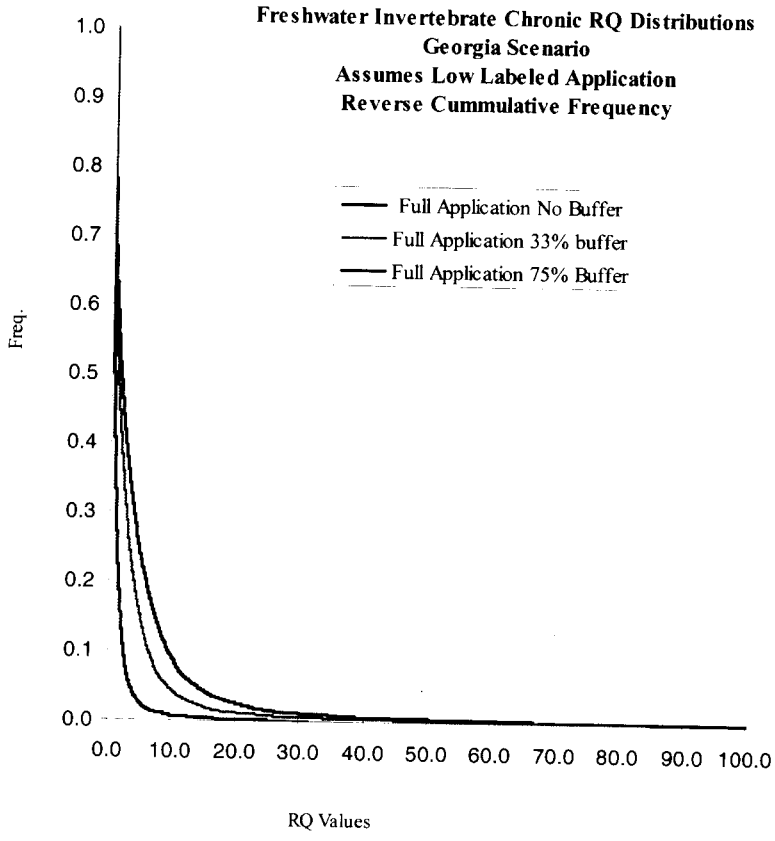
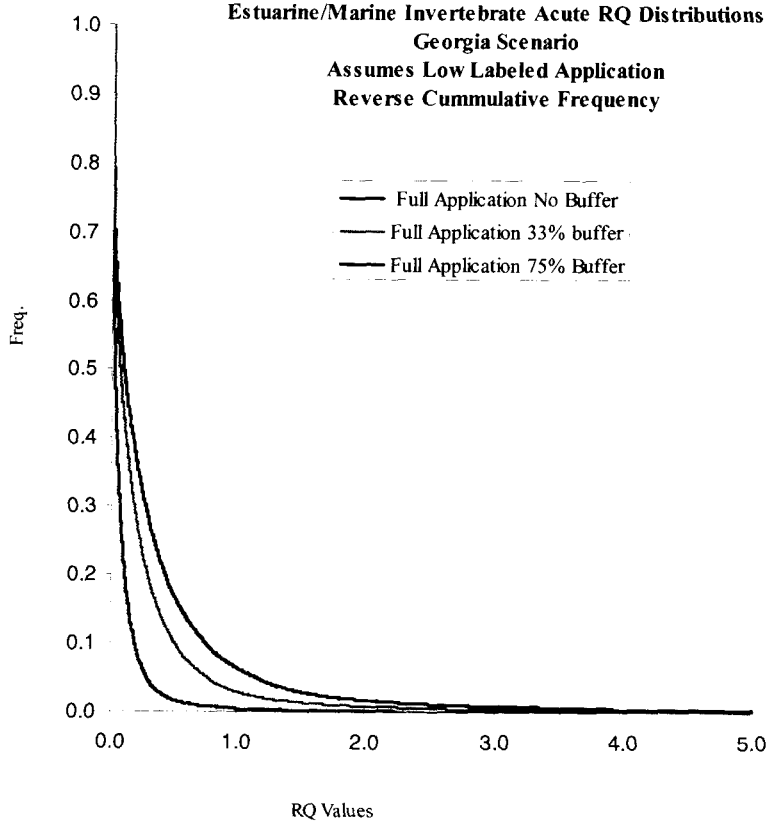
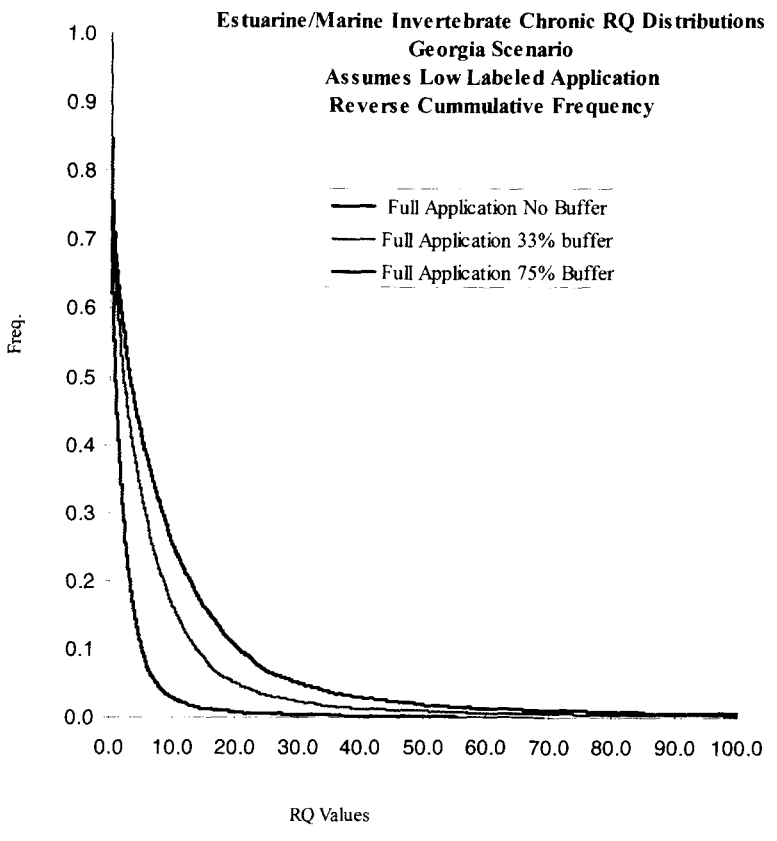





Freshwater Invertebrate Acute RQ Distributions
Georgia Scenario
Assumes Low Labeled Application
Reverse Cummulative Frequency
Full Application No Buffer
Full Application 33% buffer
Full Application 75% Buffer
Freq.
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0
1.0
2.0
3.0
4.0
5.0
RQ Values


Freshwater Invertebrate Chronic RQ Distributions
Georgia Scenario
Assumes Low Labeled Application
Reverse Cummulative Frequency
Full Application No Buffer
Full Application 33% buffer
Full Application 75% Buffer
Freq.
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
RQ Values

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