



**Note: This is presentation material only**

# Validation of SEPA Method for SLICE Loch Duich Field Trial

# Validation

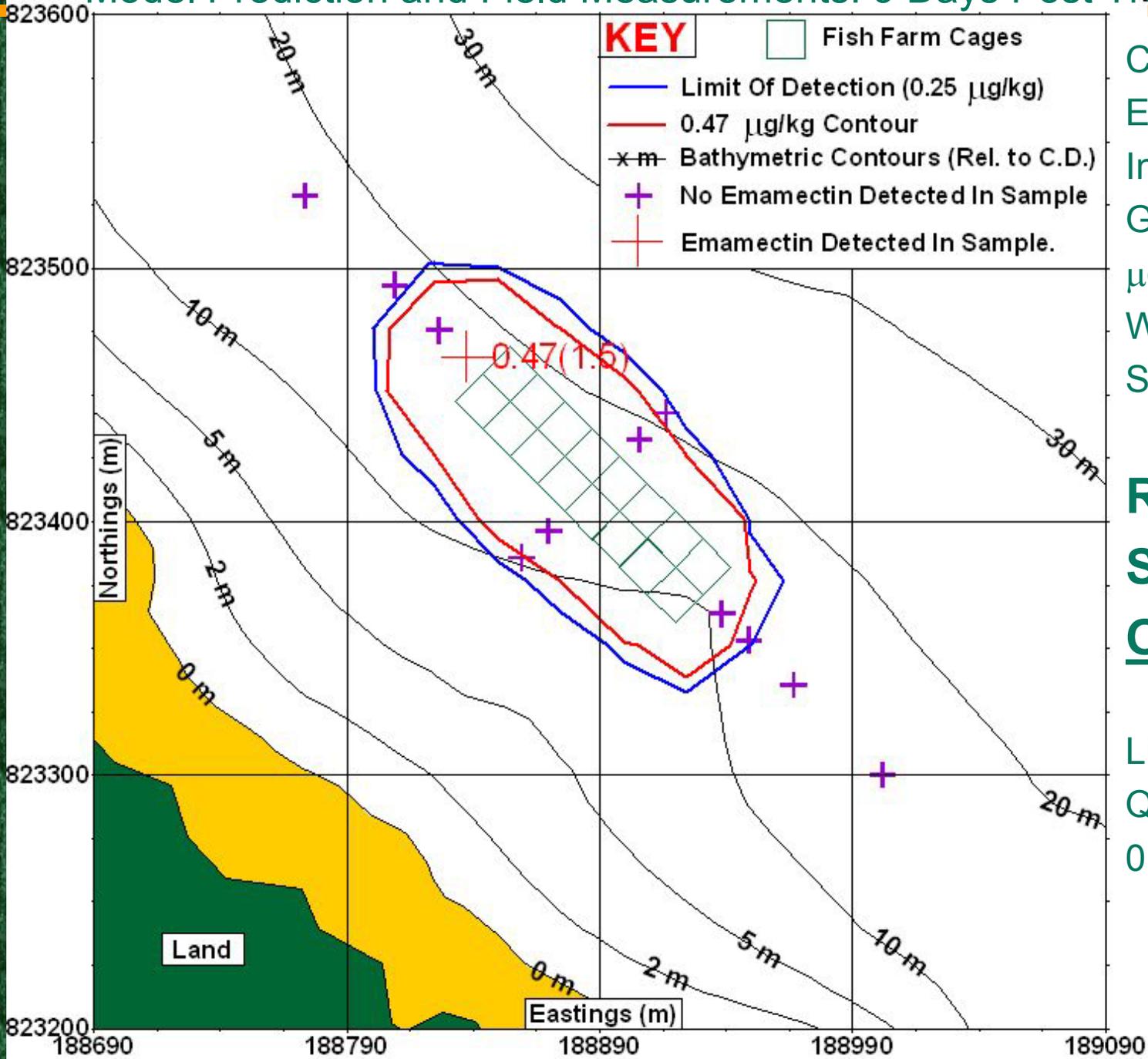
- EmBZ field trial data:
  - longitudinal sampling transects: 10m, 25m, 50m & 100m
  - transverse sampling transects: 10m & 25m
- 9, 32, 125, & 370 days after start of 7 day treatment
- consent method applied
- known biomass/feedload
- concurrent hydrographic data for first 15 days
- Loch Duich

- Loch Duich

## Map of SEPA Offices



# Model Prediction and Field Measurements: 9 Days Post Treatment

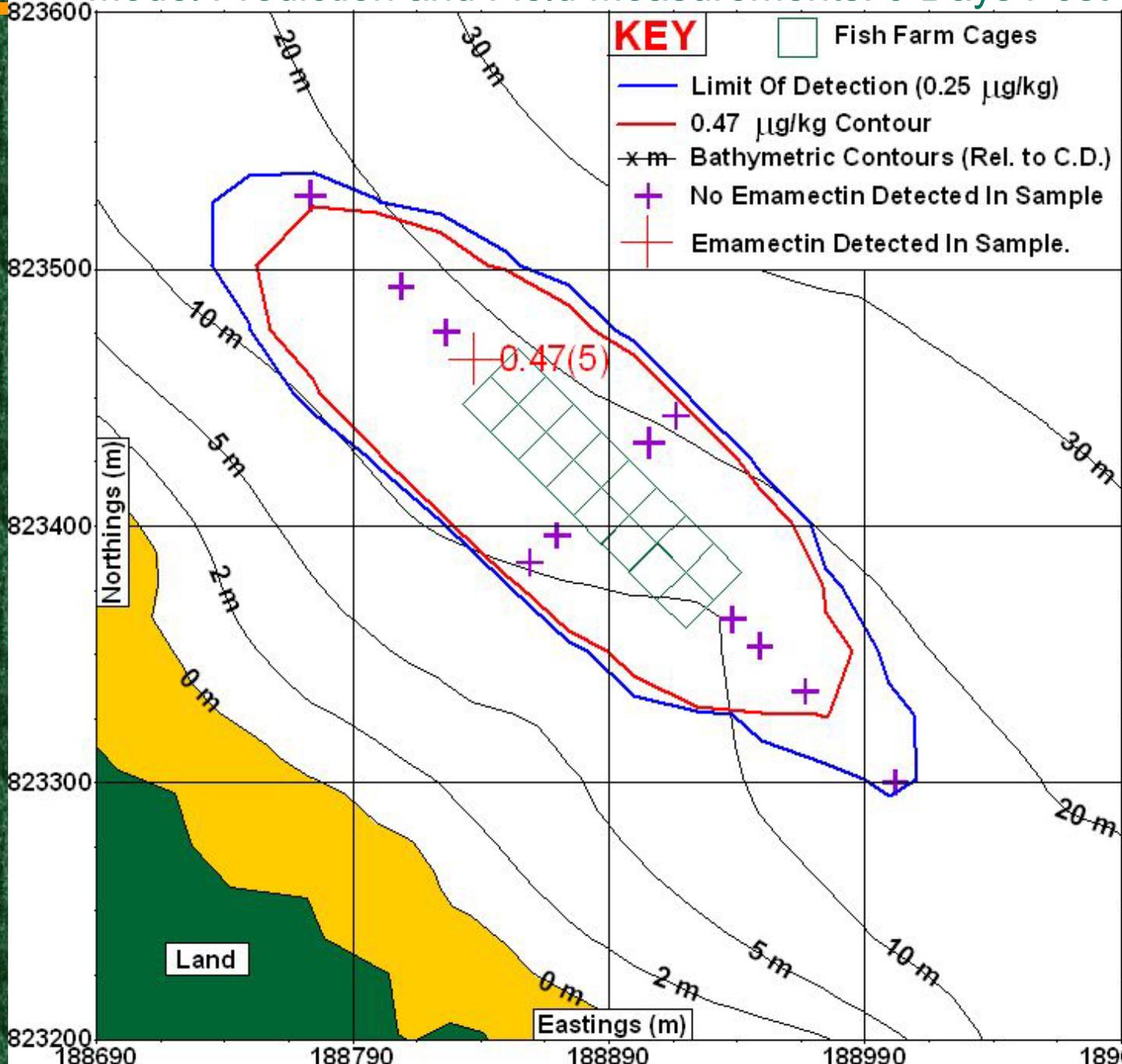


Concs. Of  
Emamectin  
In Sediment  
Given In  
μg/kg of  
Wet  
Sediment

**Resus.  
Switched  
On**

Limit of  
Quantification  
0.5 μg/kg

# Model Prediction and Field Measurements: 9 Days Post Treatment

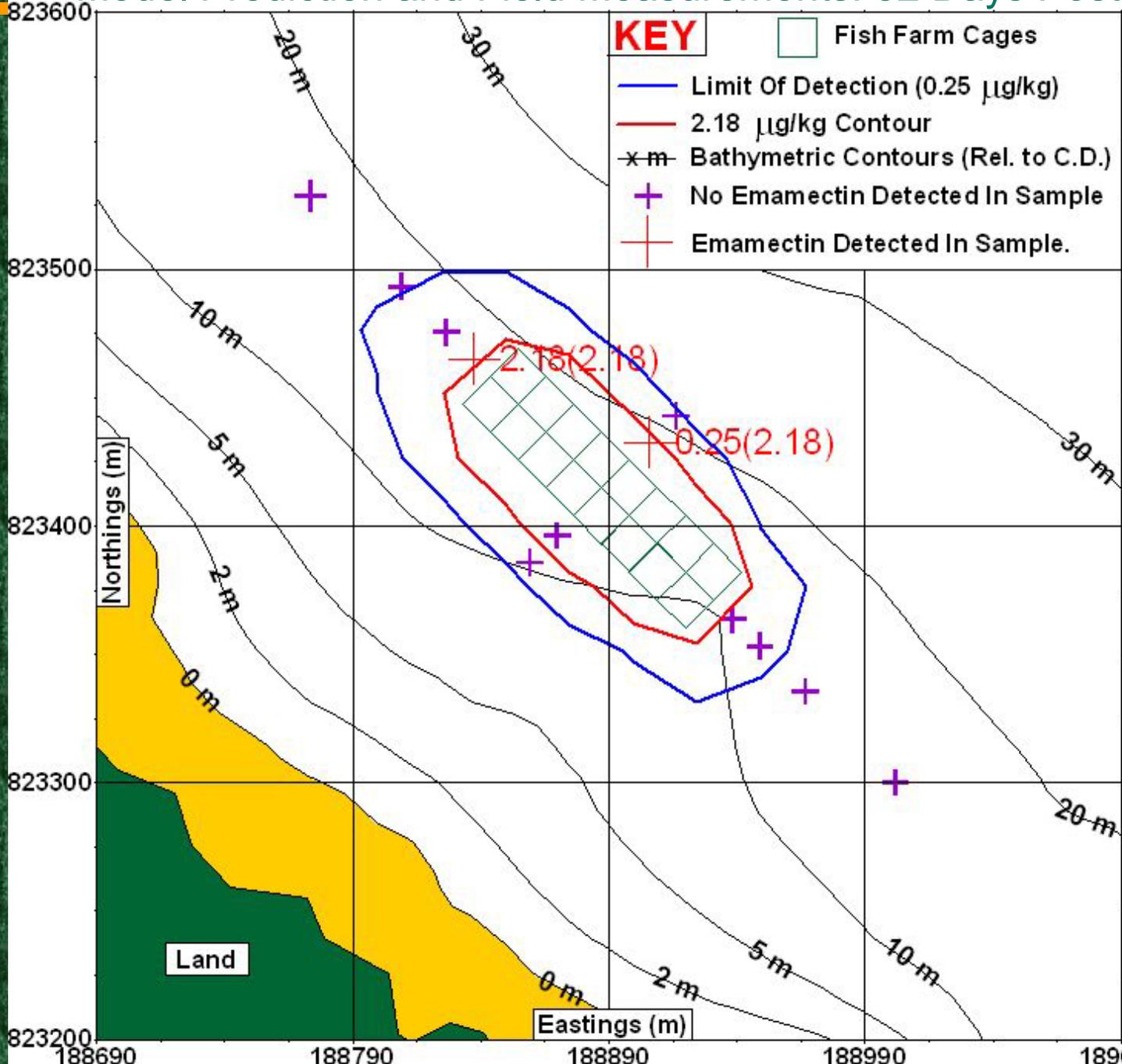


Concs. Of Emamectin In Sediment Given In µg/kg of Wet Sediment

**Resus. Switched Off**

Limit of Quantification 0.5 µg/kg

# Model Prediction and Field Measurements: 32 Days Post Treatment

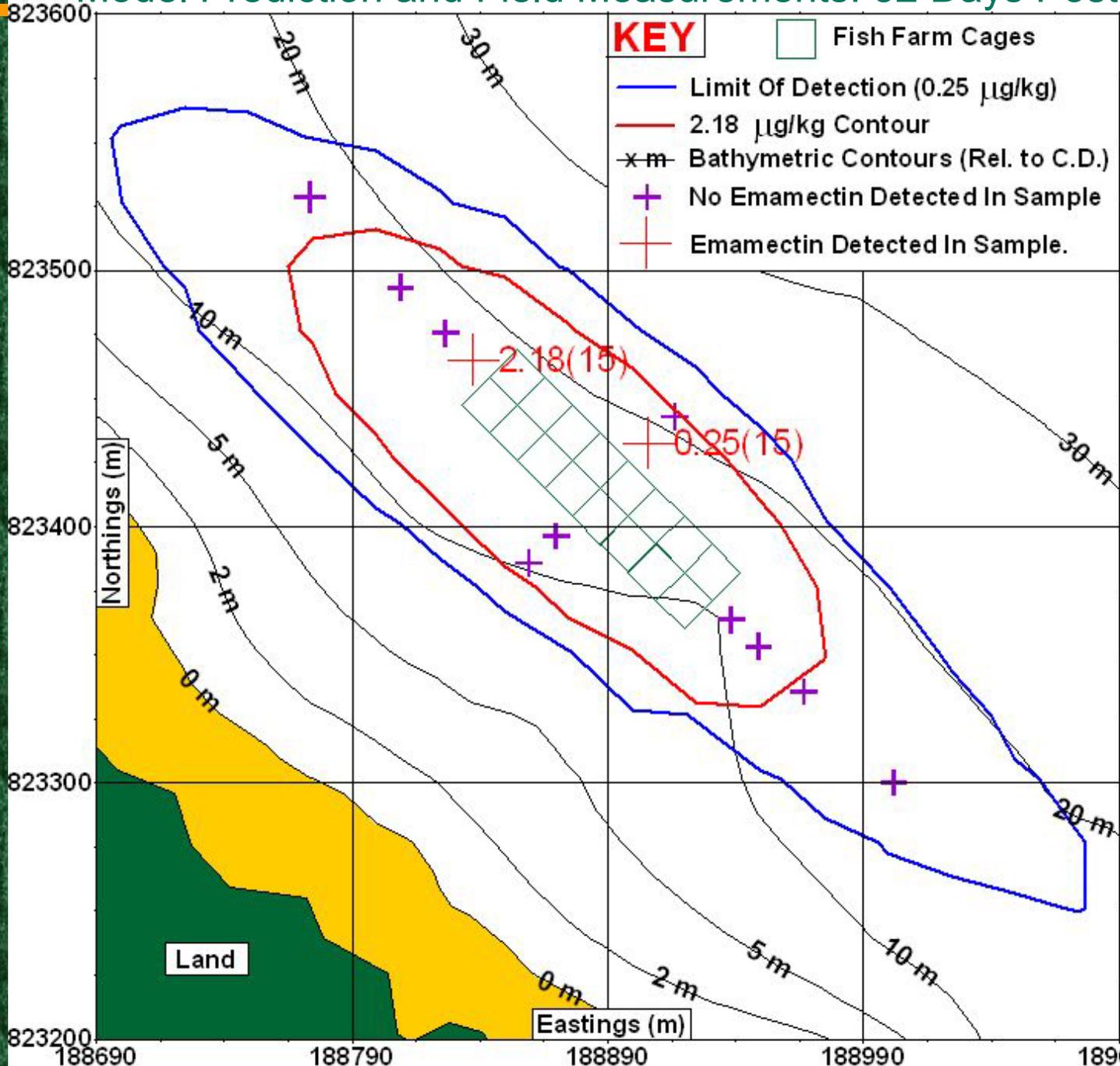


Concs. Of Emamectin In Sediment Given In  $\mu\text{g}/\text{kg}$  of Wet Sediment

**Resus. Switched On**

Limit of Quantification 0.5  $\mu\text{g}/\text{kg}$

# Model Prediction and Field Measurements: 32 Days Post Treatment

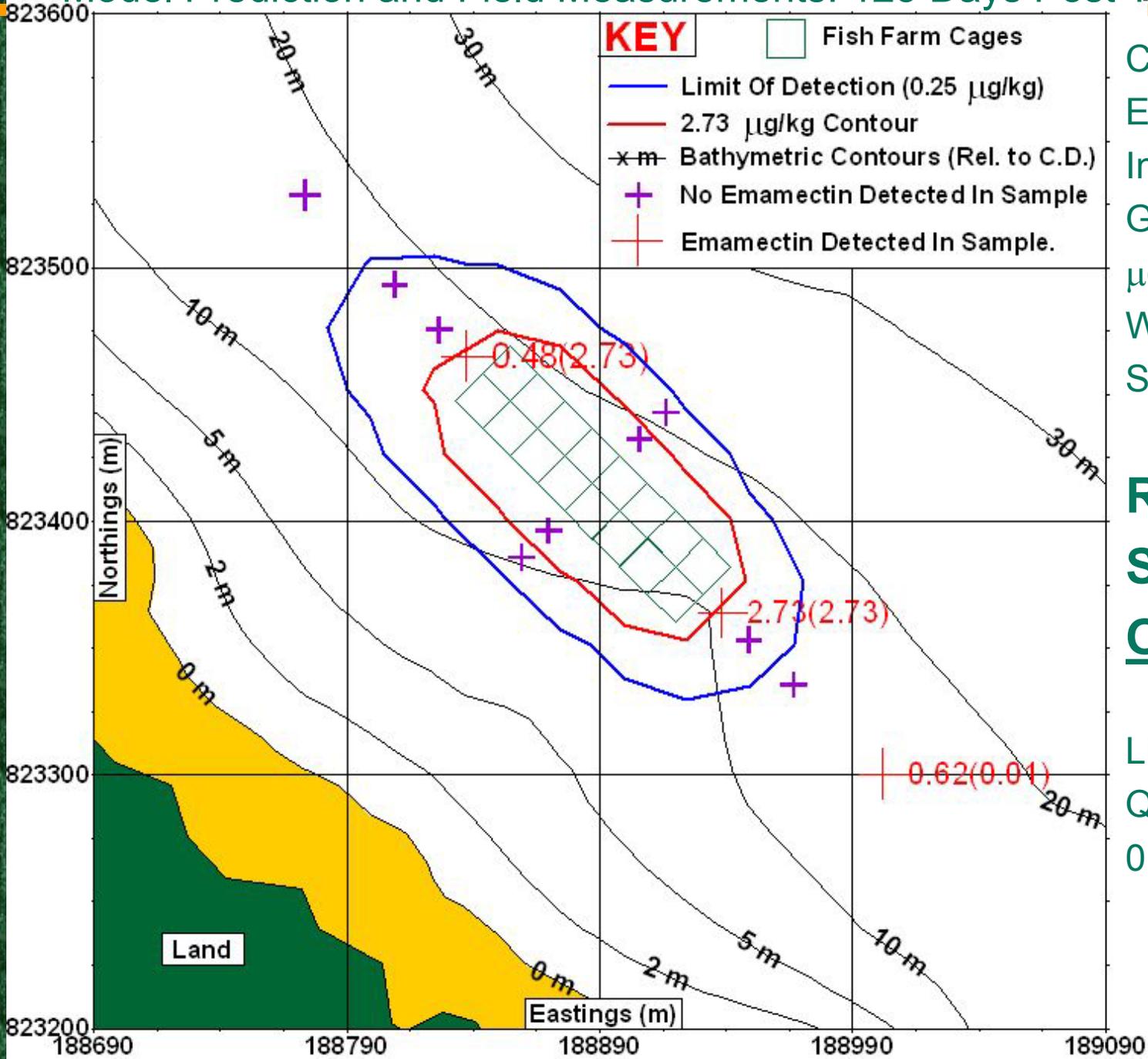


Concs. Of Emamectin In Sediment Given In  $\mu\text{g/kg}$  of Wet Sediment

**Resus. Switched Off**

Limit of Quantification  $0.5 \mu\text{g/kg}$

# Model Prediction and Field Measurements: 125 Days Post Treatment

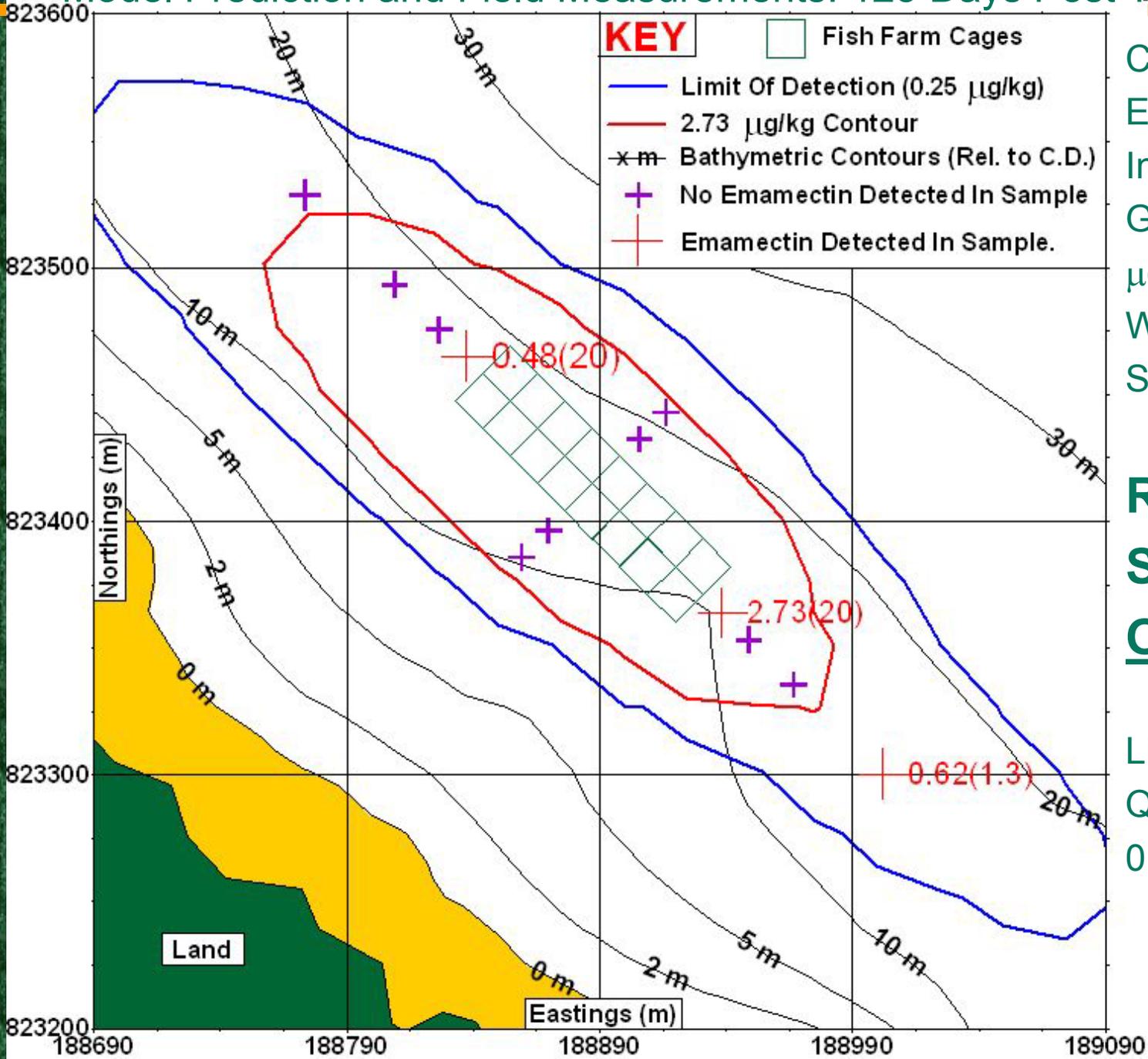


Concs. Of  
Emamectin  
In Sediment  
Given In  
 $\mu\text{g}/\text{kg}$  of  
Wet  
Sediment

**Resus.  
Switched  
On**

Limit of  
Quantification  
 $0.5 \mu\text{g}/\text{kg}$

# Model Prediction and Field Measurements: 125 Days Post Treatment

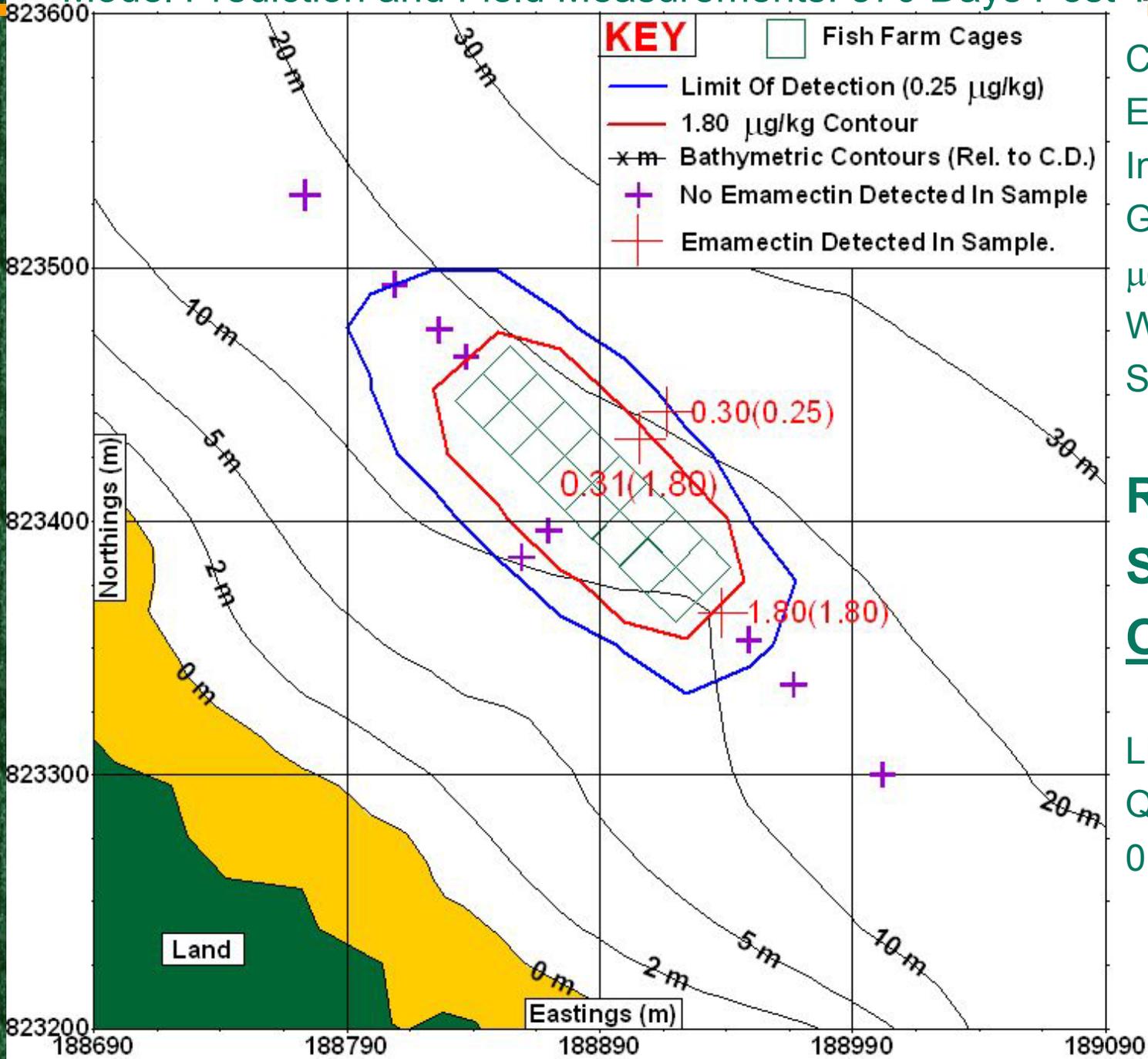


Concs. Of  
Emamectin  
In Sediment  
Given In  
 $\mu\text{g}/\text{kg}$  of  
Wet  
Sediment

**Resus.  
Switched  
Off**

Limit of  
Quantification  
 $0.5 \mu\text{g}/\text{kg}$

# Model Prediction and Field Measurements: 370 Days Post Treatment

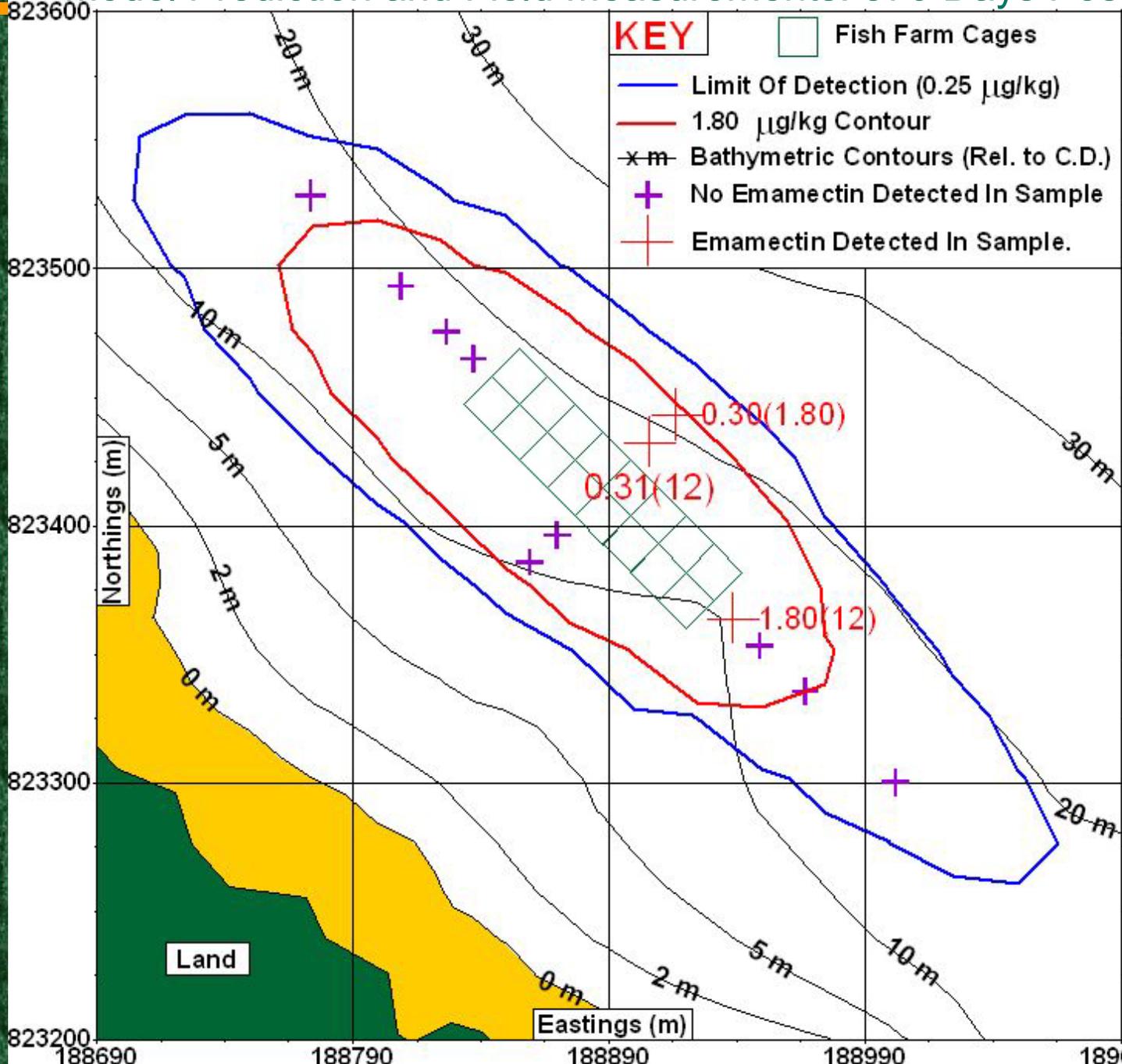


Concs. Of  
Emamectin  
In Sediment  
Given In  
 $\mu\text{g}/\text{kg}$  of  
Wet  
Sediment

**Resus.  
Switched  
On**

Limit of  
Quantification  
 $0.5 \mu\text{g}/\text{kg}$

# Model Prediction and Field Measurements: 370 Days Post Treatment



Concs. Of Emamectin In Sediment Given In  $\mu\text{g}/\text{kg}$  of Wet Sediment

**Resus. Switched Off**

Limit of Quantification  $0.5 \mu\text{g}/\text{kg}$

# Validation Summary

- consent method predictions show reasonable agreement with field data
- mass/area to mass/mass conversion assumes deposition in faecally modified sediment
- actual deposition is likely to be more patchy due to pulsed release of treatment regime
- resuspension critical to improved predictions
- resuspension events not reflected in current data result in variance between predictions and field data