

## PROJECT SHEET

**SUBCOMMITTEE:** Regulatory Capacity Building

**PROJECT TITLE:** Modelling Pesticide Transport to Groundwater

**PROJECT ID:** RC11-05-1205

**PROJECT LEADS:** Canada: Greg Malis  
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**INITIATION:** December 2005

**UPDATE:** May 2006

**GOAL:** To develop common modeling procedures for estimating pesticide concentrations in groundwater.

### PROJECT DESCRIPTION:

- Step 1** Agree on a conceptual groundwater model.
- Step 2** Find the most relevant subsurface transport models applicable to the conceptual model.
- Step 3** Agree on a model scenario development protocol.
- Step 4** Develop guidance for use of the model(s) in a regulatory context.

### BACKGROUND/RATIONALE:

In 2004, Health Canada's Pest Management Regulatory Agency published information outlining its initial direction on use of modelling to estimate pesticides in groundwater ([SPN-2004-01](#), *Estimating the Water Component of a Dietary Exposure Assessment*). Similarly, in 2004, the United States Environmental Protection Agency initiated evaluation of advanced methods for estimating pesticide concentrations in groundwater as part of their cumulative risk assessment of carbamate pesticides. Because groundwater resources in Canada and the United States are similar and many modelling aspects and needs are the same, working jointly and pooling resources will reduce redundancy and produce the best possible groundwater modeling protocol. Shared work will include establishing conceptual groundwater transport and behavioural parameters as well as developing guidance identifying required scenario characteristics plus modelling input selection.

## WORKPLAN

OBJECTIVES	ACTIVITIES	TIMEFRAME
1. Agree on a conceptual model	Canada and the United States to decide on a conceptual model.	Spring 2006 Completed: May 2006
2. Find the most relevant subsurface transport models applicable to the conceptual model.	Discuss advantages and disadvantages of relevant mathematical models toward satisfying the conceptual model.	Spring 2006 In progress: May 2006
	Pare model selections to one or two models.	Spring 2006
	Complete model testing, comparison or verification.	Summer 2006
3. Agree on a model scenario development protocol.	Proposals for scenario development protocol.	Summer 2006
	Draft scenario development protocol.	Fall 2006
	Finalize scenario development protocol.	Winter 2006
4. Develop guidance for use of the model(s) in a regulatory context.	Draft modeling guidance.	Spring 2007
	Finalize modeling guidance.	Summer 2007
	Submit documentation for peer review.	Fall 2007
	Address peer review comments.	Winter 2008
	Finalize documentation for joint publication by the Office of Pesticide Programs and the Pest Management Regulatory Agency.	