

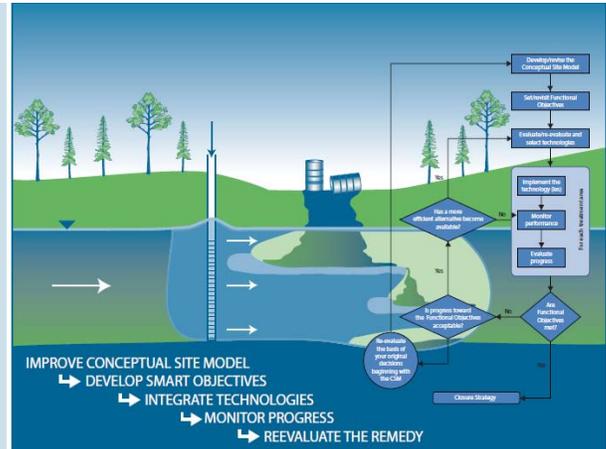


# ITRC Guidance Information for Academia

## Product Announcement (October 2011)

### ***Integrated DNAPL Site Strategy***

The ITRC Integrated DNAPL Site Strategy (IDSS) Team has developed *Integrated DNAPL Site Strategy*, a guidance document to assist site managers in developing an integrated DNAPL site management strategy incorporating five key features: conceptual site model, remedial objectives, treatment technologies, monitoring plans, and strategy reevaluation. This guidance is intended to assist in developing more efficient and effective integrated site management strategies through an iterative process. The document includes technology overviews and case studies to help solidify the importance of the integrated approach.



## Background

Chlorinated solvents are prevalent and persistent groundwater contaminants worldwide. Numerous chlorinated solvent–release sites have been assessed and remediation begun, typically focused on groundwater remediation. By the mid-1990s monitoring data showed that many remedies and operational decisions were based on an incomplete conceptual site model, poorly developed remedial objectives, and a misunderstanding of the performance of remedial technologies in a heterogeneous environment.

It is now recognized that management of chlorinated solvent sites is a lengthy process of site study, remediation, and post-remedial review. The IDSS Team members acknowledge that the document does not provide quick and easy answers to a difficult problem but rather includes a streamlined integrated approach for making efficient cleanup progress.

## Benefits

- ▶ Important DNAPL/solvent information is now incorporated into one document, thus serving as a good reference tool for project managers.
- ▶ Promotes agency consistency when developing, assessing, or critiquing proposals for DNAPL remediation.
- ▶ Facilitates project manager training.
- ▶ Facilitates transition of DNAPL solvent sites through the remediation process.
- ▶ Promotes sound decision-making process and helps develop a strategy to accelerate remediation.
- ▶ Encourages a systematic approach to total site remediation, including technology coupling.
- ▶ Strategy can apply to any chlorinated solvent–contaminated site regardless of the presence of DNAPL.
- ▶ Technology overviews and case studies included in document incorporate key site management elements.

## Actions

ITRC requests that your institution, with the help of your ITRC State Point of Contact (POC) and Academia Representative:

- ▶ Incorporate this guidance into your teaching curriculum.
- ▶ Request students visit the ITRC website and download applicable documents.
- ▶ Endorse and provide opportunities for students to attend FREE Internet-based training.
- ▶ Report to ITRC, through the contacts listed below, any use of IDSS and successes your institution has with this guidance.
- ▶ Report to ITRC, via your State POC, any successes or concerns related to this guidance.

## Resources

### Documents

- ▶ *Strategies for Monitoring the Performance of DNAPL Source Zone Remedies*, DNAPLs-5, 2004
- ▶ *In Situ Bioremediation of Chlorinated Ethene: DNAPL Source Zones*, BioDNAPL-3, 2008
- ▶ *Use and Measurement of Mass Flux and Mass Discharge*, MASSFLUX-1, 2010
- ▶ *Integrated DNAPL Site Strategy*, IDSS-1, 2011

### Links

Go to [www.itrcweb.org](http://www.itrcweb.org) and click on “Guidance Documents” to order or download documents. For more information and useful links about IDSS, go to [www.itrcweb.org/teampublic\\_IDNAPLSS.asp](http://www.itrcweb.org/teampublic_IDNAPLSS.asp).

ITRC has developed a FREE Internet-based training course for this product. The training starts with a summary of considerations needed for conceptual site model and includes information such as remedial objectives, technology categories, technology coupling, monitoring, and remedy evaluation. There is also an excellent discussion on orders of magnitude and how this concept relates to remediation.

ITRC’s Internet-based training courses assist potential users of the ITRC guidance document to understand when and how to use the document and the associated technology and/or approach. Participants can take the training “live” from the comfort of their own office or access archives of past classes at their convenience. Through ITRC’s partnership with U.S. EPA’s Technology Innovation Program, ITRC delivers training courses via the Internet to reach a geographically dispersed audience of regulators, consultants, and other members of the environmental community. The training sessions last approximately two hours, cover technical and regulatory information specific to environmental technologies and innovative approaches, and are supported by consensus-based ITRC guidance documents.

**Cost:** Sponsored by ITRC and EPA with no cost for the participant  
**Registration:** <http://clu-in.org/studio/seminar.cfm> (opens 4–6 weeks prior to class date)  
**Associated guidance documents:** Available from [www.itrcweb.org](http://www.itrcweb.org)

If you have questions after completing the on-line registration, call (402) 201-2419 or send an e-mail to [training@itrcweb.org](mailto:training@itrcweb.org).

### Contacts

Integrated DNAPL Site Strategy Team Leader  
 Najj Akladiss, Maine DEP, P.E.  
[naji.n.akladiss@maine.gov](mailto:naji.n.akladiss@maine.gov), (207) 287-7709



ITRC is affiliated with  
 the Environmental  
 Council of the States



**Regulatory Acceptance for New Solutions**  
 Documents, free Internet-based training, contact information

[www.itrcweb.org](http://www.itrcweb.org)