

# In Situ Bioremediation at Superfund Sites

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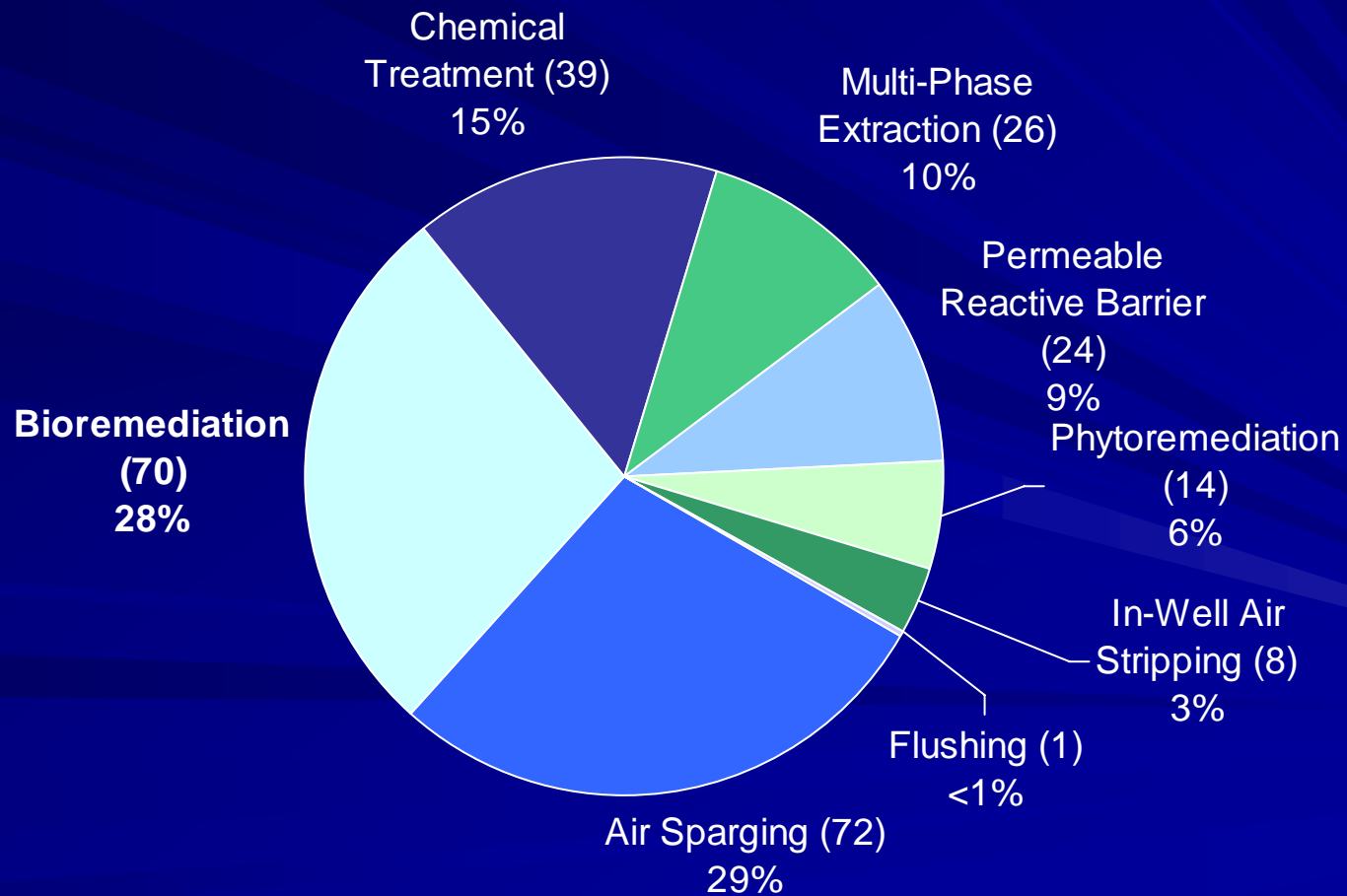
Evaluation of In Situ Bioremediation of Chlorinated Organic Solvents in Ground Water

National Association of Remedial Project Managers (NARPM) Annual Training Conference

Portland, Oregon, July 9, 2008.



In Situ Groundwater Treatment Projects (FY 1982 - 2005)  
Total Number of Projects = 254  
EPA's Treatment Technologies for Site Cleanup: Annual  
Status Report - 12th Edition



# In Situ Groundwater Treatment Projects

(ASR 12th Table 9)

Technology	<u>ASR 11<sup>th</sup> Edition</u> Number of New Projects Selected in FY 2000 – 2002*	<u>ASR 12<sup>th</sup> Edition</u> Number of New Projects Selected in FY 2002 – 2005**
<b>Bioremediation</b>	<b>21</b>	<b>26</b>
Chemical Treatment	15	17
Permeable Reactive Barrier	7	6
Air Sparging	10	6
Phytoremediation	3	5
Multi-Phase Extraction	4	5
In-Well Air Stripping	3	2
Flushing	2	0
<b>Total</b>	<b>65</b>	<b>67</b>

# Status of In Situ Groundwater Treatment Projects by Technology

(ASR 12th Table 10)

Technology	Predesign/ Design	Design Complete/Being Installed	Operational	Completed	Total
Air Sparging	9	5	38	20	72
<b>Bioremediation</b>	<b>29</b>	<b>4</b>	<b>27</b>	<b>10</b>	<b>70</b>
Chemical Treatment	19	2	9	9	39
Permeable Reactive Barrier	6	1	15	2	24
Multi-Phase Extraction	6	1	14	5	26
Phytoremediation	3	1	10	0	14
In-Well Air Stripping	1	1	6	0	8
Flushing	0	1	0	0	1
<b>Total</b>	<b>73</b>	<b>16</b>	<b>119</b>	<b>46</b>	<b>254</b>