



# SOLANO COUNTY

## Department of Resource Management

675 Texas Street, Suite 5500  
Fairfield, CA 94533  
[www.solanocounty.com](http://www.solanocounty.com)

Telephone No: (707) 784-6765  
Fax: (707) 784-4805

Birgitta Corsello, Director  
Cliff Covey, Asst Director

### Site Conceptual Model Requirements

Site Conceptual Model (SCM). The SCM is a representation of site conditions developed using readily available (existing) data that illustrates the relationship between contaminants, retention/transport media, and receptors. It is generally documented by written descriptions and supported by maps, geological cross-sections, tables, diagrams and other illustrations, which shall be updated whenever additional information is acquired. The minimum information that must to be compiled into the SCM includes:

- Local and regional plan view maps showing location of sources, extent of contamination (i.e., an interpretive drawing—not a plot of laboratory results), direction and rate of groundwater flow, and locations of potential receptors (i.e., a sensitive receptor survey and utility survey). The sensitive receptor survey will consider all relevant pathways, including onsite/offsite indoor and outdoor air.
- The sensitive receptor survey shall include a file search for all documented surface water sources and water wells with in 2,000 feet of the site. All surface water and water wells (active or abandon) shall be depicted on a scaled vicinity map illustrating the site in relation to the water sources. Information for both documented and undocumented wells shall be submitted to this Department for review. The Survey must also include field verification of well records including a drive-by survey of downgradient facilities/residences within 500 feet, a canvas of any parks/schools within 500 feet, and contact with the local water purveyors. The Sensitive Receptor Survey Report shall incorporate information regarding each receptor including; type of receptor (creek, river, irrigation well, domestic well, etc), address or approximate location,, well use, status, well construction, copies of well logs, well owners, and any testing results performed on the wells.
- The utility survey shall include all underground utilities located on and surrounding the property. Findings from the survey shall include maps illustrating the location, type, depth, and flow (as applicable) for all underground utilities for the property. The map shall also illustrate the legal property boundaries, locations of onsite buildings, for tank excavation, etc.
- Geologic cross-section maps showing subsurface geologic features, man-made conduits, and interpretive drawings of the extent of impact.
- Plots of chemical concentrations vs. time (e.g., if groundwater monitoring is being conducted, plots should be shown for each monitoring well which has had detectable levels of constituents).
- Exposure evaluation flowchart (similar to Figure 2 in ASTM's *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites*).
- Plots of chemical concentrations vs. distance from the source.
- Summary tables of chemical concentrations in different media.

Building & Safety  
David Cliche, Chief  
Building Official

Planning Services  
Mike Yankovich  
Program  
Manager

Environmental Health  
Terry Schmidtbauer  
Program Manager

Administrative  
Services  
Daniel Bellem  
Staff Analyst

Public Works-  
Engineering  
Paul Wiese  
Engineering Manager

Public Works-Operations  
Rick O'Neill  
Operations Manager



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**Site Conceptual Model Requirements, cont.**

- Boring and well logs (including construction/screening).
- Information regarding historic, current, and proposed remedial action.
- Evaluation of the type of remediation conducted, mass removed, and why it worked or didn't work.
- Identify and characterize source(s) and describe release scenario. Is an existing source still present? Where?
- Calculate residual mass in the soil and groundwater for each constituent.

The purpose of the SCM is to save time and money by summarizing important site issues, and by providing a guide for future assessment and remediation. After compiling information into the SCM, it should be readily apparent if, and what, future actions are needed. This is especially important when there is a change in the personnel providing regulatory oversight, State Funding or environmental consulting. In addition, the SCM expedites the review of work plans, cost pre-approvals, reimbursement requests, no further action requests, and appeals (if necessary).

State Fund personnel have indicated that the costs associated with preparing the SCM are reimbursable. The cost associated with updating the SCM each time information is acquired should be included in the cost of reporting that new information. You should submit your consultant's cost-estimate to the Fund for pre-approval.