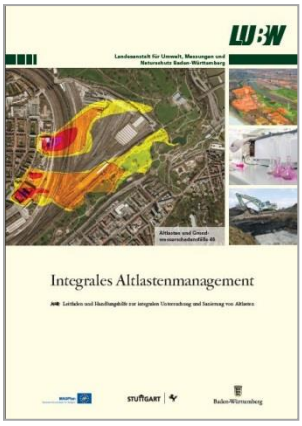
Comprehensive Contaminant Management

INTEGRALES ALTLASTENMANAGEMENT

In urban areas the single case treatment approach for environmental contamination and potentially contaminated areas has shown it´s limitations. Tracking the paths between a groundwater contamina-tion and a pollution source is often not possible due to spatial and sequential uncertainties. The guidelines and recommendations „Integrales Altlastenmanagement“ (Comprehensive Contaminant Management) offer public administrations and local authorities practical steps to perform environmental investigations and remediation. In addition, the guidelines contain information and suggestions for practical implementation to consultants and affected persons. Opportunities and possibilities for optimal further action are introduced, to ensure limited resources can be utilized efficiently. The guidelines and recommendations „Integrales Altlastenmanagement“ were developed within the framework of the EU-Life+ Project MAGPlan (management plan to prevent threats from point sources on the good chemical status of groundwater in urban areas). The department for environment, monitoring and ecology in Baden-Württemburg (LUBW Landesanstalt für Umwelt, Messungen und Naturschutz Baden-Württemberg), an associate project partner to the provincial authority in the capital city of Stuttgart (Landeshauptstadt Stuttgart), has the task of accompanying the project with professional expertise and supporting uniformity in action and the communication of results in Baden-Württemberg.



Part 1 guideline „Leitfaden Integrale Untersuchung“ describes the methods during planning and im-plementation of comprehensive environmental investigations and summarizes fundamentals, tech-niques and experiences that have been gathered and applied successfully. Part 1 is structured as fol-lows: Chapter 3 explicates the fundamentals of comprehensive environmental management. In addi-tion to the prerequisites and goals of a comprehensive approach and the definition of terms there are descriptions of legal foundations, operation paths of governing authorities and possibilities of funding. Furthermore, requirements on the project organization and quality control as well as recommendations for public relations are described. Chapter 4 provides an overview of the processes of comprehensive environmental management including the different steps during investigation, evaluation and prioritization of further actions, which are described in more detail in the following chapters. In Chapter 5 the collection and processing of data as well as

data presentation and analysis are handled. Chapter 6 deals with the development of modeling, including hydro-geological modeling with conceptional aquifer- and substance models as well as numerical models, which can be additionally applied to complex cases. Chapter 7 includes a selection of investigation methods and evaluation processes, which are of particular interest when dealing with comprehensive investigations. In Chapter 8 the comprehensive evaluation of all information is described with the goal of associating a groundwater contamination to the relevant contamination source. When this association has been successfully performed, a risk assessment and prioritization of investigation and/or remedial measures can be set down according to specifications in Chapter 9. A framework remediation concept can define remedial goals and describe all remedial measures within relevant and specific contamination sources.

Part 2 „Handlungshilfe Weiterführende Konzepte“ deals with recommendations for furthergoing concepts. Chapter 10 describes comprehensive risk assessments and methods of prioritization, Chapter 11 deals with comprehensive remediation strategies. Both approaches support a sensible continuation of comprehensive investigations, touching the interfaces of regional and urban development and surface recycling. The groundwater management plan, an innovative design tool, is introduced. It represents an approach for communities to develop a framework remedial concept to deal with extensive and complex groundwater contaminations and to prepare the appropriate investigations and remedial measures. Perspectives and opportunities of the comprehensive approach as well as methods of prioritization and implementation not yet anchored in daily practice, are summarized in Chapter 12.