Table 6Sa. Subsurface flow: subunit headings.

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| **Unit: SUBSURFACE FLOW** |
| ***Presentation 1 of 4*** |
| Direction of movement of groundwater |
| Contents |
| 1) Introduction (motivation for studying groundwater) |
| 2) Search for an answer to the question “where does groundwater move to?” |
| ***Presentation 2 of 4*** |
| Darcy’ law |
| ***Presentation 3 of 4*** |
| Velocity of groundwater movement & of contaminant spreading (advection velocity) |
| ***Presentation 4 of 4*** |
| Until now, what did we learn/what can we do with what we learned? |

Table 6Sb. Soil-contaminant interaction: subunit headings.

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| **Unit: SOIL-CONTAMINANT INTERACTION** |
| ***Presentation 1 of 4*** |
| 1) Motivation for studying soil-contaminant interaction |
| 2) Concepts and terms |
| 3) Prerequisites from physics, chemistry and soil mechanics |
| ***Presentation 2 of 4*** |
| Interaction between pairs of liquid phase – gaseous phase |
| 1) Nonaqueous contaminant – gaseous phase |
| 2) Contaminant in aqueous solution – gaseous phase |
| ***Presentation 3 of 4*** |
| Interaction between phases in the saturated zone (also applicable to the unsaturated zone as well!) |
| 1) Nonaqueous phase – aqueous phase |
| 2) Solid phase – aqueous phase |
| ***Presentation 4 of 4*** |
| Summary & main points |
| Learning outcomes |

Table 6Sc. Contaminant transport in groundwater (quantitative): subunit headings.

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| **Unit: TRANSPORT OF SOLUTES (DISSOLVED CONTAMINANTS) IN SATURATED SOIL: ΜATHEMATICAL DESCRIPTION** |
| ***Presentation 1 of 4*** |
| Transport due to diffusion |
| ***Presentation 2 of 4*** |
| Transport due to advection+diffusion+dispersion |
| ***Presentation 3 of 4*** |
| General equation for solute transport and analytical solutions for specific conditions |
| ***Presentation 4 of 4*** |
| Three solved problems & learning outcomes |