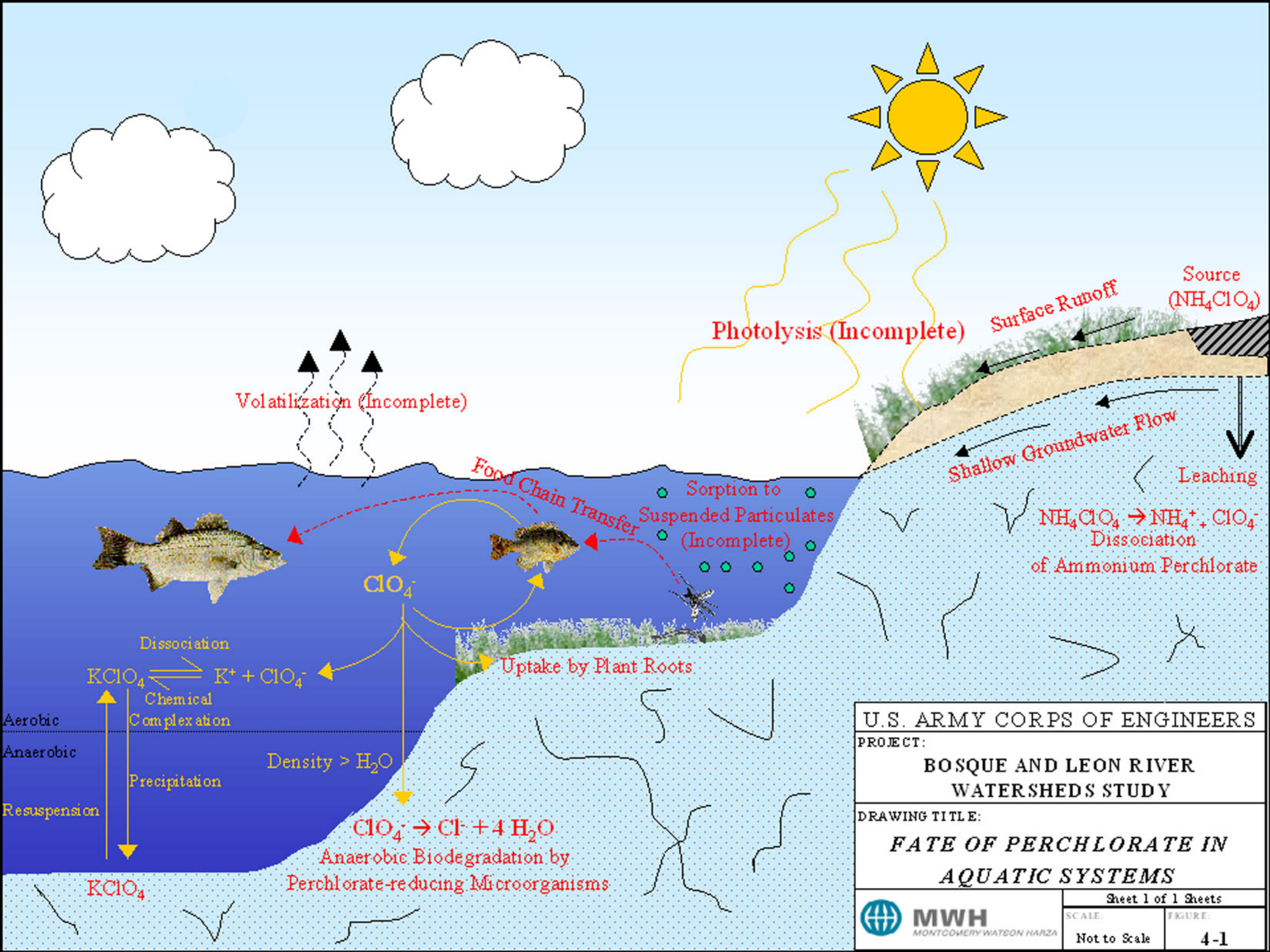
Photolysis (Incomplete)
Surface Runoff
Source
(NH_4ClO_4)
Volatilization (Incomplete)
Shallow Groundwater Flow
Leaching
Food Chain Transfer
Sorption to
Suspended Particulates
(Incomplete)
$NH_4ClO_4 \rightarrow NH_4^+ + ClO_4^-$
Dissociation
of Ammonium Perchlorate
ClO_4^-
Dissociation
$KClO_4 \rightleftharpoons K^+ + ClO_4^-$
Chemical
Complexation
Uptake by Plant Roots
Aerobic
Anaerobic
Density > H_2O
Precipitation
Resuspension
$ClO_4^- \rightarrow Cl^- + 4\,H_2O$
Anaerobic Biodegradation by
Perchlorate-reducing Microorganisms
$KClO_4$
U.S. ARMY CORPS OF ENGINEERS
PROJECT:
BOSQUE AND LEON RIVER
WATERSHEDS STUDY
DRAWING TITLE:
FATE OF PERCHLORATE IN
AQUATIC SYSTEMS
MWH
MONTGOMERY WATSON HARZA
Sheet 1 of 1 Sheets
SCALE:
Not to Scale
FIGURE:
4-1