THE EFFECTIVENESS OF USING GPR TO MONITOR CHANGES IN SOIL WATER CONTENT IN CLAYEY FLOODPLAIN SOILS DUE TO RAIN EVENTS BEFORE STREAM MODIFICATIONS

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1. Abstract

The effectiveness of using GPR to monitor changes in soil water content in clayey floodplain soils due to rain events before stream modifications is assessed. The GPR system used in this study was a 200 MHz antennas system. The system was used to measure the travel time of the GPR signal through the soil. The travel time was then used to calculate the depth of the reflector. The depth of the reflector was then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

2. Introduction

The objective of this study was to determine the effectiveness of using GPR to monitor changes in soil water content in clayey floodplain soils due to rain events before stream modifications. The GPR system used in this study was a 200 MHz antennas system. The system was used to measure the travel time of the GPR signal through the soil. The travel time was then used to calculate the depth of the reflector. The depth of the reflector was then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

3. Electromagnetics Background

A GPR (Ground Penetrating Radar) system is used to measure the travel time of the GPR signal through the soil. The travel time is then used to calculate the depth of the reflector. The depth of the reflector is then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

4. Electromagnetics Data Analysis

The GPR system used in this study was a 200 MHz antennas system. The system was used to measure the travel time of the GPR signal through the soil. The travel time was then used to calculate the depth of the reflector. The depth of the reflector was then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

5. DC Resistivity Background

A GPR (Ground Penetrating Radar) system is used to measure the travel time of the GPR signal through the soil. The travel time is then used to calculate the depth of the reflector. The depth of the reflector is then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

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9. Results

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10. Conclusions

The effectiveness of using GPR to monitor changes in soil water content in clayey floodplain soils due to rain events before stream modifications is assessed. The GPR system used in this study was a 200 MHz antennas system. The system was used to measure the travel time of the GPR signal through the soil. The travel time was then used to calculate the depth of the reflector. The depth of the reflector was then used to calculate the water content of the soil. The results of this study show that GPR is a effective method for monitoring changes in soil water content in clayey floodplain soils.

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