

SMARTCOVER[®]

Sewer Monitoring
and Alarm System



- 7/24 Monitoring
- Real Time Alarms
- Trending Data
- Detect Intrusions
- Lift Station Backup
- No Confined Space Entry
- Cost Effective
- Stand-alone System

Prevent Sewer Spills...
...Avoid Fines & Bad PR



HADRONEX ..it Happens[™]

FEATURES

SmartCover® Features

- Small, easy-to-install sensor module mounted directly on manhole or enclosure cover
- Self-contained - no external connections, trenching or A/C power required
- RF antenna mounts on top of cover
- Ultrasonic sensor continuously measures water level to 1" accuracy
- Direct and immediate communication of alarms to responsible personnel
- One year between SmartCover® PowerPack changes
- Continuous data logging with remote web display
- Historical data always available



SmartCover® Field Unit Specifications

Weight.....	4.5 lbs.
Size.....	2" x 6" x 6"
Power.....	3.6 VDC input, provided by on-board SmartCover® PowerPack
Battery Life.....	One year, normal operating conditions
Environmental.....	IP-67, NEMA 6P, shock resistant, survives submersion
Mounting.....	Magnetic or mechanical, depending on application
Antenna Mounting.....	Low profile or high gain models. Traffic hardened
Sensor Cable Lengths.....	Sized to fit application
Level Sensor Range.....	Standard: 3 inches to 86 inches. 20 ft. range available.
Standard Measurements.....	Water level, intrusion, temperature, signal strength, battery voltage, pressure (option)

Communications

Method	2-way wireless digital radio, connects to existing nationwide networks
Status Reporting	Immediate upon alarm, reports on request, and "heartbeat" reporting every 10 hours
Alarms	High water level and intrusion on movement of manhole cover or hatch
Alerts	Battery low, sensor failure, communications failure

Secure Private Customer Web Page

Content	Level and temperature data, alarm and alert history, alarm acknowledgement, data logging, maintenance logs, site-specific information, downloadable data into spreadsheet format
Security	Password protected, Secure Sockets Layer, 128-bit encryption

Data Management and Two way Communication is Standard

- Your data accessed via Hadronex secure website
- Security through password protection
- Data can be downloaded to Excel™ spread sheets
- Commands can be sent to unit via internet to change alarm distance
- Multiple SmartCover® units provide sewer system status monitoring
- Additional software not required
- System is always powered up and communicating

APPLICATIONS

Manhole Monitoring Spill Prevention

SmartCover® monitors water level and alarms at pre-set high water condition.
PREVENTS SPILLS

Security Intrusion Detection

SmartCover® alarms when manhole cover or hatch cover is lifted.
NOTIFICATION OF UNAUTHORIZED ENTRY AND ILLEGAL DUMPING

Lift Station Independent Back-up

SmartCover® monitors water level in wet wells and alarms at pre-set high water condition.
PREVENTS LIFT STATION OVERFLOW

Remote Site Monitoring

SmartCover® monitors remote sites that have difficult access.
SPILL PREVENTION - REMOTE SECURITY

Sensitive Site Protection

SmartCover® protects ecologically fragile areas, below grade level buildings, hospitals, schools and shopping centers.
PROTECTS ENVIRONMENT

Storm Drain Monitoring

SmartCover® monitors water level in storm drains and sumps and alarms for high water level.
DETECTS STORM DRAIN SURCHARGES

Force Main Pressure Sensing

SmartCover® measures, tracks and logs pressure in a force main and alarms for pressure loss.
PROTECTS ENVIRONMENT FROM SEWER LINE BREAKS

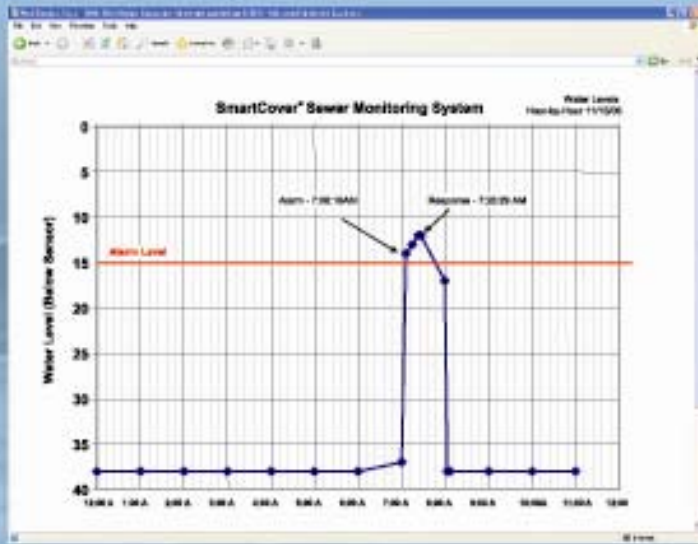
Private Sewer Spill Protection

SmartCover® monitors water levels in private sewer laterals and alarms at pre-set high water condition. Unauthorized entry protection provided.
PROTECTS PRIVATE SEWER LATERALS THAT FEED UTILITY SEWER LINES

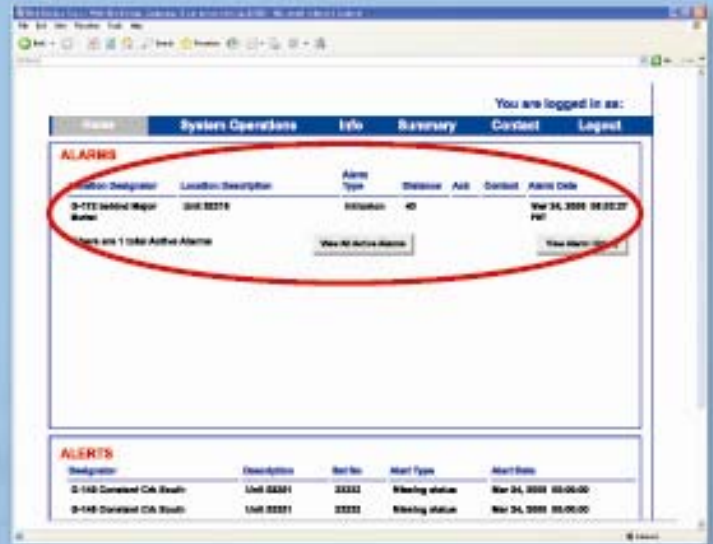
Utility Vault Protection

SmartCover® monitors utility vaults for high water, intrusions and hazardous conditions.
PREVENTS EQUIPMENT DAMAGE DUE TO WATER ENTRY

KNOW WHAT'S GOING ON IN YOUR SEWER BECAUSE... ..IT HAPPENS™



Detail of surcharge alarm showing results of early response. A sewage spill was prevented.



Example of intrusion alarm at SmartCover site. Intruder was caught.

INBOX

SMARTCOVER ALARM
SURCHARGE
115TH AND MAIN
12 IN
6:02:42 PM
JUNE 5, 2007

ERASE REPLY OPTIONS



Typical text display of surcharge alarm.

Winner of the
California Association of Sanitation Agencies
Technical Achievement Award
with the Fallbrook Public Utility District.



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