Optimizing a Mobile-Friendly Enterprise Wide Environmental Data Management Solution

Presented by Tricia Walters

© Locus Technologies 2016

Why Go Mobile?

- Increase efficiency
- Streamline access to actionable data
- Increase accuracy
- Improve data consistency

© Locus Technologies 1997-2016

Mobile Considerations

- Build or buy?
- Available data types?
- Integrated with data solution?
- Security/hardware restrictions?

© Locus Technologies 1997-2016

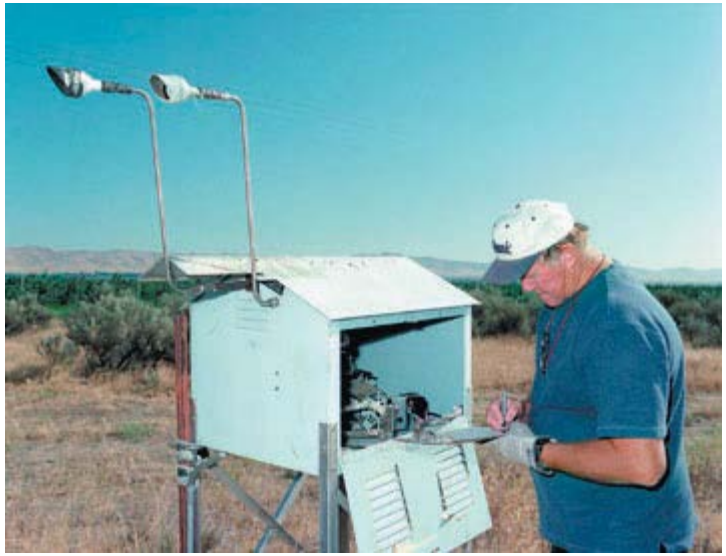
Mobile Considerations

- Teammates on board?
- Intuitive interface?
- Usability?
- Works on OR offline?
- Planned or ad hoc events?

© Locus Technologies 1997-2016

Typical Mobile Data Types

- Water (surface/ground)
  - Water levels
  - GW Stabilization
  - Surface water gauges
- Air (Gels and Filters)
- Biota
- Field Measurements



More data types = more flexibility

© Locus Technologies 1997-2016

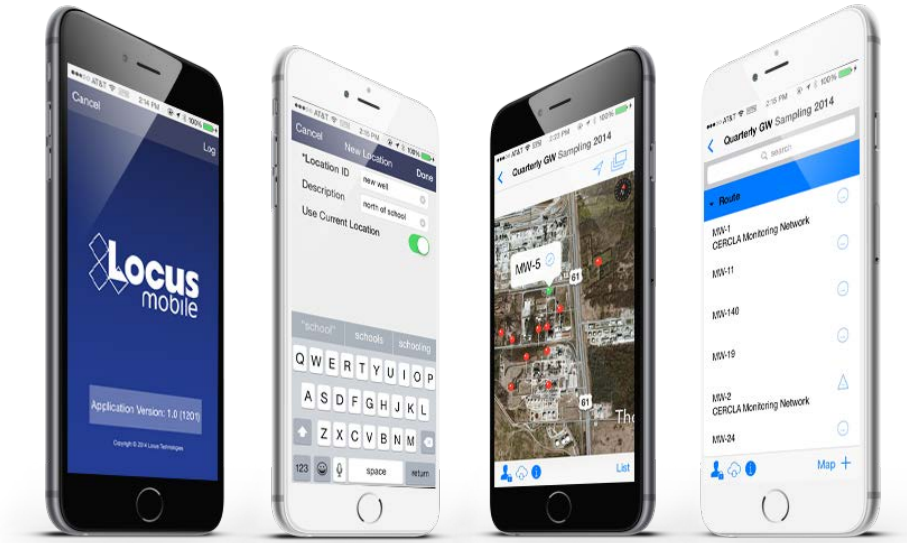
Integrated with Data Solution

- Single system, controlled values
- Schedule and plan events
- Manage incoming data
- Coordinate field crews
- Review data immediately

© Locus Technologies 1997-2016

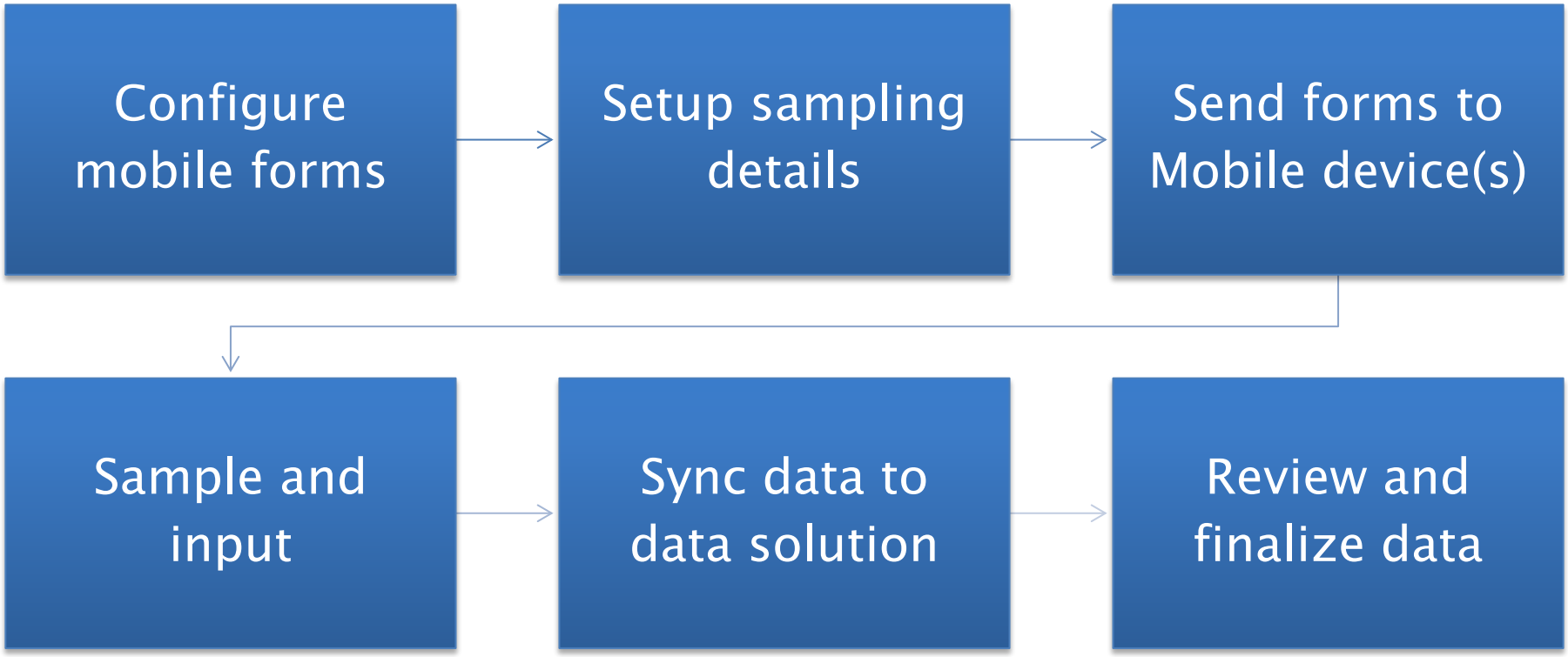
Mobile Application

- Scalable to small/large events
- Secure access
- Configurable data entry
- Reusable forms



© Locus Technologies 1997-2016

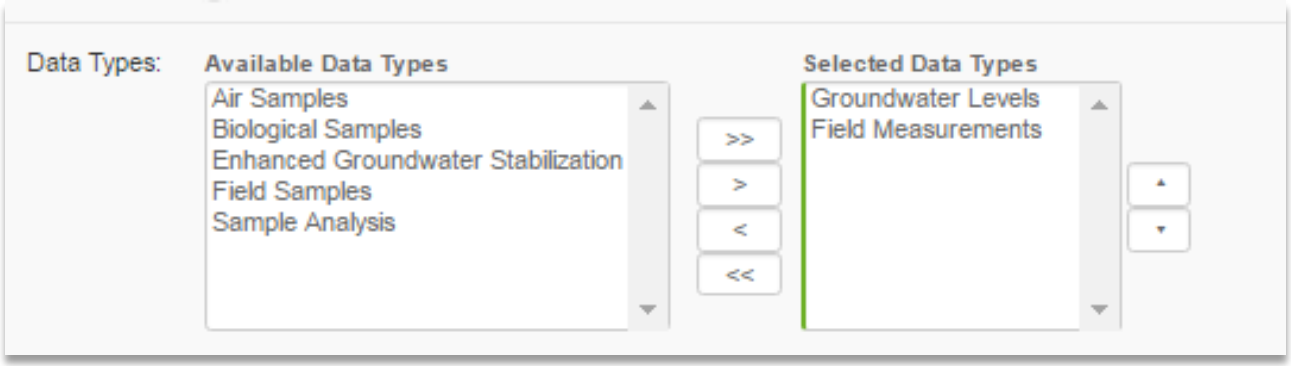
Implementing Mobile

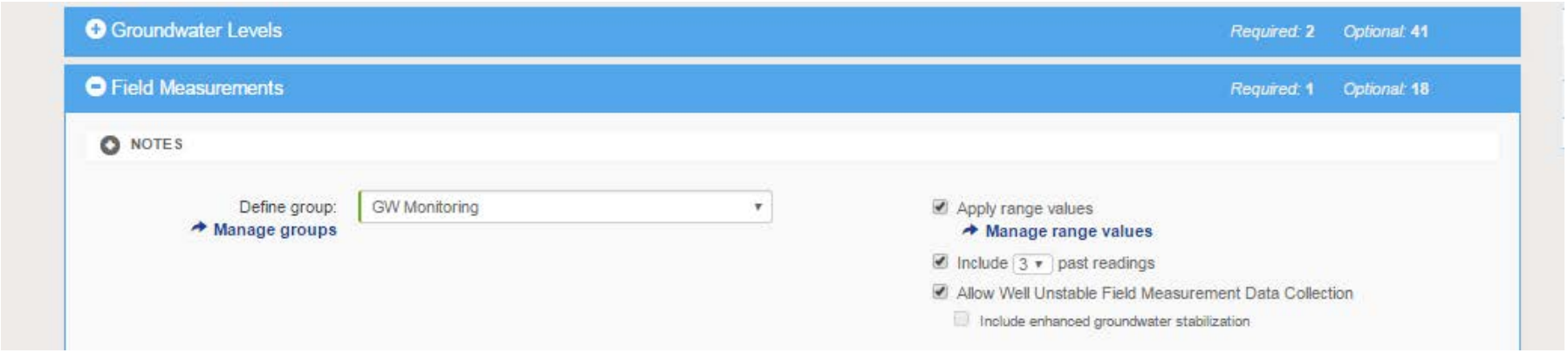


© Locus Technologies 1997-2016

Configure to Your Inputs

- Pick data types and order of input





© Locus Technologies 1997-2016

Add Details

- Select data fields
- Option to set defaults

Uncorrected Depth to GW			☐ Visible	☐ Include
Depth To Groundwater			☑ Visible	☑ Include
Groundwater Elevation			☐ Visible	☐ Include
Groundwater Level Comments			☑ Visible	☑ Include
Logging Company	Default:	Smith Brothers	☐ Visible	☑ Include
Measured By	Default:		☑ Visible	☑ Include
Meas. Method Code	Default:	Electronic Probe	☑ Visible	☑ Include
Program	Default:	NO SELECTION	☐ Visible	☐ Include
Well Depth			☑ Visible	☑ Include

© Locus Technologies 1997-2016

Configure Data Checks

Display historical values

Define acceptable input ranges

Field Parameter	Units	Lower Limit	Upper Limit	Only Warn if Outside Range
BOD	mg/L			
Conductivity	uS/cm	1000	2000	Y
Discharge Duration	hrs			
Discharge Rate	L/H			
Dissolved Oxygen	mg/L	5.0	12.5	N
Ferrous Iron	mg/L			
ORP	mV			
Oxidation-Reduction Potential	mV			
pH	SU	0	14	Y
Rel. Humidity	%			

© Locus Technologies 1997-2016

Send Mobile Forms to Device

Edit Provisioning File Users

File name: GWP-07-2016

File status: Draft

Users:

Available Users

Marian Carr (Locus Technologies)
Bill Donaldson (Locus Technologies)
Bill Test Donaldson (SJWC)
Wes Hawthorne (Locus Technologies)
Kurt Jarrett (Locus Technologies)
Shuang Liang (Locus Technologies)
Nora Liu (Locus Technologies)
Sarah Pate (Locus Technologies)

>> > < <<

Selected Users

Tricia Walters (Locus Technologies)

Pick sampler(s)

Send forms to mobile

Provision File to Mobile Device

Click 'Provision File' below to make the provisioning file available to the mobile devices for the users selected.

File name: GWP-07-2016

File status: Draft

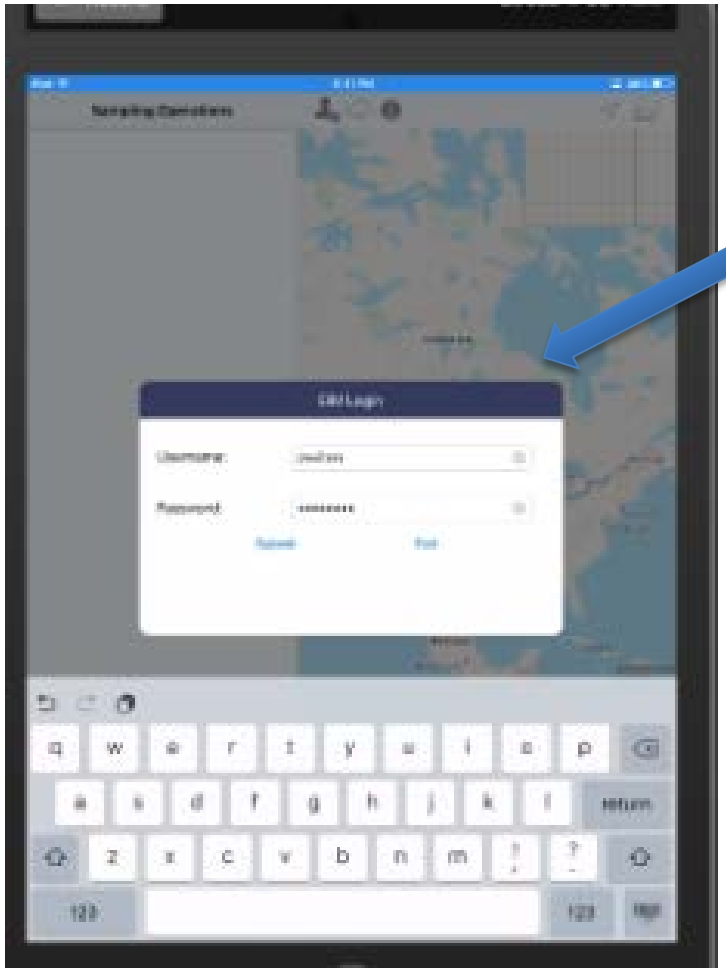
Provision File | Cancel

Review File Contents

- Locations
- Data Types
- Users

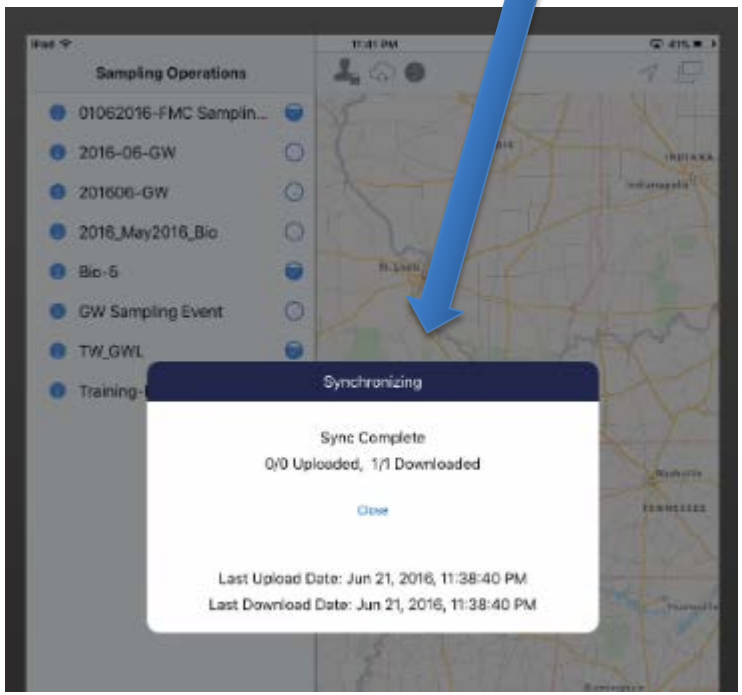
© Locus Technologies 1997-2016

Field View – Receiving Forms



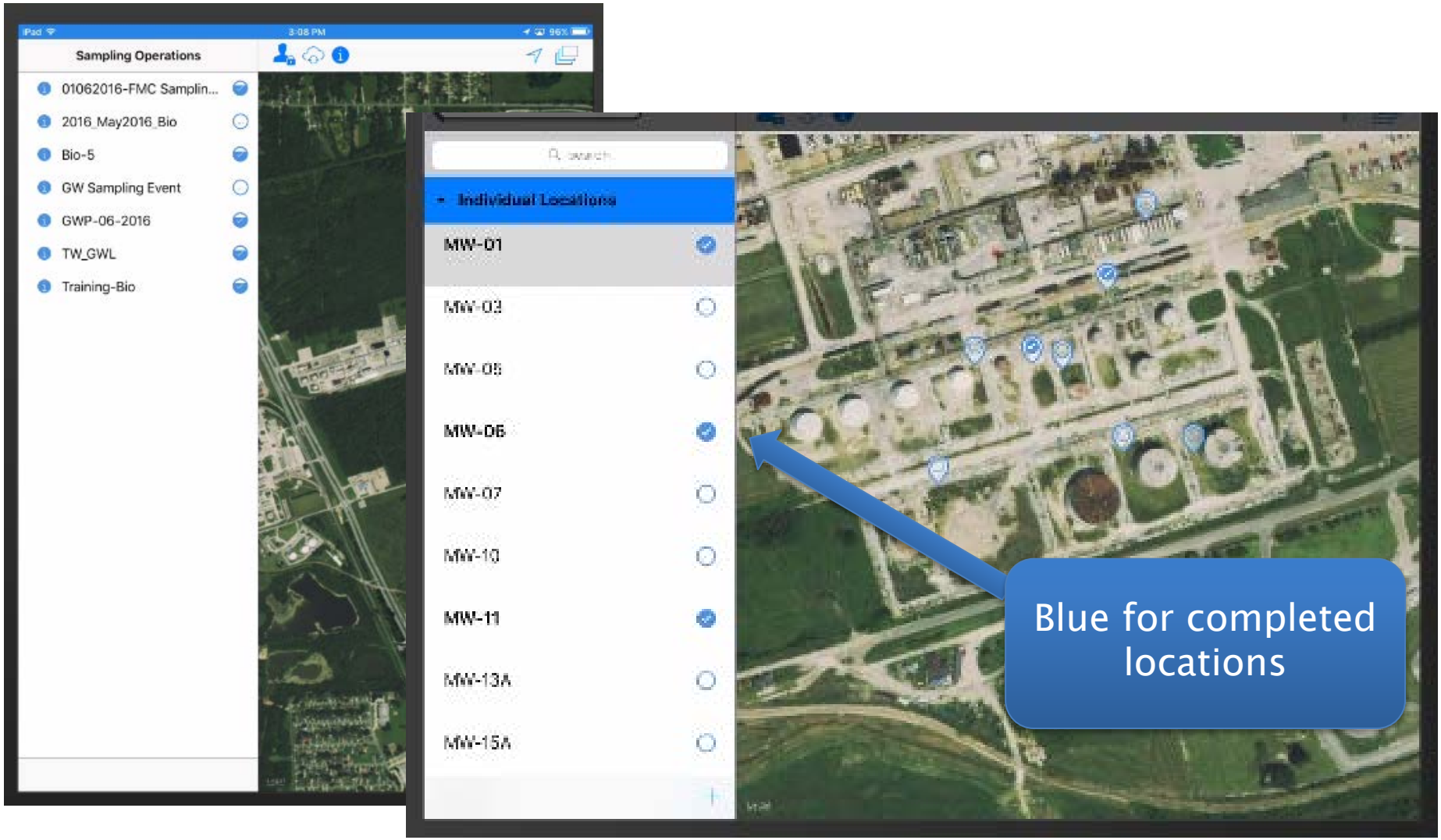
User Authentication

Retrieve Forms

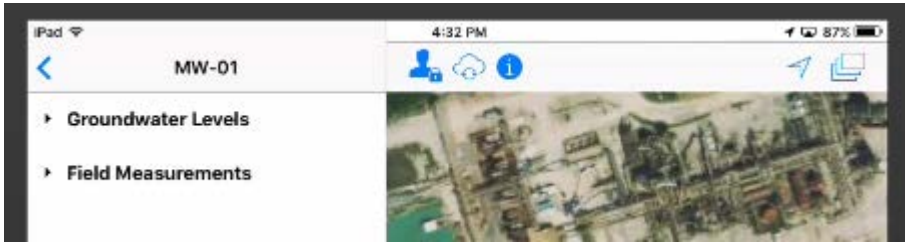


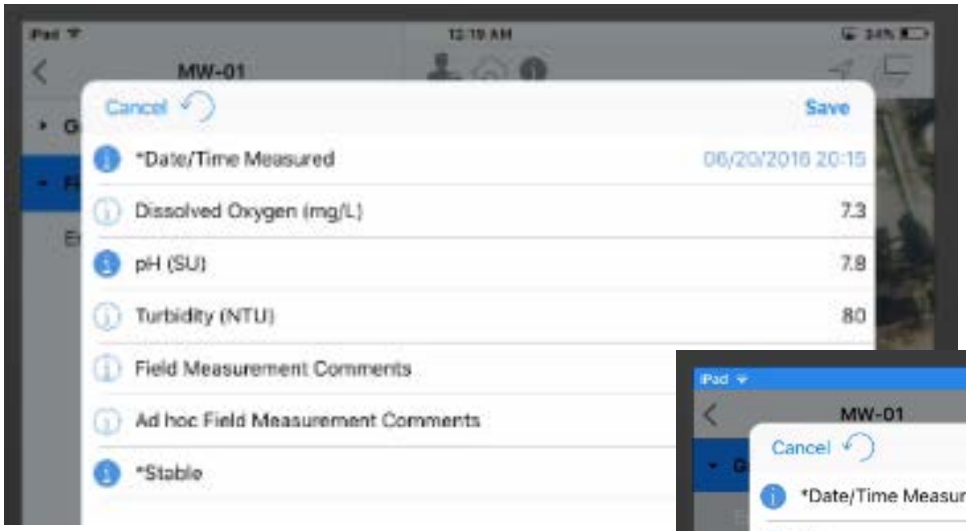
© Locus Technologies 1997–2016

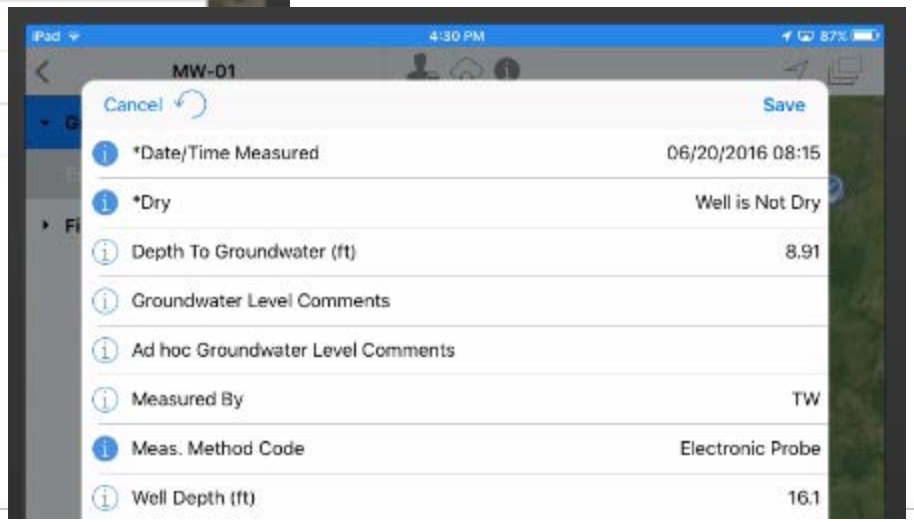
Field View – Sampling Event/s



Field View – Add Field Readings

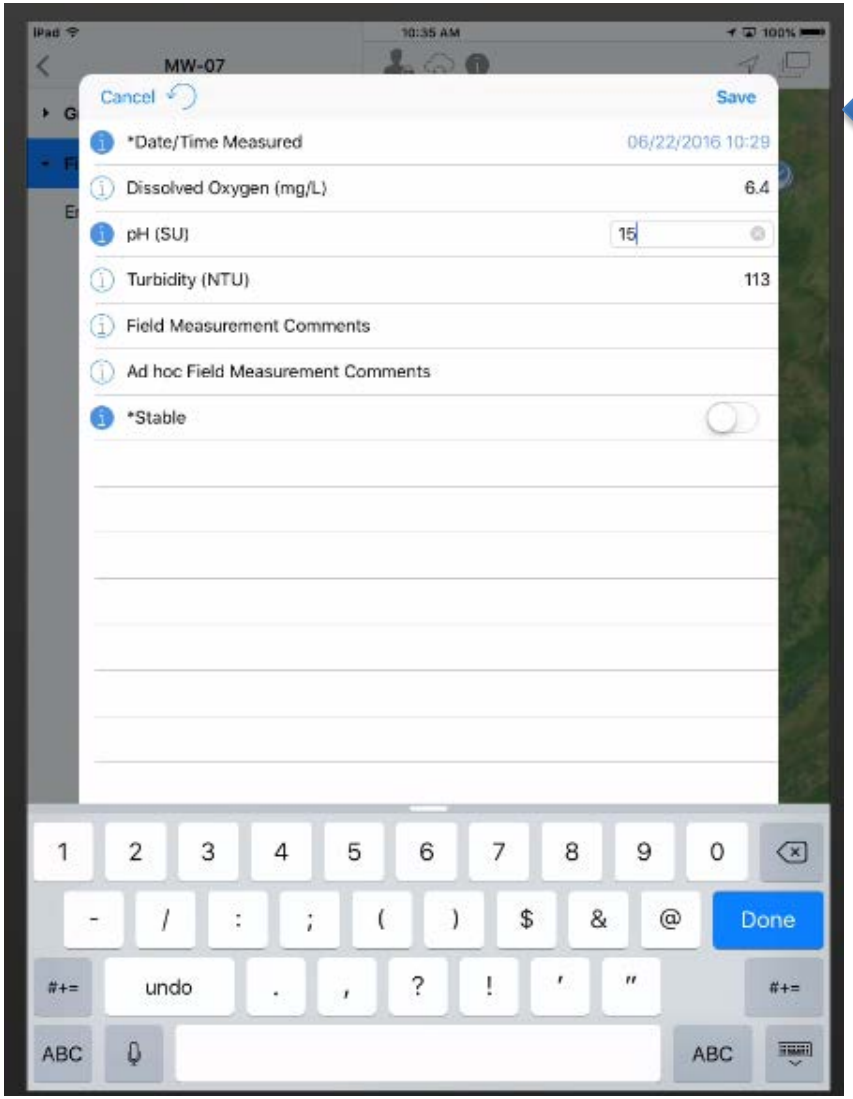




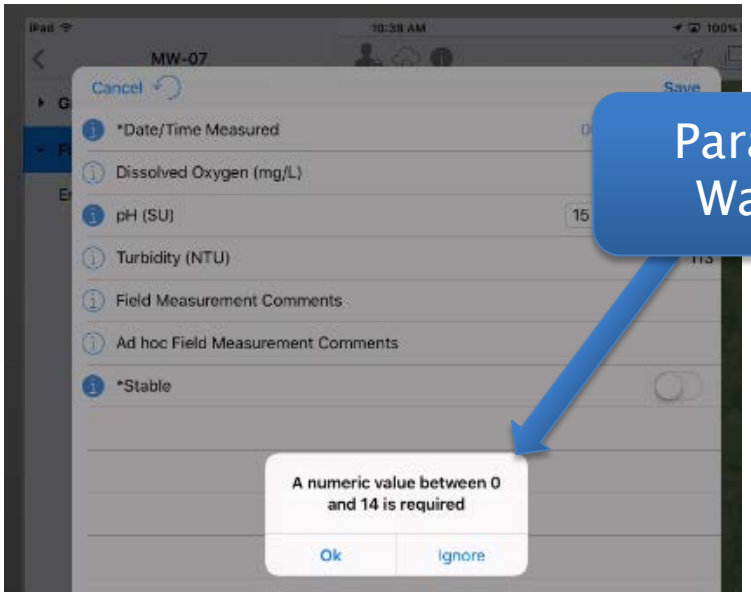


© Locus Technologies 1997–2016

Field View – Data Entry Checks



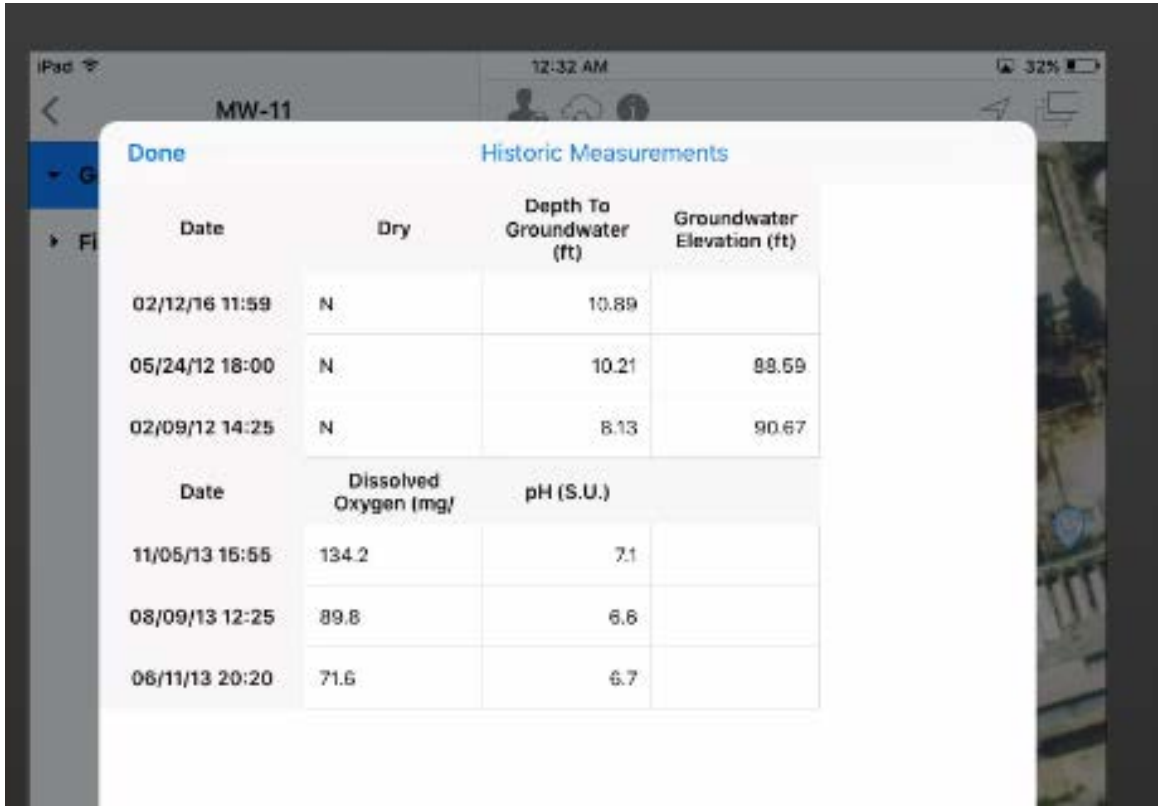
Field Measurement Data Entry



Parameter Warning

Field View – Retrieve Historical Readings

Check new readings against historical to spot quality issues or alert to changing field conditions.



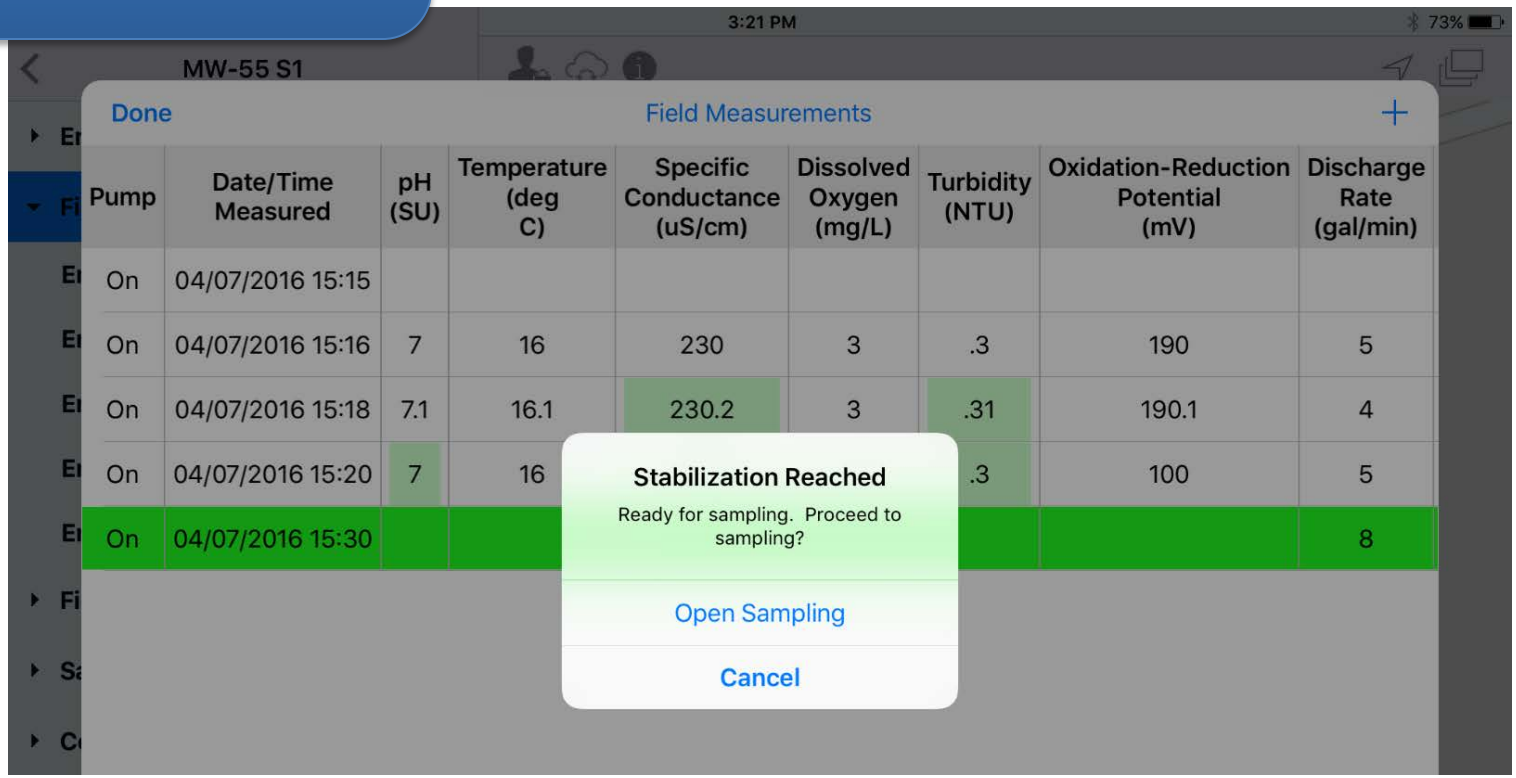
Date	Dry	Depth To Groundwater (ft)	Groundwater Elevation (ft)
02/12/16 11:59	N	10.89	
05/24/12 18:00	N	10.21	88.59
02/09/12 14:25	N	8.13	90.67

Date	Dissolved Oxygen (mg/	pH (S.U.)
11/05/13 15:55	134.2	7.1
08/09/13 12:25	89.8	6.8
06/11/13 20:20	71.6	6.7

© Locus Technologies 1997–2016

Field View – Evaluating Stabilization

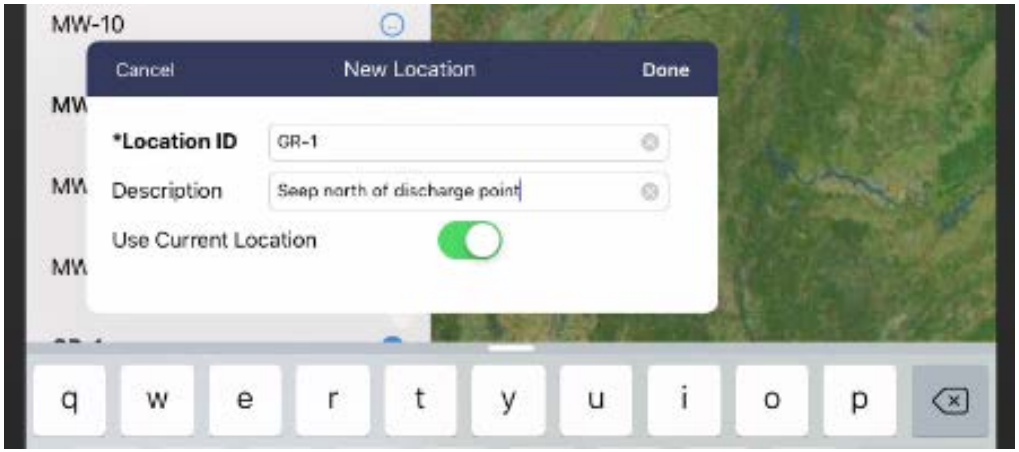
Can device perform calculations to evaluate when groundwater stabilization is reached?



Pump	Date/Time Measured	pH (SU)	Temperature (deg C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Oxidation-Reduction Potential (mV)	Discharge Rate (gal/min)
On	04/07/2016 15:15							
On	04/07/2016 15:16	7	16	230	3	.3	190	5
On	04/07/2016 15:18	7.1	16.1	230.2	3	.31	190.1	4
On	04/07/2016 15:20	7	16			.3	100	5
On	04/07/2016 15:30							8

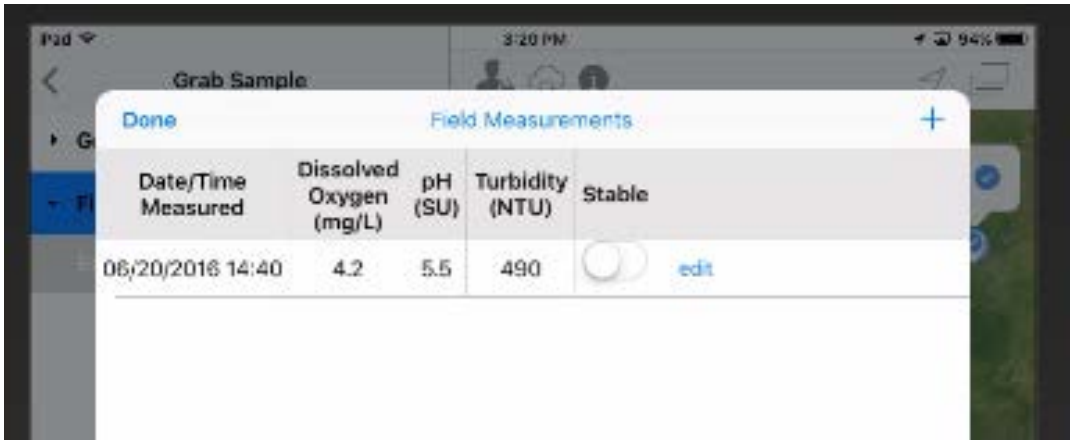
© Locus Technologies 1997-2016

Field View – Add Ad Hoc Sample



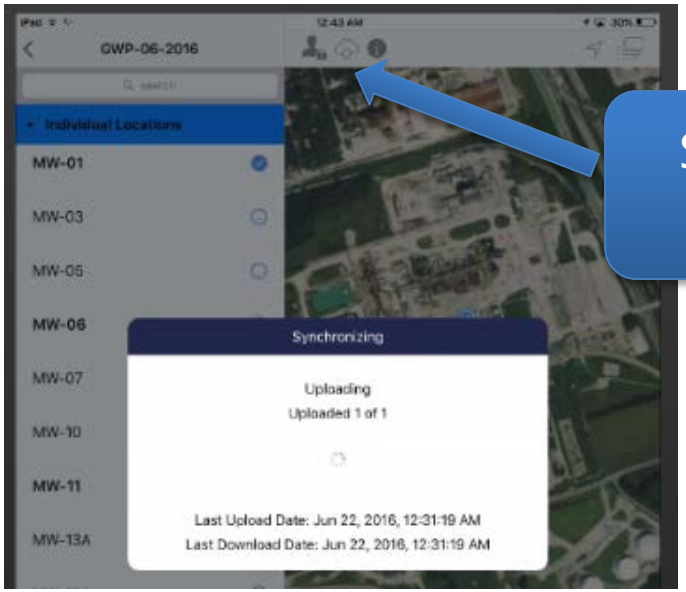
Add georeferenced location

Add field readings



© Locus Technologies 1997-2016

Data Review



Send data to database

Reviewer QC's and inserts field data into database

© Locus Technologies 1997-2016

Reporting Mobile Data

- Data secure in database
- Ready for review and reporting
- Ready to repeat next event

In Summary

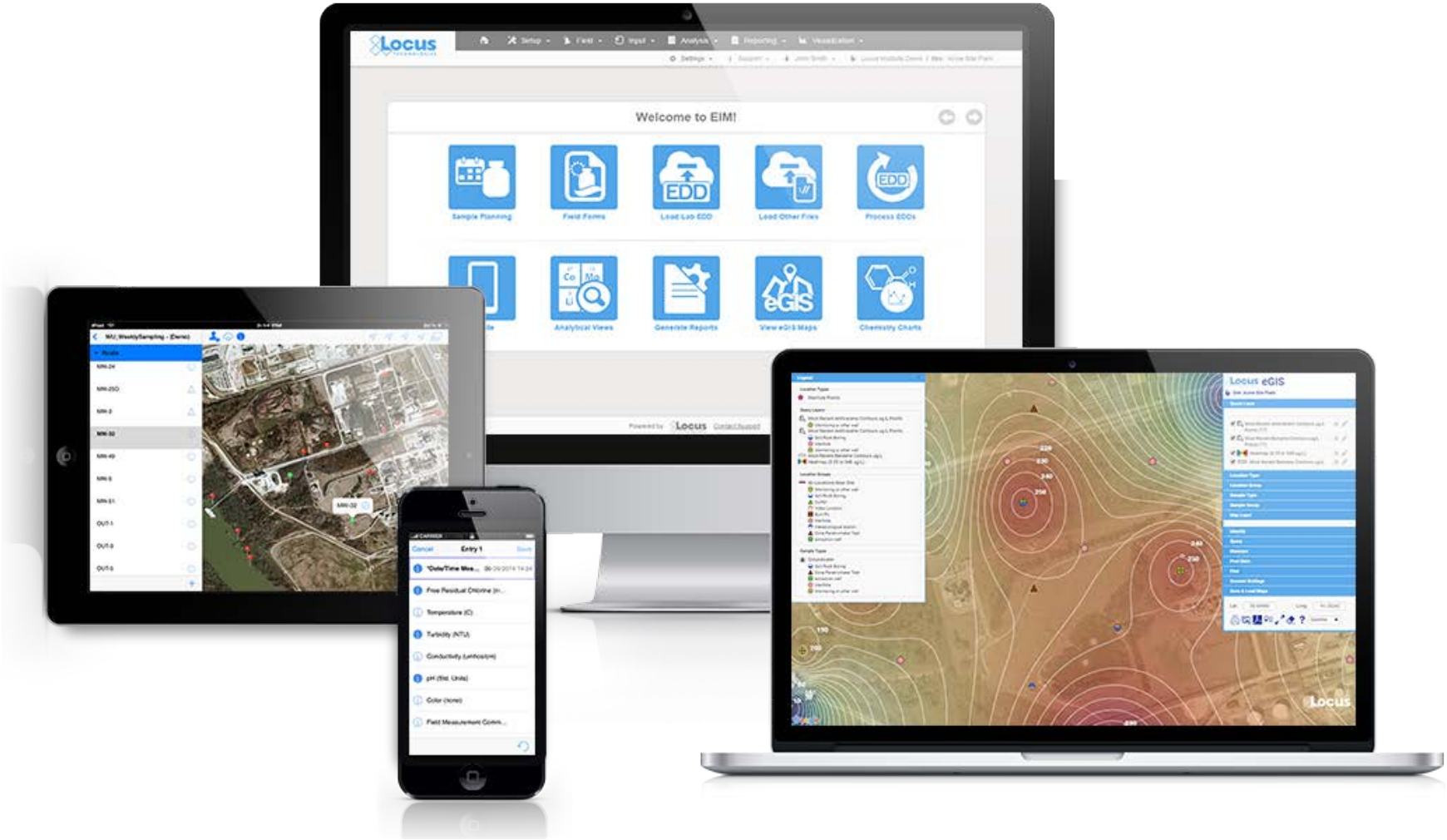
© Locus Technologies 1997–2016

Thank you!

Tricia Walters
Implementation Manager
Locus Technologies
walterst@locustec.com
415-390-2436
www.locustec.com

© Locus Technologies 1997-2016

Locus Solution



EIM + Locus Mobile

- Field and analytical data management
- Cloud solution at sites across the world for data management & reporting
- Fully integrated Locus Mobile application
- Integrated GIS

Locus Mobile App

- iOS
- iPad and iPhone
- iOS7.1 or greater
- EIM mobile user account
- Free app download from iTunes
- Cellular data plan recommended
- Works online or offline

© Locus Technologies 1997-2016