American River Flood Control District
Dude Solutions GIS Workflow Software

Staff Report

Discussion:

The District currently conducts multitudes of different operations and maintenance activities along its 40 miles of levees as well as maintains a fleet of vehicles, a headquarters facility, and two staging areas.

To better track, document, and report all of these various maintenance activities, District staff seeks to implement a GIS based software database. The prospective software will have phone and tablet based applications to input data and workflow status updates and a cloud based data storage component that will be accessible from desktops in the office.

Operations and Maintenance Items to be tracked include:
- Rodent Burrowing Damage
- High Hazard Trees
- Homeless Encampments
- State DWR Inspection Items
- Sheriff's Work Bus Sites
- Special Projects

Fleet and Facilities Maintenance Items to be tracked include:
- Repairs
- Preventative Maintenance
- Replacement/Longevity Tracking

One significant benefit of this software will be to house all of this O&M data on one platform. The data will not only have a GIS location associated with it, but the shared platform will enable all current and future employees to access the data quickly and easily without searching through individual hard drives or paper files.

Staff has met with the software company Dude Solutions to review their program's functions and capabilities. Field Supervisor Scott Webb worked with Dude Solutions at Sac County Regional Parks to track all workflow activities at that organization. Dude Solutions currently works with 14 agencies in Sacramento County including SacDOT, Sac City Zoo, Sacramento Unified School District, Twin Rivers School District, Sac Regional Parks, and many others. Dude Solutions is also a member of Sourcewell and provides least cost estimates to other Sourcewell members.

Dude Solutions' cost estimate to implement their software at the District is $8235.84 for the first year. This includes system configuration and set up. Subsequent years will cost

approximately $6000 per year for 5 licenses of the software. Additional licenses could be added at a rate of $1200 per license.

The GM intends to execute a contract with Dude Solutions to implement the workflow tracking software and database. If the Board of Trustees has no objections, this work will begin in late August and should be up and running at the District in a few months.

Recommendation:

The General Manager recommends that the Board of Trustees receive and file this report.

Asset Essentials™ for Government

The Future of Operations Management

As a government leader, you want the best for your citizens. You also want strategic ways to save time and money so your team can focus where it counts and make smarter decisions for your community. Asset Essentials provides both small and large government organizations with the tools they need to think predictively, plan intelligently and work more productively to serve their people.

More purpose, more control, more knowledge – all at your fingertips.

How does it work?

Asset Essentials is cloud-based and developed for simple and advanced asset and operations management geared toward everything Facilities, Public Works, Public Utilities and Public Service related. With our software, users can initiate, assign and track the progress of maintenance work orders; manage assets and equipment for all properties with advanced mobile and geographic information system (GIS) capabilities; develop advanced workflows with preventive maintenance (PM) scheduling; leverage Internet of Things (IoT) technology for predictive maintenance (PdM); and manage inventory.

In addition, Asset Essentials has functionality for document management, reporting and mobile capabilities. Easy-to-use mobile usage allows users to access, fulfill and include notes on work completed in the field.

Dude Solutions®

Key Benefits

Maximize efficiencies. Manage all work orders, assets and maintenance activity, for all of your properties in one cloud-based system of record, complete with automated workflows and rich mobile capabilities. Leverage your existing GIS investments directly from within our platform.

Optimize capital planning and budgeting. Understand what you're currently spending on asset repair and maintenance, make data-driven capital expenditure and forecasting decisions, and justify your need for more funding.

Improve community and citizen engagement. Engage with your user community in a user-friendly and meaningful way, and harness data and collective insight to drive measurable outcomes.

Ensure continuous improvement and success. Own your operations by adopting our proven five-step process – the Assess, Prioritize, Plan, Execute, Maintain (APPEM) framework – for ongoing optimization.

> "Having the numbers gives me an edge when presenting my budget for review. I've seen other departments getting their budget cut or staying the same, while my budget has increased."
>
> — Nathan Nagle, Parks & Recreation Director, Village of Horseheads, NY

Asset Essentials Value of Investment

By streamlining processes with Asset Essentials, a typical maintenance team can save up to 60 minutes per work order, equaling major savings for your institution.

EFFICIENCY SAVINGS *		
COST	Average work orders per year	5,000
SAVINGS	Time savings	15 min./work order saved 15 min. x 5,000 = 1250 hours/year
	Impact (at $25/hr. rate)	$31,250/year

based on 6 technicians

Dude Solutions®

Asset Essentials Value of Investment (cont'd)

Performing regular preventive maintenance (PM) can extend the life of your machines and equipment by as much as 35% by decreasing the number of failures, and can also save you 12%-18% on average over reactive maintenance. Simply increasing the percent of PM from 2-20% could save you thousands.

	REACTIVE STATE OF MAINTENANCE (2% PM)	PROACTIVE STATE OF MAINTENANCE (20% PM)
AVERAGE NUMBER OF WORK ORDERS	5,000	
PREVENTIVE WORK ORDERS	100	1,000
REACTIVE WORK ORDERS	4900	4000
AVERAGE WORK ORDER PRICE	$150 for Preventive WO / $300 for Reactive WO	
PREVENTIVE COST	$15,000	$150,000
REACTIVE COST	$1,470,000	$1,200,000
TOTAL MAINTENANCE COST	$1,485,000	$1,350,000
SAVINGS FROM INCREASING 2-20%	**$135,000 per year**	

Product Features

Workflow Management

> Work order request management
> Intelligent, automated request routing with contextual data capture forms
> Location/asset-based work orders with GIS integration
> Calendar/meter reading tied to PM/PdM scheduling
> Custom fields for organization-specific work order information
> Job planner for technicians
> Work order prioritization

Work Tracking & Monitoring

> Bulk work order update tool
> Automated email notifications for work assignment based on asset, work type, location and more
> Automatic work order scheduling based on PdM and historic data
> Audit trail and log tracking
> High-level project tracking
> Certification tracking
> Supplier/vendor tracking for specialized assets
> Cost tracking and repair history for total cost of ownership (TCO) decision making

GIS Asset Management

> Holistic map view that enables you to effectively manage work and assets inside and outside the building
> Manage work orders, GIS assets and maintenance activity in one place
> Leverage Esri GIS data to manage and maintain GIS assets
> View your upcoming workload spatially
> Prioritize work using insights from your GIS data
> Web-based portal for citizens to submit work requests with photos and locations
> Connect work to your GIS assets
> Mobile CMMS GPS and GIS tools built for today's work

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Product Features (cont'd)

Mapping	> Base map of your communities geographic area
	> Map interface leveraging existing GIS investments from within our platform without additional set up
	> Web-based, Esri-powered location mapping
	> One-touch location and work type input for optimal routing
	> View and manage your work orders on a map view
	> Create work orders and visually pin them to their appropriate location
	> Switch between street and satellite views
	> Filter work orders by priority, status, work category and more
Work Order Parts & PO Management	> Parts inventory, including physical count and knitting
	> Just-in-time (JIT) inventory
	> Purchasing/requisition management
Reporting & Analysis	> Predefined dashboard with KPIs, reports and charts
	> Budget tracking based on historic data and projections
	> Print/export to Excel, create PDF for reporting
	> Data analyzer tool
Mobile App	> Supported on iOS and Android devices (see version requirements)
	> Download free from Apple App Store or Google Play
	> Bar code and QR code capabilities for more efficient work order, asset and parts management
Document Management	> Document library supporting 20 GB of uploads
	> Supported formats include PDF, Microsoft Word, Excel, plain text

Product Packaging

ASSET ESSENTIALS CORE*

Included:
› One departmental workflow
› Safety module
› Inventory module

Add-on Modules:
› Connector Toolkit
› Capital Forecasting for Asset Essentials

* An Asset Essentials Core Plus option is also available that includes advanced configuration

ASSET ESSENTIALS PROFESSIONAL*

Included:
› Up to three departmental workflows
› Safety module
› Inventory module

Add-on Modules:
› Connector Toolkit
› Capital Forecasting for Asset Essentials

* An Asset Essentials Professional Plus option is also available that includes advanced configuration

ASSET ESSENTIALS ENTERPRISE

Included:
› Four or more departmental workflows
› Safety module
› Inventory module

Add-on Modules:
› Connector Toolkit
› Capital Forecasting for Asset Essentials

Technical Requirements

We suggest the latest version of all browsers and mobile operating systems (OS) for the best experience. Please consult with your IT department to ensure that all browsers are up to date and capable of supporting Asset Essentials.

INTERNET BROWSER
Latest versions are recommended

> Google Chrome
> Internet Explorer 11 (with Silverlight 5 or higher installed)
> Microsoft Edge
> Mozilla Firefox
> Opera
> Safari (Mac OS)

MOBILE OS

> Android 4.1 or higher
> iOS 9.0 or higher

Implementation Information

All Dude Solutions clients have our support, starting with implementation. A client engagement team member will support you with a call to outline your objectives and guide you through every step of the process. And, our support doesn't stop there. As a client, you'll have our Legendary Support Team on your side to ensure you get the most out of our solutions. From initial installation to your first work order and beyond, we've got you covered through everything.

Legendary Support Team *Cost: Included*	> All Dude Solutions clients have unlimited access to our Legendary Support Team > Reach support via phone, email or chat for immediate answers
Implementation support *Cost: Included*	> One-on-one implementation consultation with your client engagement team member > Orientation call to establish objectives and answer questions > Unlimited interactive instructor led online classes > Project collaboration tool for implementation management

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ABOUT DUDE SOLUTIONS

Dude Solutions is a leading software-as-a-service (SaaS) provider of operations management solutions to education, government, healthcare, senior living, manufacturing and membership-based organizations. For nearly two decades, Dude Solutions has inspired clients to create better work and better lives. We combine innovative, user-friendly technology with the world's smartest operations engine, empowering operations leaders to transform the most important places in our lives. Today, more than 12,000 organizations use our award-winning software to manage maintenance, assets, energy, safety, IT, events and more. For more information, visit dudesolutions.com.