

## EXHIBIT 8-A

March 3, 2017

Mr. Suresh Prasad  
Chief Financial Officer  
Monterey Peninsula Water Management District  
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Monterey, CA 93940  
(831) 658-5614  
[suresh@mpwmd.net](mailto:suresh@mpwmd.net)



Re: GIS Professional Services Agreement

Dear Suresh:

Thank-you for the opportunity to submit this scope of work to provide GIS professional services for the Monterey Peninsula Water Management District (MPWMD). Services will be performed as directed by you, and Lynx Technologies will provide appropriate staffing to conduct on- and offsite services on a time and materials basis. The term of this agreement will be for one year with a one year extension. The labor rate will be fixed at \$65 per hour throughout the contract period.

Staffing levels will be determined by task and on an as-needed basis and time sensitivity. In addition, Lynx will dedicate one staff member onsite on a regular basis. Currently MPWMD have an expressed interest in weekly onsite staff and Lynx will commit up to 8 hours per week.

The total estimated period for the current period, July 1, 2017 through June 30, 2018 (12 months) is not expected to exceed \$35,000.

### **Discussion**

Lynx Technologies conducted a brief analysis of the District's existing system between December 2016 and February 2017. This included a round table discussion with MPWMD staff engineers and scientists that use GIS, interviews with senior management and the IT Manager. We also spent a limited amount of time reviewing the existing data and applications currently in use. This discovery period provided insight into the overall nature of GIS and how it is being applied.

We found that the District is filled with a highly skilled and enthusiastic team that routinely use ArcGIS Desktop. They are experts in their field and apply GIS to solve problems as needed and consequently will often need GIS help to complete some analysis or GIS tool or process. MPWMD is also very data-rich with over 7 terabytes of GIS content. This data is in a variety of formats, none of it is in an Enterprise Geodatabase. Finally, we looked at the existing application suite employed at the District. ESRI's ArcGIS Desktop Standard edition release 10.3 is the core tool used by staff for GIS. In addition, Microsoft Access is used by several staff and at least 2 critical business needs

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are supported using this software. There are several additional excellent applications including ESRI's extensions 3D Analyst and Spatial Analyst, XTools, TerraGo, and L360. At this time it is unclear how frequently these tools are utilized.

Web Technologies and mobile applications i.e. the ability to present GIS data using browser based applications over the internet, is an expressed interest for many MPWMD staff members. The District operates ESRI's ArcGIS Server for Workgroups and Latitude Geographic's Geocortex Essentials for one application. ESRI's ArcGIS Online and Open Data portals are not in use at the District.

### **Scope of Services**

The purpose of this agreement is to provide support for the District's Geographical Information System. The scope of services will fall into 2 broad categories, first specific projects or tasks based on findings analyzing the existing GIS, secondly, unscheduled as-needed support for MPWMD staff; this category will have priority over the first. These responsibilities will vary but may involve any of the roles listed or related below:

- High availability to support ArcGIS related questions and problem solving. This will include onsite staff one day per week, telephone support, and web-based screen sharing sessions. In general support questions are to be addressed by Lynx staff in the same day as the request, even if it means arranging another time or dedicated screen sharing session. This is a critical need, if the primary Lynx staff is not available a second and third staff person will be available and their contact information shared with all MPWMD staff.
- ArcGIS Training. These may be one-one sessions or group sessions and will be driven by MPWMD staff. In other words, if a specific task that a MPWMD staff person wants training for that training can be dedicated to one or opened up to all interested staff members. How to georeference drawing files or raster images is one example.
- Create ArcGIS Templates and other help-related documents. During one of our discussions it was clear that a point of frustration for staff is finding data, understanding the data's history and level of reliability, another is that it is often a very time consuming process to build a map for a time sensitive deadline. Lynx will build a series of project templates for ArcGIS that can be centralized so that they are readily available to staff.
- Base feature layer maintenance including parcels, street addresses, and associated assessor's tables. We will coordinate with the County GIS, Public Works/Engineering and Assessors Offices to collect data, and test the system for geometry and attribute updates on a 45-day cycle. This workflow will improve the accuracy and confidence level to support business decisions.
- Ad hoc GIS analysis and/or prepare presentation materials as needed.

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- Collect, capture or convert data for GIS. For example, staff could be assigned to go through engineering data to infill missing data, or there may be a special project that city staff requires a GIS technician in which significant interaction is required.
- Field work as required, this may include field inspection such as help with Well and stream data collection, using our high precision GPS equipment.

### **Long Term Tasks**

The following recommended tasks are derived from our evaluation of the District's existing GIS architecture and will help improve the system and provide more opportunity to integrate GIS with MPWMD business practices. Note that these tasks are big projects, require participation with District staff and will take a significant amount of time to implement. Consequently we have proposed that it will be implemented as time is available.

- Restructure the GIS data and migrate the current file-based system into an Enterprise GIS. Lynx will propose a basic system architecture based on MS SQL Server 2012 (Database structure, Version and Replication models). All vector and raster GIS data will be migrated into several ArcSDE/SQL databases. The task will include an inventory of existing data, identifying duplicated layers, archiving unused legacy files. In some cases (e.g. NAIP Imagery) data currently stored at MPWMD will be removed and replaced with Web Services.
- Standardization, Data Modeling and Documentation. This task would upgrade layers and tables, by implementing current geodatabase technologies (domains, subtypes, relationships, feature-linked annotation, topologies, networks) and naming conventions, assign data ownership, implement record-level metadata, and document all layers using FGDC standards. This effort will make it easier for people who do not use the GIS all the time to access the data and provide information about the history, accuracy and currency of the data. Feature metadata is also required in order to share the data with other users in a cloud environment.
- Web development within the ArcGIS Server/Geocortex and ArcGIS Online frameworks. The current system is an excellent environment to share spatial data with non-GIS users throughout the organization. It is also the new paradigm for the GIS industry. We propose to upgrade the environment to the current release(s), migrate the Web Viewer from Silverlight to HTML5 and dramatically expand the environment so that anyone in the organization can get answers to common questions like: 1) parcel information (owner, address, paid fees and

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taxes), 2) printing a map, 3) boundary information and 4) Well and Biological data.

As the system matures we recommend that MPWMD considers expanding the web environment to include access for the public and mobile applications. This will require discussion but a couple of examples have already been solicited by staff. For example, with the ArcGIS Online Data Collector app, field staff would be able to use the GIS out in the field to view, collect and modify data.

Project level work outside of the 'normal' scope of services provided above will be billed on a specific scope of services and fixed price fee based on the following rate schedule:

Project Manager: \$150/hr.  
Senior Analyst/Developer: \$125/hr.  
GIS Analyst: \$75/hr.  
GIS Technician: \$65/hr  
Clerical: \$50/hr

If you have any questions regarding this proposal I can be reached on my cell phone at any time: (408) 482-3255, or by email: [patrickk@lynxgis.com](mailto:patrickk@lynxgis.com). Again, thank-you for the opportunity to submit this proposal and I look forward to working with you.

Sincerely,

Patrick Kelleher  
Lynx Technologies