EAST BAY
MUNICIPAL UTILITY DISTRICT

Private Sewer Lateral Replacement

Request for Information

October 22, 2021

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1.0   General Information

1.1   Overview of EBMUD

East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties on the eastern side of San Francisco Bay in Northern California. EBMUD provides high-quality drinking water for 1.4 million customers. The wastewater system serves 740,000 customers in an 88-square-mile area. Wastewater is collected and conveyed by seven satellite collection system agencies ("Satellites"): Alameda, Albany, Berkeley, Emeryville, Oakland and Piedmont, and the Stege Sanitary District (El Cerrito, Kensington, and Richmond Annex). EBMUD owns and operates the large diameter interceptor pipes, the Main Wastewater Treatment Plant, and three wet weather facilities, which help manage high flows during significant wet weather events.

EBMUD is a publicly owned utility formed under the Municipal Utility District Act passed by the California Legislature in 1921. EBMUD has a seven-member Board of Directors publicly elected from wards within EBMUD's service area. The Board of Directors and management believe that EBMUD has a public responsibility to preserve the region's resources and set industry standards for the way water and wastewater utilities conduct themselves. EBMUD is a customer-oriented and environmentally sensitive public agency, firmly committed to serving people and the environment.

1.2   Overview of the Private Sewer Lateral Program

In 2014, EBMUD and the Satellites entered into a Consent Decree in *United States, et al. v. East Bay Municipal Utility District* (Case Nos. CV 09-00186 and CV 09-05684, N.D. Cal.) with the United States Environmental Protection Agency (EPA), state and regional water boards, and non-governmental organizations (NGOs) – San Francisco Baykeeper and Our Children's Earth Foundation. This Consent Decree requires EBMUD and the Satellites to eliminate most discharges from EBMUD's three wet weather facilities by 2036 through the reduction of infiltration and inflow. One component of the Consent Decree is the continued implementation of the Regional Private Sewer Lateral (PSL) Program, which includes all Satellites except the city of Berkeley. The Regional PSL Ordinance (Ordinance) has been in effect since 2010 and was most recently modified in May 2019.

A PSL is the pipe that carries waste from the plumbing in a home or business to the public sanitary sewer main, usually located in the street. A PSL consists of two sections: an upper lateral, which connects the building cleanout to the curbside cleanout, and a lower lateral, which connects the curbside cleanout to the public sewer main (Figure 1).
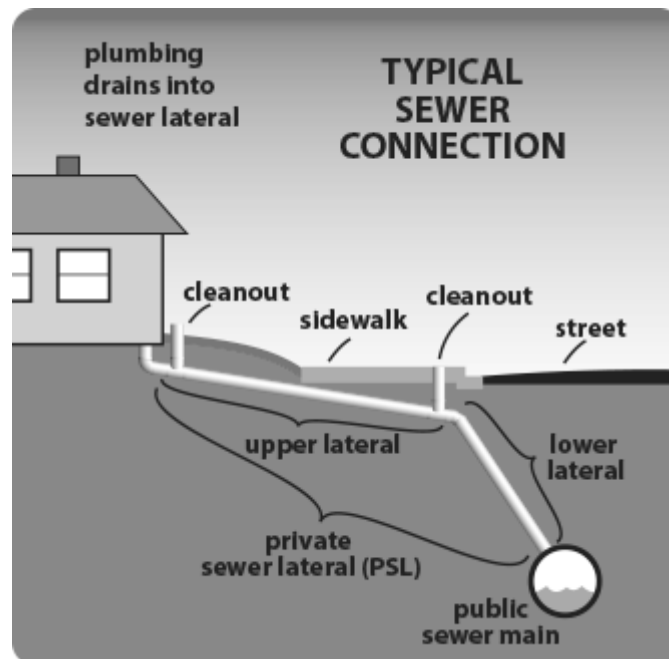
Figure 1: **Typical Sewer Connection**

The Regional Ordinance sets standards for assessing the condition and performance of PSLs in its wastewater service area, specifically in the communities of Alameda, Albany, Emeryville, Oakland, Piedmont, and Stege (also referred to as "satellites"). The City of Berkeley currently implements its own stand-alone PSL program although it may be incorporated into the Regional Program in the future.

Under the Ordinance, the majority of property owners are required to obtain a Compliance Certificate demonstrating their PSL is leak-free and meets applicable EBMUD standards when they meet one of three triggers: title transfer, remodeling or construction valued at over $100,000, or a change in water meter size. The Regional Ordinance, however, contains special provisions for two classes of properties: (1) a parcel or group of contiguous parcels with greater than 1,000 feet of PSLs; and (2) properties within a Common Interest Development governed by a Homeowners' Association (HOA).

Time Extension Certificates (TECs) were created to ensure that Compliance Certificate deadlines will not interfere with real estate transaction timelines. For title transfers, the PSL Program allows property owners to obtain a TEC prior to title transfer, allowing the transaction to proceed and for compliance to be achieved within six months by the new property owner (i.e., the buyer). TECs require a $4,500 deposit to EBMUD, which is refunded once the property owner obtains a Compliance Certificate. The PSL Program also allows EBMUD to issue an Exemption Certificate when a property owner demonstrates prior PSL replacement occurred on the parcel, and in certain circumstances when certification is not required under the Regional Ordinance (e.g., an exempt title transfer).

2.0   Project Overview

2.1   Introduction of Project

The intent of the project is to improve the functionality, reliability, and integration between the PSL management software and other EBMUD software programs. Key requirements include the ability to:

- Use the parcel-based database currently maintained by the EBMUD GIS team. Existing data are in an APN database that is not linked to GIS.
- Schedule inspectors and inspections online and track field data for each inspection
- Track various types of certificates for properties (Compliance Certificates, Time Extension Certificates, Exemption Certificates, Compliance Agreements, etc.)
- Manage noncompliance, enforcement, and appeals
- Accept, track, and manage fees assessed to parcels, payments paid, and deposits received, and deposits refunded
- Provide robust reporting and tracking on all elements and integration with existing EBMUD financial, customer service, and other systems

EBMUD has decided to replace the existing PSL application with a new application that can be used for the next 20 years. It must have transparent integrations to with EBMUD Water, Wastewater and administrative systems as specified in the requirements document.

Some key Project objectives are to implement a PSL application that:

- Meets the business needs of EBMUD and the users
- Aids EBMUD to meet compliance and quality requirements
- Has the potential to grow as business needs change
- Improves business processes, efficiency, and reduces labor-intensive data processing
- Provides a user-friendly interface for the public and internal users
- Consolidates, integrates, and retires existing applications – as appropriate
- Provides needed mobile access to functions
- Provides robust reporting and tracking capabilities
- Provides long-term functionality
- Provides long-term technical stability, security, and scalability
- Conforms to EBMUD's IT Audit and Security requirements

2.2   Request for Information (RFI)

EBMUD is seeking a new software system to manage data for its Private Sewer Lateral Program to address its current and future needs. This Request for Information (RFI) is intended to inform EBMUD about the functionality and services available in the marketplace for managing this type of information. This RFI is a vehicle for information discovery of existing, deployed solutions and should not be construed as a solicitation.

The RFI is intended for companies that develop solutions, as well as companies that implement a developer's solution. The RFI contains a general overview of EBMUD and an overview of our current environment.

Included in the package is an attachment (Attachment 1 – Vendor Response Form) in Excel format that contains tabs for Technical, Vendor and functional requirements. Please submit your responses on the spreadsheet and then return the spreadsheet to EBMUD.

Vendors are encouraged to respond whether they offer technical solutions for all or some of the business areas documented below. If you provide solutions to some of the business areas, it is critical for you to document how your system would interface with other business areas and existing systems. Select vendors will be asked to demonstrate their solutions to EBMUD stakeholders. Project requirements may be revised over the course of this discovery process based on any additional information acquired.

 (**NOTE**: A response to this RFI does not constitute a bid; however, any information or demonstration provided in a response to this RFI may be considered as historical data by EBMUD if EBMUD decides to issue a Request for Proposal (RFP).)

3.0   Current Business Environment

3.1   Business Environment
The current PSL application was custom developed by a contractor and went live 2009. It is used primarily for management of inspection scheduling and tracking of compliance status. The system is a Java-based web application with an Oracle database backend. No automated interface exists. No mobile solutions have been implemented.

The EBMUD PSL program manages inspections and issues Compliance Certificates, typically 500 per month, and requires the capability of up to 1,000 per month. It maintains parcel information for Contra Costa County and Alameda Counties. The current system consists of two components: A public user-facing web site (eastbaypsl.com) and an administration portal for internal use by approximately 20 Wastewater staff members.

4.0   Functional Business Requirements

4.1   Functional Requirements
Please find the functional requirements for the various business units in Appendix.

1. Please use the attached spreadsheet to provide your responses for the functional Business Requirements.

2. For each item, please provide the following information:
    a. In the Solution Type column, indicate how the business needs will be met i.e., whether it is out-of-the-Box (Base), an extra add-on package, a customized solution or if it is not supported.
    b. In the Availability column, indicate whether the feature is available currently or in a future release.
    c. In the response column, please provide the following information
        i. A description of the functional capabilities of your solutions.
        ii. Information that EBMUD needs to provide to your solution to accomplish the business need and how that information can be supplied.
        iii. Description of how users can interact with your system to accomplish the business needs (web, tablet, other mobile device, etc.)

5.0 Technical Requirements

5.1 Security and Compliance

Technical solutions must be designed to protect EBMUD from unauthorized access (especially any financial or personally identifiable information) from internal or external parties.

1. Describe the security features of your product. Identify features at the user, application, transaction, and data levels.

2. Describe the configuration features that allow for EBMUD policies to be consistently enforce throughout the organization.

3. Discuss how your solution adheres to Open Web Application Security Project (OWASP) security principles.

4. Describe any cryptographic technologies used by your solution in support of data privacy.

5. Describe the auditing features of your solution.

6. Discuss how your solution uses role-based access control and how to manage the roles.

7. Describe how your system authenticates users. Do you support single sign on using Active Directory Federation Services (ADFS), Central Authentication Service (CAS) or Security Assertion Markup Language (SAML)?

8. If your application allows for external access (mobile, external customer, vendors, etc.), describe the security features associated with it.

9. If our data is to be hosted remotely, please specify location(s). Are there any international locations? If yes, identify where the facilities are located.

10. What security requirements are required for your employees?

5.2 Risk Management

EBMUD plans to run its PSL system for at least the next 20 years. There are events, however, that could happen that would pose a risk to the support of a system for that long.

1. Will the source code base of the vendor's solution be made fully accessible to EBMUD? Will it be readily available to be built or modified by competent EBMUD programmers should EBMUD choose to support the solution in-house? If so, please describe the application development environment and any tools required for enhance the source code?

2. Are clients required to upgrade to new versions of your system?
    a. Can EBMUD decide to stay on one version of your system? Are you going to continue providing support in case of EBMUD choose to stay?
    b. Do you publish end-of-life support dates? Are there paid options for continuing support on non-current software releases?
    c. If function features require customization, what will happen in case of upgrade? Do you continue to provide support?
    d. Describe upgrade process in high level. Will system need to be offline during? If so, how long?

5.3 Interfaces

1. The EBMUD software environment consists of numerous applications with varying integration requirements. This includes GIS, Customer Watch (Customer Information System), APN, ELSIE (Cloud-Based Financial System), DOCS (document management system), DocuSign and payment processors like Authorize.Net etc. How does your solution interface with other software systems both on-premises and cloud solution?
    a. Describe the technical architecture of your solution and what type of protocols is used to transfer information, both real-time and as needed.
    b. Describe how data is secured while in transit from one system to another.
    c. Does your solution utilize protocols to verify sender and recipients?
    d. Describe data flow direction when interface with other systems? Is it two-way communication or just one direction? What's the limitation?
    e. There might be need to interface with County to get Parcel information. Does your solution have flexibility to access the Parcel information?
    f. Does your software integrate with MS Outlook for real-time appointment booking? What software or hardware is required to achieve? Is there additional cost?
    g. Does your software protect Personal Identifiable Information (PII)?

2. Describe what mechanism you use to manage time-sensitive data transmissions.

3. Describe any audit features associated with your interface architecture.

4. Describe how data can be exported from your solution to be loaded into EBMUD's Oracle-based data warehouse system.

5. Describe any important standards that your solution implements that promotes interoperability with other systems.

6. Describe how your system handles electronic documents, i.e., what security does it use, what backup mechanism is employed, what API's are available. Describe any electronic documents generated by your system, e.g., electronic certificate/permit.

7. Describe the performance for data transition between systems such as through API.

8. For web applications, describe which browsers your product supports.

9. Describe how to view PSL Compliance Certificates by APN in the GIS map along with related information like appointment, location etc.

10. Describe the capability of uploading sales records such as title transfer into your database. For example, data in CSV or Excel.

11. Describe compatibility with 3rd party credit card processing software i.e., Authorize.net

12. Describe integration of your system with EBMUD.com (website runs on Concrete).

5.4 Reporting Infrastructure

1. Provide a description on how reporting works in your systems. In particular:
    a. What reports are standard with your systems?
    b. What reporting software is standard with your systems?
    c. What mechanisms are available for EBMUD to generate custom reports, ad-hoc, analytical and personalize reports? Are there additional costs associated with this? If so, please describe the fee structure.
    d. What tools are available to schedule report generation?
    e. What options are available for internal report distribution?
    f. What options are available for pre-built dashboards/portals?
    g. What options are available for real time queries?
    h. Does your system provide interface allowing user to run SQL query directly?   What are other tools available for ADHOC query and what the limitation of these tools? Is there performance constrains?
    i. Can data be exported into CSV or Excel from your system?
    j. Does your system provide canned/standard reports? What are they? Is there additional cost for these?
    k. Can reports be generated in PDF format?

2. Describe the types of users who can run queries and reports?

5.5 Data Conversion

1. What is your data conversion strategy for transitioning to your solution with minimal business interruption to EBMUD?
    a. Describe the advantages and disadvantages of your strategy.
    b. Describe your experience in data conversion or migration activities including staffing requirements and duration.
    c. What tools do you utilize for the data mapping phase?

      d.   Does your solution provide a Data Dictionary that explains the meaning of your data elements to be used in mapping data from one system to another?

      e.   How do you ensure data integrity during the transition?

2. Do you provide database and data model documentation to customer including copy of your database as needed?

5.6 Mobile Options

EBMUD is seeking solutions which take advantage of current technologies to provide real-time access to critical business functionality and mobile solutions to customers for scheduling and to EBMUD staff for entering inspection information EBMUD is interested in tools to improve productivity, ensure compliance, and provide flexibility.

1. Describe the extent to which your solution supports mobile access.
   - a. What technology platforms are compatible with your solution (e.g., tablets, smartphones, etc.)?

2. Describe any additional hardware and software that would be required to implement mobile access to business functionality.
   - a. Please describe any additional fees associated with your mobile options.
   - b. Describe what additional maintenance and support activities are associated with your mobile features.
   - c. Describe what can be accessed and any limitations/restrictions.

3. Describe your application standard response time.

4. Is your application capable of adding photos from a mobile phones or tablets and then allow annotation of the photos? Any additional hardware or software required? Is there an additional cost associated with this functionality?

6.0 Vendor Requirements

6.1 Vendor Information and Experience

EBMUD is especially interested in partnering with a vendor who has demonstrated a successful track record for permitting system implementations. Successful implementations are defined as on-time, at or under budget, meeting all functional and technical requirements and helping the customer take full advantage of the efficiencies provided by the solution for end users and their business units.

1. Provide a brief history of your company, its products, and its strategic focus.

2. Provide a brief history of your experience working with governmental agencies within the past five years?

3. Provide a list of all government clients where you have implemented this solution, including the following information:
   a. Date of implementation
   b. Length of engagement
   c. Contact information for each client (name, email, and phone)

4. What makes your company uniquely qualified to provide and implement the solution? Please include a description of the qualifications of your staff, effectiveness of your methodologies and depth of your experience.

5. What is the size and financial stability of your company? Provide copies of your annual reports for the last three years. Provide any additional information that you feel would be significant in evaluating the financial soundness of your company.

6. State the nature of any pending litigation, liens or claims involving your organization. Has your company filed Chapter 7 or 11 bankruptcies in the last ten years?

6.2   Product Information and Hosting Options

EBMUD is open to exploring all hosting options available by our responding vendors.

1. If you provide an on-premises solution (a solution hosted in the EBMUD data center), please address the statements below.
   a. Describe the technical architecture of your application: presentation tier, application tier, databases supported, operating systems supported, etc.
   b. List the hardware specifications required for each tier in your architecture.
   c. List the software specifications required for each tier in your architecture: database versions, middleware versions, etc.
   d. Describe whether all user-facing functionality provided by your solution is fully accessible via standards-compliant web browsers or whether there is a need to install desktop or mobile client software.
   e. Does your solution support load balanced, high-availability architecture?
   f. Describe how your solutions handle failover or disaster recovery scenarios. Does this require any additional licenses?
   g. Describe any system tools included in your solutions that assists in monitoring application performance and stability.

2. If you provide a cloud-based solution (a solution not hosted in the EBMUD data center), please address the statements below.
   a. State where your data centers are located.
   b. State whether you own and/or lease these data centers. If you do not own this center, describe your contingency plan in the event your hosting partner goes out of business.
   c. Describe any hardware or software components of your solution that EBMUD would be expected to install or host on our own systems.
   d. Describe whether all user-facing functionality provided by your solution is fully accessible via standards-compliant web browsers or whether there is a need to install desktop or mobile client software

       e.   Describe the size and structure of your information security organization.
       f.   Describe the physical security associated with your data centers and who is responsible for it.
       g.   Describe your disaster recovery and business continuity plan.
       h.   Describe the various methods by which EBMUD can access its data. What costs or fees are associated with accessing our data?
       i.   Describe the process and timeframe required to export all EBMUD data should we decide to change hosting option or vendor.
       j.   How does your organization log and monitor system performance?
       k.   Describe your organization's data backup strategy.
       l.   Describe your application, middleware and operating system patching strategy including frequency.
       m. Describe your organization's privacy program.
       n.   Describe your incident management program.

3. Please describe your product roadmap. What features or strategic goals are incorporated within it?

6.3 Pricing Information

1. Describe the pricing structure of your solution. If you offer different hosting options, please clearly distinguish the difference between each option.
   a. Itemize the fees for each component.
   b. Does your product offer a perpetual license?
   c. Itemize all recurring costs over the first 5 years.
   d. Pricing for the different environments like staging, development etc.

2. Describe your implementation fee structure. Please itemize all fees associated with the installation, configuration, data migration, functional, regression and integration testing of your solution.

6.4 Product Implementation

Product implementation will require the completion of numerous tasks, including but not limited to testing (functional, regression, integration, acceptance), training (users, administrators) and go-live through post-go-live technical support.

1. Describe your implementation methodology.

2. Provide a high-level schedule for the implementation of your solution.

3. Describe your approach to implementation. Include staff engagement, training, collaboration, timing, and strategy.

4. Describe the number and skill set of EBMUD employees you need to assist in the implementation of your solution. Please state the time (person hours/weeks/etc.) you would require from each.

5. Describe the support and years of experience your staff would be dedicated to this project. Describe the percent of time each of your staff would be dedicated to the implementation.

6. Describe your planned testing strategy (functional, regression, integration, parallel and acceptance, structural, and performance testing).

7. What environments are to be delivered (test, user acceptance test, staging, prod)?

8. Describe strategies for increasing user adoption of the new tools and systems.

9. Describe best practices you use for monitoring the system to ensure it stays up to date and to understand how staff are using the tools.

10. Describe best practices for administration support for the product.

6.5   Training

1. Please describe the training you would recommend for your solution.
   a. Describe the different training methods you provide (e.g., online, in-person, etc.).
   b. Provide your training fee structure (if not included in solution).
   c. Describe how many hours of training would be optimal for your solution.
   d. Describe what training resources you provide (e.g., manual, reference guides, user groups, etc.)

2. Describe the components of your training plan.

3. Do you conduct a needs assessment before recommending your training options?

4. What type of post-implementation or ongoing training do you provide or recommend?

6.6   Ongoing Production Support

1. Provide a summary of your on-going customer service and support programs.
   a. What levels of customer support are available? What are the main service level agreement (SLA) components of each? What hours/days is support available? What is the cost associated with the support? Is there a toll-free number that can be utilized to access support staff?
   b. Describe the escalation procedure in the event that the SLA is not met.

2. Describe what is involved in a typical software upgrade (e.g., is any system down-time required, and if so, how long do you typically need)
   a. Please identify the typical tasks required for a software upgrade.
   b. What would be a standard timeline for an upgrade?
   c. How frequently do you release product upgrades?
   d. Describe how disruptions to business processes are minimized during software upgrades.
   e. Are release notes included with all your upgrades? Briefly describe the content and structure.

      f.   What is the process for evaluating and incorporating specific enhancements into your system?

      g.   What is the process for evaluating and incorporating high priority bug fixes into your system?

      h.   How often have you released major software upgrades to clients in the last 5 years?

      i.   Can EBMUD decide to not implement upgrade? Can the upgrade be reviewed by EBMUD staff before it is implemented?

3. Describe what is involved in an emergency software upgrade?

      a.   What is the notification process for an emergency software upgrade?

      b.   How often have you released emergency software patches in the past 5 years?

4. In the event that an upgrade impacts the existing database schema, describe how data conversion activities will be coordinated.

5. Describe the process of adding additional users to the system including any additional costs.

7.0   Vendor Information

7.1   Terms and Conditions

- This RFI requests information regarding potential product and services and no contractual obligations on behalf of EBMUD whatsoever shall arise from this RFI process.
- The Respondent shall be solely and fully responsible for all costs associated with the development, preparation, transmittal, and submission of any material in response to this RFI.
- Responses to this RFI become the exclusive property of EBMUD upon receipt.
- Responses received in response to this RFI may be subject to the California Public Records Act.
- The Respondent may designate elements in the response which are defined as business or trade secrets and plainly marked as "Confidential," "Trade Secret," or "Proprietary."

7.2   Schedule and Contact Information

The schedule is shown below. Submit your responses to the address below. Email (electronic documents) and/or hard copies are acceptable. To ensure all vendors have equal access to information regarding this RFI, please submit any questions or requests for clarification to Suma Popat, IT Project Manager via email at suma.popat@ebmud.com with subject header: Questions for PSL Replacement Project, to ensure all vendors have equal access to information regarding this RFI.

Event	Dates
RFI Release	COB Friday, October 22, 2021
Questions Due By	COB Friday, October 29, 2021
Answers Posted By	COB Friday, November 05, 2021
Responses Due By	COB Friday, November 12, 2021

Thank you in advance for your interest in this information request.

Email responses to: suma.popat@ebmud.com
                                                           Subject Header: RFI for PSL Replacement Project

Send RFI responses to: East Bay Municipal Utility District
                                                           Attn: Suma Popat
                                                           RE: RFI for PSL Replacement Project
                                                           375 11th Street, MS #302
                                                           Oakland, CA 94607

8.0 Appendix

Functional Requirements

1.0 Overview

Feature descriptions are organized by major functional module. Each module is comprised of one or more features. Each feature is defined by one or more requirement.

2.0 User Groups and General System Requirements

2.1 User Group Responsibilities

User Group	Responsibilities/Use Activities
EBMUD Customers	▪ Determine compliance of their property ▪ Obtain a certificate (Compliance, TEC, or exemption) ▪ Ascertain fees owed and pay fees ▪ Find information about program requirements ▪ Schedule inspection
PSL Scheduling Admin	▪ PSL inspection scheduling ▪ Manage Appointments ▪ Manage All Special Times ▪ Add New Appointment ▪ Customer email inbox and hotline ▪ Queries data and compiles reports
PSL Inspector Manager	▪ Manage All Appointments ▪ Edit Inspector Priorities ▪ Queries data and compiles reports
PSL Inspector	▪ Input Inspection Results
PSL Administrator Manager	▪ Time Extension Certificate refunds signoff ▪ Compliance Agreements/appeals signoff ▪ Queries data and compiles reports
PSL Administrator	▪ Edit certificate types ▪ Edit Email text ▪ Upload title transfer data ▪ Review Exemption Requests ▪ Edit parcel certificate ▪ Record manual payment ▪ Input Lower Lateral Waivers ▪ Queries data and compiles reports
Accounting Administrator	▪ Time Extension Certificate deposit reports ▪ Time Extension Certificate disbursement authorization processing ▪ Queries data and compiles reports
ISD Administrator	▪ Application support/bug fixes/maintenance ▪ Queries data and compiles reports

2.2 High Level Product Features

Product Features			User Group
			PSL Program Administrator
			System Administrator
PSL Application Capacity			
	At least 1,000 inspections per month	Must have	
2.2.1	At least 1,000 PSL Program Certificates issued per month	Must have	
2.2.2	At least 500 enforcement records per month	Must have	
2.2.3	At least 100 appeal and exemption requests per month	Must have	
2.2.4	Parcel database for Contra Costa County (El Cerrito, Kensington, and Richmond Annex), and Alameda County (Alameda, Albany, Emeryville, Piedmont, and Oakland) with room to expand upon creation of new parcels or parcel splits, and inclusion of the City of Berkeley	Must have	

2.3 Application Interfaces & Interoperability

2.3.1	The system will provide standard interfaces to existing and future EBMUD systems/applications for incoming and outgoing data	Must have	
2.3.1.	The system will be able to consume data and export data in file formats including, but not limited to the following:	Must have	
2.3.1.	Adobe PDF	Must have	
2.3.1.	CSV	Must have	
2.3.1.	Microsoft Excel	Must have	
2.3.1.	Microsoft Word	Must have	

2.3.2.	The system will consider interoperability with the following EBMUD systems/applications:	Must have
2.3.2.	Customer Watch	Must have
2.3.2.	DOCS, document management system	Must have
2.3.2.	Elsie, Oracle Cloud Financial Information System	Must have
2.3.2.	Utilize an EBMUD contracted payments processor to accept common payment methods (e.g., credit cards or ACH)	Must have
2.3.2.	Adhere to PCI compliance standards to protect personally identifiable information	Must have

2.4   User Roles and Responsibility

2.4.1	The system will allow users to be assigned security levels	Must have
2.4.1.1	The system will support a general user level that would allow user to add and retrieve data	Must have
2.4.1.2	The system will support a user level that would allow user to only view data	Must have
2.4.1.3	The system will support an administrator security level	Must have
2.4.2	Protect the information that customers submit to the PSL Program	Must have
2.4.3	The system will allow different sites to have different security roles and access levels defined for the same functionality	Must have
2.4.4	The system will be configured to authorized users to gain access to other functional group and/or site's data	Must have
2.4.5	The system will support the creation of user defined roles	Must have
2.4.6	The system administrator will have access to all functions of the system	Must have

2.4.6.1	The system administrator will be able to add or remove system functions to the user defined roles	Must have	
2.4.6.2	The system administrators will be able to assign users in the system to one or more user-defined roles	Must have	
2.4.6.3	The system administrators will have the ability to add, modify or remove functionality (permissions) to and from users (independent of assigned role)	Must have	
2.4.7	The system will automatically logout a user if the session is dormant	Must have	
2.4.8	The system will allow the administrator to establish the "dormant" time.	Must have	

Specific PSL Requirements

Assessor's Parcel Number (APN) Database Management ▪ Parcel Updates ▪ Parcel Relationships ▪ Record Keeping	
PSL Inspection ▪ Manage Appointments ▪ Inspection Records ▪ Program Triggers	PSL Inspector, PSL Inspector Manager, PSL Administrator, EBMUD Customers,
PSL Program Certificates ▪ Compliance Certificate ▪ Time Extension Certificates (TECs) ▪ Exemption Certificates	PSL Inspector, PSL Administrator, PSL Administrator Manager, Accounting Administrator
Appeals	PSL Administrator, PSL Administrator

▪ Customer Appeal Request ▪ Compliance Agreements	Manager
Enforcement ▪ Track and Manage Enforcement	PSL Administrator
HOA and Greater than 1,000-Ft Program Database ▪ Manage appointments ▪ Track inspections ▪ Manage compliance	PSL Administrator, PSL Inspector Manager, EBMUD Customers
Program Accounting ▪ Reconciliation Report ▪ Processing Payments, Refunds, and ▪ Walk-in payment processing ▪ Enforcement non-compliance billing ▪ Rate Increases	PSL Administrator System Administrator
Program Website ▪ Content and self-service through EBMUD.com and self-service through EBMUD.com	PSL Administrator Web Author
Data Aggregation and Regulatory Reporting ▪ Predefined and Ad-hoc Reports	PSL Administrator

2.5 PSL Application Capacity

2.5.1	At least 1,000 inspections per month	Must have
2.5.2	At least 1,000 PSL Program Certificates issued per month	Must have
2.5.3	At least 500 enforcement records per month	Must have
2.5.4	At least 100 appeal and exemption requests per month	Must have
2.5.5	Parcel database for Contra Costa County (El Cerrito, Kensington, and Richmond Annex), and Alameda County (Alameda, Albany, Emeryville, Piedmont, and Oakland) with room to expand upon creation of new parcels or parcel splits, and inclusion of the City of Berkeley	Must have

2.6 Application Interfaces & Interoperability

2.6.1	The system will provide standard interfaces to existing and future EBMUD systems/applications for incoming and outgoing data	Must have

2.6.1.1	The system will be able to consume data and export data in file formats including, but not limited to the following:	Must have
2.6.1.2	Adobe PDF	Must have
2.6.1.3	CSV	Must have
2.6.1.4	Microsoft Excel	Must have
2.6.1.5	Microsoft Word	Must have
2.6.2	The system will consider interoperability with the following EBMUD systems/applications:	Must have
2.6.2.1	Customer Watch	Must have
2.6.2.2	DOCS, document management system	Must have
2.6.2.3	Elsie, Oracle Cloud Financial Information System	Must have
2.6.2.4	Utilize an EBMUD contracted payments processor to accept common payment methods (e.g., credit cards or ACH)	Must have
2.6.2.5	Adhere to PCI compliance standards to protect personally identifiable information	Must have

2.7   User Roles and Responsibility

2.7.1	The system will allow users to be assigned security levels	Must have
2.7.1.1	The system will support a general user level that would allow user to add and retrieve data	Must have
2.7.1.2	The system will support a user level that would allow user to only view data	Must have
2.7.1.3	The system will support an administrator security level	Must have
2.7.2	Protect the information that customers submit to the PSL Program	Must have
2.7.3	The system will allow different sites to have different security roles and access levels defined for the same functionality	Must have
2.7.4	The system will be configured to authorized users to gain access to other functional group and/or site's data	Must have
2.7.5	The system will support the creation of user defined roles	Must have
2.7.6	The system administrator will have access to all functions of the system	Must have
2.7.6.1	The system administrator will be able to add or remove system functions to the user defined roles	Must have
2.7.6.2	The system administrators will be able to assign users in the system to one or more user-defined roles	Must have
2.7.6.3	The system administrators will have the ability to add, modify or remove functionality (permissions) to and from users (independent of assigned role)	Must have
2.7.7	The system will automatically logout a user if the session is dormant	Must have
2.7.8	The system will allow the administrator to establish the "dormant" time.	Must have

Specific PSL Requirements

3.0 Assessor's Parcel Number (APN) Database Management

3.1 Parcel Updates

3.1.1	Utilize parcel database for Contra Costa County (El Cerrito, Kensington, and Richmond Annex), and Alameda County (Alameda, Albany, Emeryville, Piedmont, and Oakland), with ability to add City of Berkeley in future. Ability to utilize GIS parcel database.	Must have
3.1.2	Get Alameda and Contra Costa County APN updates monthly from third party source	Must have
3.1.3	Provide method to upload and manage APN data	Must have
3.1.4	Ability to retain the original parcels, so historical Compliance Certificates and inspection data is not lost	Must have
3.1.5	Ability to track APN splits, merges, and newly created APNs	Must have
3.1.6	Ability to create "parcels" for the purpose of the PSL Program that do not correspond with APNs (e.g., to issue Compliance Certificates for the Port of Oakland or Alameda Point)	Must have
3.1.7	Ability to use both APN or customer water account number to track and manage PSL Program data and send information to other EBMUD databases such as Customer Watch and Oracle Financial System.	Must have
3.1.8	Ability to view PSL Compliance Certificates by APN in ESRI a GIS map layer	Must have
3.1.9	Data fields required for parcel uploads:	Must have
3.1.9.1	APN	Must have
3.1.9.2	County	Must have
3.1.9.3	Property Address	Must have
3.1.9.4	Property City	Must have
3.1.9.5	Property state	Must have
3.1.9.6	Property zip	Must have
3.1.9.7	Land use code	Must have

3.2 Parcel Relationships

3.2.1	Manage and create parcel relationships within the APN database:	Must have
3.2.1.1	Ability to track compliance by parcel group, for example: customers searching for HOA compliance can view all Compliance Certificates for the development in one view	Must have

3.2.1.2	Certificate issuance, billing, and inspection results can be linked to parcel groups under the same ownership or management	Must have

3.3 Record Keeping

3.3.1	Track all PSL program events to a given APN	Must have
3.3.1.1	Inspection bookings	Must have
3.3.1.2	Inspection records (data directly input and reports uploaded)	Must have
3.3.1.3	Appeal requests	Must have
3.3.1.3.1	Customer program fee charges and payments	Must have
3.3.1.3.2	Date fee assessed; purpose of fee; amount of fee	Must have
3.3.1.4	Date of payment and link to item being paid	Must have
3.3.1.5	Record of all Customer communication and actions taken	Must have
3.3.1.6	PSL certificate issuance (Compliance, Compliance Agreement, Exemption, Time Extension certificates)	Must have
3.3.2	Ability to issue compliance certificates to portion of a parcel in Port of Oakland or Alameda Point	Must have
3.3.3	Ability to upload documents into the database for parcel groups or individual APNs	Must have

4.0 PSL Inspection Appointments and Records

4.1 Manage Appointments

4.1.1	Create open inspection windows that may be scheduled by EBMUD customers	Must have
4.1.2	Inspection appointment mapping. See a map that shows points where all the inspections are located for any given inspector, appointment window, or for the day. A plotted map appears with color coded blips that communicate appointment window, inspector assignment, and that present complete appointment information on mouse over.	Must have
4.1.3	Define inspector work schedules and inspection assignments in application	Must have
4.1.4	Establish appointment waitlist if all inspection timeslots are taken	Must have
4.1.5	Real-time appointment booking for customers, such that inspection appointments or inspector's availability can update as changes are made	Must have
4.1.6	Manually create an inspection appointment:	Must have
4.1.6.1	APN or Address search	Must have
4.1.6.2	Customer Name	Must have

4.1.6.3	Customer Phone		Must have
4.1.6.4	Customer email		Must have
4.1.6.5	Date		Must have
4.1.6.6	Time		Must have
4.1.6.7	Inspector		Must have
4.1.6.8	Note if off-hours, HOA, or multi-lateral inspection appointment		Must have
4.1.7	Link special appointments to an inspector's time slot		Must have
4.1.8	Customer Relationship Management		Must have
4.1.8.1	Be able to add notes		Must have
4.1.8.2	Links to files and supporting files within the database to document customer interactions		Must have
4.1.8.3	Download or link to data from EBMUD central database for PSL customer inquiries and correspondence		Must have
4.1.9	Interface that allows filterable and customizable viewing for EBMUD users:		Must have
4.1.9.1	Inspection appointments (by date, inspector, city)		Must have
4.1.9.2	Inspection results (by date, inspector, parcel group, parcel)		Must have
4.1.9.3	Certificates (by issue date, expiration date, city, parcel group, parcel)		Must have
4.1.9.4	Parcel group data (by type, compliance deadline)		Must have
4.1.9.5	Events/transactions (by date, contractor, parcel, parcel group)		Must have
4.1.10	Navigation to view related PSL inspection appointment information		Must have
4.1.10.1	Ability to select a property on the schedule and view APN data		Must have
4.1.10.2	View previous inspection results		Must have
4.1.10.3	Event/transaction history (including past PSL certificates)		Must have
4.1.11	Automate inspection reschedules or cancellation alerts for inspectors		Must have
4.1.12	Ability for users to upload documents into the database associated with specific parcels, and inspection records		Must have
4.1.13	Allow dispatcher to enter instructions for special appointments		Must have
4.1.14	Have database provide twice daily email notifications (7am and 2pm) to Satellite agency staff concerning upcoming PSL inspections. System must allow PSL administrator to update Satellite agency email addresses.		Must have
4.1.14.1	Separate emails to custom email list, including PG&E, based on which city the property is in and send list of all inspections		Must have
4.1.15	PSL Inspection Workflow		Must have
4.1.15.1	Property owner triggers PSL Ordinance via title transfer, water meter, or construction remodel		Must have
4.1.15.2	Customer or Contractor submits request for PSL inspection and pays Compliance Certificate fee		Must have

4.1.15.3	Customer receives email notification confirming appointment has been booked and receipt confirming payment. Appointment reminders are sent to the customer prior to their appointment.	Must have
4.1.15.4	Inspection is scheduled and an inspector is assigned to the inspection	Must have
4.1.15.5	Inspection failed – failed verification test, inspector needs additional information (possible illicit connect(s), or customer no show – customer required to reschedule/retest, inspector enters results and reschedule fee is applied to account	Must have
4.1.15.6	Inspection passed – inspector submits results and Compliance Certificate is issued	Must have
4.1.15.7	Customer who booked PSL appointment receives email with link to download a copy of their Certificate	Must have

4.2 Inspection Records

4.2.1	Ability to incorporate data from previous inspections for a new inspection if the property has been previously inspected.	Must have
4.2.2	Reservation data fields	Must have
4.2.2.1	APN	Must have
4.2.2.2	Address	Must have
4.2.2.3	City	Must have
4.2.2.4	Owner Name	Must have
4.2.2.5	Owner Address	Must have
4.2.2.6	Owner Phone	Must have
4.2.2.7	Owner e-mail	Must have
4.2.2.8	Special instructions	Must have
4.2.2.9	Name of contractor performing verification test	Must have
4.2.2.10	Mailing address	Must have
4.2.2.11	Contractor office number	Must have
4.2.2.12	Contractor mobile number	Must have
4.2.3	Inspection data fields	Must have
4.2.3.1	Inspector name	Must have
4.2.3.2	Test date	Must have
4.2.3.3	City inspection issues - yes/no	Must have
4.2.3.4	Contractor license number	Must have
4.2.3.5	Contractor name	Must have

4.2.3.6	Parcel type: Single-family, Duplex/Triplex, Multi-unit Condominiums, Individual condominium, Apartment complex, government/public, institution, Homeowners association, Lateral over 1,000ft, Lot with no sewer connection, other	Must have
4.2.3.7	Sewer main location	Must have
4.2.3.8	Inspector's comment	Must have
4.2.3.9	Upper lateral	Must have
4.2.3.10	Lower lateral	Must have
4.2.3.11	Total lateral length (feet)	Must have
4.2.3.12	Pipe diameter (inches)	Must have
4.2.3.13	Standpipe height (inches)	Must have
4.2.3.14	PSL, replaced or repaired?	Must have
4.2.3.15	Material used for PSL replacement: clay pipe, abs pipe, PVC SDR 16, HDPE SDR 17, CIP liner, DIP iron pipe, other	Must have
4.2.3.16	Replacement method – CIP lined, Pipe burst, trench, other	Must have
4.2.3.17	Old pipe material – ABS, clay, clay/iron, iron, pvc, other, unknown	Must have
4.2.3.18	Pressure gauge audit – yes/no/unknown	Must have
4.2.3.19	Test Equipment – pass/fail/no result	Must have
4.2.3.20	Observable illicit connections – yes/no/unknown	Must have
4.2.3.21	Lower cleanout present – yes/no	Must have
4.2.3.22	Test method – air/water	Must have
4.2.3.23	Starting pressure (psi)	Must have
4.2.3.24	Ending pressure (psi)	Must have
4.2.3.25	Observable water loss – yes/no/unknown	Must have
4.2.3.26	Lateral test pass/fail – pass/fail/No result	Must have
4.2.3.27	Inspector's comments	Must have
4.2.3.28	Map for the parcel showing both satellite and GIS sewer information, with ability to annotate and save	Must have
4.2.3.29	Ability to add photo from mobile phone or tablet and then annotate photo and save as part of inspection record	Must have
4.2.4	Ability to view past PSL inspection results	Must have
4.2.5	Ability to save inspection results without generating a Compliance Certificate, so user can revisit and submit data at a later time	Must have
4.2.6	Ability to preview Compliance Certificate type prior to submitting results	Must have
4.2.7	Ability to automatically send electronic PSL inspection receipts to customer upon completion of inspection. Receipt must be read only and cannot be edited by the customer.	Must have
4.2.8	Ability to add or revise inspection data fields	Must have

4.2.9	Be able to track inspection results for all laterals on a property, regardless of how many there are, so the application generates the correct number of input forms for collecting all the facts specific to an individual lateral	Must have
4.2.10	Ability for users to upload documents to specific parcels, inspection records, etc.	Must have
4.2.11	Ability to create forms for data entry (i.e., inspection report forms, HOA statement of responsibility forms), from which entries are loaded into the system	Must have
4.2.12	Ability for users to access version-controlled SOPs on PSL inspection and data procedures	Must have
4.2.13	Ability to incorporate SD-1 GIS map for sewer system into inspection files	Must have
4.2.14	Ability to show inspection data when PSL administrators inquire about prior results	Must have
4.2.15	Access through Mobile Device	Must have
4.2.15.1	Live electronic data entry into the system during inspections	Must have
4.2.15.2	Adjustable display so mobile device user can view entire inspection results with minimal scrolling or paging	Must have
4.2.15.3	Allow data to be saved temporarily locally and then uploaded once connection is available – support offline data entry	Must have

4.3 Program Triggers

4.3.1	Title Transfers	Must have
4.3.1.1	Time Extension Certificate expiring	Must have
4.3.1.2	Ability to upload sales transactions into the PSL database	Must have
4.3.1.3	Title transfers are considered in compliance if a valid Compliance Agreement, Compliance Certificate or Time Extension Certificate	Must have
4.3.1.4	No history of valid certificate or expired certificate considered non-compliant	Must have
4.3.2	Water Meter	Must have
4.3.2.1	Increase or decrease in water meter size requires a compliance certificate	Must have
4.3.2.2	PSL software must incorporate data from New Business Office to track compliance	Must have
4.3.3	Construction Remodel	Must have
4.3.3.1	Remodel more than $100,000 of permitted costs requires a compliance certificate to be obtained	Must have
4.3.3.2	EBMUD receives data via excel file for finaled permits more than $100,000	Must have
4.3.3.3	Software must allow data to be uploaded into the database to provide status of compliance for all finaled permits	Must have

4.3.4	Compliance Agreement	Must have
4.3.4.1	Software must track compliance agreement expiration, milestones, and extension deposits	Must have

5.0 PSL Program Certificates

5.1 Compliance Certificate

5.1.1	Lower lateral waiver for all parcels in Alameda and Albany	Must have
5.1.2	Data entry fields to search for property address, determine compliance, and schedule PSL inspection	Must have
5.1.2.1	APN	Must have
5.1.2.2	Property address	Must have
5.1.2.3	Apartment number	Must have
5.1.2.4	Property city	Must have
5.1.3	Customer can choose to use either APN or Address to lookup parcel	Must have
5.1.4	Show available reservation dates and times; appointments will be booked in 3-hour windows	Must have
5.1.5	Customers must be able to see appointments prior to entering contact information	Must have
5.1.6	Data entry fields for booking PSL inspections	Must have
5.1.6.1	Property owner name	Must have
5.1.6.2	Property owner mailing address	Must have
5.1.6.3	Property owner email	Must have
5.1.6.4	Contractor name	Must have
5.1.6.5	Contractor mailing address	Must have
5.1.6.6	Contractor email address	Must have
5.1.6.7	Contractor phone number	Must have
5.1.6.8	Special instructions	Must have
5.1.7	Mobile Device Integration	Must have
5.1.7.1	Adjustable display so mobile device user view entire appointment form without scrolling or paging	Must have
5.1.7.2	Allow data to be saved temporarily locally and then uploaded once connection is available	Must have
5.1.8	Prohibit customers from booking more than one appointment for the same parcel in the same appointment booking sessions.	Must have
5.1.9	Data entry validation to prevent erroneous data being submitted by customer	Must have
5.1.10	If Compliance Certificate inspection fee is not paid the system must drop the reservation within 15 minutes	Must have

5.1.11	Field for customer to list the number of PSLs to be inspected on the parcel. The application must route the appointment request to the right team based on the number of laterals on my property	Must have
5.1.11.1	< 3 to standard appointment, customer allowed to book appointment online	Must have
5.1.11.2	> 3 to special appointments process, customer is asked to submit map with appointment booking	Must have
5.1.12	Compliance Certificate types	Must have
5.1.12.1	Compliance Certificate – Replaced Sewer Lateral (20-year certificate)	Must have
5.1.12.2	Compliance Certificate – Repaired Sewer Lateral (7-year certificate)	Must have
5.1.12.3	Compliance Certificate – Passed as-is (7-year certificate)	Must have
5.1.12.4	Compliance Certificate – renew – Replaced Sewer Lateral (20-year certificate, but must be renewed upon expiration)	Must have
5.1.12.5	Compliance Certificate – renew – Repaired Sewer Lateral (20-year certificate, but must be renewed upon expiration)	Must have
5.1.12.6	Compliance Certificate – renew – Passed as-is (20-year certificate, but must be renewed upon expiration)	Must have
5.1.12.7	Configure code to address logic for proper compliance certificate issuance	Must have
5.1.13	Reminder email is sent to customers 24 months prior to expiration of a RENEW type Compliance Certificate. PSL Administrator will be able to customize the customer notification message	Must have
5.1.14	Ability to create new certificate types or modify existing certificate types	Must have
5.1.15	Ability to revoke compliance certificate at any time	Must have
5.1.16	Criteria for compliance certificate logic	Must have
5.1.16.1	Upper Sewer Lateral (UL) and Lower Sewer Lateral (LL) Replaced = 20-year certificate	Must have
5.1.16.2	UL replaced and LL Repaired = 7-year certificate	Must have
5.1.16.3	UL replaced and LL as-is = 7-year certificate	Must have
5.1.16.4	UL as-is, and LL as-is = 7-year certificate	Must have
5.1.16.5	UL repaired and LL replaced = 7-year certificate	Must have
5.1.16.6	UL as-is, and LL replaced = 7-year certificate	Must have
5.1.16.7	UL replaced and no LL = 20-year certificate	Must have
5.1.16.8	UL repaired and no LL = 7-year certificate	Must have
5.1.16.9	UL as-is and no LL = 7-year certificate	Must have
5.1.17	Compliance Certificate logic (HOA and 1,000ft parcel groups)	Must have
5.1.17.1	UL and LL replaced = 20-year renew certificate	Must have
5.1.17.2	UL replaced and LL Repaired = 20-year renew certificate	Must have

5.1.17.3	UL replaced and LL as-is = 20-year renew certificate	Must have
5.1.17.4	UL as-is, and LL as-is = 20-year renew certificate	Must have
5.1.17.5	UL repaired and LL replaced = 20-year renew certificate	Must have
5.1.17.6	UL as-is, and LL replaced = 20-year renew certificate	Must have
5.1.17.7	UL replaced and no LL = 20-year renew certificate	Must have
5.1.17.8	UL repaired and no LL = 20-year renew certificate	Must have
5.1.17.9	UL as-is and no LL = 20-year renew certificate	Must have
5.1.18	Ability to update property owner contact information in the event property sells before Compliance Certificate expires	Must have

5.2 Time Extension Certificates (TECs)

5.2.1	TECs available on website for purchase/download	Must have
5.2.2	Record TEC fee and refundable deposit	Must have
5.2.2.1	TEC fee paid by credit card through website	Must have
5.2.2.2	TEC deposit may be paid by ACH or other electronic transfer or by mailed in check (mechanism for ACH to be tracked directly in the software)	Must have
5.2.2.3	Address when a deposit check is returned by the bank, and document event in the system so that it's known that a refund check shouldn't be issued, until a replacement deposit check is received	Must have
5.2.2.4	Mailed in checks need to be linked to the property via the system (checks contain parcel number)	Must have
5.2.3	Prohibit same property owner from obtaining more than one TEC	Must have
5.2.4	Customer TEC request data fields	Must have
5.2.4.1	Customer name	Must have
5.2.4.2	Customer Email	Must have
5.2.4.3	Mailing address	Must have
5.2.4.4	City, State Zip	Must have
5.2.4.5	Parcel number	Must have
5.2.5	Recipient refund recipient data fields	Must have
5.2.5.1	Recipient name	Must have
5.2.5.2	Mailing address	Must have
5.2.5.3	City, State Zip	Must have
5.2.5.4	Recipient phone number	Must have
5.2.5.5	Recipient email	Must have
5.2.6	Certificate is valid for 180-days from date of purchase	Must have
5.2.7	Track TEC deposit within the PSL application and cross-reference TEC purchase and required deposit (via accounting dept. deposit reports) so	Must have

	that one cannot occur without the other	
5.2.8	Expired TECs enter enforcement immediately after the extension has expired (see Enforcement section 7.1 for more details)	Must have
5.2.9	Automate disbursement authorizations to process (TEC) refunds either hard copy or electronically	Must have
5.2.9.1	User can access database to run check at any time to identify Time Extension Certificate holders who have obtained a Compliance Certificate	Must have
5.2.9.2	System will compile the TEC refund packets after refund Compliance status check has been completed	Must have
5.2.10	Perform query to generate TEC refund packets, and the database stores the following details regarding TEC deposits	Must have
5.2.10.1	Accounting ID (numeric code)	Must have
5.2.10.2	Deposit Date	Must have
5.2.10.3	Customer Name	Must have
5.2.10.4	Property Address (property triggering PSL Ordinance)	Must have
5.2.10.5	Customer Mailing Address	Must have
5.2.10.6	Customer Phone Number	Must have
5.2.10.7	Customer Email	Must have
5.2.10.8	Time Extension Certificate expiration date	Must have
5.2.11	Refund packet must include all files	Must have
5.2.11.1	Completed/signed disbursement authorization. Disbursement Authorization must include the following data fields: Vendor Code (numeric value), Remit Name, Remit Address, Date Prepared, Settlement amount, Invoice number (APN), invoice date, fund name, account number, and signatures of approval.	Must have
5.2.11.2	Copy of TEC. TEC certificate must be stored within the database	Must have
5.2.11.3	Copy of deposit check or ACH or other electronic transfer receipt	Must have
5.2.11.4	Refund recipient name and mailing address (to validate disbursement authorization since customer information is not visible due to privacy protection)	Must have
5.2.12	Integration with the EBMUD's financial and accounting system so that when checks are received the deposit is linked to the TEC	Must have
5.2.13	Valid EBMUD Compliance Certificate or exemption certificate is required for TEC deposit to be refunded	Must have
5.2.14	TEC workflow	Must have
5.2.14.1	Title transfer occurs	Must have

5.2.14.2	Customer who does not currently have a valid Compliance Certificate for their property purchases a TEC prior to close of escrow	Must have
5.2.14.3	A copy of the Time Extension Certificate along with the deposit check is mailed to EBMUD	Must have
5.2.14.4	Compliance Certificate is issued before the 180-day extension expires	Must have
5.2.14.5	TEC expires, and customer enters enforcement	Must have
5.2.14.6	Deposit is refunded back to customer once Compliance Certificate is obtained	Must have
5.2.14.7	Ability to query database to find all parcels with a TEC for which a COC has or has not been obtained for all data fields including deposit information.	Must have

5.3 Exemption Certificates

5.3.1	Ability to track and process all PSL Exemption Certificate requests	Must have
5.3.2	Automated email that goes to customer when exemption request is submitted	Must have
5.3.3	Automated email requesting additional documentation based on the exemption request type	Must have
5.3.4	Automated email that goes to customer when decision is made, and exemption is processed	Must have
5.3.5	Ability to track and store staff communication with customer	Must have
5.3.6	Criteria for exemption approval	Must have
5.3.6.1	Past PSL work, and exempt title transfers	Must have
5.3.6.2	Past PSL work	Must have
5.3.6.3	Exempt title transfers	Must have
5.3.6.4	Lineal consanguinity	Must have
5.3.6.5	Pressurized PSLs	Must have
5.3.6.6	Vacant parcels	Must have
5.3.6.7	Septic system	Must have
5.3.6.8	No sewer connection (septic)	Must have
5.3.6.9	Partial interest transfer	Must have
5.3.6.10	Will or inheritance	Must have
5.3.6.11	Co-owner	Must have
5.3.6.12	Trust	Must have
5.3.6.13	Divorce	Must have
5.3.6.14	Foreclosure	Must have
5.3.6.15	Transfer between business entity (LLC)	Must have
5.3.6.16	Other – provide flexibility to add new criteria	Must have

5.3.7	Ability to see what actions have been taken, track any communication, and can change the state to one of the states in the PSL Exemption Lifecycle	Must have
5.3.8	Exemption workflow	Must have
5.3.8.1	Customer submits exemption request online	Must have
5.3.8.2	Customer receives automated email from EBMUD confirming receipt of exemption request	Must have
5.3.8.3	Exemption request is received by EBMUD	Must have
5.3.8.4	PSL Administrator sends email to customer to request additional details or sends email to Satellite confirming permit details	Must have
5.3.8.5	Sufficient information provided – decision to approve or deny	Must have
5.3.8.6	If approved, PSL Administrator adds issue and expiration date, and notes reason for approval on the exemption certificate	Must have
5.3.8.7	Exemption duration auto populated based on compliance status (i.e., if received enforcement notice 1 month exemption, 6 month exemption if enforcement notice has not been issued)	Must have
5.3.8.8	Customer gets autogenerated email with final decision, if decision is denied customer is provided option to appeal; if decision is approved customer is provided a direct link to download a copy of the exemption certificate	Must have

6.0   Appeals

6.1   Customer Appeal Request

6.1.1	Ability to track appeal decision with PSL non-compliance enforcement process, see Enforcement section 7.0 for more details	Must have
6.1.2	Ability to track and process all PSL appeal requests and compliance agreements within database	Must have
6.1.2.1	Customers can request appeal online	Must have
6.1.2.2	Property owner name	Must have
6.1.2.3	Property owner email	Must have
6.1.2.4	Property owner phone number	Must have
6.1.2.5	Property address	Must have
6.1.2.6	Property APN	Must have
6.1.2.7	Contact Name	Must have
6.1.2.8	Contact Mailing Address	Must have
6.1.2.9	Contact Email	Must have

6.1.2.10	Contact phone number	Must have
6.1.2.11	Request extension of time – date	Must have
6.1.2.12	Appeal decision made by EBMUD – nature of decision	Must have
6.1.2.13	Have you obtained a TEC – TEC number/Expiration date	Must have
6.1.2.14	Explain reasons for appeal	Must have
6.1.2.15	Describe specific request	Must have
6.1.2.16	Attach supporting documentation	Must have
6.1.2.17	Automated email goes to customer after appeal request has been submitted	Must have
6.1.2.18	Electronic signature	Must have
6.1.3	The application must have stages of approval and review as well as tracking actions taken within the application	Must have
6.1.4	Ability to house the documents and templates within the application	Must have

6.2   Compliance Agreements

6.2.1	Compliance Agreement implementation	Must have
6.2.1.1	Ability to track monetary deposits for extensions regardless of dollar amount	
6.2.1.2	Appeal for additional time – approved, Compliance Agreement created, and certificate of extension issued to customer	Must have
6.2.1.3	If greater than 18-month extension, PSL Administrator can establish milestones	Must have
6.2.1.4	Customer gets notifications (automated emails) about upcoming milestone deadlines and one month prior to expiration of Compliance Agreement	Must have
6.2.1.5	Expired Compliance Agreements automatically enter enforcement	Must have
6.2.2	Compliance agreements will require digital signature for authorizing the extension	Must have
6.2.3	Software tracks cash deposits submitted to EBMUD for the extension	Must have

7.0 Enforcement

7.1 Track and Manage Enforcement

7.1.1	Determine the status of a parcel in the context of the PSL Ordinance Enforcement process	Must have
7.1.1.1	Title transfer trigger via monthly sales data upload	Must have
7.1.1.2	Water meter trigger data to be entered by New Business Office	Must have
7.1.1.3	Ability to upload $100K remodel trigger via quarterly permit data received from Satellite agencies	Must have
7.1.1.4	Expired Time Extension and Compliance Agreement Certificates automatically enter enforcement	Must have
7.1.2	Search and filter tools allowing user to filter enforcement data	Must have
7.1.3	User ability to edit, or delete customer data records	Must have
7.1.4	Tool that allows title transfer data to be uploaded into enforcement database	Must have
7.1.5	Ability to modify enforcement steps (forwards and backwards) to change the enforcement status (step) of any parcel as needed, and not necessarily in any stepwise fashion.	Must have
7.1.6	Attach trigger type (Sale upload, TEC expiration, Compliance Agreement expiration, water meter, $100k remodel) to each parcel in enforcement.	Must have
7.1.7	Enforcement Process	Must have
7.1.8	Parcel enters enforcement module for not obtaining a compliance certificate upon meeting one of the three program triggers	Must have
7.1.8.1	1st Courtesy notice	Must have
7.1.8.2	2nd Courtesy notice (sent 30 days after 1st courtesy notice)	Must have
7.1.8.3	Notice of Violation and Order (NOVO) (sent 30 days after 2nd courtesy notice) and assess fee	Must have
7.1.8.4	1st Continuing non-compliance (sent 60 days after NOVO) and assess fee	Must have
7.1.8.5	2nd Continuing non-compliance (sent 60 days after 1st continuing non-compliance) and assess fee	Must have
7.1.8.6	3rd or more Continuing non-compliance (sent 60 days after last continuing non-compliance) and assess fee	Must have
7.1.9	Ability to add additional enforcement steps as needed	Must have
7.1.10	Ability to record and notify Accounts Receivable when fees are paid	
7.1.11	Parcels automatically removed from enforcement due to valid program certificate	Must have

7.1.11.1	Time Extension Certificate	Must have
7.1.11.2	Exemption Certificate	Must have
7.1.11.3	Compliance certificate	Must have
7.1.11.4	Compliance Agreement	Must have
7.1.12	Ability to create courtesy notice templates and modify as needed, database would automatically generate the letters from the list of parcels to receive enforcement for a given mailer	Must have
7.1.13	Send and track email or other communication so user can determine what the PSL Team has told a customer at any given time	Must have
7.1.14	The application presents me with choices of how to communicate, helps me formulate a standard email message, and logs the communication	Must have
7.1.15	Tool that provides summary statistics of enforcement activities	Must have
7.1.15.1	Number of parcels presently in enforcement, categorized by enforcement trigger type and enforcement trigger date	Must have
7.1.15.2	Number of parcels that entered each stage of enforcement, categorized by enforcement trigger type and enforcement trigger date	Must have
7.1.15.3	Number of parcels that were formerly in enforcement, but are now compliant, and percent of total, categorized by enforcement trigger type and enforcement trigger date	Must have
7.1.15.4	Average amount of time between each enforcement stage and compliance, by enforcement trigger type and enforcement trigger date	Must have
7.1.16	Record and report the current and past enforcement stages applied and the time between each stage and compliance for each parcel.	Must have

8.0   Program Accounting

8.1   Reconciliation Report

8.1.1	Report that accurately records customer transactions and assessed fees by parcel in chronological order from oldest to newest	Must have

8.2   Processing Payments, Refunds, and Fees

8.2.1	Compatibility with Oracle Financial System software (specific requirements to be developed)	Must have
8.2.2	Ability for customers to pay fees online through a contracted payment processor	Must have
8.2.3	Ability to manually apply program fees for a given parcel or parcel group	Must have

8.2.4	Ability to cancel payment records in the PSL Application and process refunds	Must have
8.2.5	Ability to access fees to Customers and/or properties	Must have
8.2.6	PSL fee types	Must have
8.2.6.1	Compliance Certificate	Must have
8.2.6.2	Time Extension Certificate	Must have
8.2.6.3	Reschedule fee	Must have
8.2.6.4	Extra lateral fee	Must have
8.2.6.5	Off hours fee	Must have
8.2.6.6	Specific appointment time	Must have
8.2.6.7	HOA oversight	Must have
8.2.6.8	Compliance Agreement	Must have
8.2.6.9	Other fee - Ability to create new fee types	Must have
8.2.7	Ability to enter any dollar amount for "other fee"	Must have
8.2.8	Ability to refund full fee amount or specific dollar amounts, with the option to generate a DA to do so (which is necessary when the credit card charge is > 6 months old, or if we are refunding a duplicate TEC deposit)	Must have
8.2.9	Ability to update and modify fees (fee updates should not impact existing fees on record that are not paid)	Must have

8.3 Walk-in Payment Processing

8.3.1	PSL Software must allow for EBMUD staff to enter payment details and record the transaction manually	Must have
8.3.2	Ability for software to generate receipt for payment of the PSL program fee that is sent to customer electronically via email	Must have
8.3.3	The payment receipt should include	Must have
8.3.4	Customer name	Must have
8.3.5	Customer mailing address	Must have
8.3.6	Payment type and amount paid	Must have
8.3.6.1	Date of transaction	Must have
8.3.6.2	Transaction ID number	Must have
8.3.6.3	Assessor's Parcel Number	Must have

8.4 Enforcement Non-compliance Billing

8.4.1	Bill and track enforcement in application	Must have
8.4.2	Data needed to create customer accounts	Must have
8.4.2.1	Parcel Address	Must have
8.4.2.2	Assessor's Parcel Number	Must have

8.4.2.3	Property Owner Name	Must have
8.4.2.4	Property Owner Address	Must have
8.4.3	Non-compliance billing sequence	Must have
8.4.3.1	1st bill issued when NOVO is mailed (approximately 90 days after 1st courtesy notice)	Must have
8.4.3.2	2nd bill issued when 1st Continuing non-compliance letter is mailed (approximately 60 days after NOVO)	Must have
8.4.3.3	3rd bill issued when 2nd Continuing non-compliance letter is mailed (approximately 60 days after 1st Continuing non-compliance letter is mailed)	Must have
8.4.3.4	4th bill issued when 3rd continuing non-compliance letter is mailed (approximately 60 days after 2nd continuing non-compliance letter is mailed)	Must have
8.4.4	Ability to modify billing fees and frequency	Must have

8.5 Rate Increases

8.5.1	Ability for the application to keep track of fee changes and apply the correct fee based on the time that the charge was applied	Must have
8.5.2	Historical fee amounts must be retained for accurate record keeping	Must have

9.0 Program Website

9.1 Content and self-service through EBMUD.com

9.1.1	Provide online self-service functionality through ebmud.com	Must have
9.1.2	website should have a responsive design to support mobile devices	Must have
9.1.3	Customer information portal	Must have
9.1.4	Determine compliance status, download certificate, learn about what is needed to gain compliance, or schedule an inspection	Must have
9.1.5	Provide online Application Process for commercial, industrial, and residential customers	Must have
9.1.6	Provide information to customers related to PSL program requirements	Must have
9.1.7	Ability to view Compliance Certificates by property address or APN	Must have
9.1.8	Website that allows PSL administrator easy and prompt updates to keep information current	Must have

10.0 Data Aggregation and Regulatory Reporting

10.1 Predefined and Ad-hoc Reports

10.1.1	Pre-set reporting functionality (include all currently reported in CD Annual Report)	Must have
10.1.1.1	Annual Miles of PSL certified by Satellite	Must have
10.1.1.2	Annual Number of Compliance Certificates by Satellite	Must have
10.1.1.3	Annual number of exemption certificates by Satellite	Must have
10.1.1.4	Annual number of Time Extension Certificate counts: active, expired/compliant, and expired/non-compliant	Must have
10.1.1.5	Total number of: Title transfers, $100K remodel, and water meters	Must have
10.1.1.6	Projected vs Actual Compliance Certificates	Must have
10.1.1.7	Sales and compliance rates by month	Must have
10.1.1.8	Total certificates issued - % voluntary	Must have
10.1.1.9	1000ft parcel groups – Condition Assessment Plans, Corrective Action Work Plans, and compliance status	Must have
10.1.1.10	Number of HOAs and compliance status	Must have
10.1.1.11	Port of Oakland and Alameda Point parcel compliance	Must have
10.1.2	Ability to create new data quires within the database (ad-hoc)	Must have