Hawai'i SRF Management Study for the CWSRF and DWSRF Programs

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State of Hawai'i DW/CWSRF Management Study and Process Optimization Drill

The Hawaii Drinking Water and Clean Water State Revolving Funds (DWSRF and CWSRF) are operated and managed by the Environmental Resources Office (ERO) and Environmental Management Division (EMD) in the Hawaii Department of Health (DOH). Together, the Hawaii SRF programs have provided more than $796 million[1] in low-interest loans, principal forgiveness, and technical assistance to protect water quality and improve drinking water sources for thousands of Hawaiian citizens. **Combined, the DWSRF and CWSRF program account for 74% of the Hawaii Department of Health's total budget.**

The Hawaii SRF programs are in a unique position of having only four borrowing clients: the City and County of Honolulu, Hawaii County, Kauai County and Maui County. This arrangement has allowed DOH staff to form close working relationships with their clients and structure their financing program in close concert with their clients' activities. However, this arrangement also means that the Hawaii SRF programs are particularly vulnerable to the natural peaks and valleys in project demand that most other state SRF programs are able to address with a larger client base.

As a result of this and several other factors, the Hawaii SRF program activity (particularly in the DWSRF program) has varied significantly from year to year. Since 2004, the DWSRF program has averaged 3 loans and $8.2 million in total assistance per year. 2014 was a significant year for the DWSRF program, with $25 million in assistance provided. DWSRF staff and managers have made significant efforts to ensure that this upward trajectory continues, but the program history to date has resulted in a large balance of unliquidated obligations (ULOs) in the DWSRF program (Federal funds that have been obligated to the SRF program, but have not been drawn from the Federal treasury). The Hawaii DWSRF program currently has an unliquidated obligation balance of over $35 million, and ranks third in the country for highest ULOs as a percent of Federal capitalization grants.

Hawaii DOH and EPA Region 9 are taking proactive steps to address the DWSRF ULO issue. As part of this effort, Northbridge Environmental Management Consultants were invited to conduct a management study and Process Optimization Drill of the SRF programs. Although the Hawaii CWSRF program does not currently suffer from a high ULO balance, staff and managers from that program also participated in the study. Because the DWSRF and CWSRF programs are operated by the same agency, use similar processes, and deal

[1] 2013 Audited Financial Statements for the CWSRF program: Total Net Position of $466,047,076. 2013 Audited Financial Statements for the DWSRF program: Total Net Position of $126,698,963. 2013 Audited Financial Statements for the Hawaii Department of Health: Total Net Position of $796,138,949.

with the same client base, the study scope included the CWSRF program and extends certain recommendations to that program as well.

Initial discussions with DOH staff were conducted in Honolulu on March 18-20, 2014. Information gathered from those meetings was used to design a Process Optimization Drill (POD), intended to empirically quantify the workload associated with managing the SDWSRF program. Northbridge conducted the POD in Honolulu on May 19-21 with participation from CWSRF and DWSRF program staff, the DOH Administrative Services Office (ASO), the Hawaii Department of Accounting and General Services (DAGS), the Hawaii Department of Budget and Finance (B&F), the Governor's Office of Strategic Initiatives, and Oceanit Consulting. This report is the product of those meetings, and contains options that have been developed to specifically target the unique operating environment of the Hawaii SRF programs.

The topic areas covered in this report are as follows:

- **Organizational and Managerial Changes to Improve SRF Operations**
- **Internal Contributors to Hawaii's Unliquidated Obligations**
- **External Contributors to Hawaii's Unliquidated Obligations**
- **Financial Management**
- **Simplifying the Application and Disbursement Processes**
- **Communications Strategy**
- **Environmental Review**
- **POD Results Analysis**

Executive Summary

Many of the internal inefficiencies noted in this report have persisted for many years in the Hawaii SRF programs. Within DOH itself, there exists a disconcerting lack of collegiality between the CWSRF branch, the DWSRF branch, and the Water Revolving Fund Staff (WRFS) section. Perceived confusion or disagreement about the roles and responsibilities of staff has created long-standing conflict and low morale among staff and resulted in operational inefficiencies and substandard program performance. It is of great concern that these internal operational conflict issues will impede the successful implementation of the recommendations that are provided in this report. In order for positive change and program improvement to occur, it is imperative that SRF management offer solutions to address the operational problems and receive the cooperation and support of SRF program staff.

Going forward it is very important that senior DOH managers create and maintain a clear set of program operating guidelines and direct staff in a way that will result in more harmonious and efficient operations. Middle managers are clearly working very hard on all matters and have made great strides in addressing outstanding inefficiencies; however, additional effort and senior management focus to implement change, including the recommendations in this report, would be highly beneficial to overall Program performance.

Challenges and recommendations provided in this report are presented as follows:

- The major challenges influencing the **Organizational and Managerial Changes to Improve SRF Operations** section of the report are related to an uneven allocation of workload among staff resources. WRFS are performing more administrative financial duties that will be unnecessary once LGTS is in place, and are not as involved in the SRF process as they should be based on their knowledge and experience with the program. Meanwhile, there are relatively few engineers with heavy workloads, often performing duties that do not require engineering expertise. The existing management structure represents too broad a spectrum of accountability and responsibility to effectively handle all of the details associated with the SRF program. Finally, the counties also have limited staff and the processing SRF paperwork is an additional burden for them. Our recommendations for organizational and managerial changes to improve SRF operations are as follows:

    1. Undertake a workload re-distribution and re-assignment effort that shifts more handling/processing activities to Administrative Staff, incorporates LGTS to automate and simplify operations and processes, and draws more heavily on the talent pool of WRFS.

2. Dedicate staff to manage the use of DWSRF set-asides to expedite the use of these funds.
3. Reorganization of the SRF Program to achieve a single more consolidated and unified unit. By pulling the CWSRF and the DWSRF out of the Environmental Management Division's (EMD) Wastewater Branch and Safe Drinking Water Branch and placing them alongside the WRFS under ERO, the SRF Program will be better positioned to function as a cohesive team.
4. Seek outside, neutral, unbiased expertise from a specialized consulting team that focuses on conflict resolution, leadership skills development, and teambuilding. It will be important to engage a consulting team whose methodology and approach is most compatible with the cultural fabric that is unique to Hawaii. Require ongoing leadership and management training for all DOH management staff.
5. Institute regular Accountability Meetings as an overarching strategy to help management effectively resolve disagreements, keep projects on track, implement change, and guide the SRF program. DOH should develop a policy addressing how discord and failures to meet implementation milestones should be handled and apply the policy consistently.
6. Develop a formalized Project Management strategy with triggers, assigned roles and established procedures. Examples include holding a weekly "Work-in-Progress" meeting with standard protocol to facilitate information sharing, and implementing an annual workflow with triggers for program-building activities.

- A major **Internal Contributor to Hawaii's Unliquidated Obligations** is the fact that the Programs must rely on only four major borrowers for their loan demand coupled with the fact that project implementation timing is difficult to predict. The current funding timeline commits SRF funds to projects several months or years before the project is ready for construction, making the program's funding goals vulnerable to delays intrinsic to the project planning process. Our recommendations for eliminating the internal contributors to Hawaii's ULOs are as follows:

    1. Shift program timelines to fund projects that are under construction or close to construction using project bundling, programmatic lending, and refinancing.
    2. Expand the DWSRF program by promoting under-utilized eligibilities and reaching new borrowers. Examples include clarifying eligibility misconceptions, using pass-through structures to reach water efficiency projects and private borrowers, and providing DWSRF funding to individual public water systems.
    3. Simplify the priority scoring criteria to expedite the application review process.
    4. Improve demand for funds by offering customized solutions for each county. Examples include eliminating the Interim Loan Agreement for counties that do not use it, providing an allowance of funds for Kauai County at loan signing rather than after costs have been incurred, and jointly funding Maui reservoir projects using the CWSRF and DWSRF.

- The major **External Contributors to Hawaii's Unliquidated Obligations** are policies implemented by the Hawaii Department of Administration and General Services (DAGS) and the Governor's Office of Budget and Finance (B&F). Specifically, B&F maintains control of SRF funds and sets an allotment for the amount of SRF funds that may be disbursed each year, made available in quarterly installments. This requirement reduces DOH's flexibility to draw down large amounts of grant funds to refinance a project or to reimburse the SRF program for expenditure of state funds; prevents DOH from spending administrative funds where needed, degrading program efficiency and slowing down the loan process; and prevents DOH from spending set-asides in a timely manner, since expenditures over $100K for contracts or equipment must be approved by the Governor's office. Until recently, DAGS policy required every SRF loan agreement to encumber a specific source of funds, to the detail level of identify a specific year's capitalization grant, reducing the SRF programs' flexibility to change funding sources if a project is not proceeding as planned. As a result of meetings between DAGS, Northbridge, EPA and DOH, DAGS has agreed to end this policy, but the SRF programs have not yet implemented this change. Our recommendations for eliminating the external contributors to Hawaii's ULOs are as follows:

    1. End the practice of encumbering a specific source of SRF funds in the loan agreement, effective immediately.
    2. Work with B&F to increase flexibility and certainty in the SRF budget ceiling process by requesting that the ceiling be provided in a yearly or biannual, rather than quarterly, allotment.
    3. Use financial modeling to project a cash-flow based disbursement process that assumes project commitments in excess of the amount of funds on hand at the time of commitment.
    4. Deposit fee revenue into an account outside the SRF account that is easily accessed by DOH, and use these funds to purchase equipment, supplies and contracts rather than the administrative 4%.

- The major challenges related to the SRFs' **Financial Management** stem from antiquated practices and data systems. The SRF programs do not have a single-source accounting system to track SRF financial information, instead relying on individual spreadsheets and data provided by DAGS and the DOH Administrative Services Office (ASO). The lack of a cohesive, single system contributes to inefficient and non-transparent financial management. A second significant challenge is DOH's practice of assessing principal, interest and fee payments on a project as soon as the first disbursement is made, unlike most SRF programs that do not assess interest (or capitalize interest) during the construction period and do not require repayment until after project completion. This process is confusing to SRF borrowers, a disadvantageous use of SRF staff time, and acts as a disincentive for borrowers to submit disbursement requests during the construction period, thereby contributing to unliquidated obligations. Our recommendations for eliminating the financial management contributors to Hawaii's ULOs are as follows:

1. Float (or capitalize) interest during the construction period and delay repayment until construction is complete. An analysis of SRF administrative resources and fee income show that it is not necessary to collect fees during the construction period in order to support SRF administrative staff.
2. Use the Loan and Grant Tracking System (LGTS) and Financial Operations and Cash Flow Utilization in the SRF (FOCUS) funding model to organize financial data and forecast future funding goals.
3. Re-evaluate fees charged on CWSRF and DWSRF loans. A preliminary analysis of DWSRF and CWSRF fee income and administrative expenses indicates that both programs are collecting approximately $1M in fees per year over and above the amount needed to run the SRF programs.
4. Perform a periodic financial capability review of all borrowers to establish a 5-year "line of credit" and eliminate individual financial reviews for each project application. This would reduce the administrative burden on borrowers and SRF financial staff, and would speed the application process.
5. Offer DWSRF Extended-Term financing as an incentive for projects to move faster. A recent memo from EPA Headquarters allows 30-year financing to be offered to non-disadvantaged communities.

- The major challenges influencing the **Streamlining the Application and Disbursement Processes** section of the report are related to:
    - The use of multiple loan agreements,
    - The way in which amortization schedules are revised and re-calculated,
    - Time spent pre-filling and correcting disbursement requests,
    - Requiring wet signatures on all loan agreements and disbursement requests,
    - Lack of electronic submittal mechanisms,
    - Convoluted document routing protocols with multiple hand-offs (45 in CWSRF and 82 in DWSRF), and
    - Too many individual data tracking, storage and information management systems.

    These data silos significantly impede SRF and other DOH staff's ability to access accurate, real-time information which contributes to increased handling/processing activity time, increased errors, and data duplication. Our recommendations for streamlining the application and disbursement processes are as follows:

    1. Adopt a singular internal information management platform, such as LGTS, via a shared electronic platform where project data, financials, and documents may be tracked, housed, accessed, and updated seamlessly in a real-time environment. This will greatly reduce the number of physical hand-offs as well as the time required to effectuate revisions and edits to drafts and correspondence. A system like this can shepherd all aspects of a project from cradle to grave, and do the same for the capitalization grant lifecycle in a web-based environment.
    2. Develop a template for a Letter of Binding Commitment that has been pre-approved by Attorney General to replace the Interim Loan Agreement (ILA).

This would eliminate the need to send the document through the existing approval chain that is currently traveled by the ILA to the Deputy Director and the Attorney General.

3. Create one Master Loan Agreement for each county that is tailored to suit the individual needs, preferences, and personality of each County while reducing redundant and voluminous paperwork, ultimately freeing up time for both DOH and County staff to dedicate to other obligations. A Master Loan Agreement offers customers the fastest, most convenient way to borrow SRF funds by signing one document which can later be used for all future funding.
4. Eliminate the Supplemental Loan Agreement and revise the amortization schedule process unnecessarily time-consuming and complex as it requires multiple reviews, approvals and signatures from a number of individuals, including the Mayor, and accounts for an estimated 240 hours of routing and transmittal time for each amended document. DOH should issue only one loan agreement and either a Promissory Note or Payment Letter to the borrower memorializing the final loan amount and amortization schedule once construction is complete.
5. Develop an automated, electronic application system that is simple, yet elegant. Providing application material to borrowers in this format is generally more efficient, reducing turnaround time and eliminating the costs to both borrowers and state staff associated with distributing, receiving, and processing paper applications.
6. Allow electronic signatures on SRF documentation as opposed to wet signatures for all disbursement requests, which causes delays and an unnecessary amount of back and forth communication if not done correctly the first time. It will be critical to garner the support of ASO and DAGS if DOH wishes to pursue this option to streamline SRF program processes and improve customer service capabilities.
7. Develop an expedited permitting process through e-Permitting to implement an expedited permitting process for SRF projects that would allow them to get through the approval process and ready to proceed for funding much faster, thus enabling the SRF program to begin disbursing federal dollars in a more timely and expeditious manner.
8. Use equivalency procedures to reduce the administrative burden on smaller, less sophisticated borrowers who struggle with federal requirements. This would also be beneficial to the Hawaii SRF program staff that must spend many hours tracking down missing information, providing technical assistance and instruction on how to properly complete the various forms of reporting and federal compliance documentation, and correcting mistakes.
9. Provide training to borrowers on completing payment request forms, develop electronic forms that allow SRF program staff to transfer data received from borrowers more easily, while also providing borrowers with an error-proof template with which to work, and develop a step-by-step guidance manual.

- The major challenges influencing the **Developing a Communications Strategy** section of the report are related to restrictive marketing practices where DOH is targeting only county agencies and limiting loans to a narrow range of project types, mainly traditional infrastructure. The SRF website is difficult to locate from the DOH homepage and content is presented in lengthy narrative with no interactive features, outdated materials (such as the American Recovery and Reinvestment Act of 2009 narrative) making it an ineffective marketing tool for the SRF program. The contact information that is provided is limited and too general, plus the SRF Applicant Manual and other guidance are voluminous and dated. A final contributing factor is related to a lack of face-to-face interactions between DOH and SRF borrowers and stakeholders. Our recommendations for developing a communications strategy are as follows:

    1. Marketing to a broader customer base that includes private water companies, special districts, watershed groups, and other non-traditional borrowers to augment the diversity of project types that receive funding such as nonpoint source, energy and water efficiency, conservation, or other environmentally innovative approaches to protecting public health and water quality in the state. Mechanisms to help reach these target markets include offering planning and design grants, special purpose grants, project sponsorship opportunities, and more effective partnerships with the Department of Land and Natural Resources (DLNR) and the Commission of Water Resource Management, and the Department of Business, Economic Development and Tourism (DBEDT).
    2. Re-design the SRF program websites as a prime marketing tool that are neatly organized with all of the tools necessary to sufficiently inform any user about the program, expectations, decision-making tools, and pedestrian level guidance documents that are engaging, educational, and easy to digest. With thoughtful design and implementation, program websites can be one of the most effective tools for communication, education, and participation in the attractive financing opportunities DOH has to offer.
    3. Provide an annual cost savings report to all SRF borrowers with active loans at the end of each fiscal year that includes a simple one to two-page analysis of the money saved in interest paid over the life of the loan by selecting the SRF as a financing vehicle.
    4. Offer more robust guidance documentation for various stages of the SRF loan process to help water systems, counties and communities in the Capital Improvement Plan (CIP) project planning efforts, but also equip them with the tools necessary to be more pro-active in the effective management of their finances, assets, human resources, and system infrastructure.
    5. Engage in more frequent personal communication with borrowers and stakeholders by re-introducing the SRF Outreach Teams comprised of staff from both the engineering and WRFS units, providing internal staff level training to SRF engineering and financial staff so that all are equally skilled and able to effectively assist borrowers, thus creating greater depth and "bench strength" of the SRF team, participating in county board meetings more frequently, holding more on-site

training events/workshops/funding fairs on a scheduled basis every year, and pursuing co-funding opportunities with outside agencies and partners.

6. Identify dedicated staff or add another staff member dedicated to the development of a comprehensive communications strategy, its implementation, and future coordination and facilitation of marketing, outreach and education strategies for the Hawaii SRF programs.
7. Introduce a financing program for decentralized wastewater systems to open access to CWSRF funding that will help home and property owners safeguard the integrity of these systems in the interest of protecting public health and water quality in Hawaii.
8. Develop interactive website tools to provide incentives for funding specific project types, like energy and water conservation, anticipate potential rate increases, gauge affordability for proposed SRF projects, and compare financing options using various calculator tools.
9. Initiate open and transparent communication with borrowers and stakeholders through the systematic dissemination of program information and data. This may include press releases, highlighting featured projects on the SRF website and informational brochures, and developing an electronic SRF calendar on the website listing events, trainings, public meetings and deadlines for submittals.
10. Offer borrowers a chance to provide feedback about their SRF experience with an online customer service survey portal featured on the program websites.

- The major challenges influencing the **Environmental Review** section of the report are related to the way in which Environmental Decisions are being issued for the federally required NEPA-like environmental reviews for all SRF projects. The Hawaii SRF programs are the only SRF programs where it has been observed that the Applicants themselves are rendering their own environmental decisions: this has not been a documented process Northbridge has encountered in any other State program. While this process is unorthodox in the realm of the SRF, it is compliant with the law as promulgated in HRS 343 addressing how the State is to perform environmental review. Because the assistance that is being provided to Counties is generated by state and federal funds, a certain level of accountability rests on the shoulders of the SRF programs to ensure beyond any reasonable doubt that the projects to be funded are compliant with environmental regulations and will not cause any negative impacts. This is an important assurance that the EPA, as well as the local stakeholder community, will be looking for. Shifting the burden of making the environmental decision to Counties does not alleviate DOH from ultimately being accountable for funding a project that may not have met all environmental review requirements. Our recommendations for the environmental review processes are as follows

    1. Develop an Official Statement of Concurrence template for environmental decisions rendered by applicants, allowing DOH to provide greater compliance assurances to the local stakeholder community as well as to the EPA.
    2. Develop streamlined, user-friendly templates for borrowers to complete their environmental review that are standardized in format and content, making it

easier for SRF staff to review and determine whether all pertinent information has been included and all SERP requirements have been met.

- Hawaii DOH staff participated in the Northbridge **Process Optimization Drill (POD)**, a LEAN-based exercise, to quantify and characterize the existing work flow associated with the Current State in place for the Hawaii DWSRF and CWSRF programs including how each of the programs conducts the following: marketing and outreach activities, collects project pre-applications, scores and ranks projects, reviews loan applications, issues Final Loan Agreements, and processes disbursement claims. Using objective, empirical data, value stream mapping and swim lane diagrams, a suite of 22 Efficiency Opportunities were identified as potential solutions to overcome obstacles and roadblocks to efficient program processes. Analysis of the Value Stream Maps revealed that 85% of total time that was accounted for in both CWSRF and the DWSRF programs is attributed to handling/processing activities. Analysis of the transportation and motion of documentation indicates 102 total hand-offs and 43 approvals in the DWSRF program; there are 45 total hand-offs and 21 approvals in the CWSRF program. The loan process can be significantly impacted by the time SRF staff spends waiting on borrowers to submit all of the required documentation before they can be offered a loan agreement. This can sometimes be as much as 4,476 hours (about two years) in some circumstances. The comments provided by DOH participants revealed the following Top 10 Time-Consuming Activities that were evaluated in the POD:

  Top 10 Time-Consuming Activities

  1. Excessive reviews and approvals (internal and external) and document transportation, routing
  2. IUP and PPL development; the Interim Loan Agreement is also a voluminous and time-consuming document to prepare and review
  3. Manual processes and/or disconnected systems which lack adequate, accurate information sharing or cash flow modeling capabilities
  4. Waiting on Counties for loan application submittals, signatures on loan documents and disbursement requests
  5. Waiting on outside approvals from the Attorney General, Deputy Director, ASO, B&F, and DAGS
  6. Changing the source of funds in executed Final Loan Agreements takes up lots of time for the accounting staff
  7. Preparation of multiple amortization schedules and Supplemental Loan Agreements
  8. Lack of enforceable deadlines and timelines for reviews and submittals results in the random receipt of information and a chaotic workflow
  9. Water systems in the project pipeline are not actually ready to proceed with the project; no gate keeping controls in place
  10. Ineffective communications between DOH (engineering and WRFS) and Counties

Lead for Implementation

- DOH SRF Management
- Northbridge Assist/SRF Lead
- DOH WRFS Staff
- DOH SRF Engineering Staff
- EPA Region 9
- DOH Communications Staff

Phase I (estimated to be through March 2015)

Phase II (estimate to start April 2015)

Phase III (As soon as practical)

◆ Quick Fix
★ Critical Issue
△ Positive Impact

	Option Description	Phase I		Phase II		Phase III	
	Organizational and Managerial Changes to Improve SRF Operations						
★△	1. Workload Re-Distribution and Re-Assignment						
△	2. Dedicate Staff to Manage the Use of DWSRF Set-Asides						
★△	3. SRF Program Re-Organization						
★△	4. Leadership and Management Training						
★△	5. Improve Management's Approach to Effectively Resolve Disagreements and Guide the SRF Program						
★△	6. Develop a Formalized Project Management strategy with Triggers, Assigned Roles, and Established Procedures						
	Internal Contributors to Unliquidated Obligations						
◆★	1. Shift Program Timeline to Fund Projects that are Under Construction or Close to Construction						
△	2. Expand the DWSRF Program by Promoting Under-Utilized Eligibilities and Reaching New Borrowers						
◆★	3. Simplify the Priority Scoring Criteria						
△	4. Improve Demand for Funds by Offering Customized Solutions for Each County						
	External Contributors to Unliquidated Obligations						
◆★	1. End the Practice of Encumbering a Specific Source of SRF Funds in the Loan Agreement						
△	2. Increase Flexibility and Certainty in the SRF Budget Ceiling Process						
	Financial Management						
★	1. Float (or Capitalize) Interest during the Construction Period and Delay Repayment until Construction is Complete						
★	2. Use LGTS and FOCUS Funding Model to Organize Financial Data and Forecast Future Funding Goals						
△	3. Re-evaluate Fees Charged on CWSRF and DWSRF Loans						
△	4. Perform a Periodic Financial Capability Review of all Borrowers to Establish a 5-Year "Line of Credit"						
◆	5. Offer DWSRF Extended-Term Financing as an Incentive for Projects to Move Faster						
	Streamlining the Application and Disbursement Processes						
★	1. Adopt a Singular Internal Information Management Platform						
◆★	2. Replace the Interim Loan Agreement with a Letter of Binding Commitment (CWSRF Program Only)						
△	3. Create One Master Loan Agreement for Each County						
◆★	4. Eliminate the SLA and Revise the Amortization Schedule Process						
△	5. Introduce an Automated, Electronic Application System						
◆	6. Allow Electronic Signatures for SRF Documentation						
△	7. Develop an Expedited Permitting Process						
◆★	8. Use Equivalency Procedures to Reduce Administrative Burden						
	9. Provide Training to Borrowers on Completing Payment Request Forms						
	Developing a Communications Strategy						
△	1. Market to a Broader Customer Base						
△	2. Re-design SRF Program Websites and Launch as a Prime Marketing Tool						
◆★	3. Provide an Annual Savings Report						
△	4. Offer more Robust Guidance Documentation for Various Stages of the SRF Loan Process						
★	5. Implement More Frequent Personal Communication						
△	6. Identify Dedicated Staff to Develop and Manage the SRF Communications Strategy						
△	7. Introduce a Financing Program for Decentralized Wastewater Systems						
△	8. Develop Interactive Website Tools						
△	9. Systematic Dissemination of Program Information and Data						
◆	10. Offer stakeholders a chance to give feedback about their SRF experience with a Customer Service Survey						
	Environmental Review						
◆★	1. Develop an Official Statement of Concurrence for Environmental Decisions Rendered by Applicants						
◆★	2. Develop Streamlined, User-Friendly Templates for Borrowers to Complete Environmental Review						
	Process Optimization Drill Results and Analysis of the Current State						
★	1. Implement Efficiency Opportunities Identified in the POD Report						

Organizational and Managerial Changes to Improve SRF Operations

A common theme throughout this study is the vital importance of the interface between the Hawaii SRF program and the people and communities it is meant to serve. Ultimately, the relationship between the SRF and its customers is the driver that can either help or hinder the programs' ability to put federal funds to work building essential drinking water and wastewater infrastructure as expeditiously as possible. This relationship is cultivated through the foundations of providing good customer service, which is a critical element to the programs' success. In fact, **improving the quality and quantity of customer service provided to borrowers was identified as one of the top 10 goals for an ideal process identified by DOH staff.**

How SRF programs may take action to improve the quality of customer service that they provide can be broken into internal and external factors, many of which have previously been discussed in this report such as developing a formal communications strategy, incorporating demand management and recruiting their involvement, refining application processes and streamlining documentation to make it more user friendly, and automating systems wherever possible to increase both accuracy and convenience. However, improving the customer experience also relies upon the health and integrity of important internal factors that govern the programs' ability to deliver the best customer service possible. These factors include things like managing workload and resources, staffing and organization, teamwork and internal collaboration, instituting and upholding up-to-date policies and procedures, effective management, and strong leadership. An organization must have these strong foundations in place to truly be successful in providing its clientele with top quality customer service on a long-term basis.

Current Challenges

- Workload is not evenly allocated among staff resources. WRFS is performing more administrative financial duties that will be unnecessary once LGTS is in place. Meanwhile, many engineering staff is performing duties that would be better suited for WRFS to undertake.
- WRFS is not as integrated and involved in the SRF process as they should be based on their knowledge and experience with the program.

- Underutilization of set-asides due to lack of staff capacity
- The existing management structure represents too broad a spectrum of accountability and responsibility to effectively handle all of the details associated with the SRF program.
- The Counties have limited staff and the processing SRF paperwork is an additional burden for them.

Opportunities for Change

Observation and Recommendation #1: Workload Re-Distribution and Re-Assignment

The SRF program is unique in that it is indeed a perfect hybrid of banking, finance, engineering, and natural resource management. **First and foremost, however, the SRF program is a financial assistance program and as such, should be drawing more heavily from the talent pool of the WRFS than it currently does.** It has been observed that many of the duties currently undertaken by WRFS may be categorized as more administrative in nature and likely to become automated or unnecessary once the customized LGTS platform has been implemented. This prospect initially raised some concerns among DOH staff. However, alleviating this type of administrative handling/processing work will be to the benefit of both the WRFS and the SRF team as a whole by enabling them to pursue more complex tasks befitting the level of expertise and knowledge they are capable of providing. For example, once implemented, LGTS will have the capability to quickly generate all necessary forms, reports, loan agreements, and schedules produced in a homogenous format (e.g., Microsoft Word) at the touch of a button. Producing this documentation using LGTS would be a good task to delegate to the Administrative Staff, providing all data inputs have been properly vetted. This would also encourage the systemic use of a single word processing platform to increase overall efficiency, reduce duplicative non-value added work, and eliminate information silos within the Hawaii SRF program.

As the administrative workload is reduced through LGTS and automation efforts, WRFS may have the opportunity to tackle more customer-service oriented work by assisting Counties (and other borrowers) with their SRF paperwork. **Several WRFS staff could be assigned to provide assistance in pre-filling disbursement requests, completing project applications, and helping with satisfying other project requirements like Davis-Bacon compliance, or billing and invoicing.**

However, LGTS will not be up and running right away and the existing workload on WRFS is already burdensome. In the interim, there may be opportunities for WRFS to offload

some of its existing duties to the Administrative Staff more immediately which will ultimately prepare them to perform LGTS-related duties when the platform becomes available. Some of these duties may include the following:

1. Type up the pre-Final Loan Agreement meeting minutes and upload into OneStop
2. Assist in following up with Counties for the submission and status of missing information needed by the Engineering and WRFS units
3. Track OneStop for all documents submitted and identify any missing items
4. Drafting and coordinating transmittals
5. Preparing routing packages

As identified in the POD Results Analysis, a great deal of time is spent by both Engineering and WRFS in ongoing efforts to correspond with Counties about the status of their submittals to successfully satisfy the loan application and approval requirements. Again, this may account for over 4,000 hours of handling and processing time and it would be beneficial to shift some of these duties over to the Administrative Staff.
There are certain tasks that the engineering staff has been undertaking that do not require engineering expertise and which appear to fit more appropriately under financial duties, such as preparing the IUP, Annual Report, and Set-Aside contracts. Under the current state, WRFS' involvement in preparing the IUP is limited only to gathering certain financial information that has been requested by Engineering, who then incorporates it into the draft. It may be more appropriate to delegate certain portions of the IUP directly to WRFS to prepare and draft with input and contributions from Engineering, as appropriate. This includes, but is not limited to the following:

DWSRF	CWSRF
Capitalization Grant	Funding Requirements and Project Selection
Financing Guidelines	Loan Policies
Status of SRF Funds	Financial Management
Sources and Uses Tables	
Payment and Disbursement Schedules	

The CWSRF and DWSRF Chief's should be responsible for the integration of all portions of the IUP and reviewing it for accuracy.

Another example is WRFS' involvement with issuing the Commitment Letter, which is limited to only receiving the fully-executed document from Engineering and filing it. The issuance of the Commitment Letter represents an important financial decision to move forward with offering project assistance and it would be appropriate for WRFS to have more involvement and/or decision-making authority associated with this task.
Part of examining and identifying areas for improvement in any process includes instances where the program or organization may be underutilizing talent within the existing talent pool of staff. **Re-distributing some of this workload to WRFS would also bring much needed relief to the Engineering staff that are already burdened with heavy**

workloads and ultimately allow them to spend more of their time on those tasks that require a specific skill set that only they can provide.

This is, of course, predicated upon the assumption that the implementation of LGTS is in fact successful. In a previous attempt at introducing LGTS to the program it was observed that DOH's intermittent staffing of a dedicated IT specialist to assist with its implementation was a major contributor to its lack of success and poor usage record. If DOH intends to move forward with the LGTS platform in earnest, then there must be a dedicated IT staffer specifically tasked with all work associated with implementation and operation.

Observation and Recommendation #2*:* Dedicate Staff to Manage the Use of DWSRF Set-Asides

Both the Maui and Honolulu drinking water programs indicated significant interest in accessing DWSRF set-aside grants for conservation, watershed management, wellhead protection and source water protection projects. Set-asides can provide valuable funding to the counties for water protection activities outside the scope of the DWSRF loan program, but beyond that, the set-asides can play an important role in building a pipeline of projects for DWSRF construction funding. For instance, the Georgia DWSRF program uses the 2% set-aside to fund water loss audits for small systems, in hopes that these audits will translate into leak detection, repair and pipe replacement projects to be funded with the DWSRF loan fund.

In Program Evaluation Reports issued from 2005 through 2012, EPA has expressed concern with DOH's management and expenditure of DWSRF set-aside funds**. It is recommended that DOH dedicate at least one staff position to the important responsibility of allocating set-aside funding, exploring options for using set-asides for DWSRF program-building, managing set-aside contracts, and overseeing set-aside expenditures to ensure timely and expeditious use.**

Observation and Recommendation #3: SRF Program Re-Organization

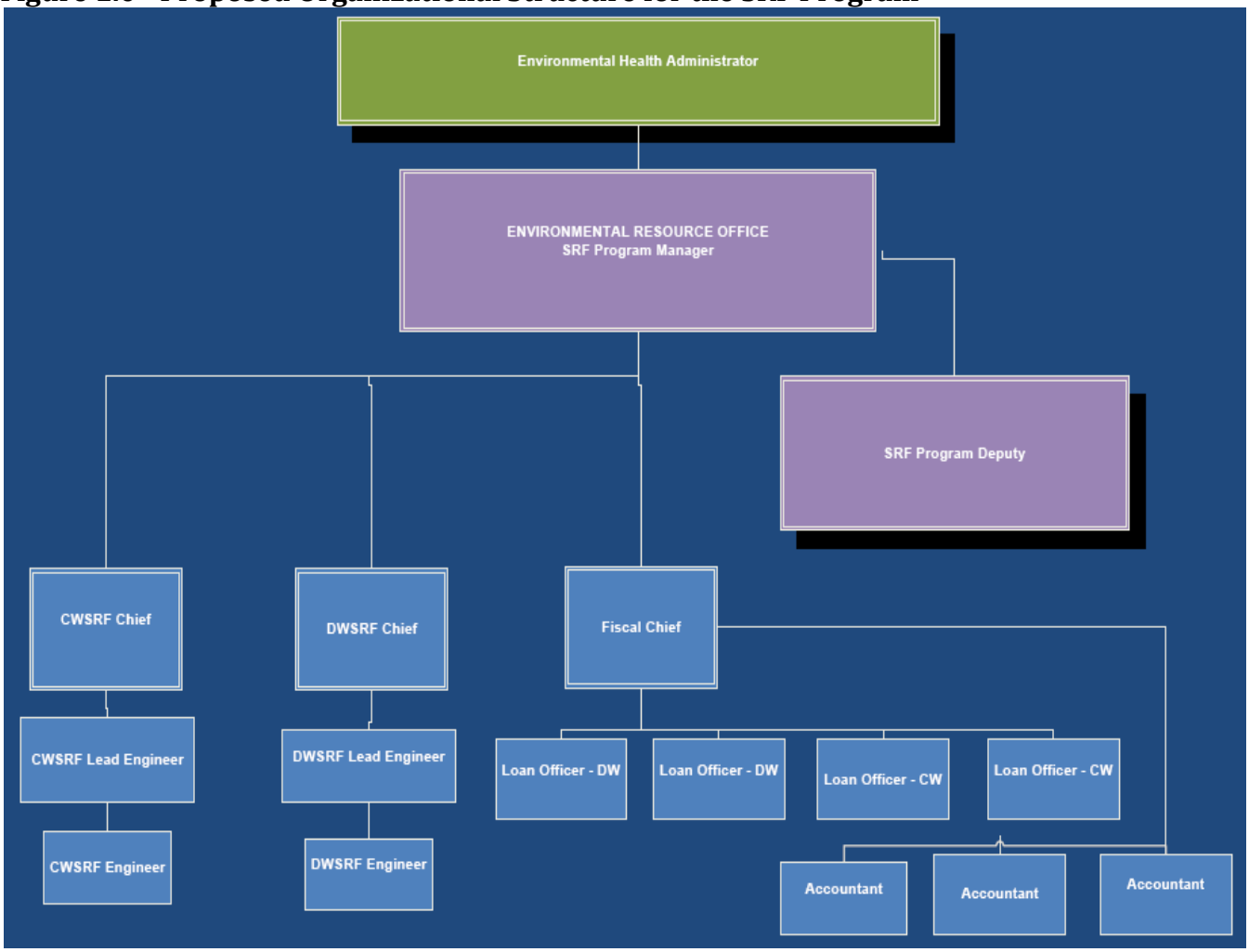
DOH should consider re-organizing the SRF Program to achieve a single, more consolidated and unified unit under the Environmental Resource Office, which is charged with handling many of the grants and financial assistance programs available through the Environmental Health Administration. Since the SRF Program is perhaps the most complex and robust of all the funding programs made available by the Agency, it is appropriate that it be housed under the ERO. **By moving the CWSRF and the DWSRF out of the Environmental Management Division's (EMD) Wastewater Branch and Safe Drinking Water Branch and placing them alongside the WRFS under ERO, the SRF Program will be better positioned to function as a cohesive team.** In addition, this structure will also support a culture of stronger management and tighter internal controls as the ERO will not be

juggling the multitude of varied programs and responsibilities as the EMD does, which inherently makes it difficult to actively manage all of the details associated with the SRF programs. The EMD is tasked with regulatory compliance monitoring, enforcement, and implementation for air and water pollution, safe drinking water, and management of solid and hazardous waste, as well as the oversight of permitting and construction activities. To be clear, moving the SRF programs under the ERO is not to say that the critical interface with the EMD branches will not be preserved: this is a vital relationship that can and will continue as SRF staff perform their technical due diligence on all proposed wastewater and drinking water projects that are seeking financial assistance.

With the introduction of an SRF Program Manager and the SRF Program Deputy, what was once a decentralized program structure may now become more of a unified model where the CWSRF, DWSRF and WRFS exist in tandem as opposed to compartmentalized units. A number of other state SRF programs share a similar structure where the two SRF programs run in tandem under a single, mutual management unit (Minnesota, Ohio) or make no delineation between CWSRF and DWSRF staff at all (Arizona, New York). **This structure offers more of an inclusive environment that supports the hybridized character of the SRF which requires the knowledge, expertise and active involvement of environmental, engineering and financial disciplines working in concert to achieve the best results**.

Under this structure, we can easily tease out members of the Outreach Teams referenced under Option # 7 of the Communications Strategy, as well as the Customer Service Specialists who provide assistance to borrowers with their SRF paperwork and disbursement requests. This structure may also allow delegating the development and management of the Communications Strategy to an in-house staff member as opposed to hiring a new position to perform this work. Figure 1.0 illustrates the proposed program re-organization structure

Figure 1.0 - Proposed Organizational Structure for the SRF Program



It is recommended that DOH conduct an analysis of its current staffing levels, workload, responsibilities, projected mission, and required workforce to ensure that the staffing and organizational structure in place is capable of achieving an efficient program and eliminate ULO challenges. This includes a thorough review of all position descriptions and the identification of any areas of diminished accountability, gaps in program oversight, and other issues or shortcomings that may exist and how DOH intends to address them. Ideally, a Position Management Analysis should assess the following and be performed on an annual basis:

- Position type and grade
- Number of positions in comparison with function and workload
- Review position descriptions for accuracy and clarity of duties
- Computation of supervisory ratios
- Balance between support positions and those assigned to perform mission-oriented focus of the organization

Observation and Recommendation #4: Training for Leadership, Management, and Team Building

Honing and striving to continuously improve the leadership and effective management skills of management staff is critical to the overall success of any organization's ability to function optimally and provide the best service possible to its customers. It is important to cultivate good, positive habits and periodically review, assess and prune unproductive ones if necessary. This skill set is not static, but one that requires continuous practice and improvement over the long term to allow managers to grow and change along with the very dynamics of the SRF program, its people, and their needs. **Many believe that the hallmark of a well-run organization lies in its stability; however the ability to evolve dynamically is just as important to the health and overall efficacy of the organization.**

The existing culture within the SRF program at DOH that has been observed by both EPA Region 9 and Northbridge is not one of cooperation and collaboration among the various offices that DOH interfaces with directly (ASO, B&F and DAGS). It will be important to work with these outside agencies and garner their cooperation and support with the implementation of the recommendations that are being provided to DOH insofar as they affect or involve practices or activities respective to them.

Within DOH itself, there exists a disconcerting lack of collegiality between the CWSRF branch, the DWSRF branch, and the WRFS section. Perceived confusion or disagreement about the roles and responsibilities of staff has created long-standing conflict and low morale among staff and resulted in operational inefficiencies and substandard program performance. It is of great concern that these internal operational conflict issues will impede the successful implementation of the recommendations that are provided in this report. In order for positive change and program improvement to occur, it is imperative that SRF management offer a clear set of solutions to address the operational problems and receive the cooperation and support of SRF program staff.

A two-pronged approach is recommended to overcome these challenges both in an immediate and long-term context. First, existing DOH management needs assistance with resolving the internal issues that have beleaguered the program for many years. This can best be accomplished by using outside, neutral, unbiased expertise from a specialized consulting team that focuses on conflict resolution, leadership skills development, and teambuilding. It will be important to engage a consulting team whose methodology and approach is most compatible with the cultural fabric that is unique to Hawaii, in addition to having a robust résumé demonstrating success with these types of issues within a government construct.

For example, Leadership Works is a business development and consulting company which was founded by a native Hawaiian over 20 years ago and is currently based in Honolulu. They offer a distinctive approach to leadership development, team building, and improving organization team performance using influences from Eastern, Western, and Polynesian cultures to cultivate "leadership island style". Hawaii's culture is considered amiable and circular, rooted in Eastern/Polynesian ideology, as opposed to a linear approach, which is a more traditional and Western approach. Leadership Works focuses on using a balance of circular/linear ideology to break down resistance, cultivate a "both/and" mentality, and focus on core behaviors that support island values. They provide an entire curriculum of intensive, hands-on workshops that focus on leadership, communication and teamwork, including a specific program called Two Think™, a unique approach to conflict resolution and teambuilding that eliminates polarizing "either/or" thinking and produces a transformational mindset and approach to teamwork, service, and leadership. Leadership Works has provided assistance to a diverse and voluminous list of clients that include the County of Hawaii, County of Maui, Hawaii Government Employees Association, University of Hawaii Federal Credit Union, and the State of Hawaii Department of Education.[2] This may be a good option to consider in resolving the internal conflict challenges within the Hawaii SRF program.

The second part of this approach recommends that DOH require that all management staff satisfactorily complete periodic leadership and management training that focuses on the core competencies of effective leadership, similar to continuing education credits offered for engineers, attorneys, and other professional disciplines. Figure 1.1 illustrates those competencies that have been found to be of the most important for managers.

Leadership and effective management skills should be continuously perfected and improved upon in regular intervals to address new challenges, give managers the opportunity to acquire and grow their repertoire and expertise, and also provide support for younger and newer staff that are up and coming from within the program.

[2] Personal correspondence with Debbie Furiya, Vice President of Leadership Works on 10/6/2014. More information available at http://www.leadershipworks.com/about/our-clients

Figure 1.1 - Core Competencies of Effective Leadership[3]

Observation and Recommendation #5: Improve Management's Approach to Effectively Resolve Disagreements and Guide the SRF Program

An important element to successful leadership that has been missing from the Hawaii SRF program is a strategy for how management addresses internal disagreements and discord among staff. This creates an environment of uncertainty and diminishes the degree of managerial understanding and support felt among staff. **The current decision-making framework is insufficient to support management's ability to effectively guide the SRF program, whose success is largely dependent upon the active participation and cooperation of staff in the implementation of management decisions.**

As mentioned in the previous recommendation, there are concerns about the affect the negativity among the SRF program staff may bring to bear on the outcome and efficacy of this management study and the long-term health and viability of the program as a whole. Part of DOH management's repertoire of skills development should also be targeted at the mitigation and resolution of conflict by pro-actively:

[3] http://blogs.hbr.org/2014/07/the-skills-leaders-need-at-every-level/

1. Listening to disagreements, taking all perspectives into consideration
2. Weighing the options available to resolve the conflict
3. Making an official management decision that supports what is in the best interest of the SRF program
4. Providing clear direction to staff on how to implement the management decision that has been made
5. Assigning accountability to staff and including measurable milestones and performance timelines for implementation

It is recommended that DOH management institute regular Accountability Meetings as part of an overarching strategy. Research has indicated that holding people accountable for their results actually has very positive effects such as greater accuracy of work, better response to role obligations, more vigilant problem solving, better decision making, more cooperation with co-workers, and an overall increased team satisfaction. It will be important for DOH management to be pro-active about creating a climate of honest and trusting problem solving among all divisions in the SRF program to foster a culture of shared, team accountability.[4]

Many organizations in both the public and private sectors have found Accountability Meetings to be an effective tool for driving performance, obtaining results, and improving morale through increased transparency and performance-based metrics. Accountability Meetings are also an important part of LEAN or Kaizen-based management structure to successfully implement change and create a culture of continuous improvement using a weekly meeting process to expose and solve problems quickly.[5]

For example, The Arizona SRF program has weekly "WIP (Work-in-Progress)" meetings that serve to keep everyone informed of project status and maintain communications across departments. WIP meetings should cover current program operations from the engineering perspective (project planning and constructions status) as well as the financial perspective (disbursements, cash flow, etc.).

Accountability Meetings should be held at regular intervals (weekly or bi-monthly) and include the following topic areas:

1. Examination of current performance goals and accountability assignments as a group
2. Follow up on the progress and status of current implementation efforts
3. Identification of obstacles or key indicators that are off target

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[4] Willard, M. et al. (2014) Accountability: A Sticky Subject for Teams available at http://teambuildersplus.com/articles/accountability-sticky-subject-for-teams.
[5] Mann, D. (2010). Creating a Lean Culture: Tools to Sustain Lean Conversions (2nd Edition). Boca Raton, FL: CRC Press.

4. Establish corrective action items and performance deadline for action items
5. Memorialize the events of the meeting and distribute to all management and staff
    a. Status updates
    b. Problems/Issues
    c. Action items and delegation of accountability
    d. Performance timelines

A more formalized structure for measuring and tracking progress within the SRF program can alleviate common pitfalls such as denial, blame, and excuse-making before finally reaching true accountability by pursuing the answer to one very important question: "What are you personally going to achieve and by when?" The key to this question comes both in when and where it is asked, which is why when asked in the context of the Accountability Meeting when all staff and management are together, its overall impact will be amplified. Research has shown that when employees make commitments to an entire group of people that includes their peers, they are more likely to meet their commitment and achieve their goals. [6] Additionally, when staff shares goals, obstacles and deadlines as a group, a greater sense of transparency is realized. This encourages better information sharing and enables managers to learn about any potential excuses or anxieties in real time and address them appropriately without impeding the progress of larger program goals.

It is important for DOH management to be prepared to address any potential failures to meet implementation milestones and safeguard the program by curtailing actions which may jeopardize the program's ability to function optimally. **To ensure clarity and transparency for all levels of staff, it also recommended that DOH develop a policy about how such issues are to be addressed. This policy should then be consistently followed and applied to preserve the fair and equitable treatment of all staff.** Effective and strong leadership in the Hawaii SRF program is perhaps the best strategy to ensuring the program is providing the very best customer service to its borrowers as well as upholding its commitment to protecting water quality and public health to the people of Hawaii.

Observation and Recommendation #6: Develop a Formalized Project Management strategy with Triggers, Assigned Roles, and Established Procedures

Analysis of the Process Optimization Drill results revealed the "Top 10 Time-Consuming Activities" from DOH's perspective of the loan process. Two of the top ten pertained to the counties' role in the loan process:

[6] https://www.leadershipiq.com/the-one-question-that-instantly-improves-accountability/

1. Waiting on counties for loan application submittals, signatures on loan documents and disbursement requests
2. Lack of enforceable deadlines and timelines for reviews and submittals results in the random receipt of information and a chaotic workflow

All DOH staff members agree that customer service and good relationships with the counties is a paramount goal of the SRF program. Several staff members referred to the professional, organized strategies of the private lending sector as a model that **helps customers feel confident in the process and respectful of procedures and timelines.** DOH should consider implementing routines and procedures that fosters an organized workflow and provides automatic response to hiccups in the loan process. Doing so may help improve the customer experience by reducing uncertainty and presenting a professional public image.

The following are suggested practices for DOH to implement in order to **establish routines** that will keep projects on track and keep all staff members informed of project status, and **create automatic responses to triggers** (such as borrower delays) that prevent workflow from derailing and becoming chaotic.

- **Establish clear expectations and deadlines for information sharing**
  Spotty information sharing is a mutual complaint between DOH engineering and WRFS. Neither section feels they are consistently receiving the information they need to do their jobs effectively. This problem can be partially improved by accurate and diligent use of the Loan and Grant Tracking System (LGTS) currently being implemented for the Hawaii SRF programs. The California CWSRF program relies heavily on LGTS to facilitate communication between program and WRFS and ensure that all staff have access to the information they need to make decisions. All DOH staff should be given a standard of expected deliverables with a schedule for inputting the information into LGTS.

  Although consistent LGTS use will help mitigate the current communication disconnects, there are many decisions that require WRFS and engineering staff to share analysis and provide professional judgment, sometimes on a daily basis. The weekly WIP meetings should help facilitate this communication. **It is very important that each WIP meeting end with a list of action items, deliverables and deadlines that are expected to result from the meeting discussions.** The list should be read aloud at the end of the meeting so that all staff understands the expectations, and updates provided at subsequent meetings. Managers should keep track of action items and deliverables, and tie their successful completion to staff performance reviews.

- **Create an annual workflow with triggers for program-building activities**
  Keeping up with the day-to-day tasks of operating an SRF program can make it difficult to find the time to assess the program's trajectory and success over the course of the year. Tying strategic program-building activities to "triggers" that naturally occur during the annual funding cycle can help make strategic planning a routine part of SRF

operations. Figure 1.2 provides an example of an annual workflow that incorporates triggers for program-building activities.

Figure 1.2: Annual Workflow

- **Establish Consistent Deadlines for Project Milestones**
  - Create a few project categories and establish the same milestone deadlines for every project in that category. For instance, projects less than $1,000,000 have 4 months from the time an application is received to submit plans & specs; projects over $1,000,000 have 6 months.
  - Alternately, consider implementing just four quarterly deadlines over the course of the year, and applying these deadlines to all projects. The deliverable will depend on the project's stage of completion. Projects that miss a deadline must meet the next quarterly deadline. This will eliminate the need to track multiple deadlines for multiple projects and will simplify workflow.
  - The milestones do not need to be firm. The counties likely appreciate DOH's flexibility during project planning, and DOH does not have broad enough

demand to eliminate projects that miss deadlines. **However, the deadlines should be used as internal indicators for DOH to evaluate which projects are proceeding in a timely manner and forecast annual funding capacity.**

- Activity triggers should be linked to the deadlines. A specific internal action is triggered each time a project misses a deadline. An example might be:
  - First missed deadline: Project should be brought up for discussion in a weekly WIP meeting to notify all staff that the project is not proceeding as planned.
  - Second missed deadline: Project should be moved below the funding line. The SRF program should continue to work with the applicant to develop the project, but should not rely on that project to receive a commitment during the current funding cycle and should attempt to find a replacement for the funds. The other three counties should be contacted to see if they have any additional projects or could use additional funds to replace the project that is not proceeding. Additional marketing and outreach activities should be planned.

Internal Contributors to Unliquidated Obligations

Current Challenges

- Applicants proceed slowly through the loan process or change course in the middle, making it difficult for the SRFs to commit all available funds to projects.
- DOH does not have a formalized project pipeline development strategy, resulting in uncertain control and knowledge of future demand.
- Counties identify the funding source for projects in their Capital Improvement Plans up to two years in advance of project implementation, in order to coincide with budget planning and resolutions. Because the counties establish their funding source for projects so far in advance, it makes it difficult for the SRF programs to substitute ready-to-proceed projects when the time comes to assign SRF funds.

Opportunities for Change

Observation and Recommendation #1: Shift Program Timeline to Fund Projects that are Under Construction or Close to Construction

- Agree to fund a specific dollar amount, not a specific project

Many of the delays in signing SRF loans can be traced back to the practice of SRF customers (particularly the Honolulu Board of Water Supply) of determining the funding source to be used for each project several years before the project takes place, as part of the budget cycle. Once the customer decides that the SRF will be used to fund a particular project, that project must proceed through the planning and SRF application processes. This system guarantees that DOH will have to wait a few years for SRF projects to come to fruition, and the early assignment of funds means that SRF projects can be subject to changes in scope or indefinite delays. Because the customers "lock in" their funding source for each project several years in advance, it makes it difficult to substitute ready-to-proceed projects when the time comes to assign SRF funds.

From the customers' perspective, this practice allows them to forecast financing costs to work within their operating cash flow, and to pass resolutions authorizing the customer to enter into SRF debt.

- **The SRF program should work with borrowers to shift the funding timeline so that projects are assigned to the SRF only when they are ready to go to bid or are already under construction.** Since HBWS constantly has projects in some stage of planning or construction, the SRF program should be able to enter the process at a later point. The Maui Department of Water Supply indicated high interest in using SRF funds to reimburse or refinance projects already under construction[7]. This approach would also ease the administrative burden for the customer and DOH by minimizing the need for change orders and disbursement requests.

- **In order to facilitate the counties' budgeting process, the SRF program should commit to fund a specific dollar amount each year from each county's project portfolio.** However, specific projects should not be assigned to the SRF early in the budgeting process. The counties can use the promised dollar amount to set their budget and plan cash flow. After project planning has commenced, the first projects to reach the bid stage can receive binding commitments for the amount of funds promised by the SRF program. All near-term projects in the 6-year CIP can be placed on the SRF Intended Use Plan so that any ready-to-proceed project may

[7] Personal communication with Dave Taylor, Maui Department of Water Supply, on August 26, 2014.

receive SRF funds (recall that the SRF IUP is an intended use plan, and projects may be substituted as long as the substitutions are explained in the SRF Annual Report). All projects in Hawaii, regardless of funding source, undergo Environmental Review and pay state prevailing wages at rates equal or higher than federal Davis-Bacon wages. These similarities should make it easy to plan all projects as though they could ultimately receive SRF funding.

- **Use the concept of programmatic borrowing / performance category borrowing for assigning SRF funds to the counties.** Encourage counties to "bundle" similar small projects together under a single application and list a broad, encompassing project on the IUP. Use an umbrella loan agreement to encompass a single, broadly-defined project that may consist of many individual locational improvements and phases. This allows the counties to proceed with the portions of the project that are ready, or swap out portions that are not ready, without modifying the project description in the IUP or loan agreement. For instance, award funds for "Maui pipe replacement" and allow Maui to swap out the specific sections that will receive SRF funds.

  The Illinois SRFs use this approach to fund multi-year loans with the City of Chicago (DWSRF) and the Metropolitan Water Reclamation District of Greater Chicago (CWSRF). The SRF will fund a certain amount every year for a specific purpose, such as pipe replacement, from Chicago's CIP. The application and loan agreement do not include a specific level of detail such as which streets are having their pipes replaced. During the disbursement process, SRF staff review invoices to ensure that the costs are eligible under the broad description of the project as funded.

- **Use refinancing as a "safety valve" to prevent buildup of ULO balances.** Thirty-two CWSRF state programs and sixteen DWSRF state programs have refinanced more than $10 billion in municipal debt using SRF funds. Hawaii's unique customer base, consisting of a few entities that repeatedly borrow from the SRF for a continuous stream of projects, make refinancing a logical use of SRF funds. After all, there is no difference in providing low-cost financing for a new project or an existing project, and saving customers money on existing financing will help make future projects more affordable. Refinancing existing projects may also be an effective way to use additional subsidization dollars that DOH has difficulty expending, which would also provide an extra incentive for customers to participate.

DOH should consider reaching out to all current borrowers to explore whether refinancing pre-2009 projects is an attractive option. If so, **DOH can establish a cut-off point during the annual funding cycle after which all excess funds not in assistance agreements are committed to refinance projects on a first-come-first-served basis in any of the four counties.** This will effectively increase the competition for funds each year and will be an incentive for applicants with new projects to move more quickly through the loan process so that they do not lose their funding.

DOH should ensure that refinanced projects comply with all SRF federal requirements, detailed below:

- **Davis-Bacon**: There is no application of the Davis-Bacon Act requirements where a refinancing occurs for a project that has completed construction prior to October 30, 2009. If a project began construction prior to October 30, 2009 but is refinanced through an assistance agreement executed on or after October 30, 2009, Davis-Bacon Act requirements apply to all construction that occurs on or after October 30, 2009 through completion of construction.[8]
- **American Iron and Steel**: American Iron and Steel requirements do not apply to a project if a State agency approved the engineering plans and specifications prior to January 17, 2014. [9]
- **FFATA, Single Audit, Disadvantaged Business Enterprise and Other Socioeconomic/Environmental Crosscutters**: These federal requirements must only be applied to projects in an amount equal to each year's capitalization grant.[10] Since DOH applies these requirements to all projects, they have a credit each year for completing the requirements in excess of what is necessary, and should be able to avoid applying these requirements to refinanced projects. EPA may request to see documentation showing that these requirements were applied to projects in an amount equal to each year's capitalization grant, such as the applicable pages from loan agreements or project files.
- **Environmental Review:** DWSRF regulations require an environmental review to be conducted for all refinanced projects.[11] Because all construction projects in Hawaii undergo the state environmental review process (SERP) regardless of funding source, it is likely that any project refinanced by the SRF has already completed an environmental review in accordance with the SERP.

The Oklahoma Water Resources Board has refinanced several projects through the SRF in recent years. A copy of their refinancing agreement can be found in Appendix **A** as a reference point.

[8] USEPA Office of Water Memorandum, "Application of Davis-Bacon Act Wage Requirements to Fiscal Year 2010 Clean Water State Revolving Fund and Drinking Water State Revolving Fund Assistance Agreements". November 3, 2009.
[9] USEPA Office of Water Memorandum, "Implementation of American Iron and Steel provisions of P.L. 113-76, Consolidated Appropriations Act, 2014".
[10] EPA SRF trainings conducted 2012-2014. Most recently, "Capitalization Grants and Federal Requirements", EPA SRF Workshop in Trenton, New Jersey on June 9, 2014.
[11] 40 CFR Part 35 Drinking Water State Revolving Funds; Interim Final Rule §35.3580(5)(f)

Observation and Recommendation #2: Expand the DWSRF Program by Promoting Under-Utilized Eligibilities and Reaching New Borrowers

Increasing competition for funds is often an effective way to improve borrowers' responsiveness and speed the pace of the program. Below are options for expanding the universe of DWSRF-funded projects by reaching out to new customers and promoting under-utilized project types.

Eligibility Education

- A simple and immediate way to expand the universe of DWSRF projects is to re-educate borrowers on the types of projects eligible for DWSRF funding. Results from the 2014 Hawaii Customer Survey indicated that 26% of respondents had previously decided not to use an SRF loan because they "did not think the project was eligible for funding". Follow up discussions with the Counties on this topic revealed a lack of awareness of the wide variety of projects that can be funded by the DWSRF program. Examples include:

    - **Recycled Water**. Maui County uses more recycled wastewater than any other Hawaii county, and Maui Department of Water Supply (DWS) staff pointed to the nexus between recycling wastewater and reducing demand for drinking water treatment. **Water recycling and water reuse projects that replace potable sources with non-potable sources are eligible for DWSRF funding**, including greywater, condensate, and wastewater effluent reuse systems, as well as extra treatment costs and distribution pipes associated with water reuse[12]. The Maui County Environmental Management staff also mentioned an interest in expanding "scalping plants" (small-scale membrane filter systems that put effluent closer to reuse locations) in Central Maui. DOH should consider working with Maui DWS and Maui County Environmental Management staff to expand DWSRF funding for recycled wastewater projects.

    - **Reservoir Construction**. During a discussion of CIP funding plans, The Maui DWS pointed to a long-term reservoir project that is pre-designed and shovel-ready, making it an ideal project to receive available SRF funds. Staff initially seemed unaware that reservoirs are not eligible to receive DWSRF funds, and indicated that reservoirs are a significant need for their program. However, **staff were also unaware that reservoir construction (and land**

[12] 2010 Clean Water and Drinking Water State Revolving Fund 20% Green Project Reserve: Guidance for Determining Project Eligibility, Part B – DWSRF GPR SPECIFIC GUIDANCE, Section 2.2-7 (April 21, 2010). Although the DWSRF program is no longer subject to GPR requirements, all project types listed in the GPR guidance remain eligible for DWSRF assistance.

purchase) <u>are</u> eligible to receive CWSRF funds, and may also be eligible for DWSRF funding if they are part of the treatment process (i.e., pre-sedimentation) and on the property where the treatment facility is located[13]. The Hawaii DWSRF program staff are currently communicating with Maui on this issue, but should also ensure that the other counties are aware of eligibilities and limitations surrounding reservoirs.

- **<u>Expansion Projects</u>**. Maui DWS mentioned confusion regarding acceptable sizing limits when a water line project contributes to fire flow or growth. It is suggested that DOH staff refer to the EPA Fact Sheet "Using the DWSRF to Support Brownfields Redevelopment" (**Appendix B** to this report) to **become familiar with allowable scenarios for expansion projects and to educate borrowers on the topic**. Both the Maui and Kauai drinking water departments mentioned avoiding DWSRF funding for expansion projects that may have actually been eligible. EPA guidance gives significant latitude to the DWSRF to fund projects for which growth and fire protection are secondary purposes.

- **<u>Resiliency and Efficiency</u>**. Maui DWS indicated that their highest priority is water volume, not treatment. Groundwater is their primary source, so treatment needs are not high; on the other hand, reliability, redundant volume, and fluctuations in quantity are their main concerns. DOH might consider having a discussion with Maui DWS on the wide variety of DWSRF-eligible **resiliency** projects (i.e,. "hardening" or waterproofing equipment, installation of physical barriers around system facilities, installing larger capacity storage tanks, constructing floodwater retention infrastructure, raising equipment levels, and installing redundant treatment and energy sources), or **water efficiency** projects (wastewater recycling/reuse, installing water efficient devices, expanding metering and installing AMR meters, funding water audits and leak detection studies and equipment). **Appendix C** contains a list of example eligible DWSRF resiliency projects; additional types of projects may also qualify with justification.

The Honolulu Board of Water Supply also expressed interest in funding resiliency projects, such as insulating generators**. DOH staff might consider hosting a workshop for all four counties that provide examples and case studies of the many under-utilized project types eligible for DWSRF funding**.

Figure 2.0 below presents opportunities for non-traditional projects eligible for DWSRF and CWSRF funds based on a review of the four counties' watershed protection planning documents.

[13] DWSRF Regulations at 40 CFR Part 35 § 35.3520(e)(3)

Reaching New Customers Via Pass-Throughs

- Another way to expand the DWSRF program is to reach new customers via pass-through programs sponsored by the Counties. Private borrowers are eligible for DWSRF funding, yet the administrative burden of processing many small loans could significantly slow DOH's current operations. SRF programs in many states, including Rhode Island, Washington, Delaware, Missouri, New Hampshire, Minnesota, Arkansas and West Virginia reach small, privately-owned borrowers by passing SRF funds through an intermediary entity such as a county, water district or utility. The intermediary acts as the single SRF borrower and takes on the administrative responsibility of processing the individual sub-loans. The following are a few examples of how this structure could be used in Hawaii to expand DWSRF program offerings.

    - **Water Efficiency Pass-Through**. Consider expanding the DWSRF's contributions to water conservation and augmentation projects. According to the Hawaii Water Resources Plan, many areas of the state are approaching the limits of groundwater resource development. Groundwater resources in Oahu are expected to be fully committed within 20-30 years, requiring more expensive alternatives. Major aquifers such as the Kualapuu Aquifer in Molokai and the Iao aquifer in Maui have been overpumped and have shrinking yields. Meanwhile, projected water demand for all counties is expected to increase 35% between 2010 and 2030.[14] **Consider using the SRF to fund a water efficiency pass-through program via the Hawaii Public Utilities Commission. Set-aside funds could be used to provide water audits, followed by loan funds to implement the corresponding capital solution.**

- A similar program could also be implemented for energy efficiency improvements to water systems. 90% of the annual budget of one water system on Molokai is energy costs.[15] **The Hawaii Public Utilities Commission currently operates an energy efficiency pass-through program called "Hawaii Energy"; considering working with the PUC to invest DWSRF funds into this existing program to fund water system energy efficiency improvements.**

[14] Water Resource Protection Plan. Prepared for the State of Hawaii Commission on Water Resource Management. June 2008.

[15] http://efc.web.unc.edu/2013/08/14/lessons-from-drinking-water-systems-in-hawaii-and-the-u-s-territories-3/

Figure 2.0 - Expansion of Project Eligibilities: Watershed Protection

County	Planning Document	Issues	Potential SRF Projects	Partners
Maui	Wahikuli-Honokowai Watershed Management Plan (Dec 2012) West Maui Watershed Plan Kaanapali-Kahekili Watershed Management Plan	• Sedimentation • Nutrient loading, legacy contaminants (nitrates) in soil • Algal blooms • Wastewater upwelling • Impacts to corals offshore of Kahekili • Corn, pineapple and sugar cane fields in operation nearby	• Treated effluent injection wells, offset by increased volume of R-1 water used for irrigation ○ Includes expansion of pipelines and other infrastructure • Construct more soft BMPs like bioretention cells, vegetated swales • Pair with MS4 projects like catch basin filter inserts, baffle boxes • Agricultural BMP projects • Land use planning projects	• **Commission of Water Resource Mgmt** • **Division of Aquatic Resources** • **Division of Forestry & Wildlife** • **Maui County** • Maui Land & Pineapple • USACE • West Maui Mountains Watershed Partnership • **West Maui Soil & Water Conservation District**
Oahu	Ko'olau Loa Watershed Management Plan Wainanae Watershed management Plan Ko'olau Poko Watershed Management Plan Central Oahu Plan (pending) Ewa Plan (pending) North Shore Plan (pending)	• Sedimentation • Inactive Landfill impacts to groundwater • USTs • Cess pools • Septic tanks • Agricultural activities • High nitrates • Coordination of resource management needs improvement • Adapt to and plan for climate change and sea level rise	• Desalinated water – from BWS Kalaeloa Desal Plant • Desalinated water – from new Waiÿanae Desal Plant • Recycled Water: Wai'anae WWTP • Water Conservation • Agricultural BMP projects • Integrated land use and water planning projects • Decentralized WW Projects • Stream channel restoration • Flood mitigation/resiliency projects	• Ko'olau Watershed Partnership • **University of Hawaii** • **State Dept of Hawaiian Home Lands** • **Kamehameha Schools** • **USDA NRC** • **Windward Soil & Water Conservation District** • **City/County of Honolulu Dept of Env Services**

Kauai	Hanalei Watershed Plan[16] Kauai Watershed Alliance Management Plan	• Invasive species (feral animals, weeds) • Erosion/sedimentation, TSS • Bacteria/pathogens • Nutrient Loading	• Watershed restoration • Fencing, ingress/egress barriers • Ag BMPs for grazing operations • Stream channel restoration • Cess pool closures • Septic system projects (replace/upgrade) • Adaptive management practices	• Kauai Watershed Alliance • Hanalei Watershed Hui • **Department of Water** • **Kauai County** • **DLNR** • **Kamehameha Schools** • **University of Hawaii** • Castle Foundation • Hawaii Community Foundation • Hawaii Community Stewardship Network
County	**Planning Document**	**Issues**	**Potential SRF Projects**	**Partners**
Hawaii	Mauna Kea Watershed Management Plan[17] Pelekane Bay Watershed Management Plan[18]	• Invasive plant species • Bacteria/pathogens (Leptosporosis, Crypto) spread by feral ungulates • Nutrient loading • Erosion/sedimentation • Wildfires • Land use conversion • Climate change	• Soil erosion and sediment control projects • Stormwater projects (NPS and MS4) • Flood mitigation/floodplain management • Ag BMPs for grazing operations • Water storage and catchment • Stream stabilization	• **DLNR** • **Department of Hawaiian Homelands** • **University of Hawaii** • **Mauna Kea Soil and Water Conservation District**

[16] http://www.hanaleiwatershedhui.org/sites/default/files/docs/projects/2012/HBWMP_Vol1_Oct2012.pdf

[17] http://www.hawaiicountycdp.info/hamakua-cdp/about-the-hamakua-cdp-planning-area/past-and-current-planning-activities-in-the-hamakua-cdp-planning-area/FINAL%20Mauna%20Kea%20watershed%20mgt%20plan%2015apr10.pdf/view

[18] http://www.maunakeaswcd.org/Documents/Pelekane_Bay_Watershed_Mgt_Plan_Final_5-31-05.pdf

- **Rainwater catchment.** Considering partnering with the Counties to provide pass-through DWSRF loans to install rainwater catchment and treatment systems for homeowners and businesses. This project type appears eligible per DWSRF GPR guidance section 2.2-7 "recycling and water reuse projects that replace potable sources with non-potable sources". Consider partnering with DOH laboratories and the University of Hawaii for these entities to provide technical assistance and project planning to homeowners and businesses using the program.

- **Pass-Through for Private Systems**. The Hawaii Public Utilities Commission regulates 38 privately owned water and sewage treatment facilities. In 2007 the PUC also identified fifty-seven non-regulated privately-owned water systems, in addition to the private water systems regulated by the PUC. Providing loans to private systems would require DOH to implement a financial capability assessment process, which may be a long-term goal for the program. However, an immediate way to reach these borrowers would be via a pass-through loan program administered by the Public Utilities Commission. The PUC would be responsible for securing a loan from the SRF, and in turn would conduct financial capability reviews of individual private systems. Pass-through arrangements are typically structured to with a slightly lower interest rate to the pass-through entity as compared to the individual sub-loans in order to compensate the entity for the administrative workload.

Providing DWSRF Funding to Individual Public Water Systems

- The Hawaii DWSRF program has historically entered into funding agreements with only four borrowers; the counties of Maui, Honolulu, Hawaii and Kauai. This arrangement is unique among SRF programs nationwide, and has the benefit of drastically decreasing the administrative burden on DOH staff from processing funding applications and performing financial capability reviews. However, this arrangement may also contribute to bottlenecks in the SRF loan process at the county level, since a limited number of county employees are responsible for coordinating funding for a multitude of water systems under their jurisdiction. In addition, each system must compete with all other systems on the county's Capital Improvement Plan (CIP) to be considered for funding each year.

  There are approximately 150 public and private water systems in Hawaii. Most of these systems are very small and may lack adequate technical, managerial and financial capability to operate a system or qualify for a DWSRF loan without sponsorship from the county level. However, Hawaii has 40 water systems serving populations over 3,300 people, and 18 systems serving more than 10,000 people[19]. DOH should consider opening up DWSRF funding accessibility to individual systems as well as the counties. Allowing individual systems to apply for and receive a DWSRF loan could significantly

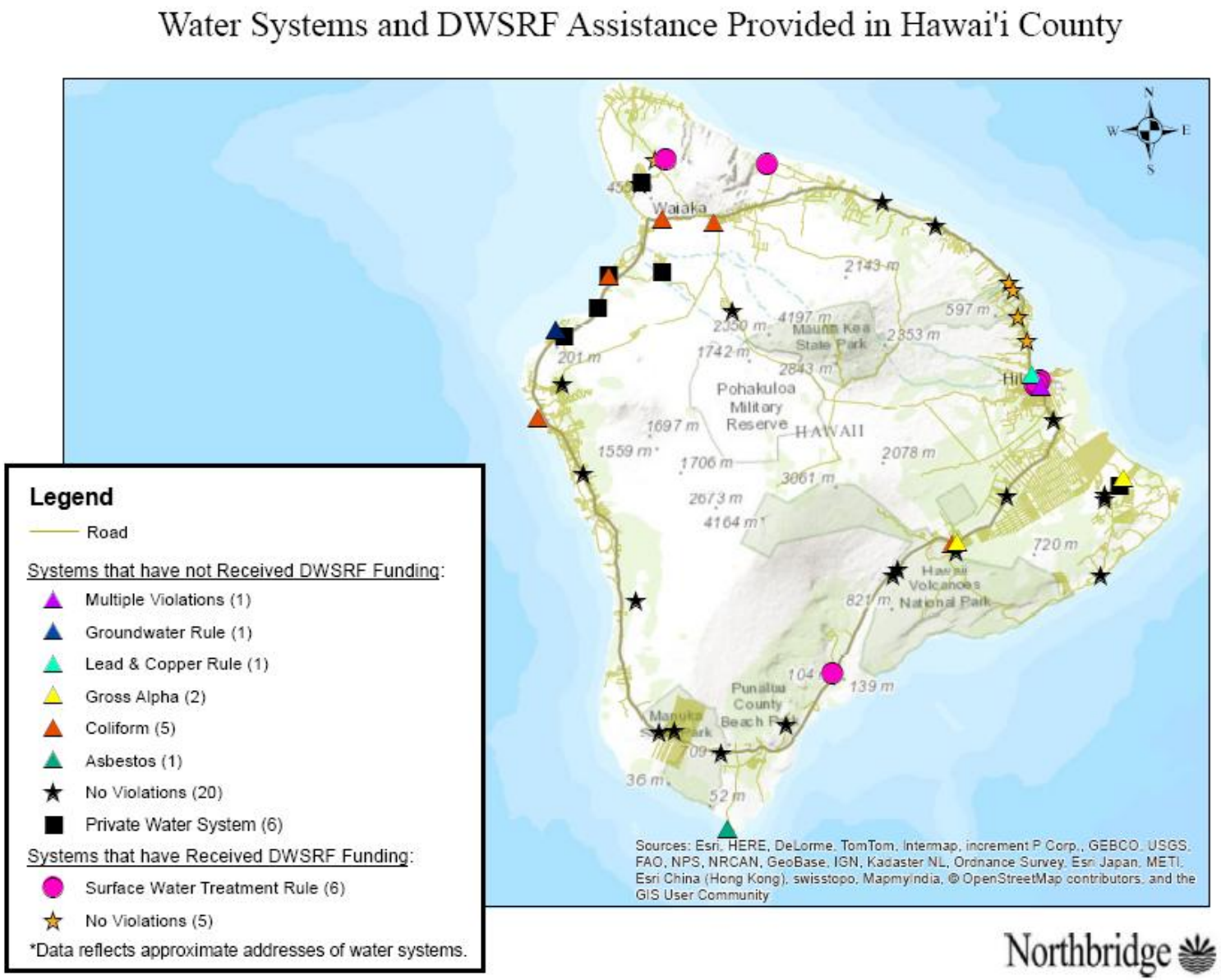
[19] Safe Drinking Water Information System (SDWIS) Database

broaden the DWSRF customer base and provide many more opportunities to fund ready-to-proceed projects.

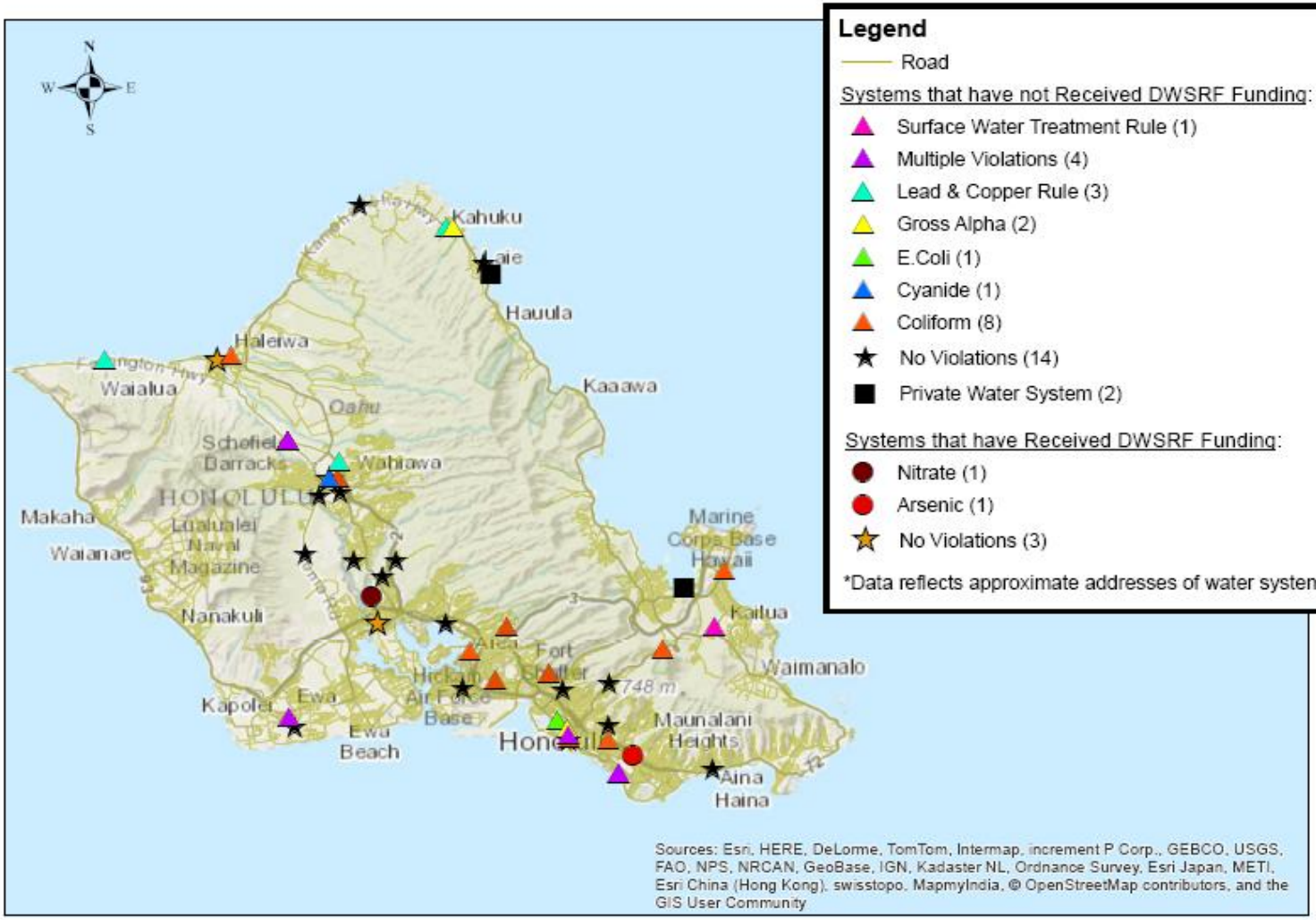
Initially, these projects may require a more detailed technical, managerial and financial (TMF) capability review from DWSRF staff. DOH might consider limiting eligibility to systems serving more than 10,000 people until an efficient TMF review process has been established. Because the majority of DWSRF programs in the nation enter into funding agreements with individual water systems, there are a plethora of examples for implementing the financial and legal aspects of such an arrangement.

Figure 2.1 presents a map of all water systems in Hawaii and indicates those that have received DWSRF funding. As demonstrated by the map, many systems in Hawaii that have received health-based compliance violations are not yet customers of the DWSRF program.

Figure 2.1 - Water Systems in Hawaii, Honolulu, Kauai, and Maui Counties

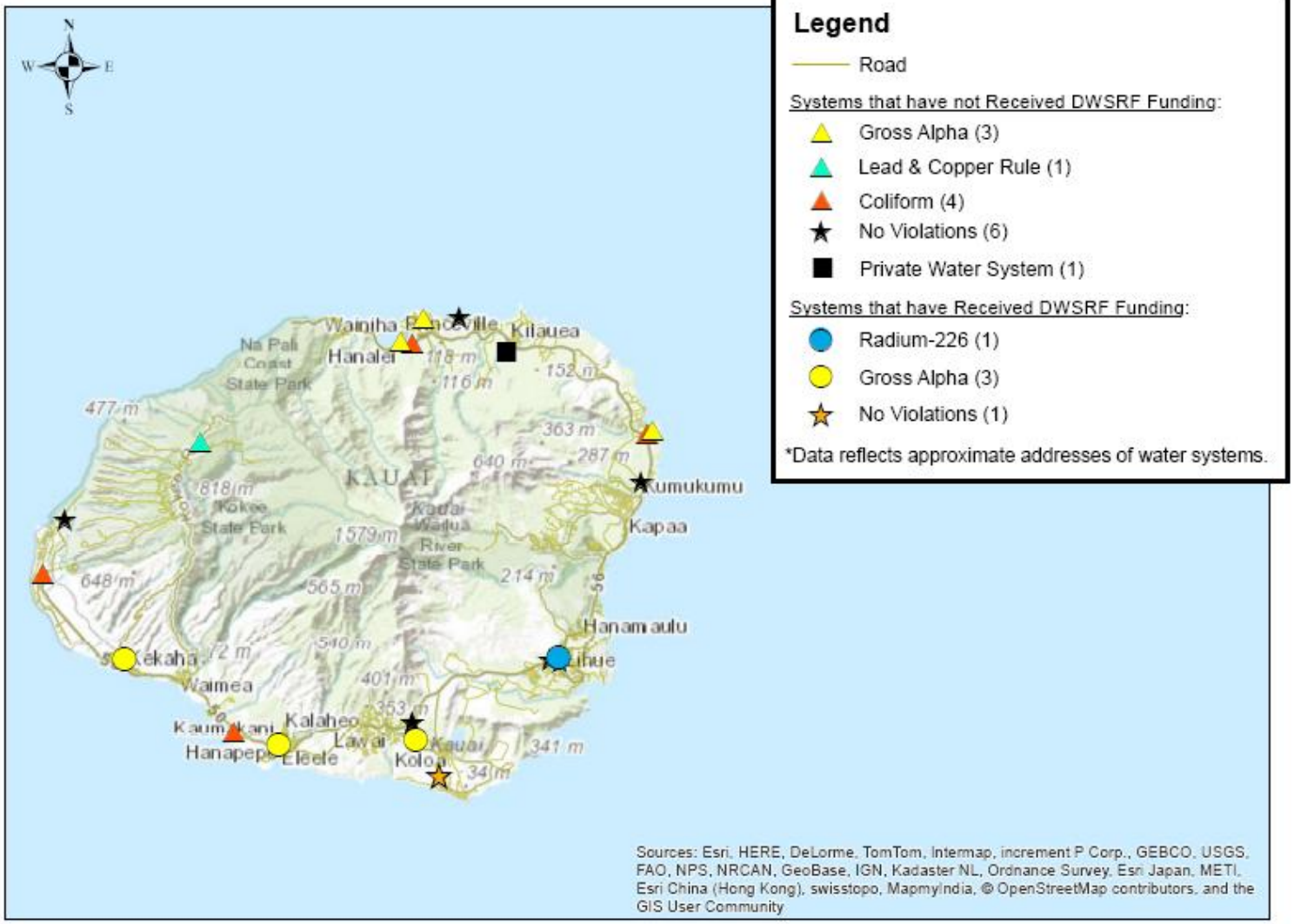


Water Systems and DWSRF Assistance Provided in Honolulu County



Northbridge

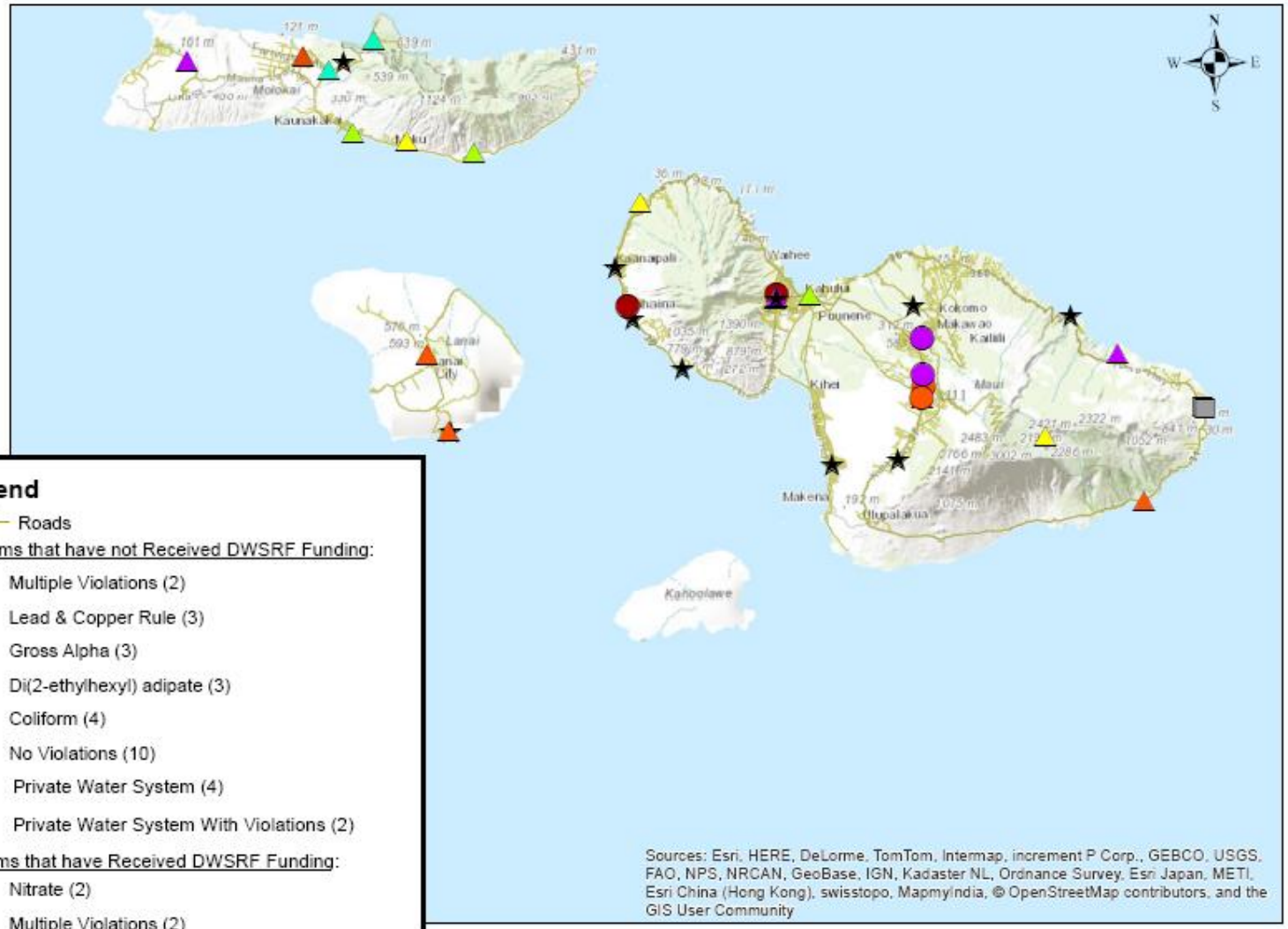
Water Systems and DWSRF Assistance Provided in Kaua'i County



Note: Islands Ni'ihau, Lehua, and Ka'ula of Kaua'i County are not shown due to inadequate data.

Northbridge

Water Systems and DWSRF Assistance Provided in Maui County



Legend

Roads

Systems that have not Received DWSRF Funding:

- Multiple Violations (2)
- Lead & Copper Rule (3)
- Gross Alpha (3)
- Di(2-ethylhexyl) adipate (3)
- Coliform (4)
- No Violations (10)
- Private Water System (4)
- Private Water System With Violations (2)

Systems that have Received DWSRF Funding:

- Nitrate (2)
- Multiple Violations (2)
- Coliform (2)

*Data reflects approximate addresses of water systems.

Northbridge

Observation and Recommendation #4: Simplify the Priority Scoring Criteria

According to the POD results, processing and ranking pre-applications takes an average of 648 hours in the CWSRF program and 435.5 hours in the DWSRF program. In most cases, projects are funded based on readiness-to-proceed and the ranking is somewhat inconsequential.

Consider using a ranking category similar to those used by the California CWSRF and DWSRF programs, which place projects in categories according to the public health and environmental risk. This system is simple and can be done quickly based on minimal project information, eliminates numerical scoring and calculations, yet still prioritizes projects based on criteria established by the Safe Drinking Water Act and Clean Water Act. DOH can provide incentive for certain activities such as asset management or consolidation by "bumping" projects into a higher category than they would normally rank. Using such a system would also reduce the amount of information applicants are required to submit in the project applications, since they are currently required to provide supporting evidence of characteristics used in calculating the priority score.

An example of California's scoring categories is shown in **Figure 2.2**.

Figure 2.2: California DWSRF Priority Scoring Categories

California DWSRF Priority System	
Category A	Water systems: *1)* with deficiencies that have resulted in documented waterborne disease outbreak illnesses that are attributable to the water system; or *2)* under a court order to correct SDWA violations and/or water outage problems; or *3)* that have violated the total coliform MCL due to active sources contaminated with coliform bacteria (fecal, E. coli, or total coliform); or *4)* that are experiencing a severe domestic water supply outage which poses an imminent threat to public health and safety.
Category B	Water systems that have: *1)* a surface water supply or GWUDI source that is untreated, not filtered, or have other filtration treatment deficiencies that violate federal or state regulations; or *2)* non-GWUDI groundwater sources that are contaminated with fecal coliform or E. coli and are inadequately treated; or *3)* uncovered distribution reservoirs.

Category C	Water systems that have: *1)* documented water outages, significant water quantity problems caused by surface water capacity, or water delivery capability that is insufficient to supply current demand; *2)* distribute water containing chemical or radiological contamination exceeding a state or federal drinking water standard; or *3)* are in violation of the Total Coliform Rule for reasons other than source contamination.
Category D	Includes the following: *1)* CWSs and PWSs owned by public schools with a single source (groundwater or surface water) and have no backup source; or *2)* water systems with treated water reservoirs that have non-rigid (floating) covers in active use; or *3)* projects that provide water meters to non-metered service connections.
Category E	Water systems that: *1)* are in violation of those portions of the Water Works Standards that could result in the entry of wastewater into the water supply or distribution system; or *2)* operate disinfection facilities that lack needed reliability features, chlorine analyzers, or alarms; or *3)* have other disinfection deficiencies that violate Water Works Standards.
Category F	Water systems which: *1)* distributes water that exceeds secondary drinking water standards; or *2)* distributes water in excess of a published chemical notification level; or *3)* distributes water which has exceeded a primary drinking water standard in one or more samples, but has not violated the standard (for a running average standard) at this time; or *4)* needs treatment for a standby groundwater source that is contaminated in excess of a primary drinking water standard; or *5)* do not meet Water Works Standards (other than those components already covered by the list above).
Category G	Water systems which: *1)* distributes water that exceeds secondary drinking water standards; or *2)* distributes water in excess of a published chemical notification

	level; or *3)* distributes water which has exceeded a primary drinking water standard in one or more samples, but has not violated the standard (for a running average standard) at this time; or *4)* needs treatment for a standby groundwater source that is contaminated in excess of a primary drinking water standard; or *5)* do not meet Water Works Standards (other than those components already covered by the list above).

Observation and Recommendation #5: Improve Demand for Funds by Offering Customized Solutions for Each County

In July 2014 prior to onsite meetings with the major Hawaii SRF customers, Northbridge developed for distribution an electronic survey to the four primary DWSRF and four primary CWSRF borrowers. A summary of the survey results can be found in **Appendix D** of this report. The survey results provided preliminary background information for discussions held with the County of Maui, the Maui Department of Water Supply, the City and County of Honolulu, the Honolulu Board of Water Supply, Kauai County, and the Kauai Department of Water in August 2014. The results of those discussions have informed several of the recommendations in this report, but it also became clear that Hawaii's unique customer profile allows for customized solutions to each entity's unique needs, and that streamlining efforts do not necessarily need to take a one-size-fits-all approach. The section below illustrates several customized solutions appropriate for each borrowing entity.

<u>MAUI:</u>

- Jointly funding projects with the CWSRF and DWSRF is appealing to Maui because the county's drinking water and wastewater programs are both subject to the same GO bond limit and their budgets are closely tied together. DOH should work with Maui to identify projects and eligibilities that can be jointly addressed by the CWSRF and DWSRF (such as reservoirs that include a pre-treatment component in the form of a sedimentation basin). Use a holistic approach that integrates CW and DW needs and funding; for instance, expanding recycled wastewater infrastructure to reduce potable water needs (Maui uses more recycled water than any other county).
- The Maui Department of Public Works handles all nonpoint source and stormwater projects, and could be a potential new customer for the CWSRF program.
- Maui's budgeting process does not require or benefit from an Interim Loan Agreement, and program staff indicated that they would be satisfied with a commitment letter.

KAUAI:

- According to the Kauai Department of Water, a major deterrent to using the SRF is Kauai's interpretation of Hawaii's Revised Statute that requires the county to have funds on hand in order to bid an infrastructure project. Because SRF funds are provided on the basis of incurred costs, funds are not available at the time of bid, when the Kauai City Council requires them to be available. **DOH should consider providing non-federal SRF funds to Kauai upon loan signing, rather than on an incurred cost basis. The SRF requirement for cash draws to be based on incurred costs only applies to capitalization grant funds pulled from the Federal Treasury; recycled funds are not subject to this requirement[20]**. DOH should consider limiting this practice to Kauai projects, since implementing it on a broad scale may make the program vulnerable to internal control deficiencies and may also delay the expenditure of federal funds. Consider putting controls in place, such as providing 50% of the project funds up front then requiring invoices and a project status report before providing 35% of the remaining needed amount. The final 15% can be held and disbursed on a traditional incurred cost basis to avoid overpayment.

  Similar practices are currently utilized by the Texas and Florida SRF programs. The Texas CWSRF program deposits funds into the borrower's escrow account upon loan closing, from which funds are drawn as construction progresses. The Florida DWSRF program provides a certain percentage of their loans to the borrower up front, in lieu of requiring costs to be incurred. Allowance limits are set at $12,000 for pre-construction costs and 0.6% of construction costs[21].

- The Kauai Department of Water does not require an Interim Loan Agreement and would be satisfied with a commitment letter.
- Kauai would benefit from more hands-on assistance with the loan process. They have new staff and high turnover, and not all staff are familiar with the SRF process. Onsite DOH assistance in the following areas would be very useful:
  - Training on completing the loan application
  - Training on submitting disbursement requests
  - Pre-reviewing applications to ensure they are complete and accurate.
- The interview with the Kauai Department of Water revealed many questions regarding DWSRF eligibility for growth and expansion projects. In the past, Kauai has avoided applying for SRF funding for new tanks and wells that may allow for future growth. Many of these projects have been identified in regional plans, and

[20] CWSRF regulations at 40 CFR §35.3155(d)(2) state "The SRF or assistance recipient must first incur a cost, but not necessarily disburse funds for that cost … in order to draw cash". The reference to "drawing cash" refers only to SRF capitalization grant funds drawn from the Federal Treasury. EPA Region 9 confirmed this interpretation via personal communication on August 28, 2014.

[21] Florida State Code Chapter 62-552.420: Project Allowances for DWSRF Loans

may be eligible for DWSRF funding. It is suggested that DOH staff meet with Kauai to provide clarification on growth and expansion eligibility considerations.

HONOLULU

- A few key City and County of Honolulu (CCH) staff initially indicated a preference for the use of an Interim Loan Agreement. They indicated that their city council expects to see all of the language and details, and they only sign SRF loans 1-2 times per year, so it is not an onerous process. The staff did indicate that they are open to considering the use of a commitment letter and a draft final loan agreement as an option. DOH should explore the option of eliminating the interim loan agreement with CCH but move to eliminate the interim loan agreement with other CWSRF and DWSRF borrowers.

- As noted previously, CCH does not have a schedule for submitting disbursement requests. The DOH engineer must visit CCH periodically to collect invoices in order to process a disbursement. This contributes to delays in disbursements. The recommendation to float or capitalized interest during the construction period and delay repayment until construction completion may encourage CCH to submit invoices more frequently. However, DOH should also couple this change with a loan agreement requirement that disbursements be submitted at least quarterly during construction. This requirement should be strictly enforced by assessing a fee for failure to follow the disbursement schedule.

- Similar to Maui, Honolulu expressed an interest in forecasting the amount of funds available from the SRF for the City/County over the next 6 years, as knowing their future funding sources will be helpful in projecting cash flow. As noted previously, consider implementing a "frequent financers" –type system to provide the larger counties with a multi-year SRF credit limit to facilitate future planning and reduce administrative requirements.

External Contributors to Unliquidated Obligations

Current Challenges

- The Hawaii Department of Administration and General Services (DAGS) requires every SRF loan agreement to encumber a specific source of funds, to the detail level of identifying a specific year's capitalization grant. In order to expend federal funds in a timely manner, SRF programs need the flexibility to change funding sources if a project is not proceeding as planned, or to avoid assigning a funding source to a project until the disbursement schedule is clearly known. At the time of loan signing, DOH has little ability to know which projects will proceed through construction quickly, and which may encounter delays.

- The Hawaii Department of Budget and Finance (B&F) maintains control of SRF funds and sets an allotment for the amount of SRF funds that may be disbursed each year, made available in quarterly installments. The allotment is based on DOH's anticipated expenditures, and any changes from quarter to quarter must be made via the legislature (B&F prohibits changes to the total ceiling amount until the next fiscal year). In addition, all expenditures of SRF administrative funds must be approved by B&F and ASO. The lack of flexibility in the allotment process and requirement for DOH to establish exact estimates are partly to blame for the following challenges contributing to Hawaii's ULOs:
    - Reduces DOH's flexibility to draw down large amounts of grant funds to refinance a project or to reimburse the SRF program for expenditure of state funds.
    - Prevents DOH from spending administrative funds where needed, degrading program efficiency and slowing down the loan process.
    - Prevents DOH from spending set-asides in a timely manner, since expenditures over $100K for contracts or equipment must be approved by the Governor's office.

Opportunities for Change

Observation and Recommendation #1: End the Practice of Encumbering a Specific Source of SRF Funds in the Loan Agreement

Until recently, The Hawaii Department of Administration and General Services (DAGS) required every SRF loan agreement to encumber a specific source of funds, to the detail level of identify a specific year's capitalization grant. This requirement has contributed significantly to building ULOs, since, at the time of loan signing, DOH has little ability to know which projects will proceed through construction quickly, and which may encounter delays. As a result of a meeting between DOH, DAGS, Northbridge and EPA, as of June 16th, 2014 DAGS and the DOH attorney general have agreed that loan agreements no longer need to specify account codes. However, the DOH WRFS have not yet utilized new loan agreements to implement this change. **It is recommended that DOH change the language in new SRF loan agreements to remove reference to a specific account code and utilize the new loan agreement language for all new loans, commencing immediately.**

Guidance from the U.S. EPA CWSRF and DWSRF program offices have repeatedly instructed states to cut the tie between SRF projects and a specific source of funds as a matter of program management policy to reduce ULOs. EPA policy strongly encourages states to expend the oldest Federal capitalization grants before expending new grant funds; a practice known as "First In, First Out (FIFO)" [22]. According to data provided by EPA Headquarters, the vast majority of state DWSRF programs (approximately 78%) now operate using FIFO[23]. Encumbering a specific source of funds at the time of loan agreement makes it virtually impossible for the Hawai'i DOH to manage the SRF using FIFO principles. As a result of using FIFO, 75% of DWSRF programs have four or fewer open federal grants. Conversely, the Hawai'i DWSRF program currently has nine open federal grants.

It is highly unusual for a state SRF program to identify a specific source of SRF funds in the loan agreement. The following loan agreements from state DWSRF and CWSRF programs were reviewed as examples:

- **California**: All DWSRF loan agreements include a clause stating "Supplier acknowledges that the source of funds disbursed to Supplier by State under this agreement includes federal financial assistance". The agreement does not include any other reference to a specific source of funding for the loan.

[22] "Strenghtening DWSRF Financial Integrity" EPA Office of Ground Water and Drinking Water webinar session, "The Cash Flow Model". EPA Office of Water webinar session "Understanding and Reviewing Cash Draw Proportionality (May 8, 2014.)

[23] Data on open federal capitalization grants drawn from EPA's grants management system. Provided by Howard Rubin, EPA Office of Ground Water and Drinking Water, June 16 2014.

- **Georgia**: Loan agreement states "the Lender's commitment in paragraph (a) above to make the advance to the Borrower shall be a limited obligation of the Lender, to be funded solely from available moneys in the Fund and from no other source of funds, including other funds of the Lender". No other reference to a specific funding source.
- **Colorado**: No reference to a specific funding source
- **Idaho**: No reference to a specific funding source
- **Illinois**: No reference to specific funding source
- **Puerto Rico**: Loan agreement states "this project will be funded by the Clean Water State Revolving Fund".
- **Wyoming**: No reference to a specific funding source.
- **West Virginia**: Loan agreement states "the [West Virginia CWSRF] are willing to lend the Local Government the amount set forth on Schedule X attached hereto and incorporated herein by reference, through the purchase of revenue bonds of the Local Government with moneys held in the Fund". No other references to a specific source of funding for the loan.
- **Vermont**: Loan agreement states "the Municipality is hereby notified that approximately __% of the funds received under this loan are identified as Federal Funds for the purposes of the Federal Single Audit Act". No other reference to a specific source of funding for the loan.
- **Minnesota**: Loan agreement states "the Loan provided by the Authority may be funded with the proceeds of one or more series of the Authority's revenue bonds, federal capitalization grants, proceeds of state general obligation bonds or other funds of the Authority, or a combination thereof". The agreement also states that the Authority may reallocate the loan to different sources of funds at its discretion, and will provide information on the source of funding to the borrower, at the borrower's request, if necessary for complying with the provisions of the loan.
- **Nebraska**: Source of funding identified only as "NDEQ CWSRF Loan"
- **Florida**: Figure 1 shows an example of a table included in the CWSRF loan agreement. The table identifies a specific capitalization grant number for the project (CS120001-090). However, according to the EPA Regional Financial Analyst for Florida, the state does **not** base disbursements on the grant number specified in the loan agreement. The grant number is only identified for the purpose of assigning Federal requirements (such as Single Audit Act requirements) to specific projects. At the time of disbursement, funds may be drawn from sources other than the grant specified in the loan agreement.[24]

[24] Conversation with Sheryl Parsons, EPA Region 4. June 16, 2014.

Figure 3.0: Example from Florida IUP Identifying Capitalization Grant Number

The Local Borrower agrees to the following audit and monitoring requirements.

(1) The financial assistance authorized pursuant to this Loan Agreement consists of the following:

Federal Resources, Including State Match, Awarded to the Recipient Pursuant to this Agreement Consist of the Following:					
Federal Program Number	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
CS120001-090	EPA	66.458	Capitalization Grants for State Revolving Funds	$	140131

DWSRF regulations at 40 CFR Parts 9 and 35 define the DWSRF "Fund" as a revolving account into which states deposit DWSRF program funds including capitalization grants, state match, repayments, net bond proceeds, and interest earnings. **40 CFR §35.3550(f) requires the state to deposit the following into the Fund: the portion of the capitalization grant to be used for projects; net bond proceeds; interest earnings; repayments; 20 percent state match; fees and interest earned on fees (fees may also be deposited into a separate account)**. Because the regulations require all sources contributing to DWSRF loans be deposited into a single Fund, the distinct funding streams become fungible once they are deposited into the Fund. For this reason, EPA allows states to apply most Federal requirements to SRF projects "in an amount equal to the capitalization grant", because it is widely understood that funds in the SRF lose their color once deposited into the Fund, making it difficult and inefficient to track the specific source of funds disbursed to an SRF loan recipient.

Observation and Recommendation #2: Increase Flexibility and Certainty in the SRF Budget Ceiling Process

Most SRF projects are large-scale construction projects that, by their nature, proceed at a fairly unpredictable pace. Construction is often delayed or halted by weather, unforeseen change orders, discovery of sensitive environmental or historic areas, permitting problems, etc. Although SRF programs make an effort to predict the pace of disbursements (payments from the program to the borrower for construction costs), the actual pace can fluctuate significantly from the plans. Most SRF programs that use models to predict their annual cash flow patterns rely on formulas based on historical averages. While these can be made quite accurate over time with the addition of actual disbursement data, they are still just a "best guess" of when funds will be needed for construction expenses. For this reason, many SRF programs keep a large buffer of cash on hand so that they can pay for unanticipated disbursements.

The Hawaii Department of Budget and Finance (B&F) maintains control of SRF funds and sets an allotment for the amount of SRF funds that may be disbursed each year, made available in quarterly installments. Splitting the SRF budget ceiling into quarterly allotments does not give DOH the flexibility to respond to variations in the pace of disbursements. **It is recommended that DOH work with B&F to explore ways to introduce more flexibility into the ceiling process.**

It is not unusual among SRF programs for a separate fiscal agency to maintain control of funds and utilize an appropriation and encumbrance process to approve the use of funds by the SRF program. **However, in most states there is sufficient flexibility in the process so that it does not hamper the SRF program's ability to spend funds effectively.** Below are some recommendations to improve the Hawaii process so that SRF funds may be spent expeditiously:

- **DOH should request that the SRF budget ceiling be provided in a yearly or biannual, rather than quarterly, allotment.** Hawaii Revised Statutes §37-32 prescribes the quarterly allotment requirement, but states *"provided that in any case where the quarterly allotment period is impracticable, the director of finance may prescribe a different period suited to the circumstances, not exceeding six months nor extending beyond the end of the fiscal year"*. In addition, HRS §37-33 states *"In the cases of capital improvements and in other cases where periodical allotments are impracticable, the director of finance may dispense therewith and prescribe such regulations as will insure proper application and encumbering of funds".* Due to the natural fluctuations and unpredictability of the construction process, DOH should make the argument that a quarterly allotment is impracticable for use in the SRF programs.

- **Because DOH's anticipated quarterly expenditures must be closely justified to B&F, DOH should use financial modeling to project a cash-flow based disbursement process that assumes project commitments in excess of the amount of funds on hand at the time of commitment.** The cash-flow based project commitment technique is used by at least nine DWSRF programs and twelve CWSRF programs, and allows programs to over-commit funds by projecting the amount that will actually be needed during the disbursement period. Without rigorous financial modeling, its possible the DOH is underestimating the SRF disbursement needs, resulting in unnecessary strain against the quarterly budget allotments.

- **The DWSRF should consider depositing fee revenue into an account outside the SRF account that is easily accessed by DOH, and using these funds to purchase equipment, supplies and contracts rather than the administrative 4%.** According to the 2014 DWSRF IUP, DOH collected $732,602 in program income fees in 2012, but used only $26,436 for administration. Projected 2014 administrative expenses for the 4% set-aside are $685,574, which could easily be covered by fee revenue rather than administrative set-aside funds (assuming the

2012 rate of fee expenditure is typical). Establishing a separate account for fee revenue (perhaps within the Environmental Resources Office) would ideally make these funds more accessible for important administrative purchase and would eliminate the need to seek approval from ASO and B&F for every administrative purchase. The unused administrative 4% can be used to fund additional projects, or can be "banked" to be drawn from a future capitalization grant.

Financial Management

Current Challenges

- DOH does not have a single-source accounting system used to track grants, disbursements, repayments, etc. Much of the SRF activity is tracked by DAGS and ASO. Disbursements are tracked in an Excel payment log and printed in a binder. The lack of a cohesive, single system makes DOH too reliant on external agencies to track the SRF financial situation, causes inefficiencies for internal financial management when staff have to pull numbers from a variety of sources, and limits transparency because only a few staff members can understand/access/update all the financial tracking sources.

- Most SRF programs do not assess interest during the construction period and do not require repayment to begin until after project completion[25]. Conversely, Hawaii DOH begins assessing principal and interest repayments on a project as soon as the first disbursement is made (typically during the construction period). In the next biannual billing period following the disbursement, DOH will issue a bill to the entity for the principal, interest and SRF program fees associated with the disbursed amount, as well as an amortization schedule showing the repayment period for the disbursed amount. With each subsequent disbursement during the construction period, DOH updates the amortization schedule to reflect the new disbursement, and bills the borrower biannually for the associated principal, interest and fees due. Once construction is complete and the final loan amount is known, DOH creates a final amortization schedule for the loan. This process was introduced when the Hawaii SRF programs were in their infancy because fee income was needed during the construction phase to support SRF staff (and according to some DOH staff, this need still exists). The process is confusing to SRF borrowers, a disadvantageous use of SRF staff time, and acts as a disincentive for borrowers to submit disbursement requests during the construction period, thereby contributing to unliquidated obligations.

[25] The DWSRF regulations in 40 CFR §35.3525(a)(i) require assistance recipients to begin repayment of principal and interest no later than one year after project completion.

- Borrowers such as the Honolulu Board of Water Supply often make project funding decisions based on the ease of the funding process and their cash flow needs rather than long-term savings, making the SRF interest rate subsidy a less effective marketing point.

Opportunities for Change

Observation and Recommendation #1: Float (or Capitalize) Interest during the Construction Period and Delay Repayment until Construction is Complete

The Hawaii DOH staff is noticeably committed to providing positive customer service to their borrowers. Not charging interest during the construction phase and delaying repayment until project completion are common, customer-oriented financial benefits that many SRF programs provide to their borrowers. **Hawaii's current system of requiring repayment of principal, interest and fees following each disbursement during the construction phase is a disservice to SRF borrowers and acts as a disincentive for borrowers to submit disbursement requests during the construction period, thereby contributing to unliquidated obligations.**

Receiving timely disbursement requests from borrowers is a key aspect of avoiding unliquidated obligations. DOH and the Honolulu Board of Water Supply have both stated that HBWS does not submit frequent disbursement requests, and that DOH staff must periodically visit the HBWS offices to collect invoices and process disbursements. **Floating (or capitalizing) interest and delaying repayments during the construction period would remove a major disincentive for HBWS to submit regular disbursement requests during construction.** As another example, the Kaiei Mauka Exploratory Well project sponsored by the County of Hawaii received its first project disbursement in April of 2003 and requested relatively level disbursements averaging 0.13% of the total loan amount in each six-month period for the subsequent ten years (as of April 2013, the loan was still not fully disbursed). In comparison, the average SRF loan in North Carolina consists of five total disbursements over a two-year period averaging 11%, 37%, 26%, 19% and 7% of the loan amount.

In the early years of the SRF programs, the cash flow obtained by requiring fees and repayments during the construction phase may have been necessary to finance additional disbursements and pay for SRF staff. **However, the mature programs should currently have sufficient cash flow to operate on prior repayments; if not, this provides further evidence of the need for DOH to adopt more sophisticated financial modeling so they may operate in a manner similar to most other mature SRF programs.** SRF borrowers have expressed dissatisfaction at the confusing re-amortization process, and would likely welcome the ability to postpone principal, interest and fee payments until the end of the

construction period**. As a safety mechanism, DOH could establish a 3-year average construction period during which interest, repayments and fees will not be assessed; projects that have construction periods exceeding that limit would be subject to billing after the 3-year mark.**

Some DOH staff members have stated that this system allows DOH to collect fee revenue during the construction period, which is required to pay for SRF staffing. The FY2015 DWSRF IUP anticipates $887,112 in total administrative expenses to be funded by $1,806,929 in total anticipated fee income, as well as $383,714 in additional administrative expenses to be funded via $353,800 taken from the 4% administrative capitalization grant set-aside, for total 2015 DWSRF administrative expenses of $1,270,826. **However, the DWSRF FY2015 IUP also shows that almost $13M in fee revenue has reverted to the loan fund over the life of the DWSRF program due to Hawaii statute limiting fee income to $2M per year.** The Hawaii Administrative Rules introducing the loan fee took effect in the year 2000, meaning that the DWSRF program has collected an average of $1M per year in loan fees that cannot be used for SRF administration. **This indicates that the DWSRF program should be able to forego the fees collected during the average 3-year construction period without impacting the fee income necessary to staff the program. Likewise, the 2014 Amendments to the Federal Water Pollution Control Act increase the amount allotted for CWSRF program administration to a maximum of 1/5% of the value of the fund, which will result in a 102% increase in administrative funds available to the Hawaii CWSRF program.**[26]

Observation and Recommendation #2*:* Use LGTS and FOCUS Funding Model to Organize Financial Data and Forecast Future Funding Goals

As noted in "Current Challenges", Hawaii SRF financial data is currently housed in a number of disparate Excel spreadsheets maintained by WRFS. This Excel-based financial management system does not have modeling capabilities, and WRFS staff often do not have the tools they need to forecast financial management scenarios and make informed recommendations to managers on important financial decisions. **Implementing LGTS will enhance DOH's financial modeling capabilities, and incorporating features from the Financial Operations and Cash Flow Utilization in the SRF (FOCUS) model (currently under development for several other SRF programs) will give WRFS the tools they need to perform the financial modeling and forecasting that is a fundamental financial management practice in most SRF programs.**

In addition to creating a single platform for SRF financial information and simplifying access to financial reports, LGTS can add the following capabilities to help ensure timely cash flow and avoid unliquidated obligations:

[26] Based on 2012 Hawaii audited financial statements showing Total Net Position of $441,195,267.

- Create pre-filled templates for disbursement requests to reduce borrower errors and speed the disbursement review process.
- Use direct debit to automatically pull loan repayments from a borrower's bank account on the biannual deadline, reducing administrative needs associated with billing and preventing late payments (this method is used by the Georgia SRF programs).
- Simplify and automate Hawaii's current practice of re-amortizing repayments during the construction phase. As each disbursement is paid by DOH, LGTS will automatically roll in to the amortization schedule and recalculate for the next payment.

Utilizing the FOCUS model will add these additional capabilities to Hawaii's fund management activities:

- Incorporate future project tracking over a one to three year period as part of the modeling effort to realistically forecast near term needs.
- Provide tracking, modeling and forecasting balances of fee accounts over time.
- Evaluate cash flows over a 20 year period incorporating projects currently in the pipeline as well as assumptions of expected commitments through year 20.
- Model the 20 year impacts of different demand levels, different interest rate, principal forgiveness and fee structures, as well as different capitalization levels.
- Allow exploration of leveraging concepts should the State wish to consider adopting leveraging
- Provides DOH with summary data, charts and indicators that are helpful for quick overviews and presentations.
- Determine what level of assistance can be provided each year based on cash flows, and enables DOH to fund projects on a cash flow basis - the result being that a state can commit over 100% of funds on hand.

The FOCUS model incorporates project milestone tracking that enables the program to conduct more accurate demand forecasting and disbursement modeling. **Utilizing LGTS and FOCUS for the financial management of the Hawaii DWSRF program will help financial staff make informed decisions to prevent the future accumulation of high unliquidated obligation balances.**

Observation and Recommendation #3: Re-evaluate Fees Charged on CWSRF and DWSRF Loans

Although Hawaii generally uses a comparable amount of administrative resources to other DWSRF program similar in size (**Figure 4.0**), the DWSRF FY2015 IUP also shows that almost $13M in fee revenue has reverted to the loan fund over the life of the DWSRF program due to Hawaii statute limiting fee income to $2M per year. The Hawaii Administrative Rules introducing the loan fee took effect in the year 2000, meaning that the DWSRF program has collected an average of $1M per year in loan fees that cannot be used for SRF administration.

EPA Region 9 staff ran an analysis of interest and fees charged to DWSRF projects based on data provided by Hawaii DOH[27]. Based on a weighted analysis of all actively disbursing loans, **EPA found an average interest rate of 0.3048% and an average fee rate of 3.2622%**. This pattern appeared to be consistent with both open and closed loans.

Figure 4.0: Hawaii DWSRF Administrative Expenses Relative to Similar Programs

	Fiscal Year Ending June 30, 2013[28]				
State	DWSRF Assistance Provided ($M)	Number of DWSRF Assistance Agreements	Expenses Paid from Fee Accounts ($M) to Administer the Fund	DWSRF Administrative Expense Set-Aside used for Administrative Expenses ($M)	Total Cumulative Administrative Expenses
Arkansas	234.0	58	2.28	6.75	9.03
Hawaii	151.4	60	3.80[29]	3.96[30]	7.76
Connecticut	160.4	92	0.00	6.15	6.15
Delaware	162.9	89	0.00	4.59	4.59
Nevada	169.0	72	0.00	4.52	4.52
New Mexico	128.7	73	0.00	5.47	5.47
S. Carolina	208.5	71	1.31	4.55	5.86

The DWSRF program should consider performing an analysis of fee income compared to administrative needs to determine whether the fee rate can be lowered. The DWSRF program could offset a reduced fee rate by collecting more interest and growing the program, could lower the total effective interest + fee rate to make the program more attractive to borrowers, or could retain the fee but waive it to incentivize

[27] Personal correspondence with EPA Region 9 on October 3, 2014.
[28] DWSRF National Information Management System reports (saadmst.PDF, feesst.PDF, and dwfaapst.PDF) as of June 30, 2013.
[29] Hawaii DWSRF FY2015 Intended Use Plan
[30] Hawaii DWSRF FY2015 Intended Use Plan

certain projects or borrower activity. An analysis of CWSRF fee income relative to administrative needs is included below; consider performing a similar analysis for the DWSRF program. Managing fee levels is a built in feature of the FOCUS model that can be coordinated with LGTS to provide accurate short-term and long-term forecasts of fee levels.

Analysis of CWSRF Fee Income Relative to Administrative Needs

CWSRF projects currently receive a 0.75% interest rate and a loan fee of 0.25%, resulting in a total loan rate of 1.00%. Both program fees and non-program fee income is used to supplement the 4% taken from the federal capitalization grant for CWSRF administration. Non-program fee income is also used for other water quality program activities such as operation and maintenance inspections of wastewater treatment plants, a recycled water program, a bio-solids program, and oversight of concentrated animal feeding operations. Hawaii Administrative Rules established a cap of $3M on the amount of fees the CWSRF program may collect. All fees above and beyond that amount must be deposited into the CWSRF loan fund. SRF staff use a practice of switching the 25%/75% split between interest earnings and fee revenue; when the fee balance nears the $3M cap, fee earnings become 25% of earnings and interest becomes 75%.

Administrative resources available to the CWSRF program will increase with the FY2015 capitalization grant as a result of the Water Resources Reform and Development Act (WRRDA); amendments to the Clean Water Act signed into law in June 2014. WRRDA changes the amount of funds available from the CWSRF capitalization grant for fund administration to 4% of the grant, $400,000 per year, or 1/5 percent per year of the current valuation of the fund, whichever is greater.[31] A preliminary analysis of Hawaii's CWSRF fund valuation based on "Total Net Position" from the 2012 CWSRF audit indicates that Hawaii's administrative resources may be upwards of $882,391 per year; a 102% increase from the $437,840 available in 2012 as 4% of the capitalization grant.

The analysis below uses data from the 2008-2013 CWSRF Audited Financial Statements and the FY2014 CWSRF Intended Use Plan. **Figure 4.1** summarizes the projections for 2015-2020, and the full chart in **Appendix E: CWSRF Administrative Resources** presents the data used in the analysis.

The CWSRF's Total Net Position is projected in two scenarios. **Scenario 1** assumes that Total Net Position increases 5% per year, which was the average annual rate of increase between 2008 and 2013. **Scenario 2** assumes that the CWSRF eliminates all fees, removing this income from the Total Net Position sum (an average of 0.11% reduction in Total Net per year), and that the Total Net Position remains level from year to year except for a 3.2% inflation adjustment[32]. **Projected Administrative Expenses** are based on an average of Hawaii's administrative expenses from 2008-2013, increased 3.2% each year for inflation.

[31] 33 U.S.C 1382 SEC. 603 WATER POLLUTION CONTROL REVOLVING LOAN FUNDS (d)(7)
[32] The 3.2% inflation factor is based on Honolulu's 10-year average Consumer Price Index from the U.S. Bureau of Labor Statistics (2004-2013)

Projected Loan Fee Income is based on an average of Hawaii's loan fee revenue from 2008-2013, increased 3.2% each year for inflation (note that a more accurate projection of fee revenue can be performed using LGTS and FOCUS data). **Even with the very conservative assumptions of Total Net Position growth in Scenario 2, the CWSRF is expected to collect approximately $1,000,000 in fee income per year over and above the amount needed to operate the CWSRF program.**

DOH might consider reducing the fee rate and making a corresponding increase to the loan interest rate to grow the fund. Taking the 1/5th valuation instead of 4% of the capitalization grant will reduce the amount of funds available for loans, and increasing the interest rate can help offset this. The 1/5th valuation is a more stable source of administrative funding since it is not as vulnerable as fee income to yearly shifts in loan volume. **The analysis of CWSRF and DWSRF program fees illustrate that both programs are collecting more fee income than is necessary to operate the programs and indicates that DOH should be able to eliminate the practice of charging fees to borrowers during the construction period.**

Figure 4.1: Projected CWSRF Fee Income Relative to Administrative Expenses

	2015	2016	2017	2018	2019	2020
Projected Total Net Position						
Scenario 1	$515,825,085	$542,673,724	$570,919,832	$600,636,147	$631,899,193	$664,789,477
Scenario 2	$495,259,949	$510,546,048	$526,303,950	$542,548,216	$559,293,858	$576,556,351
Administrative Funds Available Based on 1/5% of Projected Total Net Position						
Scenario 1	$1,031,650	$1,085,347	$1,141,840	$1,201,272	$1,263,798	$1,329,579
Scenario 2	$990,520	$1,021,092	$1,052,608	$1,085,096	$1,118,588	$1,153,113
Projected Administrative Expenses and Shortfall between Expenses and Funds Available						
Expenses	$1,914,569	$1,975,836	$2,039,062	$2,104,312	$2,171,650	$2,241,143
Scenario 1	$(882,919)	$(890,488)	$(897,223)	$(903,040)	$(907,852)	$(911,564)
Scenario 2	$(924,050)	$(954,744)	$(986,455)	$(1,019,216)	$(1,053,063)	$(1,088,031)
Projected Loan Fee Income						
	$1,913,622	$1,974,858	$2,038,053	$2,103,271	$2,170,576	$2,240,034

Observation and Recommendation #4: Perform a Periodic Financial Capability Review of all Borrowers to Establish a 5-Year "Line of Credit" and Eliminate Individual Financial Reviews for Each Project Application

According to Kyle Ginoza and Juan Rivera with Maui County, the ease of the SRF process is closely tied to internal county accounting limits[33]. **They suggested it would be helpful if DOH could provide a letter of commitment (or similar instrument) committing SRF**

[33] Communication during meeting on August 26, 2014.

funds up to a certain amount for Maui's future use. This would allow the Maui Environmental Management staff to get authority to execute contracts, allowing them to proceed quickly with SRF projects.

This approach is very comparable with a new method recently launched by the California Clean Water State Revolving Fund to provide an SRF "line of credit" to reliable, repeat borrowers. Borrowers participating in California's "Frequent Financers" program submit a 5-year Capital Improvements Plan to the CWSRF program and identify the projects they would like to fund using the SRF. In addition, the borrowers submit a single SRF financial application package covering all of the projects on the CIP. Each year, CWSRF accounting staff performs a credit and affordability review for the amount of projects slated to be funded in that year[34]. This approach reduces the administrative burden on the borrower by reducing the amount of application materials that must be completed, and also aids the borrower's budgeting process by providing assurance that SRF funding will be available to them in a certain amount each year. Adopting a similar practice would likely be a very attractive incentive for Hawaii's SRF borrowers.

Observation and Recommendation #5: Offer DWSRF Extended-Term Financing as an Incentive for Projects to Move Faster

The DWSRF program at EPA Headquarters recently issued a memo allowing the use of 30-year financing for non-disadvantaged communities using the purchase of municipal debt obligations[35]. Because many of DOH's large borrowers rely on 30-year municipal bonds to finance their capital improvements, offering 30-year financing through the DWSRF program would allow the DWSRF to be much more competitive vis á vis the municipal bond market.

Providing 30-year financing will require a small learning curve on DOH's part to establish the necessary process to purchase municipal debt obligations, and will require a small annual time commitment to comply with the financial modeling required by the EPA memo (states must show that they are providing 30-year financing at a level that will not decrease repayments more than 10% annually over the subsequent 5 years, as compared to 20-year financing at a comparable rate). Because of the small added administrative burden as a result of offering 30-year financing, DOH is justified in limiting this option to certain situations. For instance, **it is recommended that DOH offer a limited amount of 30-year loans each year on a first-come-first-served basis to the projects that are ready to proceed first.** This method will provide an incentive to the counties to prepare their projects for DWSRF financing more quickly, while also protecting the perpetuity of the fund. The aforementioned LGTS and FOCUS financial tools can aid DOH in calculating the appropriate amount of 30-year financing to offer.

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[34] Personal communication with Kelly Valine, California State Water Resources Control Board, on August 13, 2014.

[35] EPA Office of Water Memorandum "Financing Terms Greater than 20 Years in the Drinking Water State Revolving Funds" (April 14, 2014).

Hawaii Administrative Rules do not appear to limit the use of bond purchase agreements to provide 30-year financing to non-disadvantaged communities. Hawaii Revised Statutes § 340E-37 (b) states "all **loans** from the drinking water fund shall: (2) … be fully amortized not later than twenty years after project completion". Since the Hawaii statutes only apply the twenty year repayment term requirement to loans, projects financed via the purchase of municipal debt obligations should be exempt from the twenty-year limitation. The use of bond purchase agreements has been used by seventeen state CWSRF programs to provide financing with terms exceeding twenty years.

Streamlining the Application and Disbursement Processes

Current Challenges

- The use of multiple loan agreements in the Hawaii SRF program has been identified as a significant contributor to process inefficiencies. Interim Loan Agreements and Supplemental Loan Agreements use a lot of staff time and increase complexity for the borrower.

- Amortization schedules must be re-calculated and included in a revised iteration of the SLA each time that there is a repayment. It can easily become overwhelming for borrowers to keep track of and manage. The existing SLA process appears unnecessarily time-consuming and complex as it requires multiple reviews, approvals and signatures from a number of individuals for each amended document.

- A lot of staff time is spent pre-filling and correcting disbursement requests that have not been properly completed by borrowers due to lack of guidance provided in the Applicant Manual.

- An original wet signature is required for loan agreements and disbursement requests. This requires submittal of documentation via snail mail and can significantly delay the loan process and the timely disbursement of funds, causing time-consuming back-and-forth if not done correctly.

- Too many individual data tracking, storage, and information management mechanisms that impede SRF and other DOH staff access to accurate, real-time information.

- Existing document routing protocols take too much time and go through too many people with more than 45 total hand-offs identified in the CWSRF program and 82 in the DWSRF program.

Opportunities for Change

Observation and Recommendation #1: Adopt a Singular Internal Information Management Platform

The current information management environment leaves DOH staff shuffling a number of different data and tracking resources where many inconsistencies exist. The DataMart system, used by the external offices that DOH interfaces with (ASO, B&F, DAGS), contains financial information and does not always match the information contained in FAMIS, which is read-only for SRF program staff. Furthermore, the information staff sees is one day behind rather than in real time and the only way that data can be manipulated or analyzed is to run a report and download into Excel. WRFS must always reconcile data from DataMart with whatever is in FAMIS, and then roll it into proprietary financials which is very time consuming work. This is all performed using individual spreadsheets. Document storage is done using the OneStop database system which allows for sharing and viewing documents, as well as offers the capability of performing automated PPL ranking. The OneStop database system is used by both the CW and DWSRF program staff.

Whenever multiple silos of information exist and are populated and managed separately, the propensity for error increases as does the amount of time that users must spend verifying and corroborating numerous data sources to draw meaningful conclusions and make decisions. This inherently impedes efforts toward an efficient workflow built on accurate data. **DOH should consider implementing a single, shared electronic platform where project data, financials, and documents may be tracked, housed, accessed, and updated seamlessly in a real-time environment. LGTS is capable of providing this type of platform, which greatly reduces the number of physical hand-offs as well as the time required to effectuate revisions and edits to drafts and correspondence.** A system like this can shepherd all aspects of a project from cradle to grave, and do the same for the capitalization grant lifecycle in a web-based environment. The platform uses a database configuration where the logic is sophisticated and functional. **More importantly, it is readily accessible to all users in a decentralized environment providing accurate data and information in real time.** The singular information management platform may be structured to allow for editing or read-only capabilities to ensure that data is managed securely and by the appropriate personnel. Some of the other benefits of adopting a system like this include, but are not limited to, the following:

- Track entire inventory of SRF projects using discreet numeric identifiers and nomenclature. This can be used to paste directly into all document templates (e.g. loan agreements, payment request forms, etc.) to ensure continuity among all staff engaged in preparing or issuing documentation or correspondence to borrowers.
- Track and verify customized milestones for submittals, approvals, and even include automatic notifications or reminders when something needs to be submitted or a task performed pertaining to
    - Environmental Review
    - Plans and Specifications
    - Project Budget
    - Resolution
    - Rate Increases
    - Construction start dates
- Use electronic project submittals and directly route to a document repository in LGTS
- Track payment requests received, disbursements paid, and automatically update project budget in real-time status
- Electronic funds transfer capabilities allowing disbursements to be paid directly into borrowers' banking accounts

It is important to emphasize that the success or failure of implementing LGTS as an effective tool for the Hawaii SRF management program is largely dependent upon the cooperation of ASO, B&F, and DAGS, and the open and transparent sharing of critical data elements housed in DataMart. It will be critical that LGTS be allowed and enabled to connect with the DataMart information in order to truly be effective. Additionally, it will be imperative that DOH make the necessary adjustment to dedicated staffing so that the implementation and maintenance of the LGTS platform remains viable in a long-term context. This topic is discussed in further detail in the section of this report entitled "Organizational and Managerial Changes to Improve SRF Operations".

Observation and Recommendation #2: Replace the Interim Loan Agreement with a Letter of Binding Commitment (CWSRF Program Only)

The use of multiple loan agreements in the Hawaii SRF program has been identified as a significant contributor to process inefficiencies and they create an environment of unnecessary complexity for SRF borrowers. This is evidenced in the CWSRF program which currently issues three separate iterations of loan agreements to its borrowers:

- Interim Loan Agreement (ILA)
- Final Loan Agreement (FLA)
- Supplemental Loan Agreement (SLA)

Each of these is in excess of 60 pages and demands a lot of staff time to prepare, not to mention the time required for the documents to be reviewed by both DOH Deputy Director and Attorney General, but also by the applicant. **The POD analysis found that an estimated 400 hours are spent preparing, transporting, and reviewing the ILA in the CWSRF program. The same ends could easily be achieved by replacing this voluminous agreement with a Letter of Binding Commitment – an approach currently utilized by the Hawaii DWSRF program. The DWSRF program spends an estimated 42 hours issuing the Commitment Notice.** Many states use similar legal instruments to great effect in their SRF programs, including California, Delaware, Kentucky, New Mexico, Oklahoma and West Virginia to name a few (see Appendix F).

The Hawaii DWSRF program issues a Commitment Notice, similar in structure to the letters of binding commitment templates utilized by other SRF programs which includes:

- Project Name
- Project Number
- Loan Amount
- Interest and Fee Rate
- Loan Terms
- Commitment Expiration Date
- Acknowledgment and Acceptance of Terms

This document serves the same purpose as the ILA, yet does so in a much more effective and efficient way. Most letters of binding commitment range in length from 2-6 pages and provide a succinct snapshot of the loan terms SRF programs are prepared to offer an applicant, typically on some sort of conditional basis. For example, the Hawaii DWSRF program's Commitment Notice stipulates that it must be signed and returned to DOH within 90 calendar days of receipt or the commitment will expire; Kentucky allows applicants 12 months to satisfactorily perform the conditions set forth in its Conditional Commitment Letter which are shown in Figure 5.0. Failure to meet these deadlines results in a revocation of the commitment.

Figure 5.0 - Performance Conditions in Kentucky's Conditional Commitment Letter for the SRF Program

1.	Bid package must be submitted to the Division of Water for approval within 14 days of bid opening
2.	Assistance Agreement must be executed within 6 months from bid opening
3.	Borrower must agree to expend all SRF loan funds within 6 months of the date of initiation of operation
4.	Any required adjustment in utility service rates shall be adopted by ordinance, municipal order, or resolution by the appropriate governing body of the Borrower.
5.	Public hearings as required by law shall be held prior to the adoption of the rate ordinance, order, or resolution. Any required approvals by the Public Utilities Commission shall be obtained.
6.	Authority to Award Package documentation shall be submitted to and approved by

	Division of Water
7.	Environmental Review shall be conducted by the Division of Water for all construction projects receiving SRF funding
8.	Technical Plans and Specifications and a completed specifications checklist shall be approved by the Division of Water prior to project bid
9.	Obtain clear site certificate
10.	Borrower must complete and return Authorization for Electronic Deposit of Borrower Payment form

While the Hawaii DWSRF Commitment Notice also includes a few similar performance conditions, there is no deadline for these conditions to be satisfied. **By incorporating meaningful performance deadlines into the Letter of Binding Commitment, the Hawaii SRF programs may be able to significantly reduce the 4,380 hours that is spent waiting and chasing down submittals from applicants before they can even be approved for a Final Loan Agreement.**

The Hawaii CWSRF program should consider developing a template for a Letter of Binding Commitment that has been pre-approved by Attorney General to replace the ILA. This would eliminate the need to send the document through the existing approval chain that is currently traveled by the ILA to the Deputy Director and the Attorney General. This option could eliminate a significant portion of the time (estimated at 370 hours) that DOH staff spends waiting on outside approvals while providing applicants with a more streamlined, efficient, and user-friendly document that will be easier to review and approve.

An important consideration that has raised some concerns among DOH staff is the legal enforceability of a Letter of Binding Commitment versus the ILA. A Letter of Binding Commitment may be considered an informal contract as no special form is required, except that the instrument must be in writing and must include the following elements:

1. Offer to enter a legal agreement
2. Acceptance of the terms of the offer
3. Consideration – something of value received or promised, in this case a loan
4. Contractual capacity
5. Legal purpose that is not against public policy
6. Genuineness of assent – the consent of both parties must be genuine and not the result of fraud, undue influence, or duress
7. Form – typically in writing to be legally enforceable

Letters of Binding Commitment, if properly prepared, contain all of the elements of an enforceable contract but may be considered voidable if the verbiage includes conditions or caveats where one party may have the option of voiding or enforcing the contractual obligation if there is a failure to perform or meet a stipulated deadline. In the event the contract is voided, both parties are released from it.

Though not always possible due to the inherent differences between the programs, it is preferable to have the CWSRF and the DWSRF program processes function in tandem to the greatest extent practicable. Replacing the ILA with a Letter of Binding Commitment allows this congruency while offering attractive time-saving benefits.

Observation and Recommendation #3: Create One Master Loan Agreement for Each County

Because of the unique SRF customer demographic in Hawaii where DOH enjoys long-standing relationships with four core and repeat borrowers, the State should consider developing a single Master Loan Agreement specific to each of the counties. This will allow the agreements to be tailored to suit the individual needs, preferences, and personality of each County while reducing redundant and voluminous paperwork, ultimately freeing up time for both DOH and County staff to dedicate to other obligations. **A Master Loan Agreement offers customers the fastest, most convenient way to borrow SRF funds by signing one document which can later be used for all future funding.**

In particular, a Master Loan Agreement has the ability to bundle multiple projects that a County is working on into a single Supplemental Loan Agreement (SLA), as opposed to trying to juggle several separate SLAs at once.

There are not many other SRF programs that would be as well-suited to this approach as Hawaii except for perhaps Puerto Rico, who also has only a handful of SRF borrowers. The Puerto Rico SRF program does use a Master Loan Agreement for its largest and most frequent borrower, Puerto Rico Aqueduct and Sewer Authority (PRASA). They use a single agreement to include a portfolio of water or wastewater infrastructure projects that includes all of the typical boilerplate language, as well as a section addressing Special Conditions which includes, among other provisions, a schedule of milestones for all of the projects included in the Master Loan Agreement (Figure 5.1).

Figure 51 _PRASA Schedule of Milestones for SRF Projects

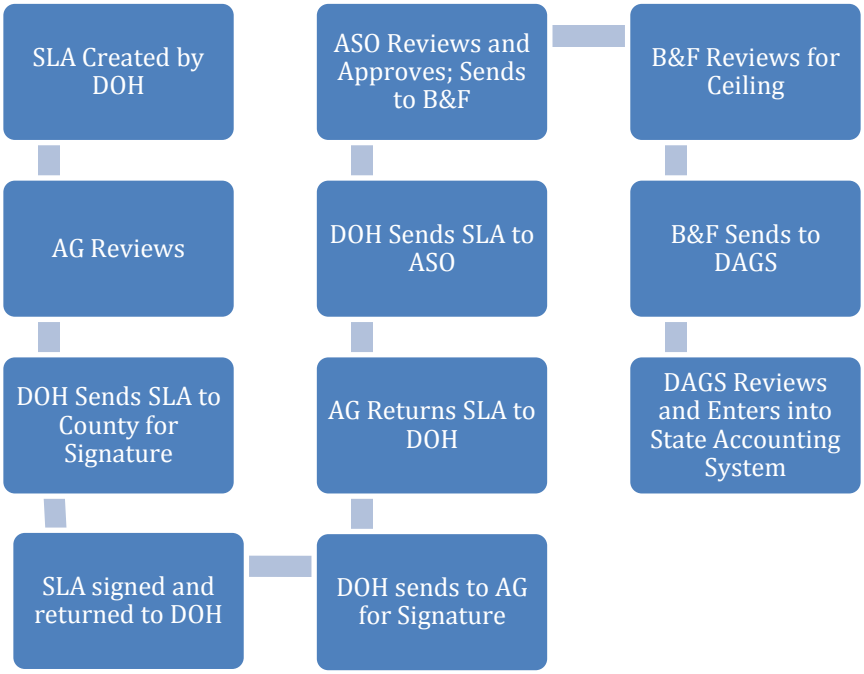
EVENTS	DATES	DATES	DATES	DATES
	Ponce – Rehabilitation 28 Km of Trunk Sewer (C-72-093-21)	San Sebastián – Replacement of Sanitary Lines (C-72-131-09)	San Sebastián – Reloc. PR-111 Río Culebrinas (C-72-131-06)	Fajardo – Sanitary Sewer System at Las Croabas (C-72-116-15)
Submittal of Design Documents	March 2012	Pending for PRASA submittal	May 2010	March 2009
Final Approval of Design Documents by EQB	March 2013	Pending for PRASA submittal	In Evaluation	January 2009
Advertise for Construction Bids	April 2003	February 2014	September 2013	April 2012
Award of Construction Contracts	Pending for PRASA submittal	March 2014	October 2013	November 2012
Initiation of Construction	September 2013	May 2014	December 2013	February 2013
Completion of Construction	October 2015	May 2016	April 2015	March 2015
Initiation of Operation	October 2015	May 2016	April 2015	March 2015
Project Certification	October 2016	May 2017	April 2016	March 2016

Coordinating a suite of projects that are ready to proceed to be included into the customized Master Loan Agreement is companion to the recommendation of the re-introduction of the SRF Outreach Teams in Observation and Recommendation #5 of the Communications Strategy portion of this report.

Observation and Recommendation #4: Eliminate the Supplemental Loan Agreement (SLA) and Revise the Amortization Schedule Process

Every SRF loan in the Hawaii DWSRF and CWSRF program receives an SLA once construction has been completed and the final disbursement has been taken. At this time, a final iteration of the loan agreement in its entirety is prepared to reflect the final amortization schedule for the loan repayments. Processing the SLA follows the same series of hand-offs (15), approvals (7) as the final loan agreement which, per the POD results, can easily chew up valuable hours. Ninety-four (94%) percent of this time has been categorized as handling/processing as opposed to value-added and shown below in Figure 5.2. Furthermore, county borrowers in Hawaii have indicated that they would prefer to only receive a single loan agreement for their SRF projects, finding the receipt and management of three discreet loan documents to be cumbersome and unnecessary. This practice is resource-heavy both in terms of the staff time required to process the SLA, as well as the materials costs associated with producing another 60-plus page document that does not serve the interest of the borrowers in any meaningful, beneficial way.

Figure 5.2: Supplemental Loan Agreement Process



DOH's amortization process, which is detailed in the section entitled "Financial Management" of this report, begins as soon as the first disbursement to the borrower is made – typically during the active construction period. Every six months, DOH will issue a bill to the borrower for the principal and interest amount (as well as program fees) associated with the amount that has been disbursed. This bill will also include a new amortization schedule showing the repayment period for the disbursed amount. With each subsequent disbursement that occurs during the construction period, DOH will update the amortization schedule to reflect the new disbursement and bill the borrower biannually for the associated principal, interest and fees that are due. The repayment amount is in a constant state of flux and will only stabilize once construction has been completed and the final loan amount is known. This practice can easily become overwhelming for borrowers to keep track of and manage, especially if they have multiple projects being funded by the SRF program simultaneously, as Honolulu and Maui do. **One borrower has shared that they never really know at any given time what their current repayment balance is as a result of this practice, which hampers other budgeting, financial, and CIP planning endeavors.**

The existing SLA process appears unnecessarily time-consuming and complex as it requires multiple reviews, approvals and signatures from a number of individuals, including the Mayor, and accounts for approximately 240 hours of routing and transmittal time for each amended document. It may also contribute to negative perceptions that borrowers may have of the SRF program, which prompts them to seek funding elsewhere.

State Examples

Of course, with any manner of construction loan, final adjustments must be made to the financing agreement to accurately reflect the exact amount of money that is to be repaid on the loan. It is normal for these amounts to fluctuate somewhat from the figures presented in the original loan agreement. However, it has been observed that most state SRF programs are able to produce a final amended loan agreement using a much simpler and streamlined approach. **For example, the Idaho SRF program issues only one loan agreement that is 11 pages long and any amendments that need to be made are done using a one-page signature document. Once construction has been completed on the project and the last disbursement has been issued, Idaho will issue the borrower a Promissory Note that is one to two pages long (see Appendix G).**

With respect to the amortization schedule, each project file will contain documentation to explain any changes to the original amortization schedule. **Prepayments and late payments are netted over time, accounting for all the little pluses and minuses with respect to interest. Adjustment to the original amortization schedule is made at the very end of the repayment term.** Should the borrower request an amended amortization schedule, then Idaho DEQ will update the schedule and provide a copy as requested; this is the only time that the amortization schedule is changed and happens infrequently according to Idaho DEQ program management.

Both Oklahoma and Minnesota also issue only one loan agreement. To memorialize the final loan amount based on the amount of funds drawn by the borrower to complete construction of the SRF project, Minnesota simply revises the Exhibit A to the loan agreement which shows the repayment schedule. They have incorporated language into their loan agreement that states the Exhibit A will be adjusted based on the final amount drawn; this eliminates the need for Minnesota to issue an amendment or sign another type of loan instrument.

Borrowers in Oklahoma make semi-annual payments during construction. Once construction is complete, Oklahoma will issue a payment letter to the borrower and they will begin making monthly payments to their local trustee who will hold onto the funds until it is time for the semi-annual payment to be made (see Appendix H). **Only one amortization schedule is issued and pre-payments are typically not allowed. However, if an exception is made, then Oklahoma will take this adjustment off at the end of the repayment period**.

Observation and Recommendation #5: Introduce an Automated, Electronic Application System

Perhaps the most pervasive theme that emerged from the POD event was the desire and need for automated systems to be integrated into the Hawaii SRF programs. **Developing an electronic application is a rather simple, yet elegant solution that offers a multitude of benefits to program staff and customers alike.** Providing application material to borrowers in this format is generally more efficient, reducing turnaround time

and eliminating the costs to both borrowers and state staff associated with distributing, receiving, and processing paper applications. With electronic forms, the state can set up targeted features such as drop-down menus and fields that auto-populate, reducing the number of applications received with erroneous, outdated or missing information. Furthermore, an electronic process for completing IUP application forms can also have benefits for SRF staff, including a more efficient review process and eliminating the work involved in collecting and processing paper IUP applications. However, establishing and maintaining these features requires both an initial and continued resource investment by the state to ensure that the system is well-designed, meets the needs of borrowers and states, and is maintained in a way that retains functionality.

There are several other options available for creating an electronic form with features that provide the benefits described above. Depending on the desired level of complexity and investment, there are three primary options that would achieve these ends while staying within a reasonable resource framework.

- **Linked Excel and PDF Files** - Creating automated drop-down menus and options to auto-populate fields within the existing fillable PDF can be achieved through a Microsoft Excel database that is linked with the existing PDF file. The PDF form could be made available to applicants via the state web page or distributed via email, although the former has been easier to manage in the experience of other states using this format.

  What is critical to note about this option is that these databases would have to be created and maintained by SRF staff members, likely on an annual basis, in order to remain current and accurate. As mentioned above, the formatting of Adobe PDF files does not allow for functionally linking this to a dynamic, external database, such as a separately maintained state database of system or permit information. Rather, this option involves only the linking of the PDF file with a single, static file created in Microsoft Excel.

  Pursing this option has several benefits. It would provide a useable format without the need for a new or updated platform. The investment by the state would be relatively low, as the only software requirements would be current copies of Microsoft Excel and Adobe Pro with the accompanying licenses. This option also requires the least amount of specialized knowledge from state staff members or other personnel developing and working with the system. However, this could be a labor-intensive option. Auto-populating information would not coming from existing, dynamic databases, such as state databases outside the SRF, but would be created by SRF staff as an Excel "database" on a routine basis. **While this approach does have the potential to reduce the number of applications received with errors, it is essentially *shifting* rather than reducing staff effort.** The time normally dedicated to reviewing and crosschecking received PPL applications would instead be used up-front to create databases with correct information prior to accepting applications. This would presumably result in the state receiving fewer

applications with missing or incorrect information, but may not have a dramatic impact on overall staff time consumed.

- **Cloud-Based Web Application** - The state could explore the option of creating a web-based application using third-party web hosting using providers such as Go Daddy, Google, or Amazon. This is an affordable option that offers additional flexibility and the ability to link to existing, dynamically maintained datasets for drop-down menus and auto-populate features. Applicants would be provided with a URL that would link to the application page, where they would find and complete all PPL application fields. These could involve a combination of fillable boxes, drop-down menus, and auto-populating options depending on the specific field. For example, municipality and system could be selected from a drop-down menu; this would then auto-populate information about the system such as the population served and the number of connections. A round-trip mechanism would then allow the users to generate and submit a PDF with this information embedded, completing the entire PPL application process electronically. This would ensure that the forms submitted by users would be complete and contain the most current information pulled from the database. The state would not necessarily have to set up and maintain the hardware and database storage resources onsite; many large service providers of cloud-based storage space could offer options to maintain this platform. This would reduce the resource burden on the state to set up and operate the system. Specific cost for such a system would depend on the state requirements for data storage and desired functionality.

  This option would have the primary advantage of linking to existing, dynamically maintained databases such as pre-existing state databases with system information either in Excel or set up on a Sequel server while allowing for continued use of the fill-able PDF format. Information could be pulled from these sources to auto-populate the application fields, thus reducing the number of errors or missing information without requiring that SRF staff members gather and compile information into a specific file format on a regular basis. Furthermore, a simple web-based platform would allow borrowers to complete the entire process electronically. Using the resources of an existing service provider to maintain a cloud-based system would bypass the need for the state to set up or significantly modify their existing hardware and/or software platform. Costs paid to the service provider would cover data storage and server requirements without requiring the state maintain these themselves. However, in order for this approach to be cost-effective, the format would have to be relatively simple. This would mean a basic application without additional features such as extensive security protections or integration with other state or program materials online.

- **Full Web-Based Application** – Hawaii could also explore the possibility of pursuing a mechanism similar to the web-based application described above, but which is created and maintained fully by the state rather than an existing provider of cloud-based data storage. The SRF program would have to work with IT staff for their

state agency or other personnel with the necessary expertise in order to identify, develop, set up, and maintain hardware and software with the desired functionality. **This would provide the state with an autonomous, self-maintained system that could be adjusted or expanded at any time to meet program needs. This would allow the possibility for the state to pursue additional features, possibly even the creation of an entire interactive platform for borrowers and program staff to manage all aspects of the loan process.** In the future, the state could consider integrating the SRF application with other state resources; some states have pursued a platform like this in order to import and perform complex information and calculations regarding water quality benefit for the application. A broader system could also be expanded to allow for the submission of additional forms online, maintain information for repeat borrowers, and have expanded security features.

This option would be the most resource intensive of those described here, but could provide the state the greatest capacity to create a highly flexible, comprehensive, and automated application process. Depending on existing IT resources and the availability of staff and physical resources at the SRF primacy agency or within the state government, this could have varying levels of difficulty for the state. All data and information would be stored onsite, requiring that the state have the resources to monitor, regularly backup, and maintain servers and associated file systems. The state would have to consider whether or not IT staff within the primacy agency are sufficient to maintain such a system, and if not, look into hiring additional FTE's or contractors to serve this purpose. The program would need to be prepared to operate and maintain the system to ensure its ongoing functionality; the state should weigh whether or not the benefit to borrowers and state staff would be sufficient to justify the investment.

State Examples

The state examples described below are provided to offer further insight based on the experiences of two states, Oklahoma and Arizona, who have made the transition from paper to electronic applications. Both states saw significant benefit in shifting SRF materials to an online format and have seen benefits from this change. However, in both cases this transition required a conscious investment of staff time and resources. Hawaii may consider this information alongside the options summarized above when evaluating which option will best align with overall program needs to provide benefits while matching the desired level of resource investment.

Oklahoma Water Resources Board Electronic Application

The Oklahoma Water Resources Board began conversion to an electronic application process for both the CWSRF and DWSRF programs by introducing PDF versions of forms and application materials. This effort began as part of an overall initiative to improve to find a more cost-effective solution to managing SRF paperwork as well as a more efficient process for collecting, scoring, and ranking PPL applications. The agency invested in Adobe PRO software and the accompanying licenses to develop the necessary forms in-house. The

SRF team received assistance from non-SRF staff in both their IT and marketing departments in creating and posting/distributing the updated forms. These were originally emailed to borrowers; this approach was changed and the state now posts a single, downloadable packet on their website.

Existing staff dedicated to collecting, reviewing, and scoring their PPL/IUP applications continue to complete these tasks and have adapted their approach for the new forms. While there is reduced workload in collecting and managing paper forms, reviewing all information provided by the borrower and scoring applications remains an equivalent effort. The up-front cost for software was quickly offset in the cost savings achieved by not distributing paper applications.

Oklahoma is currently using these forms as well as their existing water quality benefits database system, OASIS, to transition to a fully integrated electronic application. The state anticipates this next stage will significantly streamline their process. **Their PPL application will be linked and integrated with their existing OASIS system, which is a database of water quality benefits. This will allow the state to auto-populate many of the water quality metrics in their project priority list and automate many of the fields necessary for scoring.** This will reduce the workload on staff reviewing and scoring PPL applications as well as the effort required of borrowers completing forms.

To prepare for this stage, the SRF program hired one additional staff member who will be responsible for working with OASIS and the online platform as well as outreach. Northbridge has been contracted to build and integrate this system, which is likely to take at least one year to develop and deploy. Once operating, IT staff within the OWRB as well as Northbridge will maintain the system.

Arizona Water Infrastructure Finance Authority (WIFA) – Electronic Application System

WIFA introduced its new "E-Apps" web-based system in 2007. This transition from traditional paper-based application model was largely driven by the desire of the SRF program to increase overall efficiency, reduce erroneous application information and data submitted by users, make the process more user-friendly for borrowers, and to reduce the costs associated with the transmittal and processing of paper applications and submittals.

The E-Apps system uses Go Daddy as their third party web hosting service provider at a cost of $24 per month. Making the transition from a paper to a web-based application process presented a hefty up-front investment of both time and financial resources to architect the system. WIFA hired a new Database Administrator charged with developing the E-Apps system, which was done entirely in-house. WIFA indicated that they would not have ventured to pursue this endeavor without having someone on staff with experience in both web design programming as well as a good database background in html, php, or java dedicated to the oversight and administration of the platform. However, now that the system is up and running, the Database Administrator spends less that 10 percent of his

time addressing maintenance or change controls for the E-Apps system, which allows for more time on other agency projects.

The system is accessible through the WIFA website where users may apply for a loan, grant, or make updates to their application at their convenience using a secured login and password feature (https://eapps.azwifa.gov/recipients/?pageid=login). To use the E-Apps system, users must first register using an authentication required platform that stores all user data in a database, making it accessible at later point in time should the applicant choose to complete the application in stages rather than at one single sitting. This is a beneficial feature for many borrowers, as it is common to not have all the essential data readily available while completing the application form**. The ability to save changes and access the form at a later date helps increase ease of use and ensure accurate data is received.**

E-Apps uses a fill-able PDF format using AdobePro that moves data within the agency using LGTS as the data source. This could be done using any database mechanism, including Excel-based data or SQL server databases as well**. The form has been structured using a series of check boxes and radio buttons that are linked to data sets and has been set up to automatically populate and score projects in an Excel spreadsheet which serves as the "living" PPL. Each check box and/or radio button is associated with a scoring value, which also incorporates an automatic scoring mechanism behind the screen.**

WIFA undertook a statewide outreach campaign to roll out the new E-Apps web based system in 2008. This included workshops demonstrating how to access the feature, register online, and complete project applications. After implementation, which was handled expeditiously, WIFA conducted a survey of borrowers who had used the new application system; it was met with a strong positive response. WIFA continues to improve and streamline the system as changes to priority scoring criteria and federal requirements require, but always in the interest of making the application and review process as easy and efficient for borrowers and SRF staff as possible.

According to the Hawaii Customer Survey that was conducted in July 2014, 95% of the survey respondents indicated that they would be in favor and very much supportive of DOH implementing an automated and electronic process for the submission and transmittal of SRF documentation, such as applications, loan agreements, and disbursement requests.

Whichever route that DOH elects to take in developing an electronic application system, it is recommended that a systems feasibility and IT needs analysis be performed by Northbridge to determine the best system that will be compatible with the Hawaii SRF's needs, as well as ease of implementation and operation.

Observation and Recommendation #6: Allow Electronic Signatures for SRF Documentation

Since the Electronic Signatures in Global and National Commerce Act of 2000[36] (the E-Sign Law) and the Uniform Electronic Transaction Act of 1999[37] passed, legal validity and enforceability has been given to electronic signatures and documents, which has been a boon to the efficiency of doing business on a massive scale. Many organizations representing many different industries and disciplines have replaced the use of wet ink signatures with electronic ones, allowing them to eliminate paper from the process, expedite the document execution process, and eliminate wasteful back-and-forth transmission of paperwork with a system that integrates seamlessly into the organizational environment. **Both ASO and DAGS require that SRF borrowers submit a wet signature for all disbursement requests, which has been found to cause delays and cause an unnecessary amount of back-and-forth communication if not done correctly the first time.**

As mentioned in the POD Results Analysis Efficiency Opportunity #6, **DOH should allow for electronic signatures from Counties on such documents as the Letter of Binding Commitment and Loan Agreements.** This can be done either through allowing PDFs of scanned originals, or by using a web signature application. These types of systems are widely used to execute a variety of legally binding documents, loan closings, and contracts and still may allow for documents to be signed in either the conventional manner or with a web signature. Most web signature applications require Macromedia Flash Player to be able to use this feature and may be easily downloaded and installed by users who do not already have this capability.

The Pennsylvania SRF has accepted electronic disbursements for many years. They recently implemented "e-signatures" but prior to that, required one page with a wet signature with every electronic disbursement request. **DOH should consider accepting electronic copies of disbursements using electronic signatures, either via scanned PDF documents or using web signature applications. Alternatively, if other approving agencies involved in the processing of disbursement requests are not comfortable using electronic signatures for this purpose, DOH may consider requiring borrowers to submit a separate, single page with a wet signature of the authorized representative certifying that the submitted request (identified by request number) is accurate and correct.** Copies of the electronic submission could be distributed to all reviewers simultaneously, and a Sharepoint spreadsheet set up to allow DOH, ASO, B&F, and DAGS to track reviews and approvals. This may significantly reduce

[36] The Electronic Signatures in Global and National Commerce Act (***ESIGN***, Pub.L. 106–229, 114 Stat. 464, enacted June 30, 2000, 15 U.S.C. ch. 96)

[37] Hawaii Revised Statutes §489E-1 et seq. available at http://www.capitol.hawaii.gov/hrscurrent/Vol11_Ch0476-0490/HRS0489E/HRS_0489E-.htm

the amount of staff time and resources spent on copying/packaging/routing, which dominates the value stream for this particular process. **It will be critical to garner the support of ASO and DAGS if DOH wishes to pursue this option to streamline SRF program processes and improve customer service capabilities.**

Observation and Recommendation #7: Develop an Expedited Permitting Process

One of the most time-consuming elements of securing SRF funding as expressed by some county borrowers is the existing permitting process that is currently in place. Currently, the internal DOH permitting system (e-Permitting) is working to streamline their processes, including applications and approvals for NPDES permits. The e-Permitting Portal has recently been upgraded and is currently available to users to provide educational tools about various environmental permitting requirements, guidance, resources for how to successfully complete permit applications, online payment and processing of fees, and a feature that allows users to search that status of active applications. However, this does not in any way identify or flag would-be SRF projects that may be waiting in limbo for some time before their applications are actually reviewed.

DOH should consider working both internally as well as with other state agencies to implement an expedited permitting process for SRF projects that would allow them to get through the approval process and ready to proceed for funding much faster. This, in turn, would enable the SRF program to begin disbursing federal dollars in a more timely and expeditious manner, thereby alleviating some of the existing pressures that the SRF program is feeling with respect to unliquidated obligations. **This is a project area where assistance from the Governor's Office could be particularly advantageous in developing beneficial solutions with outside permitting agencies (such as the Department of Transportation and the State Historical Preservation Office) to streamline and improve practices that may cause delays in a county's ability to bring capital improvement projects to the SRF program.**

Observation and Recommendation #8: Use Equivalency Procedures to Reduce Administrative Burden

Another strategy that is available to both of the Hawaii SRF programs is to introduce the use of equivalency procedures to meet the federal capitalization grant requirements. This essentially will allow the Hawaii SRF programs to identify which projects must comply with various federal requirements and federal cross-cutters. The projects that the SRF program selects must sum to the amount of that year's capitalization grant, though they do not have to actually receive any federal dollars as part of their SRF loan. Good project candidates for meeting equivalency requirements are most often large, high-dollar projects submitted by sophisticated borrowers with the staff resources and experience to easily navigate and

perform this administrative work without the burden that is often felt by smaller borrowers trying to satisfy these requirements.

A number of other state SRF programs, such as New York, Washington, California, Utah and Texas are taking advantage of this opportunity to assist their smaller borrowers and identifying projects from their large, repeat borrowers to satisfy these federal requirements. It is common to see non-equivalency projects exempt from DBE, Single Audits, and FFATA. However, there are still some federal crosscutters with which all project must comply: NEPA-like environmental review, American Iron and Steel, Anti-Discrimination laws, Civil Rights laws, and Davis-Bacon.

It is possible that Hawaii may be able to hand-select a of couple large projects that the City and County of Honolulu and the Honolulu Board of Water Supply have submitted for SRF funding, depending on the number of assistance requests on the PPL for any given year. For example, in 2014 the Hawaii CWSRF made a loan to the City and County of Honolulu for $20 million, almost double the amount of that year's capitalization grant. The program could have selected this as an equivalency project charged with meeting all of the reporting and cross-cutter requirements like Single Audit Act, FFATA, and DBE thereby eliminating this burden from the smaller county borrowers like Kauai. Similarly, the DWSRF could have done the same by selecting two HBWS projects for $5.4 million and $5.7 million for equivalency to the $9 million capitalization grant in 2014. **The use of equivalency procedures, of course, depends on how robust the fundable list of projects may be within any given capitalization grant year. Because it is something that is defined from year to year within the IUP, it is something that may be included or omitted as the project pipeline dictates.**

This strategy is mutually beneficial to both the smaller, less sophisticated borrowers who struggle with these requirements as well as to the Hawaii SRF program staff who must spend many hours tracking down missing information, providing technical assistance and instruction on how to properly complete the various forms of reporting and federal compliance documentation, and correcting mistakes. **Using equivalency procedures is a simple and effective way to incentivize more borrowers to seek financial assistance from the SRF program by providing an antidote to the otherwise prohibitive federal requirements that can often deter participation in the program.**

Observation and Recommendation #9: Provide Training to Borrowers on Completing Payment Request Forms

Currently the Hawaii SRF pre-fills all of the payment requests for the borrowers after reviewing the monthly progress payment invoices, which often are incomplete and engineers must spend up to 80 hours trying to track down missing information needed to proceed with the request. Information is provided to borrowers in the Applicant Manual which briefly discusses how to complete a Progress Payment Request, which is also shown in Appendix P. However, the guidance provided in the Applicant Manual is not nearly

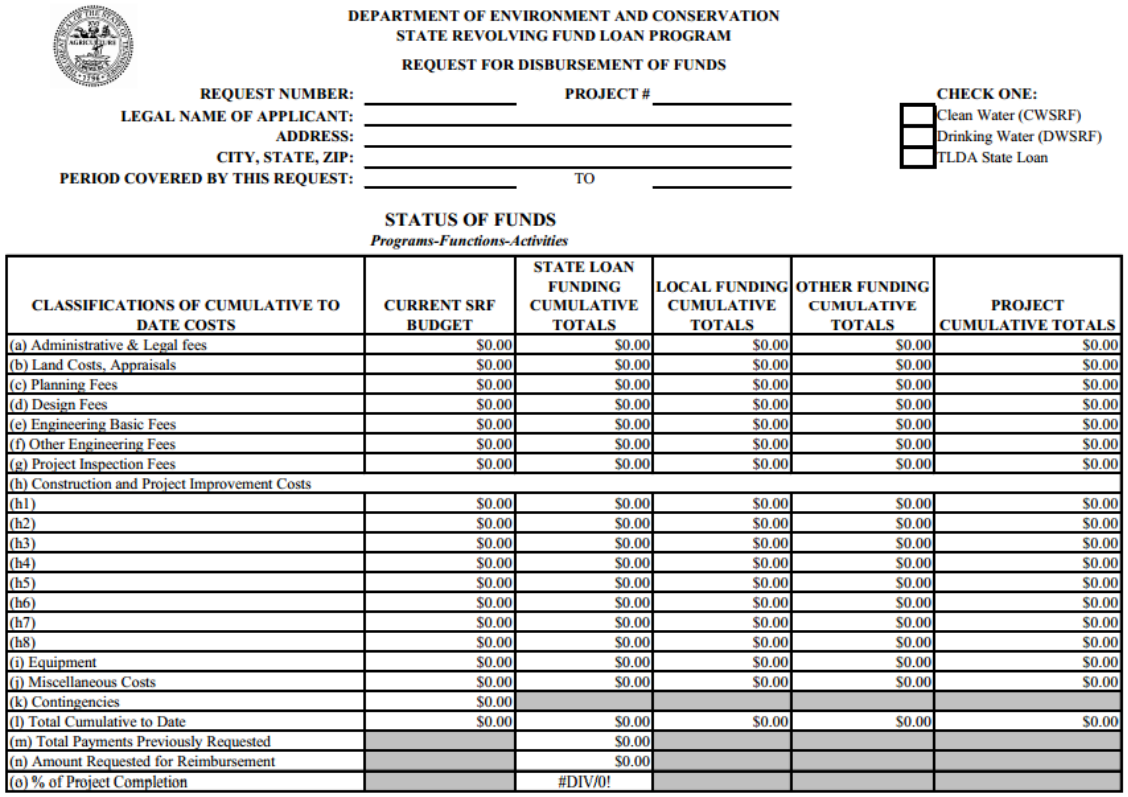
detailed enough and may be confusing to borrowers who are not familiar with the process or the various documents, like a "voucher register" and "expenditure distribution journal". There are no physical examples provided for the references to such documents. The Progress Payment Request Form, itself, has a column specifically for "ineligible/adjustments" but does not offer any kind of instruction or guidance as to what exactly this means, how the borrower should make this determination, or how the computations in the form should be performed. Without one-on-one instruction on how to properly complete this form to the satisfaction of DOH, it is quite likely that borrowers may do so incorrectly.

Many SRF programs provide various levels of guidance to borrowers to assist them in the accurate completion of payment request forms and related paperwork. New Hampshire, provides a one-page checklist to assist SRF loan recipients with the preparation of their disbursement requests, complete with active links to various forms like the Davis-Bacon Compliance Certification. Other states have developed streamlined guidance manuals to accompany their disbursement request forms that are no longer than two pages and presented in easy-to-follow bullet point format. Michigan and Kansas, for example, provide a download of the Request for Disbursement of Funds form which is in Excel and includes instructions for completion and proper arithmetic calculations. The form also clearly points out that no more than one disbursement request during a calendar month will be accepted, as well as the protocols for all documentation submission. The Tennessee SRF Loan Program Disbursement Requests forms are auto-calculating forms available in Excel and are provided for both single contract and multiple contract projects. They can be accessed by borrowers directly through the website and downloaded as a PDF or the active Excel sheets may be requested from SRF staff (Figure 5.3 below).

Texas provides an impressive example with its Outlay Workbook and Outlay Report Instructions included in this report as Appendix I. The Outlay Workbook is pre-populated by TWDB prior to delivering to the borrower. It is electronic and uses a combination of check boxes, pre-loaded formula for calculations, drop-down boxes for selecting things like budget category, and illustrative instructions that clearly show borrowers how to properly fill out the form.

DOH should consider creating electronic forms that allow SRF program staff to transfer data received from borrowers more easily, while also providing borrowers with an error-proof template with which to work. SRF program staff can pre-populate much of the information that is contained on the forms, such as project name, project number, as well as embedded formulae that are protected and capable of performing the calculations automatically for the borrowers based on a few simple inputs using LGTS. **This will ultimately reduce the number of errors in payment request forms that are submitted and free up the non-value added hours that the Hawaii SRF engineering and WRFS currently spends pre-filling payment requests on behalf of borrowers.**

Figure 5.3 - Tennessee SRF Auto-Calculating Disbursement Request Form



DEPARTMENT OF ENVIRONMENT AND CONSERVATION
STATE REVOLVING FUND LOAN PROGRAM

REQUEST FOR DISBURSEMENT OF FUNDS

REQUEST NUMBER: _____ PROJECT # _____

LEGAL NAME OF APPLICANT: _____

ADDRESS: _____

CITY, STATE, ZIP: _____

PERIOD COVERED BY THIS REQUEST: _____ TO _____

CHECK ONE:
☐ Clean Water (CWSRF)
☐ Drinking Water (DWSRF)
☐ TLDA State Loan

STATUS OF FUNDS
Programs-Functions-Activities

CLASSIFICATIONS OF CUMULATIVE TO DATE COSTS	CURRENT SRF BUDGET	STATE LOAN FUNDING CUMULATIVE TOTALS	LOCAL FUNDING CUMULATIVE TOTALS	OTHER FUNDING CUMULATIVE TOTALS	PROJECT CUMULATIVE TOTALS
(a) Administrative & Legal fees	$0.00	$0.00	$0.00	$0.00	$0.00
(b) Land Costs, Appraisals	$0.00	$0.00	$0.00	$0.00	$0.00
(c) Planning Fees	$0.00	$0.00	$0.00	$0.00	$0.00
(d) Design Fees	$0.00	$0.00	$0.00	$0.00	$0.00
(e) Engineering Basic Fees	$0.00	$0.00	$0.00	$0.00	$0.00
(f) Other Engineering Fees	$0.00	$0.00	$0.00	$0.00	$0.00
(g) Project Inspection Fees	$0.00	$0.00	$0.00	$0.00	$0.00
(h) Construction and Project Improvement Costs					
(h1)	$0.00	$0.00	$0.00	$0.00	$0.00
(h2)	$0.00	$0.00	$0.00	$0.00	$0.00
(h3)	$0.00	$0.00	$0.00	$0.00	$0.00
(h4)	$0.00	$0.00	$0.00	$0.00	$0.00
(h5)	$0.00	$0.00	$0.00	$0.00	$0.00
(h6)	$0.00	$0.00	$0.00	$0.00	$0.00
(h7)	$0.00	$0.00	$0.00	$0.00	$0.00
(h8)	$0.00	$0.00	$0.00	$0.00	$0.00
(i) Equipment	$0.00	$0.00	$0.00	$0.00	$0.00
(j) Miscellaneous Costs	$0.00	$0.00	$0.00	$0.00	$0.00
(k) Contingencies	$0.00				
(l) Total Cumulative to Date	$0.00	$0.00	$0.00	$0.00	$0.00
(m) Total Payments Previously Requested		$0.00			
(n) Amount Requested for Reimbursement		$0.00			
(o) % of Project Completion		#DIV/0!			

DOH should also consider developing a clear, concise, step-by-step guidance manual for completion of the new auto-calculating Progress Payment Request form. This document should be stand-alone, easy to locate and download directly from the SRF program websites. It should include important definitions, examples, and links to other valuable points of reference that borrowers may consult to answer questions or get additional information quickly and easily.

Lastly, **DOH should require that all SRF loan recipients receive training on how to use the Progress Payment Request form,** how to complete all entries properly, which fields will auto-calculate and which they must fill in, as well as all requirements for signatures, copies, frequency, and how documentations is to be submitted.

Develop a Communications Strategy

The Hawaii SRF program is unique from all of the other programs in the United States mainly because it is an isolated island chain comprised mainly of five primary borrowers: City and County of Honolulu, Honolulu Board of Water Supply, County of Maui, County of Hawaii (Big Island), and County of Kauai. This represents a demographic that is vastly different from the numerous and varied cast of borrowers from states like California, Ohio, or New York. As such, DOH has not undertaken any formalized method for marketing the SRF program or communicating with borrowers and stakeholders. The program has typically scheduled semi-annual meetings with County water managers to discuss potential projects seeking SRF funding and the last SRF workshop event was held in 2011. Even though Hawaii does not have the multitudes of potential borrowers to reach that many of the larger states do, that is not to say that its SRF program would not benefit from a bona fide marketing, outreach, and communications strategy. All organizations, despite their size, need to perform marketing and outreach to maintain contact and visibility with established borrowers, attract new borrowers, and provide essential training and education on a program as ever-changing and complex as the SRF. DOH has underscored the importance of providing good, reliable customer service to its borrowers and a well-crafted communications strategy is vital to delivering that service.

Current Challenges

- DOH is only marketing to County agencies and restricting loans to specific types of projects, mainly traditional infrastructure
- Website is not an engaging marketing tool in its current format and does not sufficiently promote the SRF program, public health or water quality initiatives, or provide any type of Q&A for new users who may be unfamiliar with the program.
- It is difficult to locate DWSRF and CWSRF program pages from the DOH homepage and content is presented in lengthy narrative with no interactive features.
- DWSRF website still contains ARRA narrative, 1511 Certification links, and outdated information
- Lack of face-to-face interactions between DOH and SRF borrowers and stakeholders.

- Contact information provided is limited and too general
- SRF Applicant Manual and other guidance is voluminous and dated
- CWSRF website has technical challenges and difficulties associated with PDF file downloads which makes it less user-friendly

Opportunities for Change

Observation and Recommendation #1: Marketing to a Broader Customer Base

Currently both SRF programs are actively marketing only to County agencies, which represent Hawaii's foundational customer base. However, there are ample opportunities to grow the SRF program by expanding the target markets to include private water companies, special districts, watershed groups, and other non-traditional borrowers. There are over 30 privately owned water treatment facilities that are regulated by the Public Utilities Commission in Hawaii, which represents a significant marketing opportunity for the DWSRF program to target vital infrastructure funding towards this untapped sector. This would also allow the Hawaii SRF program to augment the diversity of project types that receive funding such as nonpoint source, energy and water efficiency, conservation, or other environmentally innovative approaches to protecting public health and water quality in the state.

- **Planning and Design Grants may be an attractive incentive for small, privately owned water systems and special purpose districts to enter the SRF program as they seek to prepare preliminary engineering reports, feasibility studies, environmental assessments, design and other related planning activities.** DOH has indicated that though planning and design grants have been on offer in the past, there appeared to be limited interest in this type of assistance. However, private water companies and special districts that are new to the SRF program will need more financial and technical assistance in order to effectively initiate their projects. **This is a ripe opportunity for DOH to cultivate an active planning and design grants program, as well as launch greater face-to-face encounters to educate and engage this fresh pool of customers.** Other State SRF programs have indicated that their P&D grant programs typically result in an increase in construction loan activity as many grant recipients go on to take construction loans from the SRF program in subsequent years.[38] This, in turn, ultimately results in an uptick in overall program pace in overall pace of both the CW and DWSRF programs as more dollars of assistance are provided as a percentage of funds available over time.

[38] For example, the Water Resources and Power Development Authority have indicated that the Colorado Planning & Design grants program has resulted in a return customer rate between 80-90%.

Planning and design grants can also be targeted to support specific public health or water quality initiatives that have been identified as top priority by the State. Some examples include P&D grant programs that provide funding or incentivize green infrastructure, efficiency, or nutrient reduction projects. In Arizona, the Water Infrastructure Finance Authority (WIFA) offers P&D grants up to $35,000 that offer special incentives for green projects by waiving the 40 percent match requirements.

- **In 2013 Colorado introduced a special purpose grants program designed to address new numeric criteria for nitrogen and phosphorus levels in surface waters.** This shares a direct nexus with drinking water quality as nitrogen levels in both surface and groundwater are a significant issue in Colorado's water picture. Though not funded from the SRF program, the Nutrient Management Grants program[39] includes points allocated to those projects that seek to incorporate a watershed approach to nutrient management that address the protection of surface and groundwater resources through nonpoint source and agricultural BMPs, as well as the development of partnerships with community stakeholders committed to undertaking monitoring efforts both upstream and downstream from wastewater treatment facilities**. A similar approach could easily be applied to the Hawaii SRF grants program to address similar water quality issues, cesspools, and decentralized wastewater systems.**

- **Consider partnering with the Hawaii Department of Land and Natural Resources to fund non-traditional projects using direct loans, sponsorship, or pass-through loans mechanisms.** Developing a cooperative relationship with DLNR could further expand the breadth of project types that the CWSRF program funds. This may include financial assistance for nonpoint source, watershed protection, and source water protection projects undertaken by either the agency itself or by non-traditional borrowers seeking to protect and improve water quality in Hawaii. According to the most recent 303(d) report, turbidity is the most common impairment to marine water bodies due to the volume of polluted runoff; inland waters are negatively impacted primarily by nutrient loading of nitrogen and phosphorus.[40] DLNR currently relies heavily upon §319 funding to seed important watershed projects among the islands, but it is limited and often hamstrings these efforts. **This represents a good opportunity for the CWSRF program to assist in supporting these watershed efforts while expanding its project portfolio simultaneously.**

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39 http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovHickenlooper%2FCBONLayout&cid=1251644349558&pagename=CBONWrapper

40 Hawaii Department of Health (2012). 2012 State of Hawaii Water Quality Monitoring and Assessment Report available at

Several other states have very successful programs funding non-traditional projects that address their most pressing water quality challenges such as the Washington Conservation Tillage and Direct Seeding Program and Maine's Forestry Direct Link Program, both of which are funded out of their respective CWSRF programs. These programs rely on a cooperative relationship with partners such as conservation districts, State agencies, local lenders, and County governments – a relationship already enjoyed by DOH.

Hawaii's DWSRF program has found ways to use their 15% set-aside funds for pass through assistance mechanisms. One example was aimed at funding sewer connections for individuals located in Honoka'a on the island of Hawai'i as part of a wellhead protection project. The funds were allocated to the County of Hawai'i who in turn passed the funding along to homeowners to make the improvements. **Working in partnership with DLNR and the Commission of Water Resource Management would be advantageous in furthering these types of pursuits for watershed protection, stormwater re-use, and other innovative projects using DWSRF set-aside funds.**

- Energy and water efficiency projects have been identified as high priority projects by DOH, who has taken proactive steps toward promoting these types of projects by developing an informational brochure accessible on the home page for both the CWSRF and DWSRF program. However, the electronic version of the brochure is buried amongst a host of other narrative material and can be easily missed or overlooked. DOH should consider a more rigorous and visible approach to promoting these types of projects by presenting them under their own tab or bold topic heading. **This represents another ripe partnership opportunity between DOH and the Department of Business and Economic Development and Tourism (DBEDT), an important resource center for energy and conservation initiatives and strategies in the State of Hawai'i. This includes the Hawaii Clean Energy Initiative to increase efficiencies and maximize the use of Hawaii's abundant renewable energy resources.**

  Teasing out some of the information from the brochure and including it, along with all relevant links, directly onto the web page and offering specific "how-to" guidance that provides options and ideas on how borrowers might make their existing infrastructure projects more energy or water efficient would better promote these initiatives.

  The Massachusetts SRF program has a stand-alone section on their website for "Energy Management Enhancements" which includes examples, links and resources for designing and operating facilities with reduced energy consumption. They also provide

resources for water and wastewater utilities interested in energy efficiency and renewable energy alternatives.[41]

Additionally, DOH should examine what types of water and energy projects may exist for privately owned public water systems, 15 of which have been identified in the State. This represents good marketing opportunity to bring in a number of potential new projects that support the Hawai'i SRF goals.

It is advantageous for the SRF program to fashion itself a one-stop-shop for all things potential borrowers may want or need to know about these types of projects, financing options, and the economic advantages of pursuing such alternatives in a single, easy to navigate location.

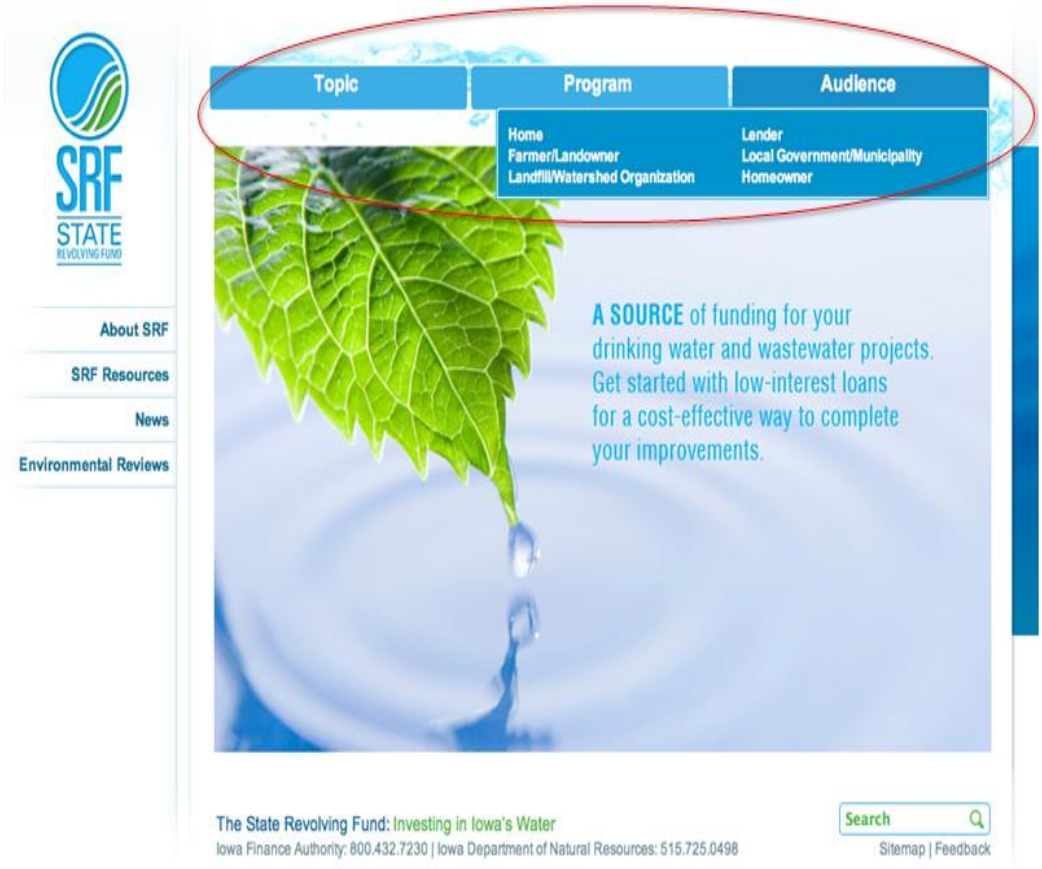
Observation and Recommendation #2: Re-design SRF program websites and launch as a prime marketing tool

The SRF program website may be the first exposure that borrowers and stakeholders have to the program, which underscores the importance of ensuring that the website is concise, clear, well arrayed, easy to navigate, and includes all of the tools necessary to sufficiently inform any user about the program, expectations, decision-making tools, and pedestrian level guidance documents that are engaging, educational, and easy to digest. With thoughtful design and implementation, program websites can be one of the most effective tools for communication, education, and participation in the attractive financing opportunities DOH has on offer. However, websites that are a confusing jumble of information can often have the opposite effect. Programs like Texas, for example, who once had a disorganized and hard to navigate website have made adjustments that include tabular topic organization, video application tutorials, and various manuals and guidance documents that have been re-developed to be easier to understand for the layperson who is new to the SRF world.

Sometimes SRF programs can suffer a number of image challenges when they are embedded deep within the state's public health agency website, usually because actually getting to the specific pages addressing the program is unnecessarily difficult and time-consuming. Several states have found themselves in a similar dilemma and have elected to re-organize or re-brand their SRF program websites to mirror a more "bank-like" model like those used by **quasi-governmental agencies. This approach often results in customers being more prepared when they approach the program to seek financial assistance, much as they would if they were going to a traditional bank to ask for a loan.**

[41] http://www.mass.gov/eea/agencies/massdep/water/grants/state-revolving-fund.html

Figure 6.0 - Iowa SRF Program Web Page



Iowa's SRF programs, which are administered by both the Iowa Finance Authority and the Department of Natural Resources, sought to develop a new communications strategy to make the program more visible to stakeholders and borrowers, while lending qualities similar to a business model a banking institution might possess. The main SRF page is neatly organized using identity tabs targeting different topics and audiences as shown in Figure 6.0. Iowa also developed high-quality glossy full color brochures and reports, revamped their website with a singular identity (www.iowasrf.com), and hired a graphic designer to develop a new program logo. **The comprehensive marketing and outreach strategy undertaken by Iowa focused strongly on how to make processes as easy as possible for the borrower. These efforts resulted in a pace increase from 80 percent in 2005 to 96 percent in 2012 for the CWSRF program alone.**

- DOH should also consider **providing a detailed list of contacts on the SRF web pages that includes names, titles, email addresses, and phone numbers.** The contact information that is currently provided is far too general and forces customers through a telephone routing process that requires information to be repeated multiple times and may be unnecessarily inconvenient.

- DOH may also consider providing a **web portal for comments and questions that allows website users to directly submit inquiries directly through the web page.** These would be set up to be automatically routed to an appointed SRF staff member based on the topic check box selected by the user. For example, if the user has a question regarding interest rates or loan terms they would check the corresponding box and the inquiry would be directly routed to a WRFS member assigned to manage web correspondence. The Georgia Environmental Finance Authority (GEFA) has included a Comments and Inquiries page on their website that allows the SRF program to answer questions, receive comments, criticism, and suggestions for improvement on a continuous basis. This in turn increases the transparency of the SRF program and allows the channels of two-way communication to function in an open and free-flowing manner.

Some of these solutions may appear cosmetic in nature, but when properly paired with the right information and respective actions from DOH staff, the result is a culmination that professionalizes the SRF image to that of a bona fide financial institution poised to be the leader in effectively addressing the State's water quality goals . For instance, **DOH could professionalize the image of the program with the recommendations above coupled with other requirements such as applicants having face-to-face meetings with senior DOH managers or staff as a condition of the loan application process.**

Observation and Recommendation #3: Provide an Annual Savings Report

As an addition to Option #4 provided above, furnishing an Annual Savings Report to SRF borrowers offers DOH the opportunity to specifically illustrate the economic benefits and cost savings that may be realized by using the SRF program for capital project financing. **DOH should consider providing such a report to all SRF borrowers with active loans at the end of each fiscal year. This report could be a simple one to two page analysis of the money saved in interest paid over the life of the loan by selecting the SRF as a financing vehicle as compared to the bond market as illustrated in Figure 6.1 below**.

This mechanism serves as an excellent way to continually market the SRF programs by providing borrowers important data to build strong foundations for seeking SRF assistance for many years to come. This information may be easily posted onto County websites or included as part of a utility mailer to demonstrate the efforts taken by community leaders to make sound financial decisions that best safeguard public health and the environment responsibly and economically.

Figure 6.1: SRF Cost Savings Report

COUNTY BORROWER COST SAVINGS ANALYSIS

CIP Budget for FY 2012-2013 $14.4 million paid for by SRF; $31.6 million out of Operating Fund using Bond proceeds; $3.3 million paid from Special Expendable Fund

PROJECT	COST
Pipelines & Facilities	$33,000,000
Hwy 16, 18-in mains	$7,800,000
Water System Improvements	$3,400,000
Paradise Drive 8-in main	$2,000,000
Village Water System Improvements III	$1,200,000
TOTAL	**$47,400,000**
Series 2012A Bond*	$85,195,000
Bond Issue Costs (2012A)	$2,293,819

DWSRF Funded

Cost of Utilizing Bond $$ for DW Infrastructure Projects

Project Amount	$31,600,000
Term (years)	20
Interest Rate	3.840%
Payments/year	12
Payment	$188,836.13
Amount Paid toward Interest	$13,720,670.49
Total Cost (Project Amount + Interest Paid)	$45,320,670.49

Cost of SRF $$ for DW Infrastructure Projects

Project Loan Amount	$31,600,000
Term (years)	20
Interest Rate	1.886%
Payments/year	12
Payment	$158,158.66
Amount Paid toward Interest	$6,358,078.57
Total Cost (Project Amount + Interest Paid)	$37,958,078.57

COST SAVINGS: $7,362,591.92

*Issued March 14, 2012 at 3.84%
Average 2012 DWSRF Interest 1.886% (NIMS)

Observation and Recommendation #4: Offer more robust guidance documentation for various stages of the SRF loan process

Offering a well-organized library of guidance documents and handbooks that are written at a pedestrian level can be a valuable resource for PWS and communities. These resources not only help them in their capital project planning efforts, but **also arm them with the tools necessary to be more pro-active in the effective management of their finances, assets, human resources, and system infrastructure.** Hot topics that are a good idea to have available include:

- How to Form a District
- Arsenic Treatment Handbook
- Hiring an Engineer
- Utility Management Primer
- POU Guidance
- Decentralized Wastewater System Business Plan Guidance and Templates

In addition to having these resources readily available via the SRF program website, hard copies can also be distributed at funding fairs, during training workshops, and face-to-face meetings. Figure 6.2 highlights only a portion of the extensive Finance and Construction Assistance Guidance and Forms Library that Texas has developed in the re-organization of its SRF program website and materials. This searchable table includes more than 75 discreet forms and guidance documents ranging in topic from Cost and Pricing Information to Water Conservation Plan Guidance to Break Down of Bid.

Figure 6.2

Finance & Construction Assistance Guidance and Forms Library

Search Table: Search reset

Document Number	Type	Document Description
TWDB-0710	Form	Financial, Managerial and Technical Self-Assessment Questionnaire
TWDB-1800	Guidance	Project Map Example
ED-005	Guidance	Guideline For Inspector Qualification
ED-006	Guidance	O & M Recommendations
ED-101	Form	Site Certificate
ED-102	Form	Break Down of Bid
ED-103	Form	Contractor's Act of Assurance (Construction Contract)
ED-104	Form	Contractor's Resolution on Authorized Representative
EPA-424D	Form	Assurances - Construction Programs
EPA-4700-4	Form	Pre-award Compliance Review Report for all applicants and recipients requesting EPA financial Assistance
EPA-6100-2	Form	DBE Program-DBE Subcontractor Participation
EPA-6100-3	Form	DBE Program-DBE Subcontractor Performance Form
EPA-6100-4	Form	DBE Program-DBE Subcontractor Utilization Form
IRS-8038	Form	Information Return for Tax-Exempt Private Activity Bond Issues
SRF-071	Form	Outlay Workbook
SRF-099	Guidance	CWSRF - Equivalency Program Instructions for the Preparation of an Environmental Information Document (EID)
SRF-404	Form	Certification Regarding Debarment, Suspension and Other Responsibilities
TWDB-0148	Form	Application for Financial Assistance
TWDB-0150	Form	Application for Financial Assistance-Privates
DB-0156	Guidance	Davis-Bacon Act (DBA) Guidance for CW & DW SRF Projects
TWDB-0161	Guidance	Guidance for determining project eligibility with green project reserve CW & DWSRF
TWDB-0162	Guidance	CWSRF Green Project Worksheets
TWDB-0163	Guidance	DWSRF Green Project Worksheets
TWDB-0342	Form	2013 DWSRF IUP Readiness to Proceed to Construction
TWDB-0343	Form	2013 CWSRF IUP Readiness to Proceed to Construction

This information can be located at: http://www.twdb.state.tx.us/financial/instructions.

Observation and Recommendation #5: More Frequent Personal Communication

Though having a highly visible, well-designed website and offering a menu of electronic tools and automated systems is an essential element to effective marketing and outreach, no communications strategy is complete without incorporation of a personal touch. Face-to-face communication is without question the most effective outreach tool an SRF program can have in its toolbox. It can also be challenging to undertake in a time and budget limited environment. Conceivably, as processes are streamlined and efficiency opportunities identified in the POD analysis are implemented, more time should be freed up for SRF staff to pursue a greater volume of face-to-face encounters to nurture relationships with existing customers and cultivate new ones with potential borrowers yet to participate in the SRF program. Focus group participants have indicated their desire for more of these types of interactions, as reflected in the response of one participant from Texas who said:

> **"If SRF outreach is to be successful, it's got to be real human beings working with real human beings."**

- **Re-introduce SRF Outreach Teams** comprised of staff from both the engineering and WRFS units to meet with borrowers and stakeholders during project development, pre-award, as well as to conduct training workshops and program road shows. This will help to better align the goals of borrowers with those of the SRF program, as well as maintain clear and open channels of communication internally and externally. Because the SRF program is a unique hybrid of environmental, engineering, and financial disciplines, it is critical to have this skill set represented as a whole when SRF program staff engages with borrowers and stakeholders. The result is a more cohesive understanding of more complex issues such as interest rates and fee policies, cost saving benefits, design and construction considerations, and compliance issues.

- **Provide internal staff level training to SRF engineering and financial staff so that all are equally skilled and able to effectively assist borrowers, thus creating greater depth and "bench strength" of the SRF team.** Teams with good depth and adaptability are more resilient and better prepared to handle challenges posed by unforeseen circumstances such as unexpected turnover, the loss or absence of key players, or sudden upturns in workload demand. This training would include customer service training, as well as marketing and sales training.

- **Participating in County Board Meetings more frequently** would help to build a stronger relationship and enable DOH to discuss capital improvement projects that would be good candidates for SRF funding, coordinate timing, and select projects suited for meeting short and long term goals. This may produce more projects that

are actually ready to proceed to construction expeditiously, which supports a flowing project pipeline and allows the SRF program to move funds out the door quickly and consistently.

- **Hold more on-site training events, workshops, and funding fairs on a scheduled basis every year.** Respondents in a number of surveys have indicated that they prefer to learn about the SRF through workshops which offers personal engagement with DOH staff, increased networking opportunities with other attendees, as well as a positive forum to ask questions and discuss details about the program. Holding workshops and training events at least annually prior to the solicitation period is recommended. These events should be held more frequently as necessitated by important changes affecting the SRF program and its borrowers such as ARRA, green projects, American Iron and Steel, or the CWSRF Amendments. Developing an outreach calendar will help borrowers and stakeholders to plan ahead for events, which results in better attendance and ultimately more project applications coming through the door.

    - Every year, the Florida SRF program holds a 1 ½ day workshop in Orlando that offers continuing education credits that they coordinate in collaboration with the Florida Engineering Society. During these workshops, the following topic areas are covered:
        - CWSRF and DWSRF program updates
        - Planning – how to do it right
        - Public/Private Partnerships
        - Trenchless Technologies
        - Presentations from SRF Program Partners (319 Program, Florida Rural Water Association, USDA)
        - Application Process
        - Disbursement Process
        - Case Studies of Successful Projects

- **Actively pursue co-funding opportunities with outside agencies and partners** It is important to engage other agencies that provide financial assistance, such as USDA, DLNR, the Commission of Water Resource Management, DBEDT, as well as non-profit groups like Kamehameha Schools and various watershed partnerships to expand the breadth and depth of SRF project funding opportunities. Figure 2.0 illustrates the types of projects that may be explored by the Hawaii SRF program for greater impact on water quality and public health protection for the State.

Recommendation #6: Identify Dedicated Staff to Develop and Manage the SRF Communications Strategy

All of the options presented above offer tremendous opportunities for DOH to tap new markets, engage existing and previous borrowers, and effectively promote the SRF program as desired. The problem, however, is that the development of a proper Communications Plan, its implementation, and the performance and oversight of the activities related to running a successful communications strategy is in itself a full time job. With the current staffing levels at DOH, it would be difficult to overcome many of the obstacles that the program is facing in terms of effectively developing and managing a thorough communications campaign.

Arizona WIFA has been shown as an example frequently in this section of the report for good reason. WIFA understands the importance of consistent, accurate, pro-active communication and outreach, recognizing it as a cornerstone of their thriving SRF program. As such, they have a dedicated Communications Director whose job it is to be the single point of contact for all program inquiries, requests for information, and coordinate communication between project managers, consultants, and RWIC partners. The Communications Director is in charge of drafting and distributing press releases, presentations, coordinating outreach events, developing special projects and fact sheets, and maintaining social media sites and content. In addition, this position also makes regular presentations to the Arizona League of Cities and Towns, the General Contractors Association, the Arizona Municipal League, as well as works closely with the consulting community to keep relationships strong and healthy.

Texas has designated a person to be the main point of contact for simple application question. This individual spends about 40 percent of work hours fielding calls from existing and new borrowers, answering questions, and walking applicants through various steps in the SRF loan application process.

DOH should consider the addition of a staff member dedicated to the development of a comprehensive communications strategy, its implementation, and future coordination and facilitation of marketing, outreach and education strategies for the Hawaii SRF programs.

Observation and Recommendation #7: Introduce a Financing Program for Decentralized Wastewater Systems

Decentralized water treatment systems (DWTS), such as onsite, individual septic systems and clustered systems, are a significant component of our nation's wastewater infrastructure. These systems account for 25 percent of water treatment systems in the United States and serve approximately the same percentage of the population, often in rural and unsewered areas. Cesspools are more widely used in Hawaii than any other

state, which can present serious health concerns as pathogens and nitrates may contaminate streams, ground water and oceans. Though the Hawaii CWSRF actively provides funding for large-capacity cesspool conversions, **more residents and homeowners are moving toward replacing cesspools with septic systems, which represents an untapped market in the CWSRF portfolio**. To protect water quality and prevent serious public health risks, it is important that these systems are in good condition, well maintained, and functioning properly. Because of this, it is critical that replacement, repair, or upgrades are performed when necessary in order to prevent increased risks and system failures. **DOH should consider developing a program opening access to CWSRF funding that helps home and property owners safeguard the integrity of these systems.**

There are six state CWSRF programs that have pioneered and refined specific mechanisms to facilitate decentralized borrowers with a demonstrated need for access to CWSRF funds: Minnesota, Iowa, Alabama, Ohio, Washington, and West Virginia. States have implemented innovative financing structures such as pass-through loans and linked-deposit programs, or assisted communities organize themselves into responsible management entity's (RME's) that would meet the program's eligibility requirements to apply for a loan. For a comprehensive overview of what states are doing to address DWTS, see Appendix J.

In addition to these efforts, the states mentioned here have also addressed other obstacles through the implementation of specialized programs designed specifically for decentralized borrowers. Minnesota focused on revisions to their CWSRF priority ranking system to enable smaller systems to qualify for funding alongside larger municipal centers. Alabama and Washington focus their efforts on water quality improvements in the Mobile Bay National Estuary and Puget Sound, respectively. All six states included education and outreach efforts in their programs as well as some form of additional assistance to lower-income and disadvantaged borrowers.

One very good example that may easily be applied in Hawaii comes from San Juan County, Washington, just one of 12 counties in the Puget Sound region participating in the Water Pollution Control Revolving Fund and Centennial Grant Program administered by the Washington Department of Ecology (DECY). These programs offer pass-through loans to individual property owners with DWTS in need of repair or replacement. The San Juan County Department of Health and Community Services (the Department) wanted to take steps to ensure that DWTS improvements financed by these programs would be properly maintained in order to keep them functioning optimally. **With assistance from DECY, the Department developed a comprehensive On-Site Sewage Program Plan with the goal of protecting public health through providing public education and outreach, ensuring the ongoing O&M of DWTS, properly enforcing applicable codes and regulations pertaining to these systems, and improving the channels of communication between individual property owners, DTWS designers and installers, and Health Department staff.** The dedicated efforts of the Department have helped forge the partnerships between these entities, which have proven essential to the success of the program as a whole.

To implement this plan, the Department took advantage of the attractive financing that was available from the Water Pollution Control Revolving Fund's pass-through loan program. DECY awarded the Department a loan for $300,000, with 50 percent principal forgiveness, for the San Juan County On-Site Repair Financial Assistance Program. This program addresses all three of the phased DWTS upgrades described in the O&M Program Plan which includes gravity, mound, and pressure systems.[42] **Through the loan with DECY, the Department has been able to issue pass-through loan to individual homeowners for an average of $15,000 per loan, with a 5-year term at 4 percent interest. The residents of San Juan County have been very receptive to the outreach efforts undertaken by the Department.**

Observation and Recommendation #8: Develop Interactive Website Tools

Outreach and education is a continuous and ongoing process in the SRF programs and effective communications strategies incorporate engaging opportunities for stakeholders and borrowers that extend beyond traditional means. When a well-branded, neatly organized website is paired with interactive tools to help borrowers make decisions or learn critical elements about the SRF program, which results in a more informed and better prepared applicant; thus, reduced busy work and increased value added activity for SRF program staff. There are a number of practical, real-world examples to draw from including the following:

- For programs that want to promote or incentivize energy efficiency and renewable energy opportunities at water and wastewater facilities, offering online tools that help borrowers quantify their energy use and potential cost savings by pursuing efficiency projects is an excellent strategy that allows the numbers to speak for themselves. **DOH may consider incorporating an easy to use energy savings tool into the SRF website.** This interactive tool would use an Access-based platform that allows borrowers to input simple information about the energy use and consumption at their water or wastewater facility to generate an estimated cost and energy savings output associated with a proposed efficiency project. For example, users could input data for infrastructure components like pumps and motors, or integration of renewable energy resources like solar or wind, which use embedded calculations to generate automated output statements estimating the cost savings per year, energy savings, and even greenhouse gas reductions that may be realized by the proposed project upgrade. Figure 6.3 shows us a Payback Tool online calculator for energy efficient motors.

  A similar tool may be customized to also address any one or all of the following efficiency measures:

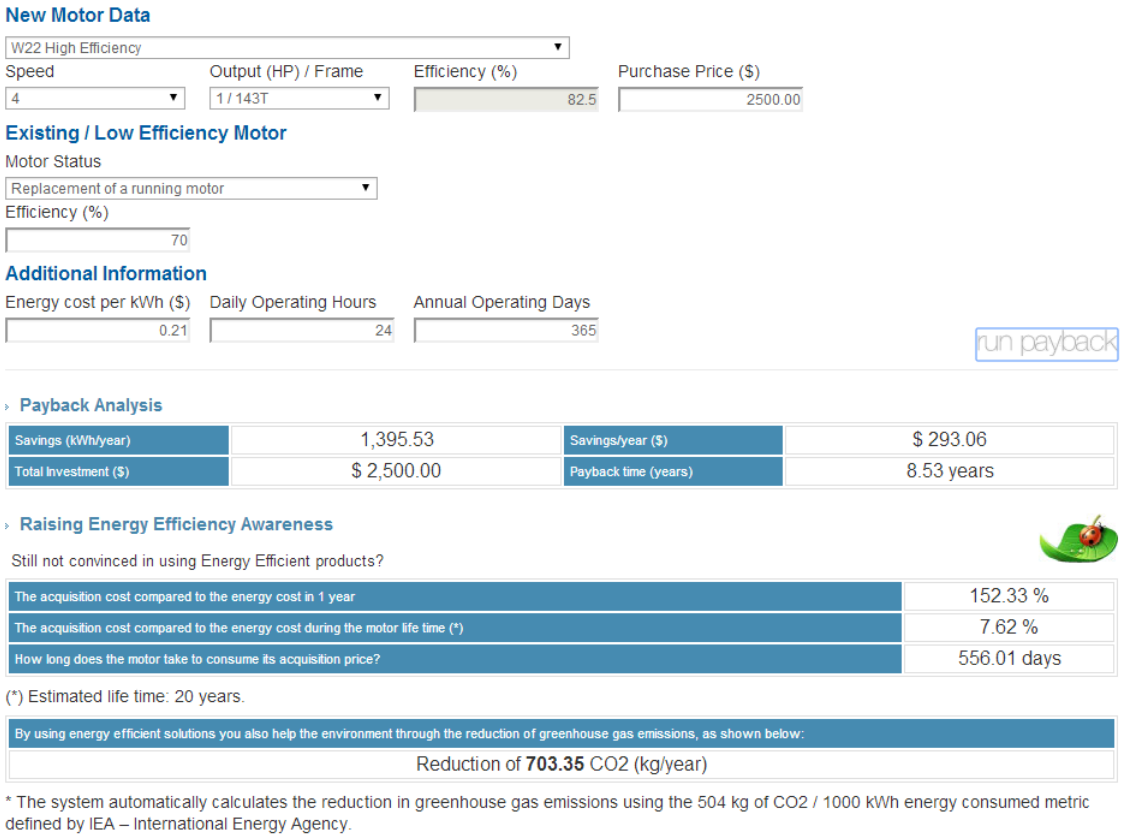
[42] Washington State Department of Ecology (2011). State Fiscal Year 2012 Final Water Quality Funding Offer List and Intended Use Plan. July 1, 2011. Publication No. 11-10-054.

- Lighting
- Reduction in Greenhouse Gas Emissions
- Treatment technology
- Variable Frequency Drives and SCADA systems
- HVAC and Lighting Systems

- Rate comparison and project affordability tools can be very useful to public water systems and communities that are considering funding a capital project using the SRF program. Making this information readily available up-front provides potential applicants the valuable information they need to make responsible financial decisions and plan their project accordingly. This may mean a change in the scope of work, a rate increase, seeking assistance from multiple funding partners may be necessary. **Having this information before making application to the SRF program may help to mitigate the number of projects on the PPL that are non-viable or not ready to proceed to construction.** See Appendix K for a mock-up of a Project Budget Worksheet and Affordability Calculator template.

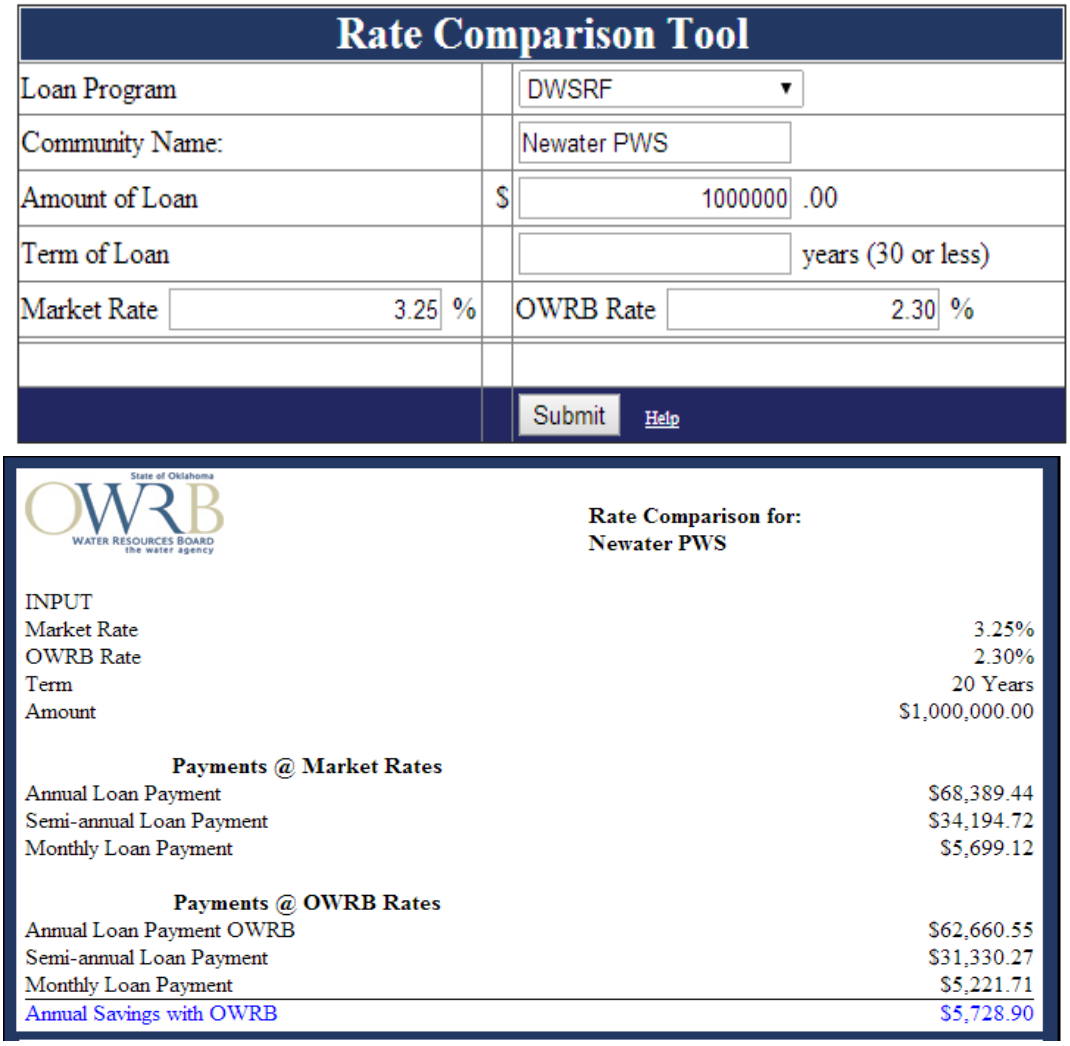
- Some good examples that have been found on other DWSRF program websites such as Oklahoma's Rate Comparison Tool and Loan Calculator provides an automated estimate of possible loan amounts. This is similar to the EPA's FACT tool, but a more streamlined and easier to use. The Loan Calculator asks for a few simple inputs and produces a printable Rate Comparison sheet (Figure 6.4).

Figure 6.3 - Example of an Online Efficiency Calculator[43]



[43] http://www.weg.net/us/Products-Services/Electric-Motors/Payback-Tool#footer_result

Figure 6.4: Oklahoma's Loan Calculator Tool



Rate Comparison Tool

Loan Program		DWSRF
Community Name:		Newater PWS
Amount of Loan	$	1000000 .00
Term of Loan		years (30 or less)
Market Rate 3.25 %		OWRB Rate 2.30 %
		Submit Help

State of Oklahoma OWRB Water Resources Board the water agency

Rate Comparison for:
Newater PWS

INPUT	
Market Rate	3.25%
OWRB Rate	2.30%
Term	20 Years
Amount	$1,000,000.00
Payments @ Market Rates	
Annual Loan Payment	$68,389.44
Semi-annual Loan Payment	$34,194.72
Monthly Loan Payment	$5,699.12
Payments @ OWRB Rates	
Annual Loan Payment OWRB	$62,660.55
Semi-annual Loan Payment	$31,330.27
Monthly Loan Payment	$5,221.71
Annual Savings with OWRB	$5,728.90

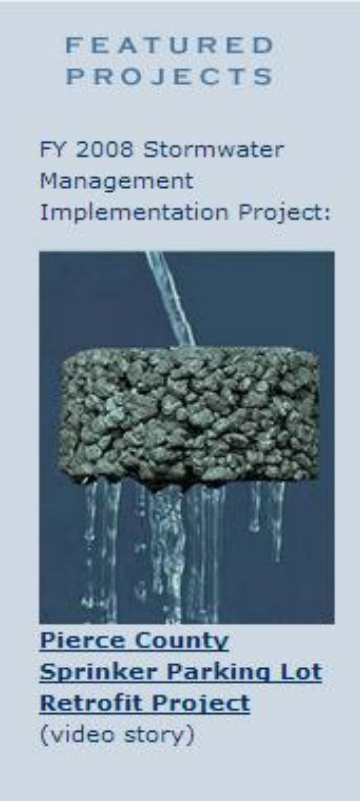
Observation and Recommendation #9: Systematic Dissemination of Program Information and Data

It is important for DOH to capitalize on the numerous opportunities to deliver information about the program on a consistent basis. This can be done using professional, business-like brochures, reports, and press releases. Below are several examples of opportunities where **DOH can initiate open and transparent communications with borrowers and stakeholders alike:**

- **Press releases are the primary tool of publicity for any business or organization and are an important part of cultivating and managing the public image SRF programs wish to convey to communities, water systems, state legislature, and environmental groups.** As such, it is important to draft

effective press releases and send them out to media contacts on a regular basis. Press releases should be drafted by DOH and issued every time a project is funded, as well as to publicize dollars directed toward planning projects and SDAS receiving assistance from the program. The issuance of press releases is used to great effect in the SRF programs of Arizona, Oklahoma, Iowa and Georgia, who have each developed a well-publicized location on their program websites where all press releases that have been issued for all assistance provided through the program can be found easily.

- **Highlighting featured projects on the SRF program website and informational brochures promotes public health and water quality initiatives while also publicizing the efforts of DOH and providing accolades to the borrowers who have undertaken such projects**. The benefits of this simple tactic are two-fold: it supports important priorities of the State while giving Counties and communities time in the spotlight, helping to bolster stakeholder interest and support for these types of projects and use of the SRF program going forward. Some states, like Kansas and Washington[44], even offer produce project feature video stories, which communities have posted on their own municipal websites. DOH has already done this by including featured projects in their brochure promoting energy efficiency projects, but could expand these efforts to also include a broader range of projects that address nonpoint source pollution, source water protection, or other innovative approached that Counties and communities are exploring.



- **Develop an electronic SRF Calendar posted on the SRF website.** Providing a monthly calendar that lists events like workshops, trainings, public meetings, deadlines for applications and submittals is an excellent and easy way to help borrowers and stakeholders with their project planning and scheduling. There is a broader calendar issued by the DOH Safe Drinking Water Board in the Water Spot newsletter, but it is not SRF-specific and is also embedded within the PDF file and website users visiting the SRF page may not know where to locate it. Having an SRF calendar readily available on the website also will help to mitigate the volume of inquiries about dates and deadlines via email or telephone calls which will ultimately reduce the amount of staff time DOH has to spend fielding this type of correspondence.

[44] http://www.ecy.wa.gov/programs/wq/funding/funding.html

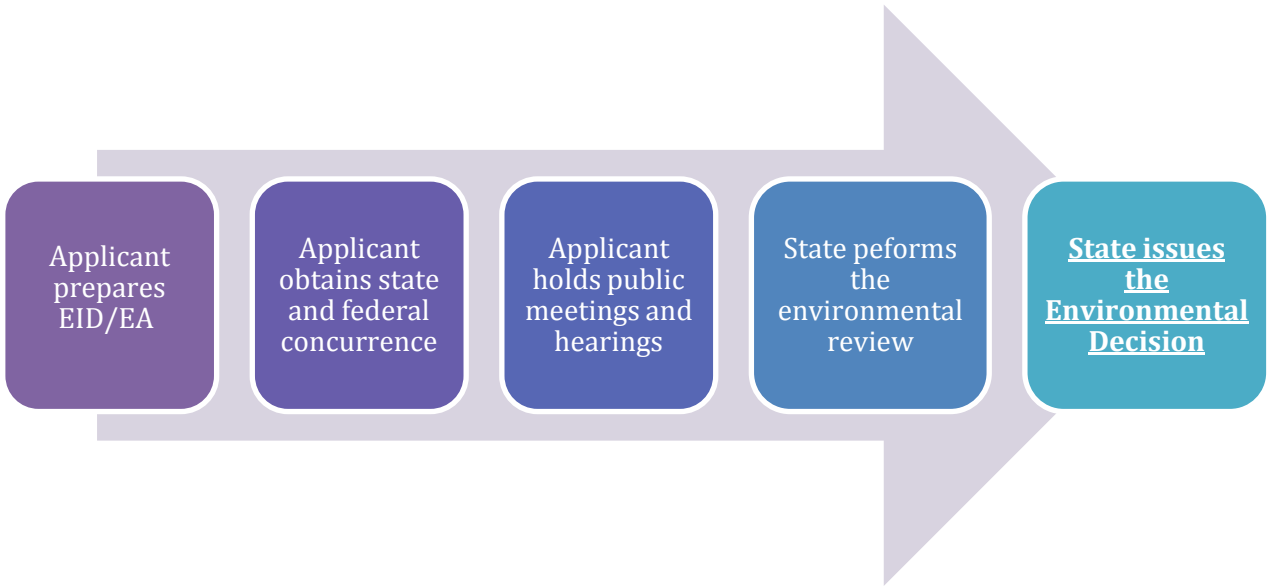
Observation and Recommendation #10: Offer Stakeholders a Chance to Give Feedback about Their SRF Experience With a Customer Service Survey

DOH could develop a survey on the SRF website that gives communities and public water systems that have worked with the program in some capacity, (either through grant, loan or capacity development assistance) to provide feedback about their experience using the program. This could be an important tool in the communications strategy toolbox that increases transparency and open communications with stakeholders, while also increasing the program's awareness of successes, shortcomings, and issues. **A survey like this would help to create positive options for the program and convey a willingness on the part of DOH to strive for constant improvement and customer service.**

The Ohio EPA, who administers both the CWSRF and DWSRF programs, offers a Customer Service Survey powered by Survey Monkey that is accessible through their Financial Assistance web page using a link entitled "How are we doing?" The survey is 14 questions, consisting of agree/disagree statements, multiple choice check boxes, and several narrative text boxes.

Environmental Review

Both the DWSRF and the CWSRF regulations require that all projects, with the exception of non-point source projects, be subject to an environmental review that is similar in nature to the federal NEPA review or is performed under the auspices of the State's own environmental review process (SERP) as set forth in State statute. Many state SRF programs do not have their own state-specific environmental protection laws, but generally follow the federal laws requiring environmental review and the preparation of an Environmental Information Document (EID) or an environmental assessment (EA). Others that do have their own environmental statues have closely modeled the environmental review process after that which is presented in 40 CFR Part 6 and Part 35, pertaining specifically to the application of environmental review requirements in the SRF programs. The predominant process used by nearly all state SRF programs in the United States is as follows:



The Hawaii SRF programs are the only SRF programs where it has been observed that the Applicants themselves are rendering their own environmental decisions: this has not been a documented process Northbridge has encountered in any other State program. In Hawaii, the Applicant performs the environmental review, issues the environmental decisions and publishes the notification in a periodic bulletin that is issued on the 8th and 28th day of each month, and then sends a copy of the EID/EA, the decision, and the Environmental Assessment Checklist to DOH. DOH then reviews the checklist for completeness and places the documentation in the file.

While this process is unorthodox in the realm of the SRF, it is compliant with the law as promulgated in HRS 343 addressing how the State is to perform environmental review. The Administrative Rules §11-200 are also reflective of the requirements articulated in the

statute, which clearly lays out in both the definitions and in §343-5(b) that an Agency[45] shall undertake all of the environmental review processes for a proposed project as shown in Figure ___. Initially, this process raises questions and concerns about conflicts of interest for an Agency to render an environmental decision for its own proposed project, but that concern is addressed in §343-5(b)(1)(E) which states

"…when a conflict of interest may exist because the proposing agency and the agency making the determination are the same, the office (Office of Environmental Quality Control) *may review the agency's determination, consult the agency, and advise the agency of potential conflicts . . ."*

Even though it would seem more appropriate for the Environmental Decision to be issued by the agency that represents the **source of funding** for a proposed project, in this case DOH, the statutes as written do not grant this authority or support the involvement of DOH even in the event of a potential conflict of interest involving a County.

Potential Risks to the SRF Programs

The current SERP may be in step with the law in Hawaii, but that is not to say that this existing process does not leave the SRF programs open to risks. Because the assistance that is being provided to Counties is generated by state and federal funds, a certain level of accountability rests on the shoulders of the SRF programs to ensure beyond any reasonable doubt that the projects to be funded are compliant with environmental regulations and will not cause any negative impacts. This is an important assurance that the EPA, as well as the local stakeholder community, will be looking for. Shifting the burden of making the environmental decision to Counties does not alleviate DOH from ultimately being accountable for funding a project that may not have met all environmental review requirements. This may become of greater concern as the DWSRF program explores extending financial assistance to private borrowers.

For example, property owners of the 148-unit Aikahi Gardens townhouse complex have raised concerns over a $175 million wastewater project for the Kaneohe-Kailua Sewer Tunnel which includes the approval for the City and County of Honolulu to exercise condemnation powers over a 3-mile section of land despite objections from the property owners. While it was found that the project would not have long-term impacts on the private properties, members of the townhouse complex expressed that they "feel railroaded" and that the City is pushing ahead with the project without completing negotiations with property owners.[46] From an environmental review perspective, this could be a problematic project for the SRF to fund based on its public controversy. This

[45] Pursuant to §343-2, "Agency" means any department, office, board, or commission of the state or county government which is a part of the executive branch of that government."
[46] http://kktunnel.org/uploads/Condemnation_on_table_for_Windward_sewer_work_-_Hawaii_News_-_Ho.pdf

particular project did not receive financial assistance from the Hawaii SRF program. However, if it had and DOH had relied upon the City's environmental decision and the Aikahi Gardens homeowners filed suit, this could present a serious predicament for DOH. Legal review and examination of how SERP is applied in Hawaii indicate that the courts bravely protect public participation in the environmental review process are inclined to favor those seeking to be heard in the governmental process and that agencies proceed at their peril if any element of the environmental review process is circumvented in any way.[47] Citizens challenging state or county agencies for evading the public review process have won major victories in the Hawaii Courts. In a scenario like that presented above, the precedent does not bode well for the agencies involved in the issuance or acceptance of an environmental decision that leaves public controversy unresolved.

Observation and Recommendation #1: Develop an Official Statement of Concurrence for Environmental Decisions Rendered by Applicants

DOH receives a completed and certified Environmental Assessment Checklist from all Applicants along with their EAD. The EAD includes copies of all correspondence with crosscutting agencies as well as evidence of public meetings or hearings. However, there is no documentation that certifies that the SRF program staff has thoroughly reviewed the EAD and officially concurs with the environmental decision rendered by the Applicant. Although the existing process employed by the SRF programs is in compliance with Hawaii state law, the programs could benefit from incorporating an additional layer of certification that illustrates a diligent review of the project's compliance with all environmental regulations and requirements by DOH prior to funding. By developing a template for an Official Statement of Concurrence for the environmental decisions issued by Applicants, DOH provides greater compliance assurances to the local stakeholder community as well as the EPA, which provides mutually beneficial results. This document could be a one-page document that is signed and dated by either the CWSRF or the DWSRF engineer who performed the review of the submittal, placed in the project file, as well as posted on the program website.

It is not unusual for State SRF programs to go above and beyond what is required by SERP to ensure environmental compliance. Figure 7.0 illustrates a few of the approaches that some states have taken to apply tighter controls to the environmental review of SRF projects.

[47] Antolini, D. (2013) The Moon Court's Environmental Review Jurisprudence: Throwing Open the Courthouse Doors to Beneficial Public Participation. University of Hawaii Law Review, Vol. 33:581 available at blog.**hawaii**.edu/**lawreview**/files/2013/01/10-Antolini.pdf.

Figure 7.0 - Examples of SRF Program Processes for Environmental Review

State	Process	Issue Environmental Determination (ED)
CT	SRF program staff perform an environmental categorization (Category 1, 2 or 3) on behalf of the Applicant . **SRF program staff performs the environmental review** using the EA Construction Project Assurances checklist to track status with all state/federal crosscutter concurrences.	SRF program staff issues CatEx and FNSI
GA	Applicant must coordinate all state and federal crosscutter concurrences for the project and the State. If required, applicant must prepare an EID if the State has determined that the project does not meet CatEx criteria. Applicant is responsible for conducting a 30-day public comment period and submit proof of public meeting by providing: • Summary of meeting (minutes) • List of attendees • Photocopy of advertisement in local paper **State also conducts an interdisciplinary review with other state agencies through the State Clearinghouse.**	State determines whether or not project meets criteria for CatEx and distribute this determination to all known interested parties. CatEx decision posted on State's website. State issues official ED and public notice.
IA	**SRF program has 3 staff members that provide and perform all Environmental Review services to financial assistance applicants**. • Obtain environmental and historical clearances • Coordinate with consultants and grant administrators • Compose and distribute EIDs and EAs	SRF program staff issues CatEx and FNSI
NM	Applicant prepares EID and holds properly noticed public meetings and hearings as appropriate. Applicant also obtains all state and federal crosscutter concurrences for the project and submits to State along with EID. **State uses the EID submitted by Applicant to**	State issues official ED and distributes decision to the project mailing list and will publish in newspaper of general circulation.

	prepare EA in accordance with the EA Outline. NMED staff uses the NEPA Project File Checklist when undertaking the environmental review.	
OR	**ODEQ will identify the extent of environmental analysis required for the project**. • ODEQ provides applicants with a CE Candidate Project Packet Applicants must prepare an EID or EA and consult with all applicable state and federal crosscutting authorities.	State issues official ED will publish in newspaper of general circulation.
PA	Applicants must prepare an EID or EA and consult with all applicable state and federal crosscutting authorities. Applicants must also conduct public meetings and hearings as required, summarize any comments received, as well as a record of attendees. State provides a template for crosscutter review for applicants to use.	State issues official ED will publish in newspaper of general circulation.
TN	Applicants must submit the following to SRF Program staff • Electronic image of most current USGS 7.5 minute topo quadrangle map showing location planning area • Electronic image of most current USGS 7.5 minute topo quadrangle map showing location of proposed project • Clear, concise project description • Facilities Plan (includes documentation of public meeting and minutes) **SRF Program Staff will conduct a 30-day interdisciplinary ER, obtain comments from state and federal crosscutting authorities**	State issues official ED will publish in newspaper of general circulation and circulate to all interested parties

Observation and Recommendation # 2: Develop Streamlined, User-Friendly Templates for Borrowers to Complete Environmental Review

One of the observations made by DOH during the POD event identified that often Counties have limited staff and those that work on SRF-related projects and activities do so only on a part-time basis. Though Counties are not new to the environmental review process, there still remains an element of staff turnover and there are steps that DOH can take to make this process easier and more efficient for applicants seeking SRF assistance. This may be

especially beneficial should the DWSRF elect to pursue funding to private water companies in the future, many of whom may not be very familiar with SERP requirements or how to prepare an EAD. Having EADs that are standardized in format and content may also prove beneficial to DOH engineering staff, making it faster to the review of all EADs submitted by applicants and ascertain whether all pertinent information has been included and all SERP requirements have been met. When documents come in varied iterations, the likelihood of inadvertently missing an important detail may be significantly increased.

There are many state SRF programs that have developed very simple, yet thorough templates for applicants to use in the preparation of their environmental review assessments, transmittal memos and letter templates to send to state and federal crosscutting agencies, as well as program review and comment forms. Oregon has created a Categorical Exclusion Candidate Project Packet that is provided to applicants as a fill-able PDF virtually taking all guesswork out of the preparation of environmental review documentation while also allowing for a faster State/Federal agency review process.[48] Colorado has provided a 6-page environmental assessment template that includes boilerplate language, fill-in blanks, and detailed bullet lists of the specific information that is required for each section, as well as an agency contact list by region within the state. For example[49]:

V. ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

A. DIRECT AND SECONDARY IMPACTS

Lead off this section with the following language…

"Construction of _____ may have direct impacts from facility construction and secondary and cumulative impacts from future development within the service area. "Secondary impacts are those induced or stimulated by, or as a result of, the proposed action. These can include cumulative, social and land use impacts, among others." "Cumulative impacts are the collective incremental impacts of the proposed action regardless of the entity undertaking the action." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." From the characteristics of the proposed project, and descriptive elements of the environmental setting, probable impacts are direct and/or secondary.

A State/Federal Agency Coordination and Consulting Mailing List that lists the contact names, addresses, phone numbers, website, and email addresses of all the crosscutting agencies that will need to be contacted in order to satisfactorily complete the EAD is a simple, but incredibly useful guidance tool that SRF programs can easily provide to borrowers.

[48] http://www.deq.state.or.us/wq/loans/docs/CECandidateProjectPacket.pdf
[49] https://www.colorado.gov/pacific/sites/default/files/WQ_Environmental-Assessment-Template-and-Agency-Contact-List.pdf

North Carolina has taken an innovative track on its environmental review processes by introducing a completely tabular format for borrowers to use in the preparation of the EIDs. The template that is provided includes discreet tables for the following topics:

- Topography and Floodplains
- Soils
- Prime and Unique Farmland
- Land Use
- Forest Resources
- Wetlands and Streams
- Stream/Wetland Crossings
- Water Resources
- Shellfish, Fish, and Their Habitats
- Wildlife and Natural Vegetation
- Public Lands and Scenic, Recreational, and State Natural Areas
- Areas of Archaeological or Historical Value
- Air Quality
- Noise Levels
- Introduction of Toxic Substances
- Environmental Justice Analysis
- Mitigation Measures

Something similar could be developed for the Hawaii SRF programs that meet the requirements set forth in HAR 11-200-10 as well as the Office of Environmental Quality Control Guidebook. What is especially appealing about using a tabular template is that it can easily be prepared in an electronic format making it easier and more efficient for borrowers to complete, as well as support more expeditious routing between the borrower, crosscutting agencies, and DOH.

Hawai'i SRF Program: Process Optimization Drill Results & Analysis of the Current State

A number of State SRF programs have recently utilized various process optimization methods to attain increased overall operational efficiency, improved loan demand, and an enhanced customer experience and participation. Iowa has used Kaizen, New York elected to pursue the AGILE approach, and Colorado has used LEAN (with assistance from Northbridge). Incidentally, since implementing changes to their processes as a result of the LEAN event in 2013, Colorado has realized an 80 percent reduction in the time it takes staff to process applications and they have already increased their customer participation rate by 20 percent.[50]

Hawaii DOH staff participated in the Northbridge Process Optimization Drill (POD), a LEAN-based exercise, to extrapolate the existing work flow associated with the Current State in place for the Hawaii DWSRF and CWSRF programs. The Current State includes how each of the programs conducts marketing and outreach activities, collects project pre-applications, scores and ranks projects, reviews loan applications, issues Final Loan Agreements, and processes disbursement claims. This process relies upon objective, empirical data to provide a visual representation of what really happens during each step of the process, which makes it much easier to identify solutions to obstacles and road blocks that have been revealed. The goal of this exercise is to provide all participants with a common understanding of current processes to develop solutions that support the following desired outcomes: increase in value-added activity, establishment of clear processes, increased ease of use, increased efficiency, visibility and transparency, and increased overall satisfaction from program staff, borrowers, and program partners.

Part of this exercise included creating a value stream map of each discreet process to identify the tasks performed, the time associated with task performance, assigning a value to that time, and tracking the number of hand-offs and approvals necessary before advancing to the next process. The complete results are attached to this report in Appendix L. Time was categorized as one of the following:

- Value – activity that is meaningful to the borrower, changes the product or service provided to the borrower, is visible to the borrower, and is done correctly the first

[50] Per telephone conference with Michael Beck, Unit Manager of the Colorado WPCRF on February 21, 2014. Colorado undertook another value stream mapping exercises to quantify value add, handling/processing, and regulatory related activities and time associated to compare the results of the newly implemented processes with the processes that were originally analyzed during the LEAN event to measure these improvement results.

time. This may include activities such as ranking a pre-application, drafting a loan agreement, or approving a disbursement claim.

- Handling/Processing – activity that may be associated with correcting errors or defects, searching for and collecting missing information or documentation, overproduction, waiting for approvals/responses from others, redundant approvals/verifications/reviews, excessive transportation of documentation, non-utilized talents in staffing pool.
- Regulatory Requirement – activity that is required by federal or state law, statute, or regulation.

The goal is to increase value, eliminate (to the extent practicable) unnecessary handling and processing, and automate regulatory requirements as much as possible to attain a more streamlined, efficient process overall.
During the dissection of these processes, the group also identified goals for an ideal process, issues and obstacles impeding efficiency, ideas for improvement, and system limitations.

Goals for an Ideal Process Identified by DOH

1. Paperless, electronic automation of processes from application submittals, project ranking, internal operations, and processing disbursement requests.
2. Modification of ASO/B&F encumbrance process to allow the SRF programs to effectively pursue a "first-in-first-out" (FIFO) funding model
3. Get "true" ready to proceed projects on the Project Priority List using well-defined, measurable criteria
4. Streamline loan agreement documentation
5. Better alignment of County goals with SRF goals
6. Mitigate impacts of federal requirements on borrowers
7. Increase quantity and quality of customer service provided to borrowers
8. Increase and improve internal communications
9. Develop a more internally cooperative methodology for marketing, outreach, and project development
10. Develop a formalized Communications Strategy

Figures 8.0, 8.1, 8.2 and 8.3 below illustrate the results of the Value Stream Mapping exercise and tabulate the number of hand-offs, approvals and hours of lead time associated with each of the identified process steps. The number of hours spend on a particular activity may be translated into days using the assumption of a standard 8-hour working day. Analysis of the task times required for each of the discrete processes involved in processing loans in the DWSRF and CWSRF programs shows that the two programs produced very similar results. There are noticeable differences, however, in the number of hand-offs and approvals between the two programs with the DWSRF having double that of the CWSRF program.

Figure 8.0 – Determination of Value for Task Time (in hours)

DWSRF Process Steps	Value-Add	Handling/ Processing	Regulatory	TOTAL
Develop Set-Aside Work Plan	122	225	141	488
Pre-Applications, Ranking	22.5	122.5	290.5	435.5
Loan Application Review and Approval	54	4458	11	4523
Issuing the Final Loan Agreement	32.5	545	0	577.5
Processing Disbursements	17	319	8	344
TOTAL HOURS	**126**	**5444.5**	**309.5**	**6368**

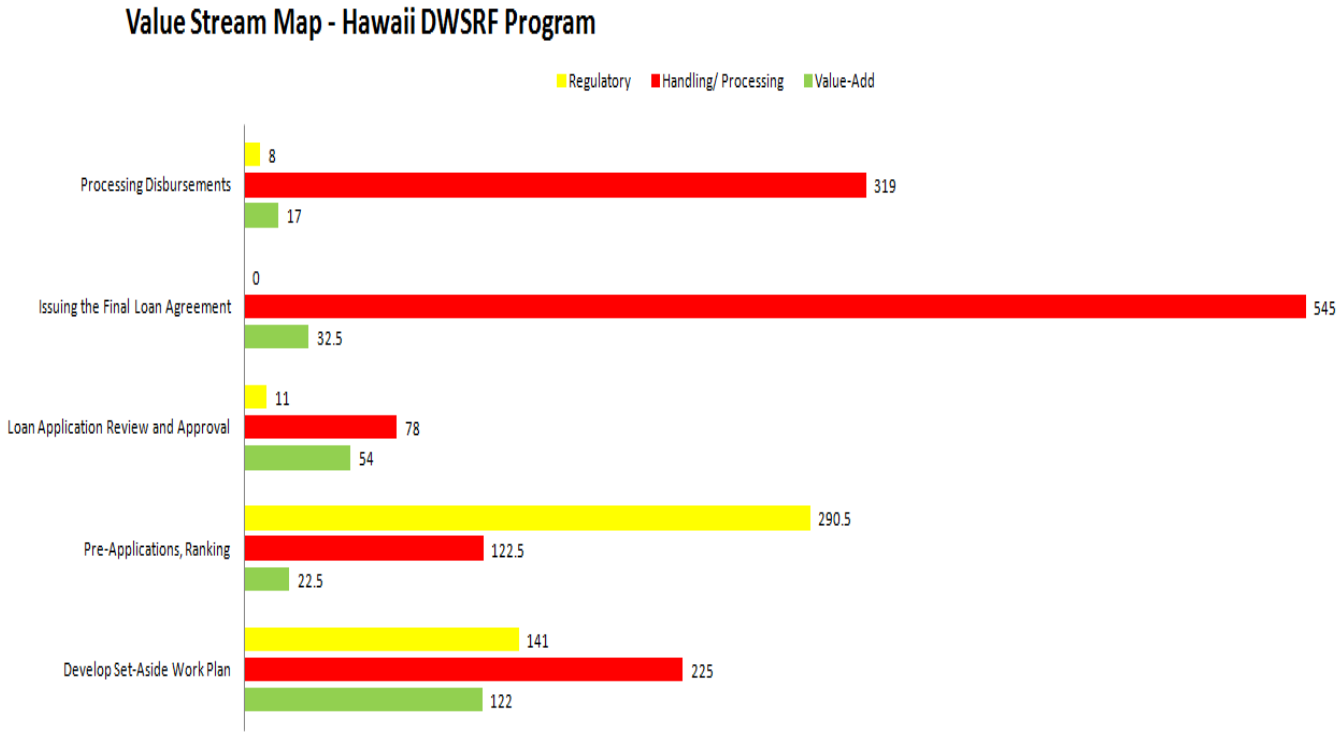
CWSRF Process Steps	Value-Add	Handling/ Processing	Regulatory	TOTAL
Pre-Applications, Ranking	30	223	395	648
Loan Application Review and Approval	34.5	4412.5	432.5	4879.5
Issuing the Final Loan Agreement	32.5	529	0	561.5
Processing Disbursements	96.5	402.5	8	507
TOTAL HOURS	**193.5**	**5567**	**835.5**	**6596**

Figure 8.1 – Analysis of Transportation and Motion

DWSRF Program	Number of Hand-Offs	Numbers of Approvals
Develop Set-Aside Work Plan	20	8
Pre-Applications, Ranking	15	8
Loan Application Review and Approval	32	15
Issuing the Final Loan Agreement	15	7
Processing Disbursements	20	5
TOTAL	**102**	**43**

CWSRF Program	Number of Hand-Offs	Number of Approvals
Pre-Applications, Ranking	12	5
Loan Application Review and Approval	12	7
Issuing the Final Loan Agreement	14	6
Processing Disbursements	7	3
TOTAL	**45**	**21**

Figure 8.2 – Value Stream Maps for DWSRF and CWSRF Programs (time spent by activity in hours)



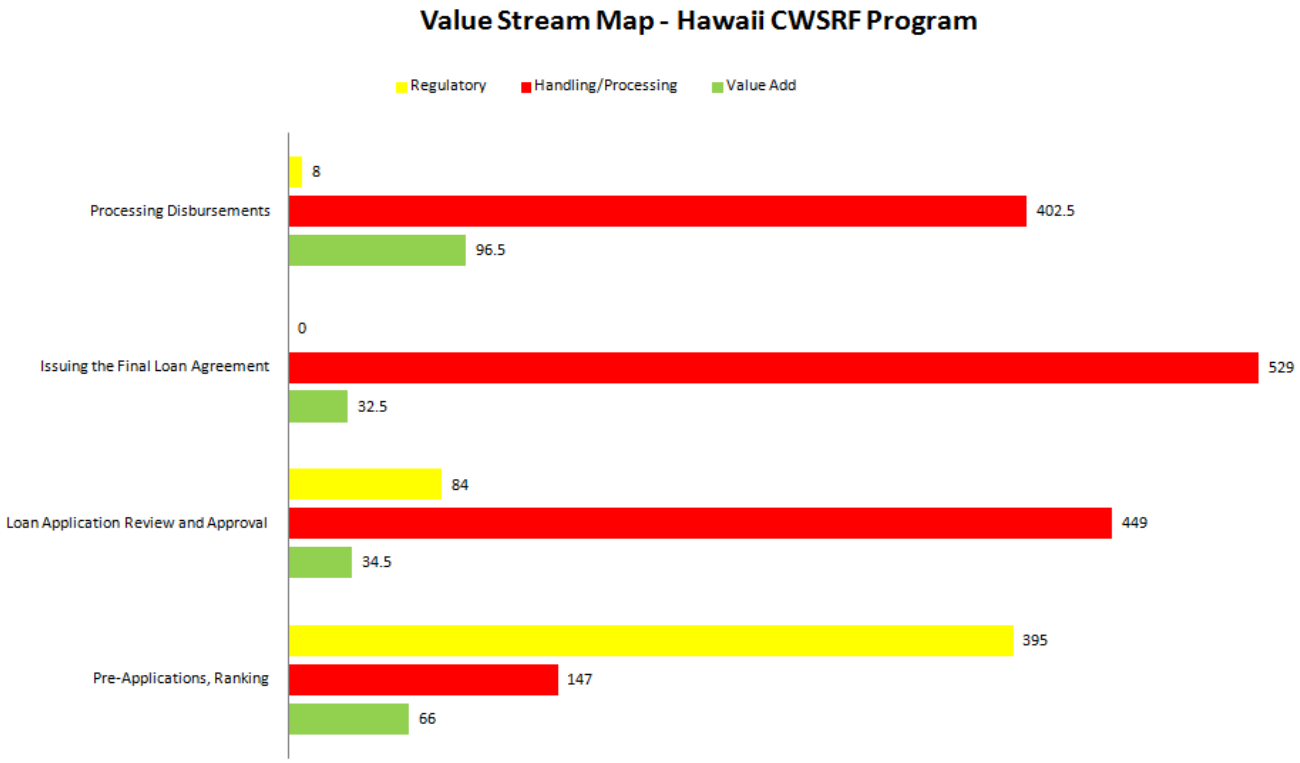
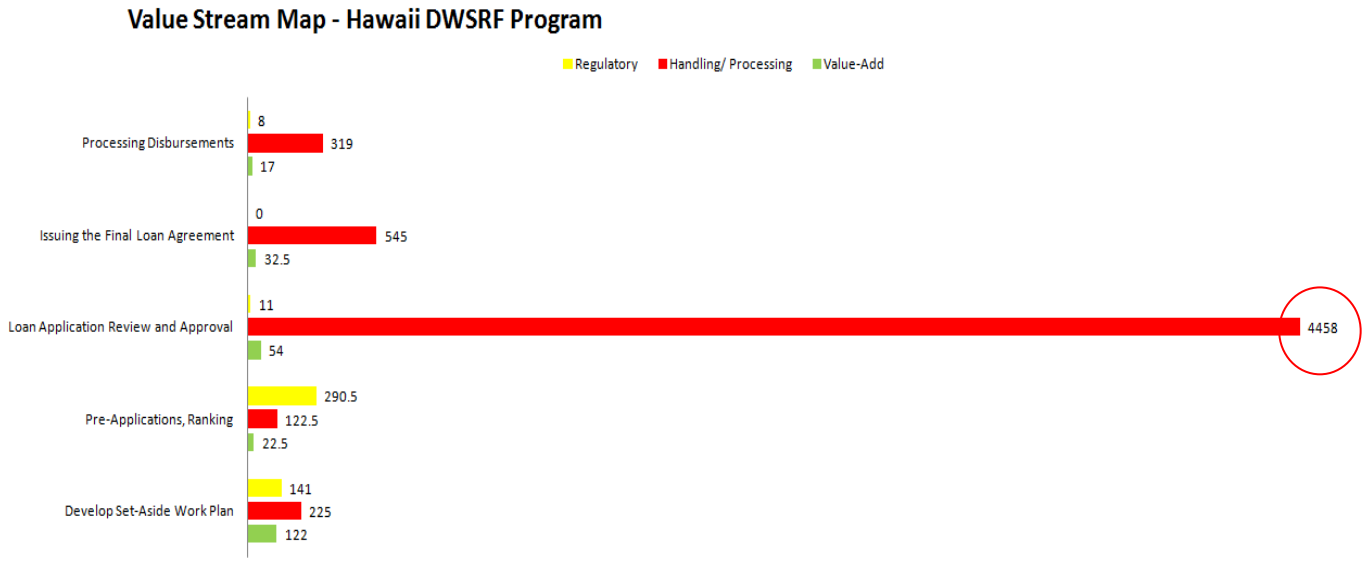
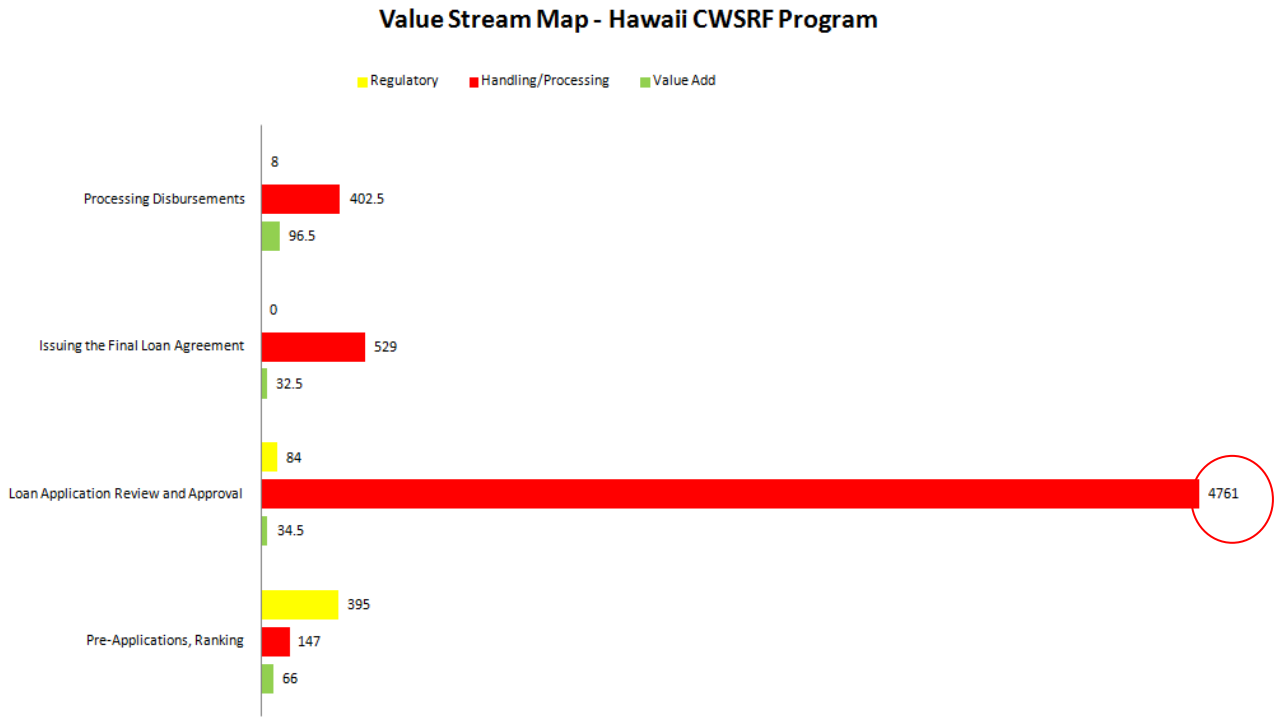


Figure 8.3 – Value Stream Maps: Impact of Waiting Times on Overall Process (in hours)





Comparison of the data presented in Figures 8.2 and 8.3 underscores the inherent differences that exist between the Drinking Water and the Clean Water programs. While they do share a number of similarities and congruencies in certain realms of conducting business (e.g., Issuing the Final Loan Agreement, and Processing Payment Requests), there are important differences that account for the variances in their respective Value Stream Maps.

For example, the scope and complexity of many wastewater infrastructure projects far surpasses those of the majority of drinking water projects; thus, more time may be spent reviewing project documentation and details. Similarly, the Drinking Water program often receives a greater number of project applications than does Clean Water. Though smaller in project scope, it may take more time to prepare a larger number of loan agreements. The POD aims to cultivate an environment where both SRF programs function in parallel and in as similar a fashion as is practicable while acknowledging the important differences that make each program unique.

Analysis of the Value Stream Maps and the comments provided by DOH participants revealed the following Top 10 Time-Consuming Activities associated with the processes that were evaluated in the POD:

Top 10 Time-Consuming Activities

1. Excessive reviews and approvals (internal and external) and document transportation, routing
2. IUP and PPL development; the Interim Loan Agreement is also a voluminous and time-consuming document to prepare and review
3. Manual processes and/or disconnected systems which lack adequate, accurate information sharing or cash flow modeling capabilities
4. Waiting on Counties for loan application submittals, signatures on loan documents and disbursement requests
5. Waiting on outside approvals from the Attorney General, Deputy Director, ASO, B&F, and DAGS
6. Changing the source of funds in executed Final Loan Agreements takes up lots of time for the accounting staff
7. Preparation of multiple amortization schedules and Supplemental Loan Agreements
8. Lack of enforceable deadlines and timelines for reviews and submittals results in the random receipt of information and a chaotic workflow
9. Water systems in the project pipeline are not actually ready to proceed with the project; no gate keeping controls in place
10. Ineffective communications between DOH (engineering and WRFS) and Counties

These findings help direct our attention to specific areas where Efficiency Opportunities can be easily found, in particular by looking more closely at the workflow within specific process steps. The Value Stream Maps illustrates the profound impact that waiting on submittals from borrowers, external reviews and approvals, and general fragmentation can have on the overall efficiency of processes currently utilized in the Hawaii SRF program. Specifically, the amount of time that it takes staff internally to Review and Approve All Submittals (as part of the Loan Application Review and Approval process) furnished by applicants ranges between 63 and 68 hours (see Appendix L).

However, we must take into consideration the fact that SRF program staff typically spends the equivalent of two years (over 4,400 hours) to get all of the required, complete, and accurate information from applicants. Over 4,400 hours are spent trying to gather this information, without which applicants cannot enter into an SRF loan agreement. This is only one example of the factors that have contributed to the existing ULO issue in Hawaii's DWSRF program and, along with other specific examples explored below, represents a number of opportunities where automation, adjustments to internal review processes, memoranda of understanding with external state agency partners, or the introduction of readiness to proceed indicators may support a more efficient workflow model.

Figure 8.3 shows us that problem areas were apparent in the Loan Application Review and Approval, Issuing the Final Loan Agreement, and Processing Disbursements. However, upon closer examination of the detailed steps associated with each of these broader processes, specific activities and tasks could be isolated. To pinpoint Efficiency

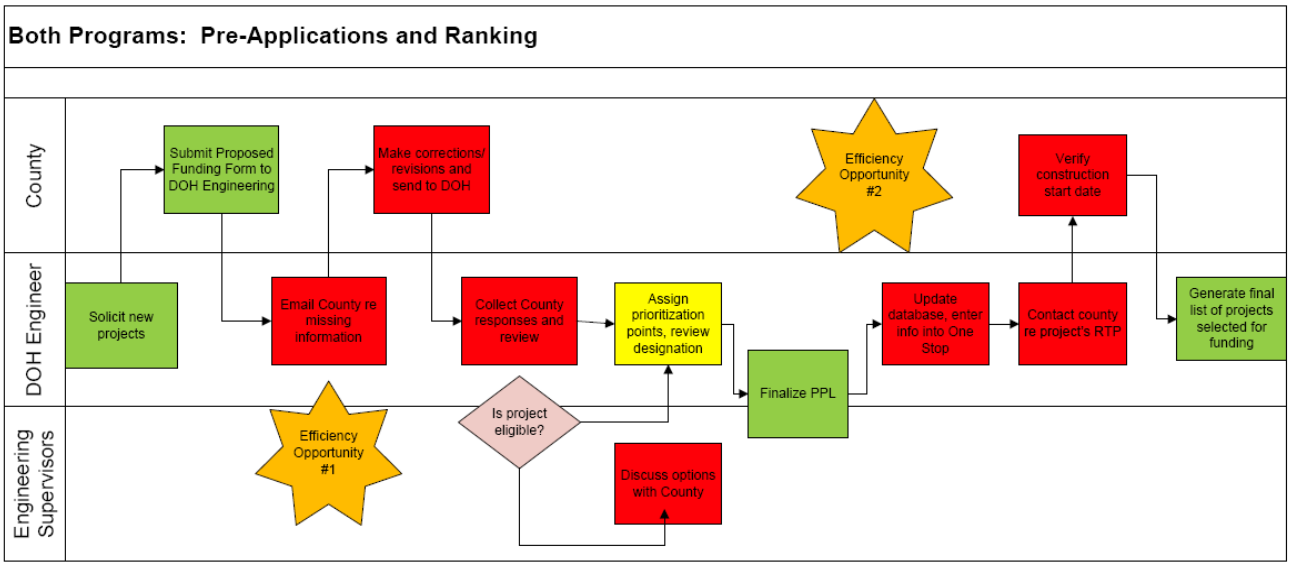
Opportunities in these areas, Swim Lane diagrams were created that clearly illustrate the existing workflow model.

Swim Lane Diagram Analysis of the Current State

Swim lane diagrams clarify not only the steps involved in a particular work process, but also who is responsible for each one, how information is passed between individuals/departments, functional capabilities, and helps identify how delays or errors are most likely to occur. In the analysis of the POD Value Stream Maps, these specific process steps were identified for swim lane analysis and ripe with Efficiency Opportunities: Processing Pre-Applications, Drafting the Intended Use Plan, Issuing the Commitment Letter, Issuing the Interim Loan Agreement, Reviewing and Approving All Submittals, Issuing the Final Loan Agreement, and Pre-Filling Payment Requests. Some swim lanes extrapolate processes specific to either the Drinking Water or the Clean Water program, while others reflect congruent processes applicable to both programs. Each Swim Lane uses color-coded boxes where green indicates a Value Add activity, red indicates Handling/Processing, yellow indicates a Regulatory Requirement, and orange bursts indicate Efficiency Opportunities. Each will be discussed in detail below.

Swim Lane #1: Processing Pre-Applications, Scoring and Ranking Projects – DW and CW

This process is similar between both programs and analysis of the workflow revealed a number of disconnected, manual processes, and staff spending a lot of time trying to chase down missing and/or inaccurate information from applicants. When we exclude the tasks that are associated with Drafting the IUP and focus mainly on reviewing incoming project applications, determining eligibility, scoring and ranking projects, and determining which projects will receive funding in the next fiscal year, many of the processes are Handling/Processing activities. Contributing factors to the inefficiencies that exist here include incomplete project descriptions on applications, difficulty in updating priority scoring, as well as utilization of a manual priority list.

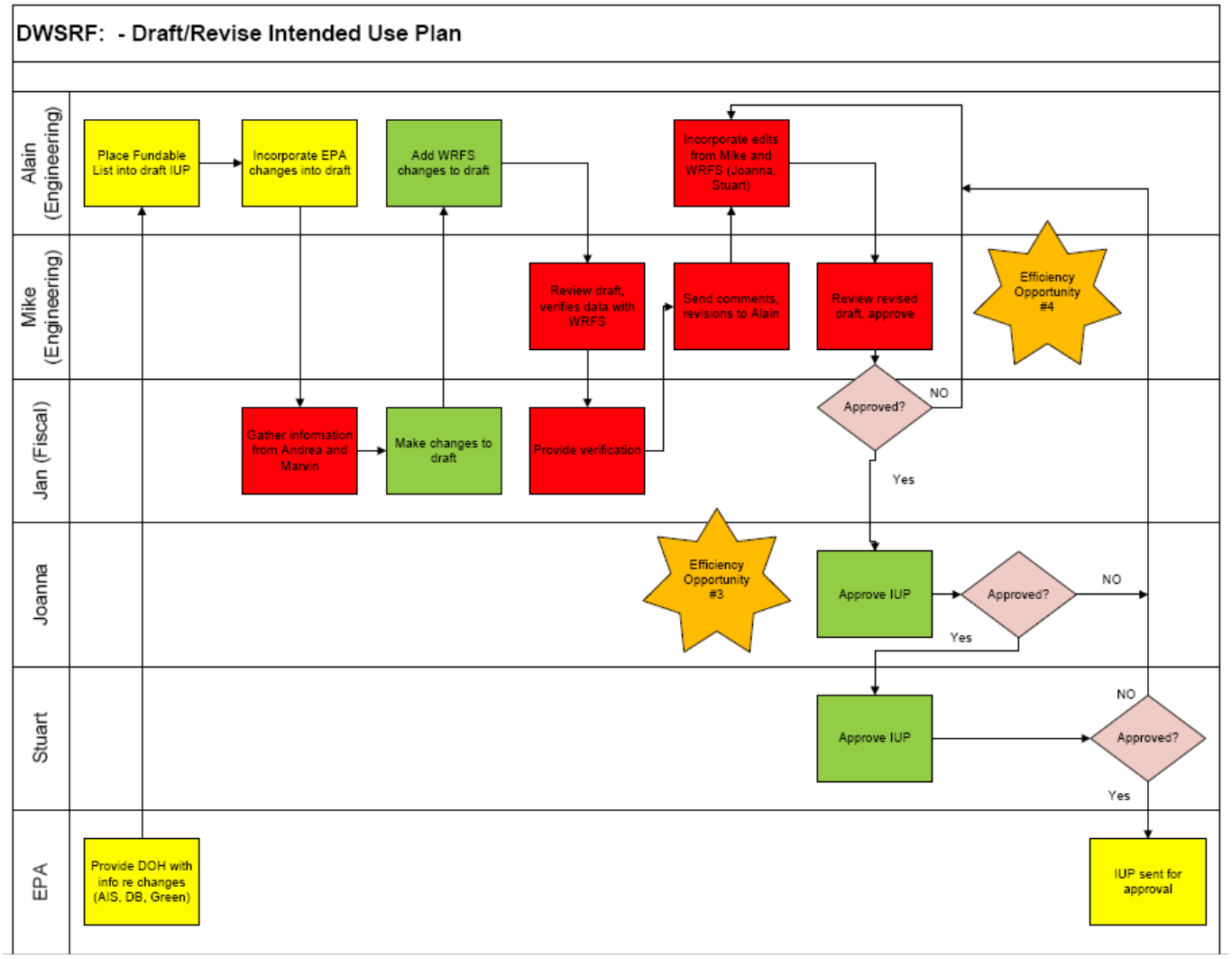


Efficiency Opportunity #1:	Development of an electronic project applications system, which may be either a fill-able PDF or via a web-based platform, that includes more specific data requests and gate-keeping mechanisms that disallow submittal if any information is missing or incomplete. Error-proof wherever possible using radio buttons, check boxes, and drop-down menus to mitigate errors or missing data elements. Other gate-keeping mechanisms include establishing clear, well-defined Readiness-to-Proceed criteria to help SRF program staff better determine how near/far a project may be from the construction phase and the ability to draw down funds. These options can help reduce false starts, delays associated with waiting for applicants to make corrections/revisions, and reduce the number of back and forth communications on the front end.
Efficiency Opportunity #2	Automate project scoring capabilities and develop an electronic PPL that can automatically update the priority score for projects discreetly, as opposed to requiring SRF staff to manually re-rank all projects. This can be done in a variety of ways, including building an automated scoring feature into a fill-able PDF Project Application Form which can later be modified to interface with a web-based application system. This can significantly reduce the amount of time staff spends on data entry and manual data manipulation.

Swim Lane #2: Drafting the Intended Use Plan – Drinking Water

Analysis of the POD results actually showed that this process takes more hours to complete for the CWSRF program than in the DWSRF program. However, when comparing the two, the DWSRF program had nearly triple the number of hand-offs and double the number of approvals to complete this task. The analysis also revealed more cooperative and balanced

efforts on the parts of both engineering staff and WRFS in the completion of this task in the CWSRF program where both units appear to be more equally involved.

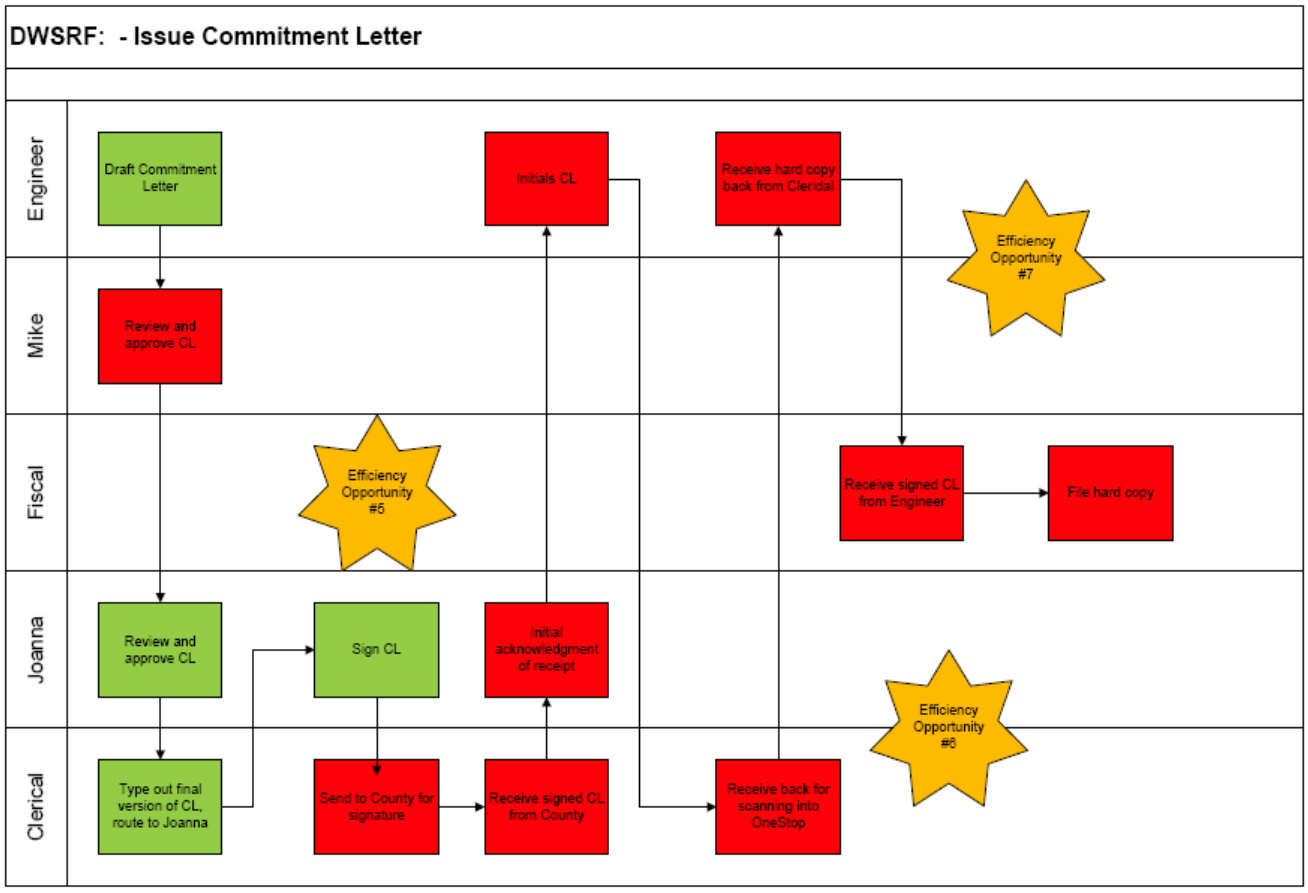


Efficiency Opportunity #3:	There is a lot of back and forth involved to determine which projects should be funded and gauging an applicant's "true" readiness to proceed with a project that may require by-passing and trying to get the funds allocated to another project that is, indeed, ready to go. Project selection can be made more systematic through automation, gate-keeping mechanisms, and good Readiness to Proceed criteria that can provide DOH staff with a reasonably accurate gauge of where Applicants are with their projects. Again, there may be automation opportunities track Readiness to Proceed status in a "living" PPL. This may improve DOH's capability for more accurate demand management and allow more front-end decision-making. This will also reduce the number of hand-offs, revisions, and modifications in the drafting process as well as cultivate a better interface between the

	engineering and WRFS units to make the development of the IUP a more collaborative effort.
Efficiency Opportunity #4	Part of examining and identifying areas of inefficiency in any process includes instances where the program or organization may be underutilizing talent within the existing talent pool of staff. Often excessive or redundant levels of approval are indicative of a potential need to grant more decision-making authorities to other levels of staff or to simply reduce the number of internal approvals that are required.

Swim Lane #3: Issue Commitment Letter – Drinking Water

Though not as cumbersome a document as the Interim Loan Agreement, the potential efficiency of the Commitment Letter is hampered by an excessive number of hand-offs and an overly complicated routing process. These are perfect examples of where automation of processes and electronic routing conventions can help streamline this process rather easily. Another concern is the use of incompatible software between different units of DOH; some staff are using Word Perfect while others are using MS Word. There needs to be a single, approved software protocol whereby all staff is using the same system. This will support a more efficient work flow and eliminate the need for re-work.



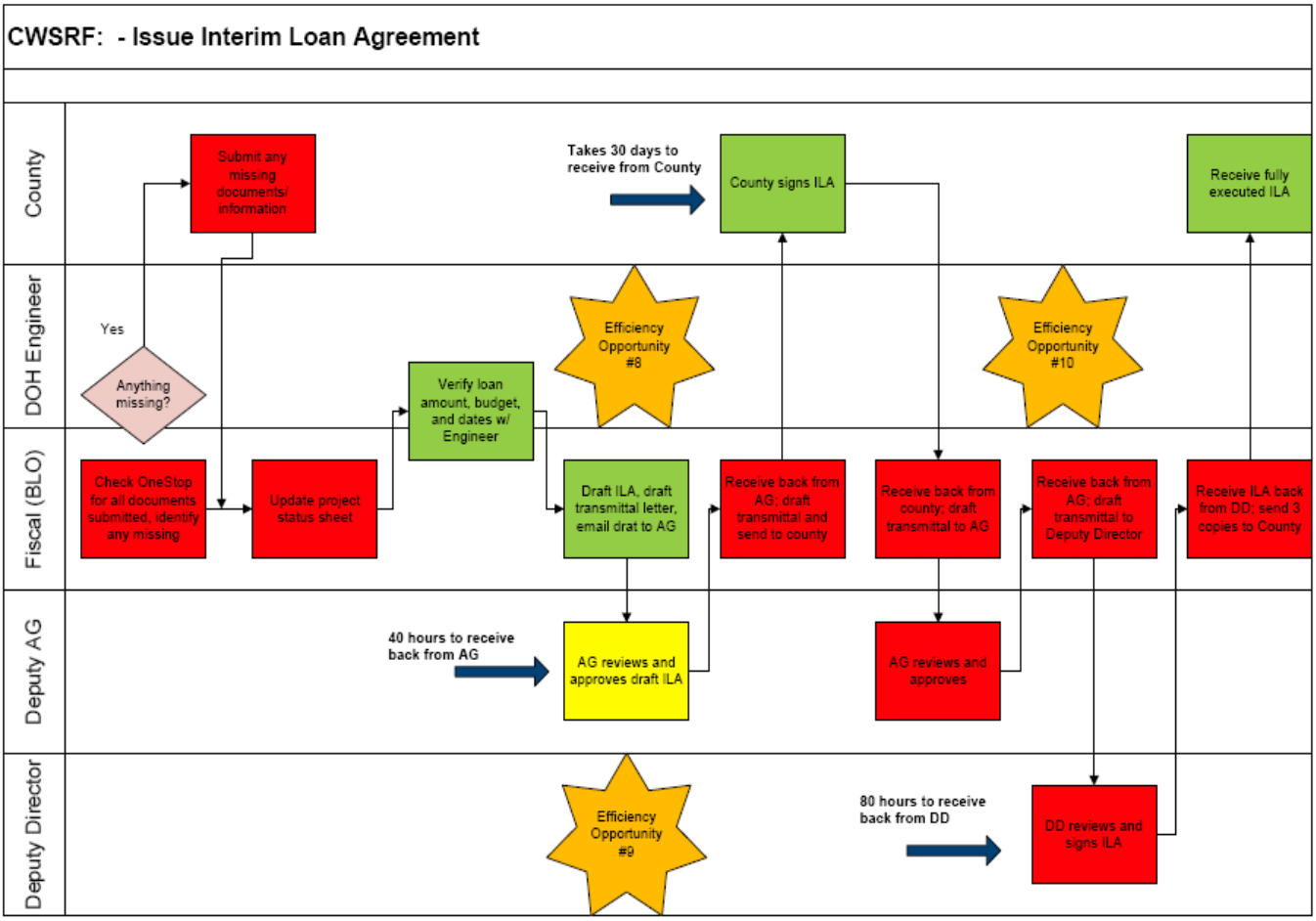
Efficiency Opportunity #5:	Eliminate redundant approvals and streamline routing wherever possible. Can two internal approvals be reduced to one?
Efficiency Opportunity #6	Allow for electronic signatures from Counties. This can be done either through allowing PDFs of scanned originals, or using an e-signature application. These types of systems are widely used to execute a variety of legally binding documents, loan closings, and contracts. Electronic signatures are legally binding as established under the Electronic Signatures in Global and National Commerce Act of 2000[51] and the Uniform Electronic Transaction Act of 1999[52].
Efficiency Opportunity #7	Implementation of a single, shared electronic platform where documents may be housed, accessed, and updated seamlessly in a real-time environment. LGTS is capable of providing this type of platform, which greatly reduces the number of physical hand-offs as well as the time required to effectuate revisions and edits to drafts and correspondence.

Swim Lane #4: Issue Interim Loan Agreement – Clean Water

The Interim Loan Agreements consume a lot of staff time in their preparation and transportation, as well as present borrowers with an increased level of complexity that may be unwarranted. Ninety percent of the task time associated with this process is for Handling/Processing activity, the majority of which may be attributed to waiting for review, approvals, signatures, as well as cumbersome routing practices.

[51] The Electronic Signatures in Global and National Commerce Act (*ESIGN*, Pub.L. 106–229, 114 Stat. 464, enacted June 30, 2000, 15 U.S.C. ch. 96)

[52] Hawaii Revised Statutes §489E-1 et seq. available at http://www.capitol.hawaii.gov/hrscurrent/Vol11_Ch0476-0490/HRS0489E/HRS_0489E-.htm



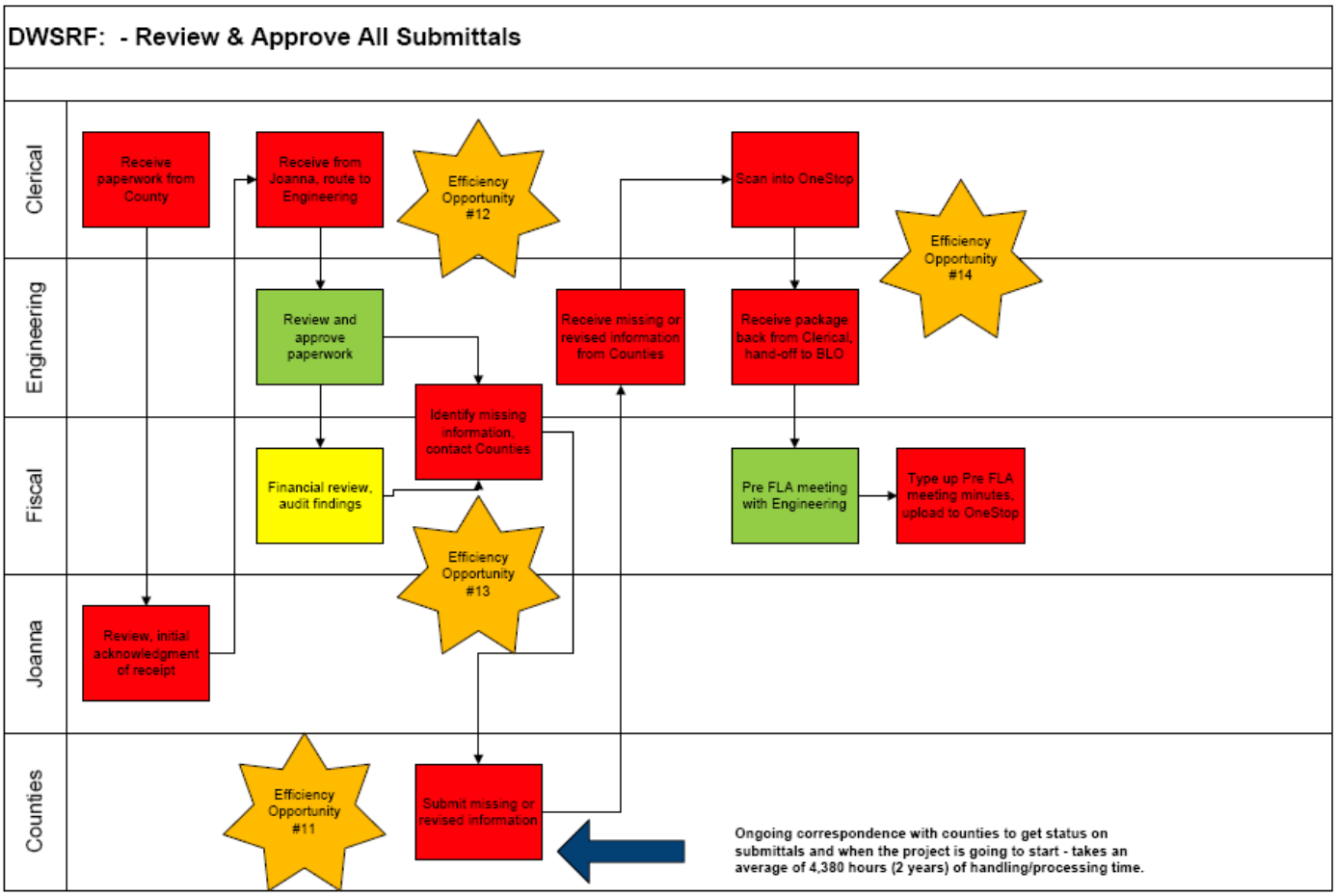
Efficiency Opportunity #8	It may be appropriate to reconsider the necessity of the Interim Loan Agreement in its current, lengthy iteration. Many state programs have successfully been able to offer their applicants assurances of a binding commitment using legal instruments of greater brevity, yet equal reliability and enforceability. Transitioning to the use of a Binding Commitment Letter, or at the very least a revised and streamlined document can save a significant amount of time spent both internally and externally on preparation, drafting, reviewing, approving, and execution.
Efficiency Opportunity #9	It is a time-consuming process to get pre-approval from the Attorney General for each project every time that DOH sends out an Interim Loan Agreement. It may be possible to eliminate this process by developing a boilerplate template that has been reviewed and approved by the Attorney General at its conception, thereby making the need for pre-approval of each separate ILA obsolete.
Efficiency Opportunity #10	Producing four copies of this 60+ page document represents a significant amount of unnecessary waste and materials costs. Find out if Counties are amenable to receiving electronic copies of the ILA, as well

	as moving toward an electronic signature process as mentioned in Efficiency Opportunity #6. Create one master loan agreement for each county. Amend that loan agreement every time a new project is added to reflect the new loan amount, new (single) amortization schedule, and any new requirements in an addendum.

Swim Lane #5: Review and Approve All Submittals – DW and CW

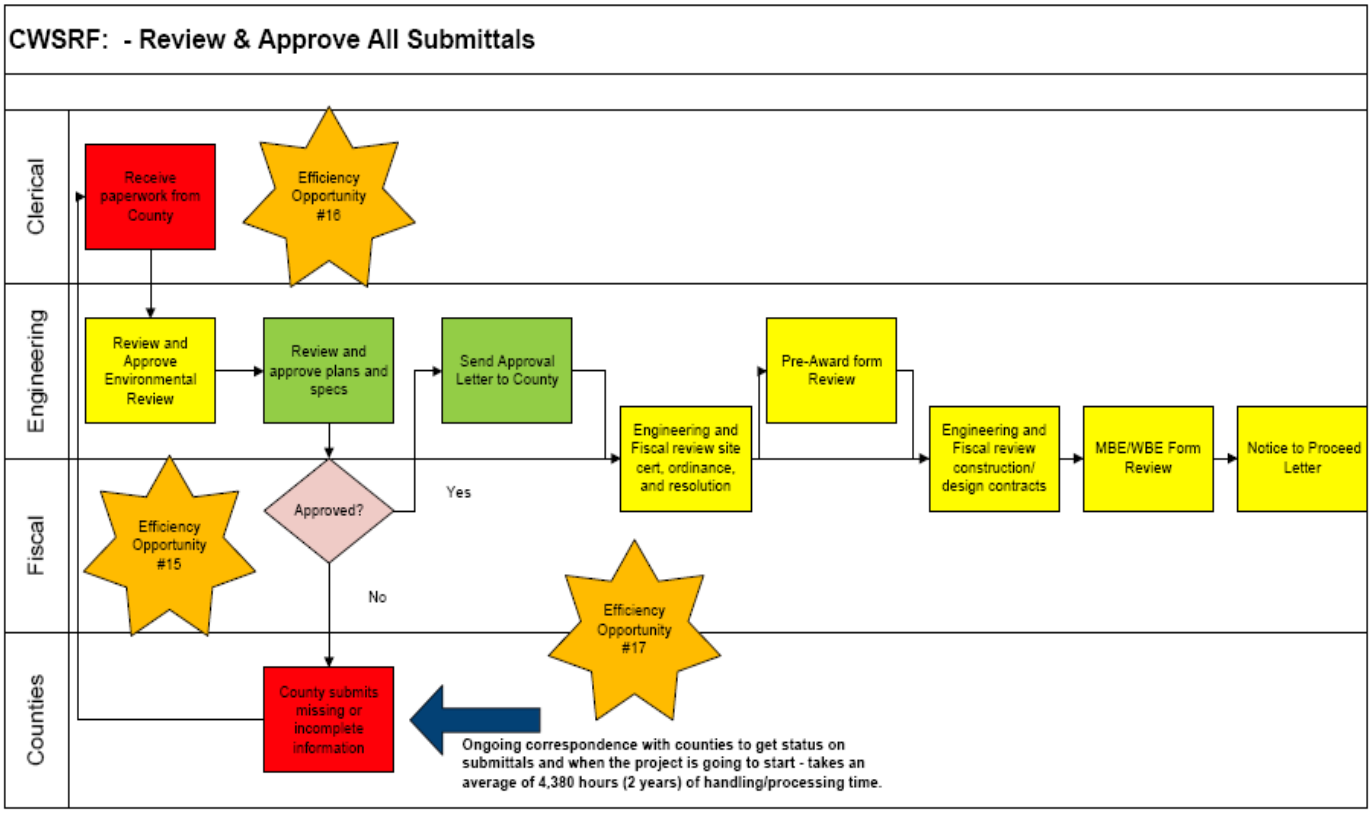
This process proves to be one of the more problematic for both the CWSRF and the DWSRF programs, largely owing to the amount of time that staff spends in ongoing correspondence with Counties to get status updates on when a project is going to start, collect all of the required submittals such as the Environmental Assessment, Facilities Plans, Plans and Specifications, Construction Contracts, and the like. As previously mentioned, DOH staff can easily spend up to two years trying to procure this documentation and information.

Another observation generated from the POD exercise is the difference in the number of hand-offs and approvals associated with this process between the CWSRF and the DWSRF programs: 12 hand-offs and 10 approvals in DW, 2 hand-offs and 1 approval in CW. There appears to be a more collaborative workflow between the WRFS and engineering units in the CWSRF program in the review and approval of the applicant submittal package, whereas the flow in DWSRF appears to be more fragmented thus creating a greater back-and-forth transportation pattern.



Efficiency Opportunity #11	Establish a formalized Communications Strategy that incorporates more frequent face-to-face interactions with Counties and DOH staff to discuss current Capital Improvement Plan projects, budgets, and timing. DOH should talk with Counties about preparing all of their projects as SRF projects, including the necessary compliance language and documentation addressing things like Davis-Bacon, American Iron and Steel, etc. This is something that Counties used to do, but have since stopped doing; it would be beneficial to the SRF program and Counties alike to re-introduce this practice. DOH and Counties should work more cooperatively to align CIP budget schedules with those of the SRF funding cycle to maximize project opportunities and cost savings through utilization of SRF loans.
Efficiency Opportunity #12	Improved and more frequent internal two-way communication between the engineering and WRFS units. Working more collaboratively with greater balance of participation from each respective unit can make a big impact on the amount of back and forth communications taking place, the unnecessary transportation of documentation, and reduce the number of approvals necessary to complete this process. The current routing

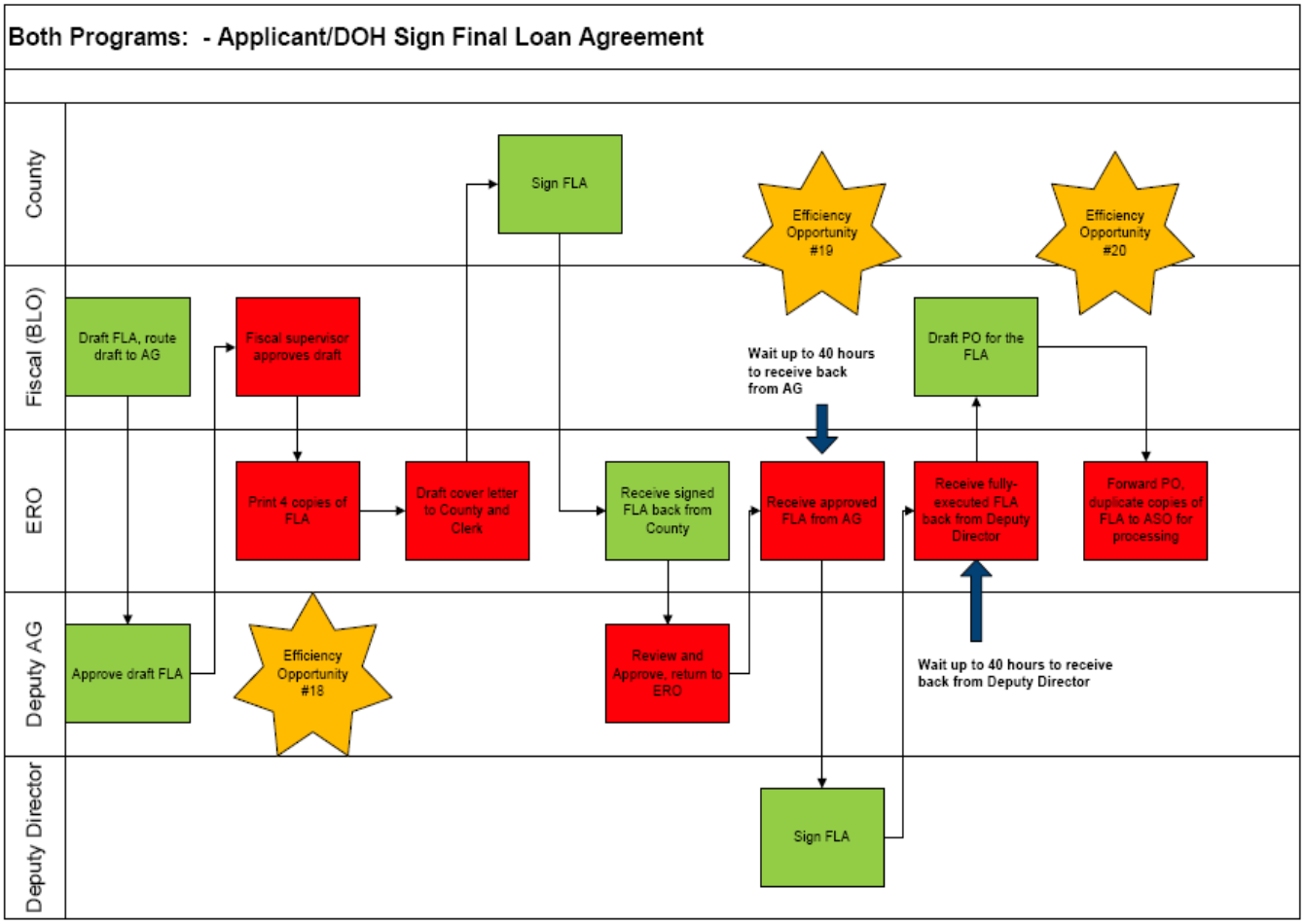
	system in place takes a lot of time and channels through numerous individuals unnecessarily.
Efficiency Opportunity #13	Establish meaningful and enforceable deadlines in which Counties who are applying for SRF funding must submit documentation or information. Their failure to do so may result on their project being place on an "inactive list" until such time that they have met certain milestones that indicate they are serious about moving forward with the project and have demonstrated that the project is ready to proceed based on well-defined criteria. DOH has been taking a more assertive approach to ensuring that projects remain viable and moving; developing more formalized guidance for borrowers that clearly identifies expectations, deadlines, and consequences for failure to meet established deadlines can make a positive impact on these processes.
Efficiency Opportunity #14	Automation that allows for the electronic submittal of documentation from borrowers routed directly into a shared-platform repository. This may also benefit from the addition of an auto-notification feature that sends an email alert to DOH staff (engineering and WRFS) when documents come in, allowing for concurrent reviews to take place.



Efficiency Opportunity #15	The way in which DOH administers the SERP and satisfies the Environmental Review requirements as described in both the CWSRF and DWSRF regulations puts both programs in positions of potential risk. By allowing applicants to render their own Environmental Decision, DOH is open to challenges of the Environmental Decision in the event of any public outcry which may result in projects stalling out, legal action, and unwanted negative publicity that reflects poorly on the SRF program as a whole. This could become especially problematic if the DWSRF program starts to make loans to private water systems. It is important that DOH retain the accountability and the authority of issuing the Environmental Decision based on the Environmental Assessment documentation and relevant correspondence from state and federal cross-cutting authorities to protect both the interests of the SRF program, as well as those of its borrowers.
Efficiency Opportunity #16	Automation that allows for the electronic submittal of documentation from borrowers routed directly into a shared-platform repository. This may also benefit from the addition of an auto-notification feature that sends an email alert to DOH staff (engineering and WRFS) when documents come in, allowing for concurrent reviews to take place.
Efficiency Opportunity #17	See Efficiency Opportunity #11 above

Swim Lane #6: Issue the Final Loan Agreement – DW and CW

In both programs, 94 percent of the time required to complete this process has been categorized as Handling/Processing and is characterized by another round of excessive reviews and approvals (both internally and externally), document transportation, and inefficient routing practices. There are over 80 hours alone spent waiting for documents to be approved and returned from both the Attorney General and Deputy Director's office.

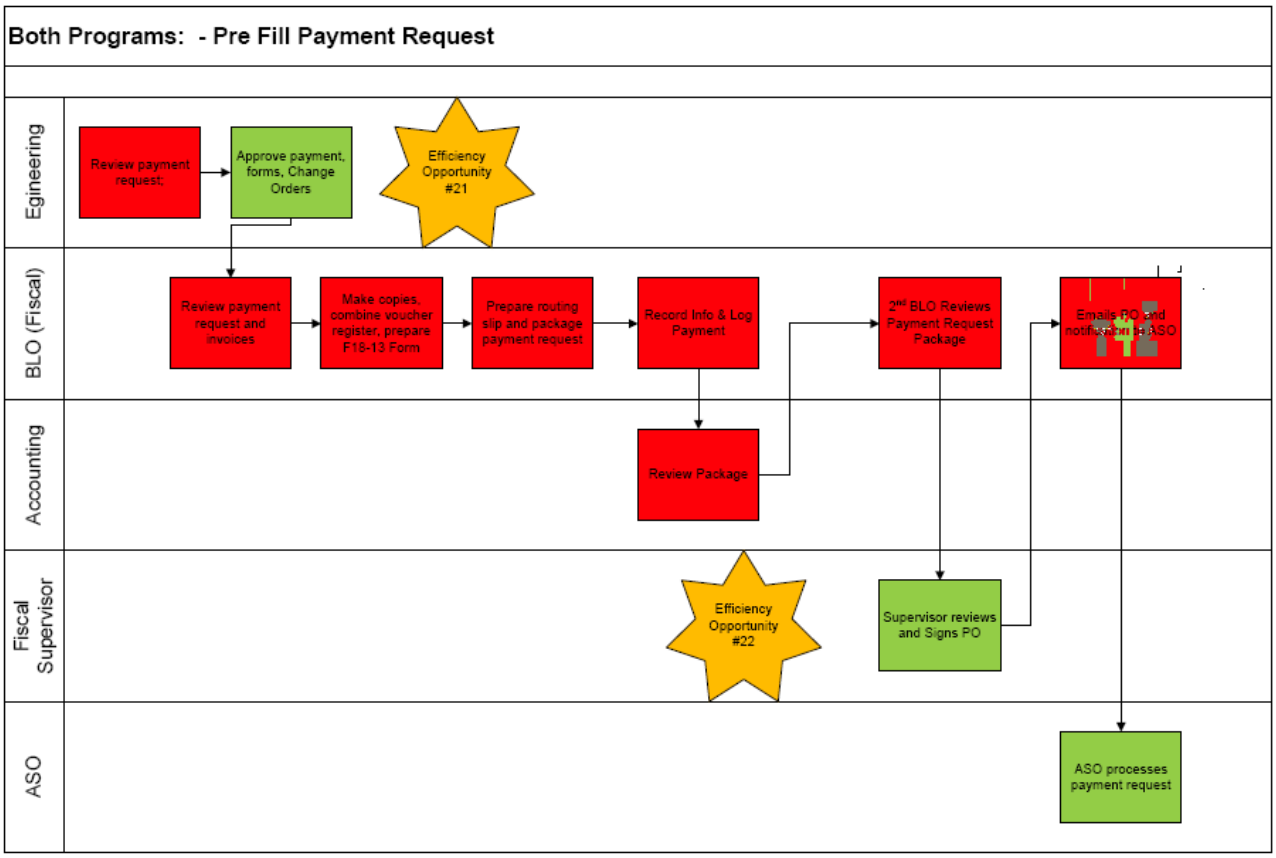


Efficiency Opportunity #18	Producing four copies of this 60+ page document represents a significant amount of unnecessary waste and materials costs. Find out if Counties are amenable to receiving electronic copies of the Final Loan Agreement, as well as moving toward an electronic signature process as mentioned in Efficiency Opportunity #6. This process could also benefit from the implementation of a single, shared electronic platform where documents may be housed, accessed, and updated seamlessly in a real-time environment which can greatly reduce the number of physical hand-offs as well as the time required to effectuate revisions and edits to drafts and correspondence.
Efficiency Opportunity #19	It is a time-consuming process to get pre-approval from the Attorney General for each project every time that DOH sends out a Final Loan Agreement. It may be possible to eliminate this process by developing a boilerplate template that has been reviewed and approved by the Attorney General at its conception, thereby making the need for pre-approval of each separate agreement unnecessary.
Efficiency Opportunity #20	Consider whether it is possible to have the Attorney General and the Deputy Director sign the Final Loan Agreement without the transmittal memorandum, received electronically via email, and if electronic

	signatures (or PDF of the signed document) may be used in lieu of wet signatures. See references presented in Efficiency Opportunity #6.

Swim Lane #7: Pre-Fill Borrower Payment Request – DW and CW

Borrowers are encouraged to submit payment requests on a monthly basis, though that is not strictly enforced. Receiving payment requests from borrowers and their contractors on time is a constant challenge and contributes to additional delays in getting federal funds out the door quickly. A lot of staff time is spent pre-filling and correcting payment requests that are submitted by borrowers. Adding to the issue is the requirement as specified by both ASO and DAGS that borrowers must submit a wet signature for disbursement requests, which also delays requests and can cause back-and-forth if not done correctly the first time.



Efficiency Opportunity #21	DOH should consider accepting electronic copies of disbursements, but require borrowers to submit a separate, single page with a wet signature of the authorized representative certifying that the submitted request (identified by request number) is accurate and correct. Copies of the electronic submission could be distributed to all reviewers simultaneously, and a Sharepoint spreadsheet set up to

	track reviews/approvals. Implementation of electronic signatures could be added at a later date. This would reduce the volume of copying/packaging/routing.
Efficiency Opportunity #22	Provide training to borrowers on completing disbursement forms. Create pre-filled forms with checklists for borrowers to self-check their work. NB: Create an example of a simplified, pre-filled disbursement request form that would allow DOH to prepare most of the form in advance.

Developing the Future State

The findings of the POD and the 22 Efficiency Opportunities that have been identified will be explored in detail in the Northbridge Management Study Report. This report will, among other things, extrapolate various options for overcoming the obstacles that POD has identified: streamlining elements of the pre-application, loan application, and internal review processes, as well as cultivate strategies for enhanced demand management, robust communications and marketing, and improved integration of the WRFS unit in the SRF process. Options that are presented will be accompanied by specific examples from other State DWSRF programs from around the country to provide a context of how such options have been used effectively and successfully.

The development of the Future State will be dependent upon the options that DOH elects to pursue upon review of the Management Study, some of which may require regulatory changes that influence the Current State as it functions today. The implementation effort can be done successfully by laying a strong and clearly thought-out foundation on which to continue building as the corpus of the Future State begins to develop.