

## MINUTES

### REGULAR MEETING OF THE BOARD OF WATER SUPPLY

January 28, 2019

At 2:01 pm on January 28, 2019 in the Board Room of the Public Service Building at 630 South Beretania Street, Honolulu, Hawaii, Board Chair Andaya called to order the Regular Meeting.

Present: Bryan P. Andaya, Chair  
Kapua Sproat, Vice Chair  
Kay C. Matsui  
Ray C. Soon  
Max J. Sword  
Ross S. Sasamura  
Jade T. Butay

Also Present: Ernest Lau, Manager and Chief Engineer  
Ellen Kitamura, Deputy Manager and Chief Engineer  
Erwin Kawata  
Mike Fuke  
Mike Matsuo  
Joe Cooper  
Kathleen Elliott-Pahinui  
Michele Thomas  
Barry Usagawa  
Kevin Ihu  
Henderson Nuuhiwa  
Leanne Matsumoto  
Jennifer Elflein  
Owen Narikawa  
Lester Fujikawa  
Nolan Chang  
Stuart Wong  
Jin Ling Yan

Others Present: Jessica Wong, Deputy Corporation Counsel  
Lawrence Chew, N&K CPAs  
Ryan Iwane, N&K CPAs  
David Brown, Morgan, Lewis and Bockius LLP  
Joseph Tracy, Interra  
Chris Harris, Harris & Co.  
Tom Myers, Brown and Caldwell  
Bruce Wayne, Olelo  
Sonny Jakahi, Public

**APPROVAL OF  
MINUTES**

Approval of the Minutes of the Regular Meeting held on January 28, 2019.

**MOTION  
TO APPROVE**

Board Members Jade Butay and Max Sword motioned and seconded, respectively, to approve the Minutes of the Regular Meeting of January 28, 2019. The motion was unanimously carried.

ITEM FOR INFORMATION NO. 1

"January 28, 2019

FINANCIAL  
STATEMENTS  
AND  
SUPPLEMENTAL  
INFORMATION

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chair and Members:

Subject: Financial Statements and Supplemental Information with  
Independent Auditors' Report, Fiscal Years Ended  
June 30, 2018

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Our auditors, N&K CPAs, Inc., have completed the audit of the financial statements and federal awards of the Board of Water Supply and issued an unmodified opinion. They have indicated that there are no weaknesses on internal control over financial reporting.

Attached is the auditors' required communication letter dated December 5, 2018. Copies of the financial statements of the Board of Water Supply and the reports thereon by N&K CPAs, Inc., covering the results of their examination of the accounts and financial status of the Board of Water Supply for the year ended June 30, 2018 as required under Article VII, Section 7-108 of the Revised Charter, are also attached.

Lawrence Chew and Ryan Iwane from N&K CPAs, Inc. will present highlights from the auditors' report.

Respectfully submitted,

/s/ for ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

Attachments"

The foregoing was for information only.

DISCUSSION:

Lawrence Chew and Ryan Iwane of N&K CPAs, Inc., provided the auditor's report on the Financial Statements and Single Audit reports of the BWS for Fiscal Year ended June 30, 2018. Manager Lau asked to clarify the purpose of GASB 75 accounting for post-employment benefits in the financial statement. Lawrence Chew explained it as an accounting and financial reporting liability to be recorded on the financial statements which is a national requirement. Lawrence Chew thanked BWS for its assistance and cooperation during the audit. Manager Lau thanked N&K CPAs for working with BWS on the audit. There were no other comments or discussion.







N&K CPAs, Inc.

ACCOUNTANTS|CONSULTANTS



# Board of Water Supply

City and County of Honolulu

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Single Audit for the Fiscal Year Ended

June 30, 2018

## Scope of Services

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- To express an opinion on the fair presentation of the Board of Water Supply's financial statements as of and for the fiscal year ended June 30, 2018.
- To express an opinion on compliance with applicable federal requirements that could have a direct and material effect on each of the Board of Water Supply's major federal programs for the fiscal year ended June 30, 2018.
- Our audit was performed in accordance with auditing standards generally accepted in the United States of America, the standards applicable to financial audits contained in *Government Auditing Standards*, and the audit requirements of the Uniform Guidance (Title 2 CFR Part 200)

# Summary of Auditor's Results

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## **Financial Statements**

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP:

Unmodified

Internal control over financial reporting:

Material weakness(es) identified?

\_\_\_ yes

☒ no

Significant deficiency(ies) identified?

\_\_\_ yes

☒ none reported

Noncompliance material to financial statements noted?

\_\_\_ yes

☒ no

## **Federal Awards**

Internal control over major federal programs:

Material weakness(es) identified?

\_\_\_ yes

☒ no

Significant deficiency(ies) identified?

\_\_\_ yes

☒ none reported

Type of auditor's report issued on compliance for major federal programs:

Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?

\_\_\_ yes

☒ no

# Summary of Auditor's Results (Continued)

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Identification of major federal programs:

CFDA Number

66.468

Name of Federal Program or Cluster

Capitalization Grants for Drinking  
Water State Revolving Funds

Dollar threshold used to distinguish between type A  
and type B programs:

\$750,000

Auditee qualified as a low-risk auditee?

☐ yes

☒ no

## **SECTION II - FINANCIAL STATEMENT FINDINGS**

No matters were reported.

## **SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS**

No matters were reported.

## Required Communication with Those Charged with Governance at the Conclusion of the Audit

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- Auditor's views about the BWS's significant accounting policies, sensitive accounting estimates and financial statement disclosures.
- No significant difficulties were encountered during the audit.
- No disagreements with management about financial accounting, reporting, or auditing matters arose during the course of the audit.
- Management corrected all known and likely misstatements identified during the audit. None of these misstatements were considered material, either individually or in the aggregate.

## Adoption of New Accounting Principle in FY 2018

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- GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB)*
  - The requirements of this statement apply to the financial statements of all state and local governmental entities.
  - Requires the net OPEB liability to be measured as the portion of the actuarial present value of projected OPEB benefit payments attributed to past periods of employee service, net of the OPEB plan's fiduciary net position. Information on the net OPEB liability can be found in Note M (pages 43 to 48) to the financial statements.
  - The cumulative effect of applying the requirements of GASB 75 resulted in the retroactive reduction to beginning net position by \$84,461,339 as of June 30, 2017, which is disclosed in Note O (page 49) to the financial statements.



N&K CPAs, Inc.

ACCOUNTANTS|CONSULTANTS

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To the Board of Directors  
Board of Water Supply  
City and County of Honolulu

We have audited the financial statements of the Board of Water Supply ("BWS"), a component unit of the City and County of Honolulu, as of and for the fiscal year ended June 30, 2018. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America, *Government Auditing Standards* and the Uniform Guidance, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated July 5, 2018. Professional standards also require that we communicate to you the following information related to our audit.

#### Significant Audit Findings

##### *Qualitative Aspects of Accounting Practices*

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the BWS are described in Note B to the financial statements. In 2018, the BWS adopted the provisions of Government Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. This statement requires the liability of the BWS to employees for postemployment benefits other than pensions (OPEB) to be measured as the portion of the present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees' past periods of service, net of the OPEB plan's fiduciary net position. This change has been applied by retroactively restating the beginning net position of the BWS as of June 30, 2017.

We noted no transactions entered into by the Board of Water Supply during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the BWS's financial statements were:

1. Valuation allowance for receivables
2. Depreciation of capital assets
3. Net pension liability
4. Postemployment benefits other than pensions (OPEB) liability
5. Accrued workers' compensation liability

Management's estimate of the valuation allowances for receivables is based on historical collection experience and the length of time individual receivables are past due. We evaluated the key factors and assumptions used for the valuation allowance in determining that it is reasonable in relation to the financial statements taken as a whole.

Management's estimate of depreciation recorded on capital assets is based in part on the estimated useful lives of those capital assets. We evaluated the key factors and assumptions used to estimate



depreciation of the Board of Water Supply's capital assets in determining that it is reasonable in relation to the financial statements taken as a whole.

The collective net pension liability, deferred inflows of resources, and deferred outflows of resources of the cost-sharing multiple employer defined pension plan administered by the State of Hawai'i's Employee Retirement System was determined by an actuarial valuation. The BWS's proportionate share of the collective net pension liability, deferred inflows of resources, deferred outflow of resources was based on the BWS's contributions to the pension plan relative to the contributions of all participating employers during the measurement period. We evaluated the key factors and assumptions used to estimate the BWS's proportionate share of the collective net pension liability, deferred inflows of resources, deferred outflow of resources in determining that it is reasonable in relation to the financial statements taken as a whole.

The net OPEB liability was measured as the portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service, net of the OPEB plan's fiduciary net position. We evaluated the key factors and assumptions used to estimate the net OPEB liability and related deferred inflows of resources, deferred outflows of resources, and OPEB expense in determining that it is reasonable in relation to the financial statements taken as a whole.

The accrued workers' compensation liability was determined using an actuarial analysis performed by a third-party specialist. We evaluated the key factors and assumptions used to estimate the accrued workers' compensation liability in determining that it is reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

1. The net pension liability and related pension expense of the BWS in Note M to the financial statements. The net pension liability was determined by an actuarial valuation that required the use of several significant actuarial assumptions, which are also described in Note M.
2. The adoption of GASB Statement No. 75 in Note O to the financial statements and the effect the change had on the presentation of the BWS's financial statements compared to the prior year presentation. The cumulative effect of applying the requirements of GASB Statement No. 75 resulted in a reduction to beginning net position by \$84,461,339 as of June 30, 2017. As of June 30, 2018, the BWS reported a net OPEB liability of \$74,721,923, which is disclosed in Note M to the financial statements.

The financial statement disclosures are neutral, consistent, and clear.

#### *Difficulties Encountered in Performing the Audit*

We encountered no significant difficulties in dealing with management in performing and completing our audit.

#### *Corrected and Uncorrected Misstatements*

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the BWS's financial statements taken as a whole.

*Disagreements with Management*

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

*Management Representations*

We have requested certain representations from management that are included in the management representation letter dated December 5, 2018.

*Management Consultations with Other Independent Accountants*

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the BWS's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

*Other Audit Findings or Issues*

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the BWS's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to management's discussion and analysis and the schedules of proportionate share of the net pension liability, contributions (pension), changes in the net OPEB liability and related ratios, and contributions (OPEB), which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the schedules of expenditures of federal awards, bonds payable and net revenue requirement, which accompany the financial statements but are not RSI. With respect to this supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory section, which accompanies the financial statements but is not RSI. Such information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

N&K CPAs, Inc.

ACCOUNTANTS | CONSULTANTS

Restriction on Use

This information is intended solely for the information and use of the board of directors and management of the BWS and is not intended to be, and should not be, used by anyone other than these specified parties.

*N + K CPAs, INC.*

Honolulu, Hawai'i  
December 5, 2018



**BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU**

**SINGLE AUDIT REPORTS**

**Fiscal Year Ended June 30, 2018**

December 5, 2018

To the Board of Directors  
Board of Water Supply  
City and County of Honolulu

We have completed our audit of the basic financial statements of the Board of Water Supply (the "BWS"), a component unit of the City and County of Honolulu, as of and for the fiscal year ended June 30, 2018. Our report containing our opinion on those basic financial statements is included under a separate cover. We submit herein our reports on the BWS's internal control over financial reporting and compliance, compliance for each major federal program, internal control over compliance, and on the schedule of expenditures of federal awards.

## OBJECTIVES OF THE AUDIT

The primary objectives of the audit were as follows:

1. To express an opinion as to whether the financial statements are fairly presented, in all material respects, in accordance with accounting principles generally accepted in the United States of America and to report on the fairness of the schedules of expenditures of federal awards, bonds payable and net revenue requirement when considered in relation to the financial statements as a whole.
2. To report on internal control over financial reporting and compliance with provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements in accordance with *Government Auditing Standards*.
3. To report on internal control related to major federal programs and an opinion on compliance with federal statutes, regulations, and the terms and conditions of federal awards that could have a direct and material effect on each major federal program in accordance with the Single Audit Act Amendments of 1996 and Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance).

## SCOPE OF THE AUDIT

Our audit was performed in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of the Uniform Guidance.

## ORGANIZATION OF THE REPORT

This report is presented in four parts as follows:

- Part I - Report on internal control over financial reporting and on compliance and other matters.
- Part II - Report on compliance for each major federal program; report on internal control over compliance; and report on the schedule of expenditures of federal awards required by the Uniform Guidance.
- Part III - The schedule of findings and questioned costs.
- Part IV - The summary schedule of prior audit findings.

We wish to express our sincere appreciation for the excellent cooperation and assistance extended by the staff of the BWS.

Sincerely,

*N + K CPAs, INC.*

N&K CPAs, Inc.

## BOARD OF WATER SUPPLY

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**PART I**

**REPORT ON INTERNAL CONTROL OVER FINANCIAL  
REPORTING AND ON COMPLIANCE AND OTHER MATTERS**

**REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN  
ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

**INDEPENDENT AUDITOR'S REPORT**

To the Board of Directors  
Board of Water Supply  
City and County of Honolulu

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Board of Water Supply (the "BWS"), a component unit of the City and County of Honolulu, as of and for the fiscal year ended June 30, 2018, and the related notes to the financial statements, and have issued our report thereon dated December 5, 2018.

**Internal Control over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the BWS's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the BWS's internal control. Accordingly, we do not express an opinion on the effectiveness of the BWS's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the BWS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*N + K CPAs, INC.*

Honolulu, Hawai'i  
December 5, 2018

**PART II**

**REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL  
PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND  
REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
REQUIRED BY THE UNIFORM GUIDANCE**

**REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM;  
REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND  
REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL  
AWARDS REQUIRED BY THE UNIFORM GUIDANCE**

**INDEPENDENT AUDITOR'S REPORT**

To the Board of Directors  
Board of Water Supply  
City and County of Honolulu

**Report on Compliance for Each Major Federal Program**

We have audited the Board of Water Supply's (the "BWS") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the BWS's major federal programs for the fiscal year ended June 30, 2018. The BWS's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

**Management's Responsibility**

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

**Auditor's Responsibility**

Our responsibility is to express an opinion on compliance for each of the BWS's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements

referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the BWS's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the BWS's compliance.

### **Opinion on Each Major Federal Program**

In our opinion, the BWS complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the fiscal year ended June 30, 2018.

### **Report on Internal Control over Compliance**

Management of the BWS is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the BWS's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the BWS's internal control over compliance.

*A deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

#### **Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance**

We have audited the financial statements of the BWS as of and for the fiscal year ended June 30, 2018, and have issued our report thereon dated December 5, 2018, which contained an unmodified opinion on those financial statements. Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

*N + K CPAs, INC.*

Honolulu, Hawai'i  
December 5, 2018

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
Fiscal Year Ended June 30, 2018**

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Total Federal Expenditures
<b>ENVIRONMENTAL PROTECTION AGENCY</b>			
Pass-through Department of Health, State of Hawai'i			
Capitalization Grants for Drinking Water State Revolving Funds	66.468	ASO Log 17-118	\$ <u>2,538,800</u>
<b>TOTAL EXPENDITURES OF FEDERAL AWARDS</b>			\$ <u>2,538,800</u>

The accompanying notes are an integral part of this schedule.



**Board of Water Supply  
City and County of Honolulu  
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
Fiscal Year Ended June 30, 2018**

**NOTE A - BASIS OF PRESENTATION**

The accompanying schedule of expenditures of federal awards (the "Schedule") includes the federal award activity of the BWS under programs of the federal government for the fiscal year ended June 30, 2018. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the BWS, it is not intended to and does not present the financial position, changes in net position, or cash flows of the BWS.

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

Expenditures reported on the Schedule are reported on a modified accrual basis of accounting under which expenditures are reported when incurred and when reimbursed by federal loan proceeds received from the pass-through entity during the audit period. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement.

**NOTE C - INDIRECT COST RATE**

The BWS has elected not to use the 10-percent de minimis indirect cost rate allowed under the Uniform Guidance.

**PART III**  
**SCHEDULE OF FINDINGS AND QUESTIONED COSTS**

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF FINDINGS AND QUESTIONED COSTS  
Fiscal Year Ended June 30, 2018**

**SECTION I - SUMMARY OF AUDITOR'S RESULTS**

**Financial Statements**

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP:

Unmodified

Internal control over financial reporting:

Material weakness(es) identified?

☐ yes

☒ no

Significant deficiency(ies) identified?

☐ yes

☒ none reported

Noncompliance material to financial statements noted?

☐ yes

☒ no

**Federal Awards**

Internal control over major federal programs:

Material weakness(es) identified?

☐ yes

☒ no

Significant deficiency(ies) identified?

☐ yes

☒ none reported

Type of auditor's report issued on compliance for major federal programs:

Unmodified

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?

☐ yes

☒ no

Identification of major federal programs:

CFDA Number

66.468

Name of Federal Program or Cluster

Capitalization Grants for Drinking Water State Revolving Funds

Dollar threshold used to distinguish between type A and type B programs:

\$750,000

Auditee qualified as a low-risk auditee?

☐ yes

☒ no

**SECTION II - FINANCIAL STATEMENT FINDINGS**

No matters were reported.

**SECTION III - FEDERAL AWARD FINDINGS AND QUESTIONED COSTS**

No matters were reported.

**PART IV**  
**SUMMARY SCHEDULE OF PRIOR AUDIT FINDINGS**

**Board of Water Supply  
City and County of Honolulu  
Status Report  
Fiscal Year Ended June 30, 2018**

No prior audit findings which apply under the current criteria of the Uniform Guidance were noted.



**Board of Water Supply  
City and County of Honolulu**

**FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION  
WITH INDEPENDENT AUDITOR'S REPORT**

**Fiscal Year Ended June 30, 2018**

**BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU**

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**Board of Water Supply  
City and County of Honolulu  
INTRODUCTION  
Fiscal Year Ended June 30, 2018**

The Board of Water Supply of the City and County of Honolulu (BWS) is pleased to present its Annual Financial Report for fiscal year 2018. This introduction provides a brief overview of the mission, organization, and operations of the BWS. The following management's discussion and analysis is intended to provide the reader with an easily understandable analysis of the BWS's financial performance and all aspects of its financial position. Financial statements presenting the financial position and results of operations and cash flows of the BWS in conformity with accounting principles generally accepted in the United States of America, accompanied by the independent auditor's report, follows the management's discussion and analysis.

## **HISTORY OF THE BOARD OF WATER SUPPLY**

The BWS was created in 1929 by the Territorial Legislature in response to public outcry for a truly effective water management system that was above politics. The 1929 Legislature passed Act 96 to create and define the powers and duties of the Honolulu Board of Water Supply. Although it remained as a department of the City and County of Honolulu (City), the BWS was designed to be a semi-autonomous and self-supporting agency with the authority to charge for water usage to support its capital improvement and operating expenses and set long-term plans for Oahu's water future.

## **POWERS, DUTIES, AND FUNCTIONS**

The BWS manages Oahu's municipal water resources and distribution system, providing residents with a safe, dependable, and affordable drinking water supply.

The BWS is the largest municipal water utility in the state of Hawaii. In fiscal year 2018, the BWS delivered potable and non-potable water to approximately one million customers on Oahu. The BWS carefully and proactively manages and invests in its intricate system, consisting of 94 active potable water sources, 171 reservoirs, and over 2,100 miles of pipeline.

The BWS is a financially self-sufficient, semi-autonomous agency of the City and County of Honolulu. Its operations and projects are financed with revenues generated by water transmission and distribution fees. It receives no tax money from the City. The BWS also pursues federal and state grants to help subsidize BWS projects.

The BWS is governed by a Board of Directors (Board), consisting of seven members. Five members are appointed by the Mayor and are confirmed by the Honolulu City Council. The remaining two serve in their capacities as the Director of the State Department of Transportation, and the Director and Chief Engineer of the City's Department of Facility Maintenance. The Board appoints the BWS Manager and Chief Engineer to administer the BWS.

The BWS consists of the following 10 divisions: Capital Projects Division, Customer Care Division, Field Operations Division, Finance Division, Information Technology Division, Land Division, Office of the Manager and Chief Engineer, Water Quality Division, Water Resources Division, and Water System Operations Division.

**Board of Water Supply  
City and County of Honolulu  
INTRODUCTION  
Fiscal Year Ended June 30, 2018**

**MISSION**

The BWS mission is to provide a safe, dependable, and affordable water supply now and into the future, focusing in three strategic areas: resource, operational, and financial sustainability.

- **Resource Sustainability (Safe).** Protect, conserve and manage Oahu's water supplies and watersheds now and into the future through adaptive and integrated strategies.
- **Operational Sustainability (Dependable).** Build an effective organization that continuously works to improve dependable service.
- **Financial Sustainability (Affordable).** Implement sound fiscal strategies to provide safe, dependable and affordable water service.

**ACCOMPLISHMENTS**

BWS employees work diligently to provide safe, dependable, and affordable water service to customers by concentrating their efforts to achieve the BWS's strategic goals:

**Resource Sustainability (Safe)**

- Conducted 47,152 chemical tests, 31,304 microbiological tests, and collected 18,036 samples from BWS sources, distribution systems and treatment facilities to ensure all water served is safe to drink; tests performed this fiscal year include regulatory compliance testing, groundwater quality testing and response to customer inquiries about water quality; BWS continues to monitor the Red Hill Fuel Storage Facilities and provide input to the Administrative Order of Consent as subject matter experts.
- In June 2018, BWS completed its annual production and delivery of the Consumer Confidence Report (CCR), also known as the Water Quality Report, to all BWS customers. The report provides information on the quality of the water delivered from the BWS system and was mailed to all customers on record and is also available at [www.boardofwatersupply.com](http://www.boardofwatersupply.com). The BWS also placed ads in Honolulu newspapers, including various ethnic language publications, to inform community members of the distribution.
- Potable water demand continues its downward trend of approximately 10% from 1990 to 2018 due to advanced water conservation efforts, economic incentives from sewer and water rate increases, recycled water, public education, and leak detection and repair programs in the BWS water system. BWS also launched a rebate program for water efficient clothes washers and rain barrels to continue conservation in the home.

**Board of Water Supply  
City and County of Honolulu  
INTRODUCTION  
Fiscal Year Ended June 30, 2018**

- Recycled water is an important conservation strategy to reduce potable water consumption to extend our high-quality water supplies. Recycled water use from the Honouliuli Water Recycling Facility provides an alternative water supply in Ewa for irrigation and industrial purposes. Recycled water production from the BWS Honouliuli Water Recycling Facility averaged approximately eight million gallons per day. BWS is seeking State of Hawaii land to construct an elevated recycled water reservoir, which will increase recycled water use in Ewa.
- BWS staff held 28 outdoor water conservation classes at the Halawa Xeriscape Garden. 588 community members attended these classes focused on reducing water use through efficient landscaping.
- The BWS sponsored its 40th annual Water Conservation Week Poster Contest and the 10th annual Water Conservation Week Poetry Contest, receiving more than 1,056 posters and 320 poems from more than 60 Oahu schools, focused on the theme "Conserve To Preserve." All winning entries will be featured in the 2019 Water Conservation Calendar scheduled for distribution in December 2018.

**Operational Sustainability (Dependable)**

- Developed a five-year proposed Schedule of Rates and Charges and held four public hearings, made presentations to 15 neighborhood boards and 10 small special interest group meetings (realtors, developers, farmers, AARP), reaching more than 700 residents through these outreach efforts;
- Completed a comprehensive evaluation of fiscal needs including a Cost of Service study and rate design, revisions to financial policies, 10-year and 30-year financial budgets, and a long-term debt plan; this long-range financial plan will provide the fiscal capability to maintain and improve the infrastructure of water mains, water sources, pumps and reservoirs;
- May 2018 marked the third year of the Stakeholder Advisory Group (SAG) - a group comprised of nearly 30 local residents, civic organization leaders, and business and environmental professionals, covering all City Council districts - whose purpose is to provide important feedback on the BWS Water Master Plan, financial plan, proposed rate study and other important initiatives such as water conservation, recycled water and watershed management; and the SAG effort demonstrates the BWS commitment to increase responsiveness and transparency of public engagement and communications;
- The development of a new Customer Self-Service web portal, and an Interactive Voice Response (IVR) capability integrated with our Customer Care and Billing system was initiated in FY 2017 and is on-going. This will provide our customers the ability to initiate actions and interactions with the BWS, at their convenience, without having to call in and speak with a Customer Service Representative.
- Responded to 321 main breaks, or about 15 breaks per 100 miles of pipeline.

**Board of Water Supply  
City and County of Honolulu  
INTRODUCTION  
Fiscal Year Ended June 30, 2018**

- BWS staff helped protect Oahu's water resources and prevent damage to BWS infrastructure by handling 11,520 One Call locate requests and providing in-field support for 748 water line leaks and breaks. The BWS staff proactively investigated 25,569 meters to ensure accurate and timely billing and assisted 4,993 customers with concerns about bills reflecting high water consumption. BWS staff assisted 144,582 customers: 123,416 (85.4%) by phone; 5,239 (3.6%) in-person; 15,698 (10.9%) via web requests; 229 (0.1%) by mail and fax.

**Financial Sustainability (Affordable)**

- A total of over \$87 million in construction contracts and over \$20 million in professional service contracts were awarded as of June 30, 2018. The major programs include the following:
  - **Water Main Replacement Program:** Aging and corroded water mains are systematically identified and replaced throughout the municipal water system to improve system reliability, reduce main breaks, and to ensure sufficient system pressure during periods of peak demand. In conjunction with main replacement projects, existing fire hydrants are replaced and new hydrants are installed to improve fire protection and ensure that current standards are met. Over \$20 million in design contracts were awarded by the BWS for water main replacements in Nuuanu, Waimalu, Waikiki, and Kapolei.
  - **Water Facility Improvement Program:** Identification and improvements of deficiencies to the appearance and integrity of aging BWS water facilities continues. These facilities include water reservoirs, wells and booster stations, and administrative offices belonging to the BWS. New construction contracts were awarded to repair, renovate, repaint and/or reroof the Punanani Wells, security fencing at Maakua Well and Waihee Tunnel, and Nuuanu 822 Reservoir.
  - **Mechanical and Electrical Renovation Projects:** Renovation projects ensure the dependable service and operational efficiency of the BWS's pump and booster stations. Construction contracts were awarded for the renovation of the mechanical and/or electrical systems at Kunia Booster Pump 1, replace discharge heads and valves, Kaimuki Pump Station, and Aina Koa Booster 4.
- BWS staff received mail-in payments via lockbox, which continued to be the most popular method of payment for BWS customers, with 34.8% using the service, down 1.2% from last fiscal year. Automatic bill payments account for 31.5% of the BWS' total bill collections. Credit card payments account for 16.4% of payments, a .4% increase over last fiscal year. Online payments account for 8.8%, walk-in customers for 4.1%, payments made at satellite city hall locations for 2.6%, and other accounts for 1.8% of payments received.

## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors  
Board of Water Supply  
City and County of Honolulu

### Report on the Financial Statements

We have audited the accompanying financial statements of the Board of Water Supply (the "BWS"), a component unit of the City and County of Honolulu (the "City"), as of and for the fiscal year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the BWS's basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the BWS as of June 30, 2018, and the changes in its financial position and its cash flows for the fiscal year then ended in accordance with accounting principles generally accepted in the United States of America.

### **Emphasis of Matter**

As discussed in Note B, the financial statements of the BWS are intended to present the financial position, the changes in financial position, and cash flows of only that portion of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City that is attributable to the transactions of the BWS. They do not purport to, and do not, present fairly the financial position of the City as of June 30, 2018, the changes in its financial position, or its cash flows for the fiscal year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

### **Adoption of New Accounting Principle**

As discussed in Note O to the basic financial statements, the BWS adopted new accounting guidance, GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. Our opinion is not modified with respect to this matter.

### **Other Matters**

#### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 10 through 16 and the schedules of proportionate share of the net pension liability, contributions (pension), changes in the net OPEB liability and related ratios, and contributions (OPEB) on pages 51 to 56 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Other Information*

Our audit was conducted for the purpose of forming an opinion on the financial statements that comprise the BWS's basic financial statements. The introduction and schedules of bonds payable and net revenue requirement are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The schedules of bonds payable and net revenue requirement are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules of bonds payable and net revenue requirement are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introduction has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

**Other Reporting Required by Government Auditing Standards**

In accordance with *Government Auditing Standards*, we have also issued our report dated December 5, 2018 on our consideration of the BWS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the BWS's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the BWS's internal control over financial reporting and compliance.

*N + K CPAs, INC.*

Honolulu, Hawaii  
December 5, 2018

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

This section presents management's discussion and analysis of the BWS's financial condition and activities for the fiscal year ended June 30, 2018. This information should be read in conjunction with the BWS's basic financial statements.

**Financial Highlights**

The BWS maintains a relatively strong financial performance with a manageable capital program. Meanwhile, management continues to carefully evaluate the BWS's finances to ensure optimum performance. In addition to meeting all debt covenants, outstanding debt and cash reserves were kept at levels appropriate for maintaining favorable bond ratings. Key financial highlights are listed below:

- Net position increased \$46.2 million in fiscal year 2018 compared to the \$60.4 million increase in fiscal year 2017.
- Total assets were \$1.6 billion in fiscal year 2018 and 2017, which exceeded liabilities by \$1.1 billion at June 30, 2018 and 2017.
- The BWS's unrestricted current assets at June 30, 2018 were 4.6 times its related current liabilities compared to 5.7 times at June 30, 2017.
- The BWS's debt to equity ratio was 26.2% and 26.7% at June 30, 2018 and 2017, respectively, indicating the continuance of capacity to issue additional debt.

**Overview of the Financial Statements**

The BWS is a semi-autonomous agency of the City. The financial statements are presented using the economic resources measurement focus and the accrual basis of accounting, whereby revenues and expenses are recognized in the period earned or incurred.

Management's discussion and analysis ("MD&A") represents management's analysis and comments on the BWS's financial condition and performance. Summary financial data, key financial and operational indicators used in the BWS's annual report, budget, bond resolutions, and other management tools were used for this analysis.

The basic financial statements include the statement of net position, statement of revenues, expenses and changes in net position, statement of cash flows, and notes to the financial statements. The statement of net position presents the resources and obligations of the BWS as of the end of the reporting period. The statement of revenues, expenses and changes in net position presents the changes in net position for the fiscal year then ended, and the resultant ending net position balance.



**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

The statement of cash flows present changes in cash and cash equivalents (short-term investments with original maturities of three months or less from the date of acquisition), resulting from operating, investing, capital and related financing activities, and non-capital financing activities.

**Financial Analysis of the BWS**

During fiscal year 2018, the BWS adopted the provisions of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pension* (GASB 75). This statement significantly changes how governments calculate and report the annual costs and long-term obligations associated with other postemployment benefits other than pensions (OPEB) provided to their employers. The adoption of GASB 75 resulted in a retroactive reduction to beginning net position by \$84.4 million as of June 30, 2017, which was primarily the result of recording the net OPEB liability at June 30, 2017 totaling \$80.4 million. As of June 30, 2018, the BWS's net OPEB liability totaled \$74.7 million.

The BWS also adopted the provisions of GASB Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period* (GASB 89) as of June 30, 2018. This statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred, as opposed to being capitalized as part of the historic cost of a capital asset. The adoption of GASB 89 was applied prospectively as of June 30, 2018. For the fiscal year ended June 30, 2017, capitalized interest costs were approximately \$2.8 million.

The condensed financial information as of and for the fiscal year ended June 30, 2017 that is included in management's discussion and analysis do not include any retroactive adjustments to reflect the provisions of GASB 75 or GASB 89.

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

**Results of Operations**

**CONDENSED STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**  
(Amounts in thousands)

	<u>2018</u>	<u>2017</u>	<u>% Change</u>
Operating revenues	\$ 232,378	\$ 231,445	0.4%
Operating expenses			
Administrative and general	70,494	63,861	10.4%
Depreciation	47,337	47,938	-1.3%
Power and pumping	32,065	29,899	7.2%
Other operating expenses	47,850	45,826	4.4%
Total operating expenses	<u>197,746</u>	<u>187,524</u>	5.5%
Operating income	<u>34,632</u>	<u>43,921</u>	-21.1%
Nonoperating revenues (expenses)			
Interest income	6,097	4,617	32.1%
Interest expense	(9,837)	(7,641)	28.7%
Others	<u>(6,169)</u>	<u>(6,283)</u>	-1.8%
Total nonoperating expenses	<u>(9,909)</u>	<u>(9,307)</u>	6.5%
Contributions in aid of construction	<u>21,509</u>	<u>25,757</u>	-16.5%
Change in net position	\$ <u>46,232</u>	\$ <u>60,371</u>	

The increase in net position for the year ended June 30, 2018 was \$46.2 million, compared to an increase of \$60.4 million for the year ended June 30, 2017.

Operating revenues for the year ended June 30, 2018 totaled \$232.4 million, a slight increase of \$0.9 million or 0.4% from the year ended June 30, 2017. This was the result of overall water consumption that was relatively consistent year-over-year with no significant changes to the water rates in effect.

Total operating expenses increased by \$10.0 million in fiscal year 2018. Factors contributing to this change are explained below:

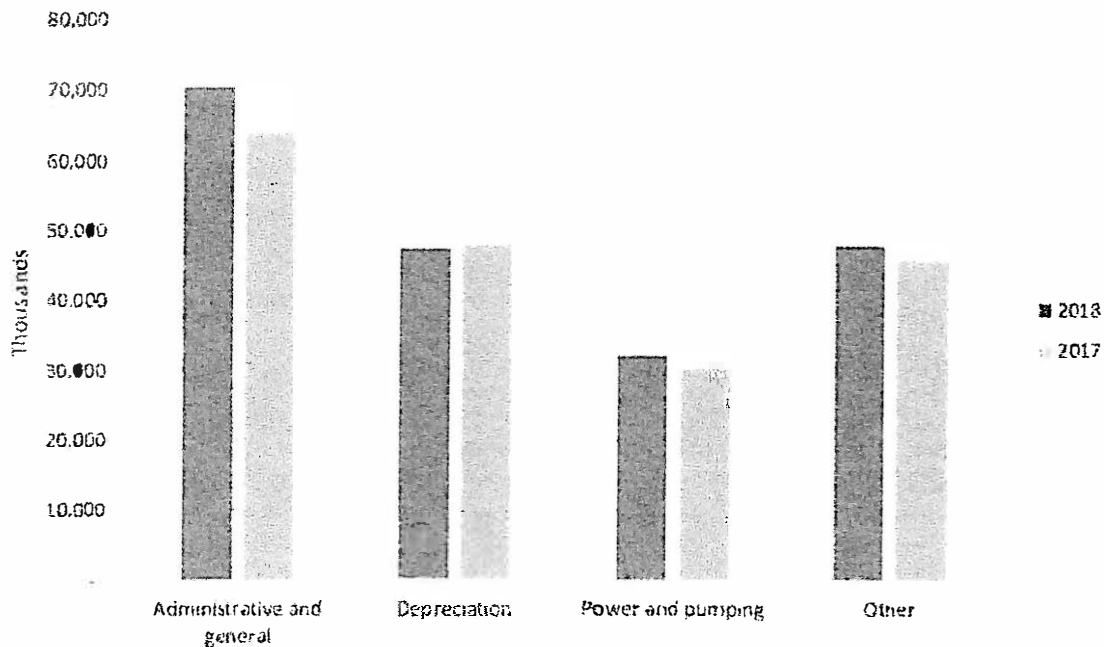
- Administrative and general expenses increased by \$6.6 million in fiscal year 2018. This is primarily due to an increase in pension expense of \$1.5 million, an increase in the estimated ultimate cost of settling workers' compensation claims of \$1.8 million, and an increase in professional services expense of \$1.9 million that was largely the result of costs related to the BWS continuous efforts in monitoring the impact of the jet fuel leak at the Red Hill Fuel Storage Facilities.

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

- Power and pumping expenses increased by \$2.2 million in fiscal year 2018 mainly due to increases in electricity costs.
- Other operating expenses increased by \$2.0 million during fiscal year 2018 mainly due to the increase in water reclamation and transmission and distribution costs.

For the year ended June 30, 2018, net nonoperating expenses increased by \$0.6 million. This was the result of an increase in interest expense of \$2.1 million which was due to the implementation of GASB 89. This increase in interest expense was offset by an increase in interest income of \$1.4 million.

Expenditures by Functional Class



Contributions in aid of construction result from Water System Facilities Charges (WSFC) that are levied against all new developments and residential properties requiring water from the BWS's systems, except those developments that have paid for and installed a complete water system, including sources, transmission, and daily storage facilities. In addition, contributions of capital assets from governmental agencies, developers and customers are recorded as contributions in aid of construction at their cost. The BWS realized contributions in aid of construction of \$21.5 million in fiscal year 2018 compared to \$25.8 million in fiscal year 2017. The decrease was primarily due to a decrease in WSFC revenue of \$5.5 million, offset by a contribution to recognize principal forgiveness for the Energy Savings Performance Contract of \$1.7 million. During the year ended June 30, 2018 the major developments were Hawaiian Electric Company 8" Recycled Waterline and Hoopili Development, Phase I Roadway Improvements.

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

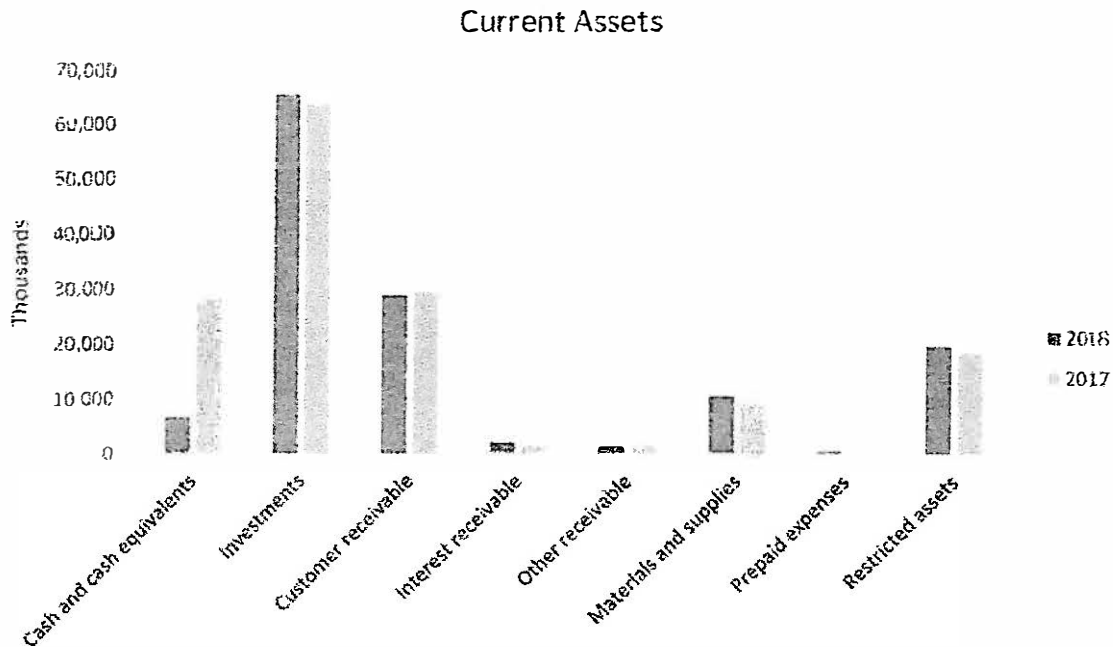
**Financial Condition**

**CONDENSED STATEMENTS OF NET POSITION**  
(Amounts in thousands)

	<u>2018</u>	<u>2017 (As Restated)</u>	<u>% Change</u>
Current assets	\$ 135,696	\$ 152,328	-10.9%
Noncurrent assets			
Capital assets, net	1,150,029	1,139,003	1.0%
Investments	320,355	268,759	19.2%
Restricted and other assets	22,408	41,132	-45.5%
Total assets	<u>1,628,488</u>	<u>1,601,222</u>	1.7%
Deferred outflows of resources	<u>57,873</u>	<u>62,984</u>	-8.1%
Total assets and deferred outflows of resources	\$ <u>1,686,361</u>	\$ <u>1,664,206</u>	1.3%
Current liabilities	\$ 44,731	\$ 42,019	6.5%
Noncurrent liabilities			
Bonds payable, noncurrent	224,342	234,758	-4.4%
Notes payable, noncurrent portion	64,255	69,746	-7.9%
Net pension liability	113,350	116,343	-2.6%
Net OPEB liability	74,722	--	100.0%
Other liabilities	11,993	10,576	13.4%
Total liabilities	<u>533,393</u>	<u>473,442</u>	12.7%
Deferred inflows of resources	<u>5,693</u>	<u>5,260</u>	8.2%
Net position			
Net investment in capital assets	882,809	859,696	2.7%
Restricted for capital activity and debt service	18,117	18,770	-3.5%
Unrestricted	246,349	307,038	-19.8%
Total net position	<u>1,147,275</u>	<u>1,185,504</u>	-3.2%
Total liabilities, deferred inflows of resources and net position	\$ <u>1,686,361</u>	\$ <u>1,664,206</u>	1.3%

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

The BWS's current assets were 3.0 and 3.6 times its related current liabilities as of June 30, 2018 and 2017, respectively. The ratio decrease at June 30, 2018 was due to a decrease in cash and cash equivalents. The decrease in cash can be attributed to transfers to investment accounts.



As of June 30, 2018, net capital assets increased by \$11.0 million. The increase in fiscal year 2018 was primarily due to the completion of various distributions mains projects and additions to construction work in progress, offset by dispositions and depreciation charges.

Restricted and other assets decreased by \$18.7 million in fiscal year 2018. The decrease is primarily attributed to the implementation of GASB 75. Specifically, the OPEB asset as of June 30, 2017 totaling \$15.7 million, which was determined under previous accounting guidance, was removed from the BWS's financial statements as of July 1, 2017.

Bonds payable decreased by \$10.2 million as of June 30, 2018. The decrease represents scheduled debt service payments and the amortization of bond premiums during fiscal year 2018.

Notes payable decreased by \$5.5 million as of June 30, 2018. The decrease is primarily due to principal payments made during fiscal year 2018 totaling \$12.3 million, which included early principal prepayment of approximately \$9.7 million. This was offset by the receipt of loan proceeds for projects utilizing financing from the state revolving fund loan program totaling \$8.6 million.

**Board of Water Supply  
City and County of Honolulu  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
Fiscal Year Ended June 30, 2018**

The net pension liability decreased by \$3.0 million as of June 30, 2018 which was mainly due to favorable differences between projected and actual earnings on pension plan investments.

The net OPEB liability increased by \$74.7 million as of June 30, 2018. This increase was due to the implementation of GASB 75.

**Capital Assets and Long-Term Debt**

During fiscal years 2018 and 2017, the BWS capitalized \$37.3 million and \$56.3 million, respectively, to its utility plant in service. Major assets added in fiscal year 2018 were Hawaiian Electric 8" RO Waterline, \$4.7 million; Hahaione Water System Improvements, \$3.0 million; Aiea Kai Place and Way 8" Main, \$2.5 million; Energy Savings Performance Contract, \$1.9 million; Repair and Reroofing of Various BWS Facilities, \$1.9 million; Niumalu Loop and Kukii Street 8" Water Mains, 1.7 million; Hoopili Development Phase I Roadway Improvements, \$1.7 million; Storm Water Management Plan Improvements at Manana and Wahiawa Corporation Yards, \$1.7 million. The BWS issues long-term bonds to finance part of its capital improvement program. The BWS's debt to equity ratio has remained fairly constant at 26.2% and 26.7% for fiscal years 2018 and 2017, respectively.

All outstanding bonds have been assigned underlying ratings of Aa2 from Moody's Investors Service and AA+ from Fitch Ratings.

**Rate Covenant**

The BWS is required under its bond indenture, among other things, to fix, charge and collect such rates and other charges in each fiscal year to meet the net revenue requirement for such fiscal year. The net revenue requirement is the greater of 1) the sum of the aggregate debt service and all deposits required by bond resolution to be made, or 2) 1.20 times the aggregate debt service. The BWS met the net revenue requirements for the fiscal years ended June 30, 2018 and 2017.

**Request for Information**

This financial report is designed to provide a general overview of the BWS's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Board of Water Supply, City and County of Honolulu, 630 S. Beretania Street, Honolulu, Hawaii 96813.

**Board of Water Supply  
City and County of Honolulu  
STATEMENT OF NET POSITION  
June 30, 2018**

**ASSETS**

**Current assets**

Cash and cash equivalents	\$ 7,343,537
Investments	65,688,974
Interest receivable	1,946,243
Customer receivables	
Billed, less allowances for uncollectible accounts of	
\$2,954,984	15,743,241
Unbilled	12,779,125
Other receivables, less allowances for uncollectible	
accounts of \$510,868	1,425,880
Materials and supplies	10,519,111
Prepaid expenses	471,838
Restricted assets	
Cash and cash equivalents	18,856,615
Investments	921,705
Total current assets	<u>135,696,269</u>

**Noncurrent assets**

Capital assets	
Infrastructure	1,527,922,394
Building and improvements	176,188,768
Equipment and machinery	<u>320,775,882</u>
	2,024,887,044
Less accumulated depreciation	<u>(1,029,116,807)</u>
	995,770,237
Land	32,373,064
Construction work in progress	<u>121,885,982</u>
Net capital assets	1,150,029,283
Investments	320,354,548
Restricted assets	
Investments	22,407,800
Other assets	706
Total noncurrent assets	<u>1,492,792,337</u>
Total assets	<u>1,628,488,606</u>

**DEFERRED OUTFLOWS OF RESOURCES**

Deferred loss on refunding of debt	17,085,994
Deferred outflows of resources related to pensions	31,931,839
Deferred outflows of resources related to OPEB	<u>8,855,338</u>
Total deferred outflows of resources	<u>57,873,171</u>
Total assets and deferred outflows of resources	\$ <u>1,686,361,777</u>

See accompanying notes to financial statements.

**Board of Water Supply  
City and County of Honolulu  
STATEMENT OF NET POSITION (Continued)  
June 30, 2018**

**LIABILITIES**

**Current liabilities**

Payable from current assets

Accounts payable	\$ 12,163,691
Contracts payable, including retainages	5,072,065
Accrued vacation, current portion	2,851,001
Accrued workers' compensation, current portion	1,033,217
Other	<u>3,832,949</u>
Total payable from current assets	<u>24,952,923</u>

Payable from restricted assets

Contracts payable, including retainages	3,267,464
Accrued interest payable	4,781,189
Bonds payable, current portion	8,550,000
Notes payable, current portion	<u>3,179,667</u>
Total payable from restricted assets	<u>19,778,320</u>
Total current liabilities	<u>44,731,243</u>

**Noncurrent liabilities**

Bonds payable, noncurrent	224,342,342
Notes payable, noncurrent portion	64,255,055
Net pension liability	113,350,294
Net OPEB liability	74,721,923
Accrued vacation, noncurrent portion	4,165,279
Accrued workers' compensation	2,515,969
Customer advances	1,606,003
Other	<u>3,704,937</u>
Total noncurrent liabilities	<u>488,661,802</u>

Total liabilities

533,393,045

**DEFERRED INFLOWS OF RESOURCES**

Deferred inflows of resources related to pensions	4,375,619
Deferred inflows of resources related to OPEB	<u>1,317,856</u>
Total deferred inflows of resources	<u>5,693,475</u>

**NET POSITION**

Net investment in capital assets	882,809,242
Restricted for capital activity and debt service	18,116,438
Unrestricted	<u>246,349,577</u>
Total net position	<u>1,147,275,257</u>
Total liabilities, deferred inflows of resources and net position	<u>\$ 1,686,361,777</u>

See accompanying notes to financial statements.



**Board of Water Supply  
City and County of Honolulu  
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION  
Fiscal Year Ended June 30, 2018**

**OPERATING REVENUES**

Water sales	\$ 229,526,599
Other, principally contract and service fees	<u>2,851,249</u>
Total operating revenues	<u>232,377,848</u>

**OPERATING EXPENSES**

Administrative and general	70,493,764
Depreciation	47,337,006
Power and pumping	32,064,982
Transmission and distribution	22,693,884
Maintenance	12,663,811
Water reclamation	5,164,896
Customers' accounting and collection	4,022,619
Central administrative services expense fees	3,300,000
Source of supply	<u>4,418</u>
Total operating expenses	<u>197,745,380</u>
Operating income	<u>34,632,468</u>

**NONOPERATING REVENUES (EXPENSES)**

Interest income	6,097,077
Interest expense, net of amortization of bond premiums of \$1,865,197	(9,836,724)
Loss from disposal of capital assets	(298,169)
Realized and unrealized gain (loss) on investments	(6,323,489)
Other	<u>451,948</u>
Total nonoperating expenses	<u>(9,909,357)</u>

**CONTRIBUTIONS IN AID OF CONSTRUCTION**

	<u>21,509,465</u>
Change in net position	46,232,576

**NET POSITION**

Beginning of year, as previously reported	1,185,504,020
Restatement adjustment: cumulative effect of implementation of new accounting standard	<u>(84,461,339)</u>
Beginning of year, as restated	<u>1,101,042,681</u>
End of year	<u>\$ 1,147,275,257</u>

See accompanying notes to financial statements.

**Board of Water Supply  
City and County of Honolulu  
STATEMENT OF CASH FLOWS  
Fiscal Year Ended June 30, 2018**

**CASH FLOWS FROM OPERATING ACTIVITIES**

Cash received from customers	\$ 232,624,848
Payments to suppliers for goods and services	(84,142,970)
Payments to employees for services	<u>(56,488,853)</u>
Net cash provided by operating activities	<u>91,993,025</u>

**CASH FLOWS FROM CAPITAL AND RELATED  
FINANCING ACTIVITIES**

Acquisition and construction of capital assets	(47,590,231)
Customer payments for capital projects	8,915,036
Principal paid on bonds	(8,365,000)
Interest paid on bonds	(9,358,160)
Proceeds from notes payable	8,564,034
Interest paid on notes payable	(864,688)
Principal paid on notes payable	<u>(12,474,813)</u>
Net cash used in capital and related financing activities	<u>(61,173,822)</u>

**CASH FLOWS FROM INVESTING ACTIVITIES**

Purchase of investments	(172,354,414)
Proceeds from maturity of investments	112,246,870
Interest on investments	<u>5,414,572</u>
Net cash used in investing activities	<u>(54,692,972)</u>
Net decrease in cash and cash equivalents	(23,873,769)

**CASH AND CASH EQUIVALENTS**

Beginning of year	<u>50,073,921</u>
End of year	\$ <u>26,200,152</u>
Reconciliation of cash and cash equivalents to the statement of net position	
Unrestricted	\$ 7,343,537
Restricted	<u>18,856,615</u>
	\$ <u>26,200,152</u>

See accompanying notes to financial statements.

**Board of Water Supply  
City and County of Honolulu  
STATEMENT OF CASH FLOWS (Continued)  
Fiscal Year Ended June 30, 2018**

**RECONCILIATION OF OPERATING INCOME**

**TO NET CASH PROVIDED BY OPERATING ACTIVITIES**

Operating income	\$ 34,632,468
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation	48,924,008
Provision for doubtful accounts	847,834
Change in assets, deferred outflows of resources, liabilities and deferred inflows of resources:	
Customer receivables	(371,416)
Materials and supplies	(1,529,490)
Other receivables	361,148
Prepaid expenses and other	(267,471)
Deferred outflows of resources related to pensions	12,452,972
Deferred outflows of resources related to OPEB	2,869,389
Accounts and contracts payable	842,586
Accrued vacation	39,781
Accrued workers' compensation	1,282,031
Net pension liability	(2,992,622)
Net OPEB liability	(5,729,260)
Other liabilities	197,746
Deferred inflows of resources related to pensions	(884,535)
Deferred inflows of resources related to OPEB	1,317,856
Net cash provided by operating activities	\$ <u>91,993,025</u>

**SUPPLEMENTAL DISCLOSURE OF NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES**

Contributions of capital assets from government agencies, developers and customers that are recorded as contributions in aid of construction	\$ 10,977,138
Amortization of other costs	\$ 28,819
Amortization of bond premium, net	\$ 1,865,197
Amortization of deferred loss on refunding	\$ 1,513,204
Forgiveness of principal due on notes payable	\$ 1,662,400

See accompanying notes to financial statements.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE A - OPERATIONS**

The Revised Charter of the City and County of Honolulu provides for the operation of the Board of Water Supply (the "BWS") as a semi-autonomous body of the City and County of Honolulu government (the "City"). The BWS has full and complete authority to manage, control and operate the City's water system and related properties.

Article VII of the Revised Charter of the City and County of Honolulu states that the BWS's seven-member Board of Directors has the authority to establish and adjust water rates and charges so that the revenues derived shall be sufficient to make the BWS self-supporting. The Board of Directors is required to follow certain procedures that include holding public hearings before implementing changes in the water rate schedules.

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

- (1) ***Financial Statement Presentation*** - The BWS is a component unit of the City (the "primary government"). The accompanying financial statements present only the financial position and activities of the BWS and do not purport to, and do not present the financial position of the City, the changes in its financial position, or its cash flows.
- (2) ***Measurement Focus and Basis of Accounting*** - The accompanying financial statements are presented using the economic resources measurement focus and the accrual basis of accounting. Under this method, revenues are recorded when earned and expenses are recorded at the time liabilities are incurred.
- (3) ***Use of Estimates*** - The preparation of the financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities, deferred inflows of resources and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include the carrying amount of capital assets, valuation allowances for receivables, accrued workers' compensation, and pensions and postretirement benefits. Actual results could differ from those estimates.
- (4) ***Cash and Cash Equivalents*** - The BWS considers all cash on hand, demand deposits, and short-term investments (including restricted assets) with original maturities of three months or less from the date of acquisition to be cash and cash equivalents.
- (5) ***Investments*** - Investments are measured at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The cost of securities sold is generally determined by the weighted average method.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

- (6) **Receivables** - Receivables are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the BWS's best estimate of the amount of probable credit losses in the BWS's existing receivables. The BWS determines the allowance based on past collection experience and the length of time individual receivables are past due. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.
- (7) **Materials and Supplies** - Materials and supplies are stated at weighted average cost (which approximates the first-in, first-out method). The cost of materials and supplies are recorded as expenses when consumed rather than when purchased.
- (8) **Restricted Assets** - Restricted assets are comprised of cash and cash equivalents and investments maintained in accordance with bond resolutions and other agreements for the purpose of funding certain debt service payments, construction, improvements, and renewal and replacements of the water system. When both restricted and unrestricted assets are available for use, it is the BWS's policy to use restricted assets first, then unrestricted assets as they are needed. Restricted assets comprise the following:
- The debt service account accumulates transfers from the operating account throughout the fiscal year to make principal and interest payments on the outstanding water system revenue bonds and other notes payable.
  - The renewal and replacement account and the reserve release fund provides funding for improvements, reconstruction, emergency or extraordinary repairs, and renewals or replacements of the water system.
  - The improvement account holds the proceeds of the series bond issuance pursuant to the series resolution or series certificates. These proceeds are only applied to costs specified in the applicable series resolution or series certificates.
  - The extramural account holds reimbursements received from any governmental agency or private entity, pursuant to negotiated agreements, contracts and/or grants.
- (9) **Capital Assets** - Capital assets include those assets in excess of \$5,000 for buildings, infrastructure, and equipment and machinery with a useful life of more than one year. Capital assets are stated at cost and include contributions by governmental agencies, private subdividers and customers at their cost or estimated cost of new construction.

Major replacements, renewals and betterments are capitalized. The BWS also capitalizes certain indirect costs to construction work based upon actual construction direct labor. Maintenance, repairs and replacements that do not improve or extend the lives of the assets are charged to expense.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

Assets are depreciated over the individual assets' estimated useful lives using the straight-line method. Depreciation on both purchased and contributed assets is charged against operations.

The estimated useful lives of capital assets are as follows:

Source of supply plant	20 to 100 years
Pumping plant	20 to 50 years
Water treatment plant	20 to 30 years
Transmission and distribution plant	13-1/3 to 50 years
General plant	5 to 50 years

Gains or losses resulting from the sale, retirement or disposal of capital assets in service are charged or credited to operations.

- (10) ***Bond Issue Prepaid Insurance Costs, Original Issue Discount or Premium and Deferred Loss on Refunding of Debt*** - Bond issue costs are expensed when incurred, except for prepaid insurance, which are amortized over the life of the respective issue on a straight-line basis. Bond issue prepaid insurance costs are presented as other assets in the statement of net position.

Original issue discounts or premiums are amortized using the straight-line method over the terms of the respective issues. Original issue discounts or premiums are offset against or added to bonds payable in the statement of net position.

Deferred loss on refunding of debt is amortized using the straight-line method over the remaining life of the refunded debt or the life of the new debt, whichever is shorter. The deferred loss on refunding of debt is presented as deferred outflows of resources in the statement of net position.

- (11) ***Accrued Vacation and Compensatory Pay*** - Vacation is earned at the rate of one and three-quarters working days for each month of service. Vacation days may be accumulated to a maximum of ninety days as of the end of the calendar year and are convertible to pay upon termination. The BWS accrues a liability for compensated absences and additional amounts for certain salary-related payments including payroll taxes and fringe benefits.

As of June 30, 2018, accumulated sick leave aggregated approximately \$19,133,000. Sick leave accumulates at the rate of one and three-quarters working days for each month of service without limit, but can be taken only in the event of illness and is not convertible to pay upon termination of employment. However, an employee who retires or leaves government service in good standing with 60 or more unused sick days is entitled to additional service credit in the State of Hawaii's Employees' Retirement System.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

- (12) **Net Position** - Net position represents the difference between assets and deferred outflows of resources less liabilities and deferred inflows of resources. Net position is classified in the following three components: net investment in capital assets, restricted for capital activity and debt service, and unrestricted net position. Net investment in capital assets consists of capital assets, net of accumulated depreciation and reduced by outstanding debt that is attributable to the acquisition, construction or improvement of those assets. Debt related to unspent proceeds or other restricted cash and investments at year-end is not included in the calculation of net investment in capital assets. Restricted for capital activity and debt service consists of net position for which constraints are placed thereon by external parties, such as lenders, grantors, contributors, laws, regulations or enabling legislation. Unrestricted consists of the remaining balance not included in the above categories.
- (13) **Operating Revenues and Expenses** - The BWS distinguishes operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services in connection with the BWS's principal ongoing water operations. The principal operating revenues are derived from charges for water usage, while operating expenses include cost of services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.
- (14) **Revenue Recognition** - Charges for water sales are based on usage. The BWS's policy is to bill customers on a cyclical monthly basis. The accrual for unbilled water revenues and related receivables reflected in the accompanying financial statements is based on estimated usage from the latest meter reading date to the end of the fiscal year.
- (15) **Contributions in Aid of Construction** - Contributions in aid of construction represent cash or capital assets received by the BWS to aid in the construction of infrastructure assets. It also includes the forgiveness of principal due on state revolving fund loans that were used to finance the costs of infrastructure needed to maintain the water system. Contributions in aid of construction are recognized when they are accepted by the BWS and when all applicable eligibility requirements have been met.
- (16) **Water System Facilities Charge** - A water system facilities charge is levied against all new developments and residential properties requiring water from the BWS's systems, except those developments that have paid for and installed a complete water system, including source, transmission and daily storage facilities. The amounts collected are initially recorded as customer advances and are recognized as contributions in aid of construction when water service is made available to the customer. The use of these funds is designated for the construction of water facilities.
- (17) **Pensions** - For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Employees' Retirement System of the State of Hawaii (the "ERS") and additions to/deductions from the ERS's fiduciary net position have been determined using the accrual basis of accounting, which is the same basis as they are reported by the ERS. For this purpose, employer and member

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

contributions are recognized in the period in which the contributions are legally due and benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

- (18) **Postemployment Benefits Other Than Pensions ("OPEB")** - For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the Hawaii Employer-Union Health Benefits Trust Fund ("EUTF") and additions to/deductions from EUTF's fiduciary net position have been determined on the same basis as they are reported by EUTF. For this purpose, EUTF recognizes benefit payments when due and payable in accordance with the benefit terms. Investments are reported at fair value, except for investments in commingled and money market funds, which are reported at net asset value (NAV). The NAV is based on the fair value of the underlying assets held by the respective fund less its liabilities.
- (19) **Deferred Compensation Plan** - All full-time employees are eligible to participate in the City and County of Honolulu's Public Employees' Deferred Compensation Plan (the "Plan"), adopted pursuant to Internal Revenue Code Section 457. The Plan permits eligible employees to defer a portion of their salary until future years. The deferred compensation amounts are not available to employees until termination, retirement, death or unforeseeable emergency.

A trust fund was established to protect plan assets from claims of general creditors and from diversion to any uses other than paying benefits to participants and beneficiaries. Accordingly, the BWS has excluded the Plan's assets and liabilities from the financial statements because the BWS and the City do not have significant administrative involvement in the Plan or perform the investment function for the Plan.

- (20) **Risk Management** - The BWS is exposed to various risks of loss from: (1) torts, (2) theft of, damage to, and destruction of assets, (3) employee injuries and illnesses, (4) natural disasters, and (5) employee health, dental, and accident benefits. Commercial insurance coverage is purchased for claims arising from such matters.

The ranges of insurance limits and deductibles are as follows:

<u>Policy</u>	<u>Limits (Millions)</u>	<u>Deductibles</u>
Property	\$ 60	\$ 50,000
Public entity liability	\$ 15	\$ 750,000
Excess workers' compensation	\$ 25	\$ 600,000
Employment practices	\$ 5	\$ 75,000
Storage tank liability	\$ 2	\$ 10,000
Pollution legal liability	\$ 5	\$ 250,000
Crime	\$ 5	\$ 25,000
Cyber liability	\$ 3	\$ 50,000

There have been no significant reductions in insurance coverage's from the prior fiscal year.



**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

- (21) ***New Accounting Pronouncements*** - The Government Accounting Standards Board (the "GASB") issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The Statement replaces GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*. The Statement will require the liability of employers for defined benefit OPEB to be measured as the portion of the present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees' past periods of service, less the amount of the OPEB plan's fiduciary net position. The requirements of this Statement are effective for fiscal years beginning after June 15, 2017. Management has adopted the applicable requirements of this new standard as presented in the BWS's financial statements.

The GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. This Statement addresses accounting and financial reporting for certain asset retirement obligations ("AROs"). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

The GASB issued Statement No. 84, *Fiduciary Activities*. This Statement establishes specific criteria for identifying activities that should be reported as fiduciary activities and clarifies whether and how business-type activities should report their fiduciary activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

The GASB issued Statement No. 85, *Omnibus 2017*. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Management has adopted the applicable requirements of this new standard as presented in the BWS's financial statements.

The GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. This Statement addresses in-substance defeasance of debt when a government places cash and other monetary assets acquired with only existing resources, as opposed to proceeds of refunding debt, in an irrevocable trust to extinguish the debt. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Management has determined that this Statement does not have a material impact on the BWS's financial statements.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE B - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

The GASB issued Statement No. 87, *Leases*. This Statement requires the recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

The GASB issued Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. This Statement defines debt for purposes of disclosure in notes to financial statements and establishes additional financial statement note disclosure requirements related to debt obligations of governments, including direct borrowings (for example, a government entering into a loan agreement with a lender) and direct placements (for example, a government issuing a debt security directly to an investor). Direct borrowings and direct placements have terms negotiated directly with the investor or lender and are not offered for public sale. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Management has not yet determined the effect this Statement will have on the BWS's financial statements.

The GASB issued Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged. Changes adopted to conform to the provisions of this Statement should be applied prospectively. Management has early adopted the applicable requirements of this new standard as presented in the BWS's financial statements.

- (22) **Restatement** - The cash and cash equivalent balance as of June 30, 2017 (beginning of year) presented in the statement of cash flows has been restated to increase cash and cash equivalents by \$944,106 for comparability purposes to conform with the presentation in the 2018 financial statements. The restatement had no effect on the previously reported change in net position or net position as of June 30, 2017.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE C - CASH AND INVESTMENTS**

Cash deposited with the City is maintained by the Department of Budget and Fiscal Services of the City. The City maintains a cash and investment pool that is used by all of the City's Funds and the BWS. The Hawaii Revised Statutes ("HRS") provide for the City's Director of Finance to deposit the cash with any national or state bank or federally insured financial institution authorized to do business in the State of Hawaii, provided that all deposits are fully insured or collateralized. The City's demand deposits are fully insured or collateralized with securities held by the City or its agents in the City's name.

The HRS authorizes the BWS to invest, with certain restrictions, in obligations of the State of Hawaii or the United States of America, in federally insured savings accounts, time certificates of deposit, and bank repurchase agreements with federally insured financial institutions authorized to do business in the State of Hawaii. The BWS's portfolio is managed by various investment managers. These investments consist of U.S. government and U.S. government agencies securities.

***Interest Rate Risk*** - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Generally, the longer the term of an investment, the greater the sensitivity of its fair value to changes in market interest rates. As a means of limiting its exposure to fair value losses, the BWS invests operating funds primarily in shorter-term securities, money market mutual funds, or similar investment pools.

***Custodial Credit Risk*** - The custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. Excluding cash deposited with the City, all cash, money market mutual funds and investment securities as of June 30, 2018 were held in trust by two financial institutions in the State of Hawaii.

All investment securities are registered in the name of the BWS and are not exposed to custodial credit risk. Money market mutual funds are not considered investment securities for purposes of custodial credit risk classification and are not exposed to custodial credit risk. Cash held in trust with these financial institutions are uncollateralized, however, amounts in excess of depository insurance are covered by commercial insurance obtained by each financial institution designed to insure against losses resulting from errors and omissions or fraud.

***Credit Risk and Concentration of Credit Risk*** - Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligation to the holder of the investment. Concentration of credit risk is the risk of a loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2018, all investment securities and money market mutual funds were rated Aaa and Aaa-mf, respectively, by Moody's Investors Services. The BWS's concentration of credit risk related to investments in debt securities has been mitigated by limiting such investments to only debt obligations of the U.S. government and U.S. government agencies.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE C - CASH AND INVESTMENTS (Continued)**

The historical cost and estimated fair value of investments at June 30, 2018 consisted of the following:

	<u>Cost</u>	<u>Fair Value</u>
U. S. Treasury obligations	\$ 339,521,895	\$ 333,157,965
U. S. government agencies	<u>77,524,930</u>	<u>76,215,062</u>
	\$ <u>417,046,825</u>	\$ <u>409,373,027</u>

As of June 30, 2018, the credit exposure as a percentage of total investments were as follows:

	<u>Percent of Total</u>	<u>Fair Value</u>
U. S. Treasury obligations	82%	\$ 333,157,965
U. S. government agencies		
Federal National Mortgage Association	9%	36,832,412
Federal Home Loan Mortgage Corporation	3%	14,113,035
Federal Home Loan Bank	6%	25,269,615
	<u>100%</u>	\$ <u>409,373,027</u>

The fair value of investments at June 30, 2018 by contractual maturity is shown below:

	<u>Fair Value</u>	<u>Investment Maturities (In Years)</u>	
		<u>Less Than 1</u>	<u>1 - 5</u>
U. S. Treasury obligations	\$ 333,157,965	\$ 58,201,216	\$ 274,956,749
U. S. government agencies	<u>76,215,062</u>	<u>15,994,998</u>	<u>60,220,064</u>
	\$ <u>409,373,027</u>	\$ <u>74,196,214</u>	\$ <u>335,176,813</u>

**NOTE D - RESTRICTED ASSETS**

At June 30, 2018, the BWS's restricted assets were comprised of cash, cash equivalents and investments and were held for the following purposes:

Construction, renewals and replacements	\$ 6,977,462
Debt service	<u>35,208,658</u>
	\$ <u>42,186,120</u>

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**NOTE E - FAIR VALUE MEASUREMENTS**

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described as follows:

**Level 1** - Inputs to the valuation methodology are quoted prices (unadjusted) in active markets for identical assets or liabilities that a government has the ability to access at the measurement date.

**Level 2** - Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include:

- Quoted prices for similar assets or liabilities in active markets,
- Quoted prices for identical or similar assets or liabilities in markets that are not active,
- Inputs other than quoted prices that are observable for the asset or liability,
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

**Level 3** - Inputs that are unobservable for an asset or liability.

Following is a description of the valuation techniques used by the BWS to measure fair value:

U.S. Treasury obligations: Valued using quoted prices in active markets for identical assets.

U.S. government agencies obligations: Valued using quoted prices for identical or similar assets in markets that are not active.

The following table sets forth by level, within the fair value hierarchy, assets measured at fair value on a recurring basis as of June 30, 2018:

	Total	Level 1	Level 2	Level 3
U. S. Treasury obligations	\$ 333,157,965	\$ 333,157,965	\$ —	\$ —
U. S. government agencies	76,215,062	—	76,215,062	—
	<u>\$ 409,373,027</u>	<u>\$ 333,157,965</u>	<u>\$ 76,215,062</u>	<u>\$ —</u>

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**NOTE F - CAPITAL ASSETS**

Capital assets activity during the fiscal year ended June 30, 2018, were as follows:

	Balance July 1, 2017	Additions	Transfers	Retirements	Balance June 30, 2018
Depreciable assets					
Infrastructure	\$ 1,504,279,618	\$ 11,083,749	\$ 14,529,249	\$ (1,970,222)	\$ 1,527,922,394
Building and improvements	169,870,257	—	6,344,030	(25,519)	176,188,768
Equipment and machinery	317,240,982	3,613,780	1,790,043	(1,868,923)	320,775,882
Total depreciable assets	1,991,390,857	14,697,529	22,663,322	(3,864,664)	2,024,887,044
Less accumulated depreciation	(983,717,510)	(48,924,008)	—	3,524,711	(1,029,116,807)
Total depreciable assets - net	1,007,673,347	(34,226,479)	22,663,322	(339,953)	995,770,237
Land	32,373,064	—	—	—	32,373,064
Construction work in progress	98,956,663	56,895,383	(33,966,064)	—	121,885,982
Net capital assets	\$ 1,139,003,074	\$ 22,668,904	\$ (11,302,742)	\$ (339,953)	\$ 1,150,029,283

Depreciation charges allocated to various functions for the fiscal years ended June 30, 2018 totaled \$1,587,002.

**NOTE G - BONDS PAYABLE**

At June 30, 2018, bonds payable consisted of the following:

	<u>Amount</u>
Water System Revenue Bonds, Series 2012A, annual principal due ranging from \$2,000,000 to \$8,535,000 through July 1, 2033, with interest ranging from 2.00% to 5.00%.	\$ 78,830,000
Water System Revenue Bonds, Series 2014A, annual principal due commencing from July 1, 2023, ranging from \$410,000 to \$9,205,000 through July 1, 2036, with interest ranging from 3.00% to 5.00%.	101,655,000
Water System Revenue Bonds, Series 2014B, annual principal due ranging from \$1,540,000 to \$4,790,000 through July 1, 2031, with interest ranging from 1.74% to 3.86%	34,355,000
	214,840,000
Add: unamortized premium	18,052,342
	232,892,342
Less: current portion	8,550,000
Noncurrent portion	\$ 224,342,342

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**NOTE G - BONDS PAYABLE (Continued)**

Principal and interest payments on water system revenue bonds are to be paid from the BWS's revenue. Water system revenue bonds are subject to redemption on and after specific dates prior to maturity at the option of the BWS. The redemption amount equals the outstanding principal amount plus accrued interest without premium on the date of redemption.

At June 30, 2018, future bond principal and interest payments are as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2019	\$ 8,550,000	\$ 9,175,000	\$ 17,725,000
2020	8,820,000	8,902,000	17,722,000
2021	9,110,000	8,613,000	17,723,000
2022	9,450,000	8,273,000	17,723,000
2023	10,075,000	7,833,000	17,908,000
2024 - 2028	59,250,000	31,281,000	90,531,000
2029 - 2033	70,460,000	15,963,000	86,423,000
2034 - 2038	<u>39,125,000</u>	<u>2,957,000</u>	<u>42,082,000</u>
Total	\$ <u>214,840,000</u>	\$ <u>92,997,000</u>	\$ <u>307,837,000</u>

**NOTE H - NOTES PAYABLE**

At June 30, 2018, notes payable consisted of the following:

	<u>Amount</u>
Notes payable to Department of Health:	
Note payable in semi-annual installments of approximately \$150,500, including interest and loan fees at 1.50% per annum, due May 2034.	\$ 4,008,972
Note payable in semi-annual installments of approximately \$149,600, including interest and loan fees at 1.50% per annum, due May 2034.	3,982,357
Note payable in semi-annual installments of approximately \$142,900, including interest and loan fees at 1.50% per annum, due November 2034.	3,904,788
Non-interest bearing note payable in semi-annual installments of approximately \$207,300, including loan fees at 1.00% per annum, due November 2034.	5,873,400
Non-interest bearing note payable in semi-annual installments of approximately \$785,300, including loan fees at 1.00% per annum, due April 2034.	<u>21,662,285</u>
Balance carried forward	\$ <u>39,431,802</u>

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**NOTE H - NOTES PAYABLE (Continued)**

	<u>Amount</u>
Balance brought forward	\$ 39,431,802
Non-interest bearing note payable in semi-annual installments of approximately \$244,000, including loan fees at 1.00% per annum, due December 2037.	8,626,265
Non-interest bearing note payable in semi-annual installments of approximately \$381,400, including loan fees at 1.00% per annum, due February 2039.	13,485,210
Note payable in semi-annual installments of approximately \$148,300, including interest and loan fees at 1.50% per annum, due October 2036.	4,773,716
Notes payable to other lenders:	
Note payable in monthly installments of approximately \$15,700, including interest at 5.0%, due September 2025	<u>1,117,729</u>
	67,434,722
Less current maturities	<u>3,179,667</u>
	\$ <u>64,255,055</u>

The notes payable to the Department of Health are state revolving fund loans and are collateralized by net revenue of the BWS.

At June 30, 2018, future principal, interest, and loan fee payments for notes payable are as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Principal</u>	<u>Interest</u>	<u>Loan Fee</u>	<u>Total</u>
2019	\$ 3,180,000	\$ 138,000	\$ 643,000	\$ 3,961,000
2020	3,511,000	127,000	625,000	4,263,000
2021	3,848,000	115,000	590,000	4,553,000
2022	3,873,000	103,000	553,000	4,529,000
2023	3,898,000	91,000	515,000	4,504,000
2024-2028	19,343,000	275,000	2,012,000	21,630,000
2029-2033	19,429,000	118,000	1,054,000	20,601,000
2034-2038	9,595,000	14,000	237,000	9,846,000
2039-2043	758,000	-	6,000	764,000
	<u>\$ 67,435,000</u>	<u>\$ 981,000</u>	<u>\$ 6,235,000</u>	<u>\$ 74,651,000</u>



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**NOTE I - LONG-TERM LIABILITIES**

The following is a summary of changes in long-term liabilities for the fiscal year ended June 30, 2018:

	Balance July 1, 2017	Additions	Reductions	Balance June 30, 2018	Current Portion
Bonds payable	\$ 223,205,000	\$ -	\$ (8,365,000)	\$ 214,840,000	\$ 8,550,000
Add: unamortized premium	<u>19,917,539</u>	<u>-</u>	<u>(1,865,197)</u>	<u>18,052,342</u>	<u>-</u>
Total bonds payable	243,122,539	-	(10,230,197)	232,892,342	8,550,000
Notes payable	73,007,901	8,564,034	(14,137,213)	67,434,722	3,179,667
Accrued vacation	6,976,499	2,890,782	(2,851,001)	7,016,280	2,851,001
Accrued workers' compensation	2,267,155	2,441,751	(1,159,720)	3,549,186	1,033,217
Customer advances	1,529,622	8,915,036	(8,838,655)	1,606,003	-
Other	<u>3,574,344</u>	<u>1,383,598</u>	<u>(1,253,005)</u>	<u>3,704,937</u>	<u>-</u>
	<u>\$ 330,478,060</u>	<u>\$ 24,195,201</u>	<u>\$ (38,469,791)</u>	<u>\$ 316,203,470</u>	<u>\$ 15,613,885</u>

**NOTE J - NET POSITION**

The BWS's net position consisted of the following as of June 30, 2018:

**Net investment in capital assets**

Capital assets, net	\$ 1,150,029,283
Deferred loss on refunding	17,085,994
Less: noncurrent portion of water system revenue bonds payable	(224,342,342)
Less: noncurrent portion of notes payable	(64,255,055)
Unspent debt proceeds	<u>4,291,362</u>
	<u>882,809,242</u>

**Restricted for capital activity and debt service**

Restricted cash and cash equivalents	18,856,615
Restricted investments	23,329,505
Less: unspent debt proceeds	(4,291,362)
Less: contracts payable, including retainages	(3,267,464)
Less: accrued interest payable	(4,781,189)
Less: bonds payable, current portion	(8,550,000)
Less: notes payable, current portion	<u>(3,179,667)</u>
	<u>18,116,438</u>

**Unrestricted**

	<u>246,349,577</u>
	<u>\$ 1,147,275,257</u>

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**NOTE K - LEASES**

The BWS leases space for its deep seawater cooling project on Oahu under an operating lease that extends through September 2025. The lease is subject to early cancellation contingent on mutual agreement between the BWS and the lessor. Rent expense under this lease for the fiscal year ended June 30, 2018 totaled \$159,000.

The BWS also leases certain properties to other users, primarily utility and telecommunications companies, under multi-year license agreements. The terms of these agreements range from 5 to 30 years through December 2031. The agreements are generally based on fixed annual amounts, with provisions for increases.

The future minimum rental payments and revenue from these operating leases at June 30, 2018 were as follows:

<u>Fiscal Year Ending June 30,</u>	<u>Future Minimum Rental Payments</u>	<u>Future Minimum Rental Revenue</u>
2019	\$ (159,000)	\$ 119,000
2020	(159,000)	119,000
2021	(159,000)	119,000
2022	(159,000)	111,000
2023	(159,000)	104,000
2024-2028	(350,000)	500,000
2029-2033	--	300,000
	<u>\$ (1,145,000)</u>	<u>\$ 1,372,000</u>

**NOTE L - RELATED PARTY TRANSACTIONS**

The BWS has an agreement with the Department of Environmental Services, City and County of Honolulu to provide certain services relating to the billing and collection of sewer service charges. Fees related to these services totaled \$3,106,817 for the fiscal year ended June 30, 2018.

The BWS has an agreement with the City to pay a central administrative services expense ("CASE") fee for treasury, personnel, purchasing and other services that the City provides to the BWS on an on-going basis. The BWS's Charter allows for CASE fees to the extent that it represents a reasonable charge for services necessary for the BWS to perform its duties. CASE fees totaled \$3,300,000 for the fiscal year ended June 30, 2018.

Amounts due from the City totaled \$1,845,926 as of June 30, 2018 and are included in customer receivables in the statement of net position.

The BWS has entered into agreements with the City for joint capital projects. Unexpended advanced funds totaled \$826,000 as of June 30, 2018 and are included in other liabilities in the statement of net position.

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**NOTE M - EMPLOYEE BENEFIT PLANS**

**Pension Plan**

*Plan description.* The ERS is a cost-sharing, multiple-employer public employee retirement system established as a defined benefit pension plan to administer a pension benefits program for all eligible employees of the State and counties of Hawaii. Benefit terms, eligibility, and contribution requirements are established by Chapter 88 of the Hawaii Revised Statutes and can be amended through legislation.

The ERS provides retirement, disability and death benefits that are covered by the provisions of the noncontributory, contributory and hybrid retirement membership classes. The three classes provide a monthly retirement allowance equal to the benefit multiplier (generally 1.25% or 2%) multiplied by the average final compensation multiplied by years of credited service. Average final compensation is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation for employees hired January 1, 1971 or later and the average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation for employees hired prior to January 1, 1971.

For members hired before July 1, 2012, the original retirement allowance is increased by 2.5% each July 1 following the calendar year of retirement. This cumulative benefit is not compounded and increases each year by 2.5% of the original retirement allowance without a ceiling (2.5% of the original retirement allowance the first year, 5.0% the second year, 7.5% the third year, etc.). For members hired after June 30, 2012, the post-retirement annuity increase was decreased to 1.5% per year.

**Noncontributory Class**

- o *Retirement Benefits* - General employees' retirement benefits are determined as 1.25% of average final compensation multiplied by the years of credited service. Employees with 10 years of credited service are eligible to retire at age 62. Employees with 30 years of credited service are eligible to retire at age 55.
- o *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 12.5% of average final compensation.
- o *Death Benefits* - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a monthly benefit of 30% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. Additional benefits are payable to surviving dependent children up to age 18. If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

Ten years of credited service is required for ordinary death benefits. For ordinary death benefits, the surviving spouse/reciprocal beneficiary (until remarriage/re-entry into a new reciprocal beneficiary relationship) and dependent children (up to age 18) receive a benefit equal to a percentage of member's accrued maximum allowance unreduced for age or, if the member was eligible for retirement at the time of death, the surviving spouse/reciprocal beneficiary receives 100% joint and survivor lifetime pension.

**Contributory Class for Employees Hired Prior to July 1, 2012**

- *Retirement Benefits* - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 55.
- *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a one-time payment of the member's contributions and accrued interest plus a lifetime pension of 50% of their average final compensation. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined as 1.75% of average final compensation multiplied by the years of credited service but are payable immediately, without an actuarial reduction, and at a minimum of 30% of average final compensation.
- *Death Benefits* - For service-connected deaths, the surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the death benefit is payable to the designated beneficiary.

Ordinary death benefits are available to employees who were active at time of death with at least one year of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

**Contributory Class for Employees Hired After June 30, 2012**

- *Retirement Benefits* - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with 10 years of credited service are eligible to retire at age 60.
- *Disability and Death Benefits* - Disability and benefits for contributory class members hired after June 30, 2012 are generally the same as those for contributory class members hired June 30, 2012 and prior.

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

Hybrid Class for Employees Hired Prior to July 1, 2012

- o *Retirement Benefits* - General employees' retirement benefits are determined as 2% of average final compensation multiplied by the years of credited service. General employees with five years of credited service are eligible to retire at age 62. General employees with 30 years of credited service are eligible to retire at age 55.
- o *Disability Benefits* - Members are eligible for service-related disability benefits regardless of length of service and receive a lifetime pension of 35% of their average final compensation plus refund of their contributions and accrued interest. Ten years of credited service is required for ordinary disability. Ordinary disability benefits are determined in the same manner as retirement benefits but are payable immediately, without an actuarial reduction, and at a minimum of 25% of average final compensation.
- o *Death Benefits* - For service-connected deaths, the designated surviving spouse/reciprocal beneficiary receives a lump sum payment of the member's contributions and accrued interest plus a monthly benefit of 50% of the average final compensation until remarriage or re-entry into a new reciprocal beneficiary relationship. If there is no surviving spouse/reciprocal beneficiary, surviving children (up to age 18) or dependent parents are eligible for the monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the death benefit is payable to the designated beneficiary.

Ordinary death benefits are available to employees who were active at time of death with at least five years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest plus a percentage multiplied by 150%, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death but was credited with at least 10 years of service and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

Hybrid Class for Employees Hired After June 30, 2012

- o *Retirement Benefits* - General employees' retirement benefits are determined as 1.75% of average final compensation multiplied by the years of credited service. General employees with 10 years of credited service are eligible to retire at age 65. Employees with 30 years of credited service are eligible to retire at age 60.
- o *Disability and Death Benefits* - Provisions for disability and death benefits generally remain the same except for ordinary death benefits. Ordinary death benefits are available to employees who were active at time of death with at least 10 years of service. Ordinary death benefits consist of a lump sum payment of the member's contributions and accrued interest, or 50% Joint and Survivor lifetime pension if the member was not eligible for retirement at the time of death and designated one beneficiary, or 100% Joint and Survivor lifetime pension if the member was eligible for retirement at the time of death and designated one beneficiary.

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

*Contributions.* The employer contribution rate is a fixed percentage of compensation. The employer contribution rate was 18% for the fiscal year ended June 30, 2018. For the fiscal years ended June 30, 2018, contributions to the pension plan from the BWS totaled \$7,561,614.

The employer is required to make all contributions for noncontributory members. For contributory class employees hired prior to July 1, 2012, general employees are required to contribute 7.8% of their salary. For contributing class employees hired after June 30, 2012, general employees are required to contribute 9.8% of their salary. Hybrid class members hired prior to July 1, 2012 are required to contribute 6.0% of their salary. Hybrid class members hired after June 30, 2012 are required to contribute 8.0% of their salary.

***Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions***

At June 30, 2018, the BWS reported a liability of \$113,350,294 for its proportionate share of the net pension liability. The net pension liability was measured as of June 30, 2017, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The BWS's proportion of the net pension liability was based on the actual employer contributions to the pension plan relative to the contributions of all participating employers. At June 30, 2017, the BWS's proportion was 0.88%, which was an increase of 0.005% from its proportion measured as of June 30, 2016.

For the fiscal year ended June 30, 2018, the BWS recognized pension expense of \$16,917,657. At June 30, 2018, the BWS reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,816,533	\$ 1,214,716
Changes of assumptions	17,308,162	—
Net difference between projected and actual earnings on pension plan investments	—	335,614
Changes in proportion and differences between employer contributions and proportionate share of contributions	5,245,530	2,825,289
Employer contributions subsequent to the measurement date	7,561,614	—
	<u>\$ 31,931,839</u>	<u>\$ 4,375,619</u>

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

The BWS reported \$7,561,614 of deferred outflows of resources related to pensions resulting from BWS contributions subsequent to the measurement date, which will be recognized as a reduction of the net pension liability in the fiscal year ended June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources will be recognized in pension expense as follows:

<u>Fiscal Year Ended June 30:</u>	<u>Net Deferred Outflows (Inflows)</u>
2019	\$ 5,926,213
2020	7,568,422
2021	4,878,337
2022	1,524,981
2023	96,653
	<u>\$ 19,994,606</u>

*Actuarial assumptions.* The total pension liability in the June 30, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Investment rate of return, including inflation	7.00%
Salary increases, including inflation	
Police and fire employees	5.00% to 7.00%
General employees	3.50% to 6.50%
Teachers	3.75% to 5.75%

Mortality rates used in the actuarial valuation as of June 30, 2017 were based on the following:

Active members - Multiples of the RP 2014 mortality table for active employees based on the occupation of the member.

Healthy retirees - The 2016 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2016 and with multipliers based on plan and group experience.

Disabled retirees - Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2016. Minimum mortality rate of 3.5% for males and 2.5% for females.

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

The actuarial assumptions used in the actuarial valuation as of June 30, 2017 were based on the results of an actuarial experience study for the five-year period ended June 30, 2015. The major changes to assumptions resulting from the 2015 actuarial experience study were (1) a decrease in the investment return assumption from 7.65% to 7.00% and (2) the mortality assumptions were modified to assume longer life expectancies as well as to reflect continuous mortality improvement.

The long-term expected rate of return on pension plan investments, based on ERS' investment consultant, was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

Strategic Allocation (Risk-Based Classes)	Target Allocation	Long-Term Expected Rate of Return	Long-Term Expected Real Rate of Return *
Broad growth	63.00%	8.05%	5.80%
Principal protection	7.00%	2.45%	0.20%
Real return	10.00%	5.80%	3.55%
Crisis risk offset	20.00%	5.35%	3.10%
	<u>100.00%</u>		

\* Uses an expected inflation of 2.25%

*Discount rate.* The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the current contribution rate and that contributions from employers will be made at statutorily required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.



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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

*Sensitivity of the BWS's proportionate share of the net pension liability to changes in the discount rate.* The following presents the BWS's proportionate share of the net pension liability calculated using the discount rate of 7.00%, as well as what the BWS's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate:

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Proportionate share of the net pension liability	\$ <u>146,890,615</u>	\$ <u>113,350,294</u>	\$ <u>85,694,584</u>

*Pension plan fiduciary net position.* Detailed information about the pension plan's fiduciary net position is available in the separately issued ERS financial report. ERS's complete financial statements are available at [ers.hawaii.gov](http://ers.hawaii.gov).

***Payable to the Pension Plan***

At June 30, 2018, the amount payable to the ERS totaled \$1,484,267, which consists of statutorily required employer contributions for the month of June 2018 and excess pension costs attributed to fiscal year 2018, as required by the HRS.

**Postemployment Benefits Other Than Pensions (OPEB)**

***General Information about the OPEB Plan***

*Plan description.* Chapter 87A of the Hawaii Revised Statutes ("HRS") established the EUTF, an agent multiple-employer defined benefit plan, which provides a single delivery system of health and other benefits for state and county workers, retirees and their eligible dependents. The EUTF issues a stand-alone financial report that is available to the public on its website at <https://eutf.hawaii.gov>.

*Benefits provided.* Chapter 87A of the HRS grants the authority to establish and amend the benefit terms to the board of trustees of the EUTF. The EUTF currently provides medical, prescription drug, dental, vision, chiropractic, supplemental medical and prescription drug, and group life insurance benefits for retirees and their dependents. The following table provides a summary of the number of employees covered by the benefits terms as of July 1, 2017:

Inactive employees or beneficiaries currently receiving benefits	580
Inactive employees entitled but not yet receiving benefit payments	53
Active employees	<u>570</u>
	<u>1,203</u>

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

*Contributions.* The BWS's contribution levels are established by Chapter 87A of the HRS. For the fiscal year ended June 30, 2018, the BWS was required to contribute a minimum amount equal to at least 80% of the annual required contribution ("ARC"), as determined by an actuary retained by the board of trustees of the EUTF. The BWS will be required to contribute 100% of the ARC starting in fiscal year 2019. The ARC represents a level of funding that is sufficient to cover, 1) the normal cost, which is the cost of the other postemployment benefits attributable to the current year of service; and 2) an amortization payment, which is a catch-up payment for past service costs to fund the unfunded actuarial accrued liability over the next thirty years. For the fiscal year ended June 30, 2018, contributions to the OPEB plan from the BWS totaled \$8,855,338, which resulted in an average contribution rate of approximately 23.3% of covered-employee payroll.

For employees hired before July 1, 1996, the BWS pays the entire base monthly contribution for employees retiring with 10 or more years of credited service, and 50% of the base monthly contribution for employees retiring with fewer than 10 years of credited service. A retiree can elect a family plan to cover dependents. The BWS's contribution is based on the plan selected by the retiree (single, two-party, or family plans).

For employees hired after June 30, 1996, but before July 1, 2001, and who retire with fewer than 10 years of service, the BWS makes no contributions. For those retiring with at least 10 years of service but fewer than 15 years of service, the BWS pays 50% of the base monthly contribution. For employees retiring with at least 15 years of service but fewer than 25 years of service, the BWS pays 75% of the base monthly contribution. For employees retiring with at least 25 years of service, the BWS pays 100% of the base monthly contribution. The BWS's contribution is based on the plan selected by the retiree (single, two-party, or family plans).

For employees hired on or after July 1, 2001, and who retire with less than 10 years of service, the BWS makes no contributions. For those retiring with at least 10 years but fewer than 15 years of service, the BWS pays 50% of the base monthly contribution. For those retiring with at least 15 years but fewer than 25 years of service, the BWS pays 75% of the base monthly contribution. For those employees retiring with at least 25 years of service, the BWS pays 100% of the base monthly contribution. Only single plan coverage is provided for retirees in this category. The BWS's contribution is based on the single plan base monthly contribution. Retirees can elect family coverage but must pay the difference.

***Net OPEB Liability***

The BWS's net OPEB liability was measured as of July 1, 2017, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date.

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NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

*Actuarial assumptions.* The total OPEB liability in the July 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50%
Salary increases	3.50% to 7.00%, including inflation
Investment rate of return	7.00%
Healthcare cost trend rates	
PPO	Initial rates of 6.60%, 6.60% and 9.00%; declining to a rate of 4.86% after 14 years
HMO	Initial rate of 9.00%; declining to a rate of 4.86% after 14 years
Part B & base monthly contribution	Initial rates of 2.00% and 5.00%, declining to a rate of 4.70% after 14 years
Dental	3.50%
Vision	2.50%
Life insurance	0.00%

Mortality rates used in the actuarial valuation as of July 1, 2017 were based on the following:

Active members - Multiples of the RP 2014 mortality table for employees with generational projection using the BB projection table from the year 2014 based on the occupation of the member.

Healthy retirees - The 2016 Public Retirees of Hawaii mortality table, generational projection using the BB projection table from the year 2016 and with multipliers based on plan and group experience.

Disabled retirees - Base table for healthy retirees' occupation, set forward five years, generational projection using the BB projection table from the year 2016. Minimum mortality rate of 3.50% for males and 2.50% for females.

The actuarial assumptions used in the actuarial valuation as of July 1, 2017 were based on the results of an actuarial experience study for the five-year period ended June 30, 2015 as conducted for the ERS.

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**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class as of July 1, 2017 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. equity	19.00%	5.50%
International equity	19.00%	7.00%
U.S. microcap	7.00%	7.00%
Private equity	10.00%	9.25%
REITs	6.00%	5.85%
Core real estate	10.00%	3.80%
Global options	7.00%	5.50%
Core bonds	3.00%	0.55%
Long treasuries	7.00%	1.90%
Trend following	7.00%	1.75%
TIPS	5.00%	0.50%
	100.00%	

*Discount rate.* The discount rate used to measure the total OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that BWS contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments for current active and inactive employees. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

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June 30, 2018**

**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

***Changes in the Net OPEB Liability***

The following schedule presents the changes in the net OPEB liability for the fiscal year ending June 30, 2018:

	Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
<b>Balance at June 30, 2017</b>	<b>\$ 140,024,777</b>	<b>\$ 59,573,594</b>	<b>\$ 80,451,183</b>
<b>Changes for the fiscal year:</b>			
Service cost	2,404,087	--	2,404,087
Interest on the total OPEB liability	9,685,512	--	9,685,512
Contributions - employer	--	11,724,727	(11,724,727)
Net investment income	--	6,029,726	(6,029,726)
Benefit payments	(5,724,727)	(5,724,727)	--
Administrative expense	--	(13,794)	13,794
Other	--	78,200	(78,200)
<b>Net changes</b>	<b>6,364,872</b>	<b>12,094,132</b>	<b>(5,729,260)</b>
<b>Balance at June 30, 2018</b>	<b>\$ 146,389,649</b>	<b>\$ 71,667,726</b>	<b>\$ 74,721,923</b>

*Sensitivity of the net OPEB Liability to changes in the discount rate.* The following presents the net OPEB liability of the BWS, as well as what the BWS's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current discount rate:

	1% Decrease (6.00%)	Discount Rate (7.00%)	1% Increase (8.00%)
<b>Net OPEB Liability</b>	<b>\$ 96,608,229</b>	<b>\$ 74,721,923</b>	<b>\$ 56,878,627</b>

*Sensitivity of the net OPEB Liability to changes in the healthcare cost trend rates.* The following presents the net OPEB liability of the BWS, as well as what the BWS's net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower or 1-percentage point higher than the current healthcare cost trend rates:

	1% Decrease	Current Healthcare Cost Trend Rates	1% Increase
<b>Net OPEB Liability</b>	<b>\$ 56,208,713</b>	<b>\$ 74,721,923</b>	<b>\$ 97,787,751</b>

**Board of Water Supply  
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June 30, 2018**

**NOTE M - EMPLOYEE BENEFIT PLANS (Continued)**

***OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB***

For the fiscal year ended June 30, 2018, the BWS recognized OPEB expense of \$7,313,323. At June 30, 2018, the BWS reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on OPEB plan investments	\$ --	\$ 1,317,856
Employer contributions subsequent to the measurement date	8,855,338	--
	<u>\$ 8,855,338</u>	<u>\$ 1,317,856</u>

The BWS reported \$8,855,338 as deferred outflows of resources related to OPEB resulting from BWS contributions subsequent to the measurement date, which will be recognized as a reduction of the net OPEB liability in the fiscal year ended June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Fiscal Year Ended June 30:	Net Deferred Outflows (Inflows)
2019	\$ (329,464)
2020	(329,464)
2021	(329,464)
2022	(329,464)
	<u>\$ (1,317,856)</u>

**NOTE N - COMMITMENTS AND CONTINGENCIES**

**Contract Commitments**

Commitments, primarily for capital improvements, approximated \$253,543,000 as of June 30, 2018. Such amounts are to be funded by operating revenues, contributed capital, cash and investments on hand.

**Workers' Compensation Self-Insurance Liability**

The BWS is self-insured for workers' compensation and disability claims up to \$600,000 and in excess of \$25,000,000. The BWS has obtained excess insurance coverage for claims that are not self-insured. The BWS provides reserves for claims not covered by insurance that in the opinion of management will result in probable judgment against the BWS.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO FINANCIAL STATEMENTS  
June 30, 2018**

**NOTE N - COMMITMENTS AND CONTINGENCIES (Continued)**

The liability for losses and loss adjustment expenses is comprised of case reserves and incurred but not reported loss reserves ("IBNR"). Case or outstanding loss reserves represent estimates of ultimate costs to settle reported claims.

Determination of a reserve account for workers' compensation is a significant estimate. It is reasonably possible that one or more future events could result in a material change in the estimated claims loss in the near term.

**Safe Drinking Water**

The BWS is subject to the requirements of the Safe Drinking Water Act (the "Act"), which is administered by the State Department of Health on behalf of the U.S. Environmental Protection Agency. Management believes that the BWS is in full compliance with the requirements of the Act and is not aware of any matters under the Act that may materially affect the BWS's customer service area.

**Other Legal Matters**

The BWS is party to various legal proceedings arising in the normal course of business. The outcome of individual matters is not predictable. However, management believes that the ultimate resolution of all such matters, after considering insurance coverage, will not have material adverse effect on the BWS's financial position, results of operations, or liquidity.

**NOTE O - ADOPTION OF NEW ACCOUNTING PRINCIPLE**

BWS has adopted the applicable requirements of GASB 75. The cumulative effect of applying the requirements of GASB 75 resulted in a reduction to beginning net position by \$84,461,339 as of June 30, 2017, which is summarized as follows:

	<u>Amount</u>
Net position at June 30, 2017, as previously stated	\$ 1,185,504,020
Cumulative effect of applying GASB 75:	
Reverse net OPEB asset at June 30, 2017, as previously stated	(15,734,883)
Net OPEB liability at June 30, 2017	(80,451,183)
Deferred outflows of resources - employer contributions paid during the fiscal year ended June 30, 2017	<u>11,724,727</u>
Net position at June 30, 2017, as restated	\$ <u>1,101,042,681</u>

Management of the BWS concluded that it was not practical to determine the amounts of all applicable deferred inflows of resources and deferred outflows of resources related to OPEB as of June 30, 2017. Accordingly, as permitted under the provisions of GASB 75, the restatement of beginning balances as of June 30, 2017 only includes deferred outflows of resources for OPEB contributions by the BWS made subsequent to the measurement date of the beginning net OPEB liability (June 30, 2016) but before June 30, 2017.

## **REQUIRED SUPPLEMENTARY INFORMATION**



**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF PROPORTIONATE SHARE  
OF THE NET PENSION LIABILITY  
Last Ten Fiscal Years \***

<b>Measurement Period Ended</b>	<b>Proportion of the Net Pension Liability</b>	<b>Proportionate Share of the Net Pension Liability</b>	<b>Covered Payroll</b>	<b>Proportionate Share of the Net Pension Liability as a %age of Covered Payroll</b>	<b>Plan Fiduciary Net Position as a %age of the Total Pension Liability</b>
June 30, 2017	0.88%	\$ 113,350,294	\$ 35,912,898	316%	54.80%
June 30, 2016	0.87%	\$ 116,342,916	\$ 34,536,085	337%	51.28%
June 30, 2015	0.93%	\$ 81,526,553	\$ 33,412,761	244%	62.42%
June 30, 2014	0.91%	\$ 73,141,824	\$ 32,202,276	227%	63.92%
June 30, 2013	0.78%	\$ 69,992,291	\$ 29,761,149	235%	57.96%

\* This schedule is intended to present information for ten years, as of the measurement date of the collective net pension liability for each respective fiscal year. Additional years will be built prospectively as information becomes available.

See accompanying notes to required supplementary information.

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF CONTRIBUTIONS (PENSION)  
Last Ten Fiscal Years**

<b>Fiscal Year Ended</b>	<b>Statutorily Required Contribution</b>	<b>Contributions in Relation to Statutorily Required Contributions</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Contributions as a %age of Covered Payroll</b>
June 30, 2018	\$ 7,561,614	\$ 7,561,614	\$ --	\$ 36,816,067	20.5%
June 30, 2017	\$ 6,885,401	\$ 6,885,401	\$ --	\$ 35,912,898	19.2%
June 30, 2016	\$ 6,647,884	\$ 6,647,884	\$ --	\$ 34,536,085	19.2%
June 30, 2015	\$ 6,686,641	\$ 6,686,641	\$ --	\$ 33,412,761	20.0%
June 30, 2014	\$ 5,931,238	\$ 5,931,238	\$ --	\$ 32,202,276	18.4%
June 30, 2013	\$ 4,604,149	\$ 4,604,149	\$ --	\$ 29,761,149	15.5%
June 30, 2012	\$ 4,404,845	\$ 4,404,845	\$ --	\$ 29,353,916	15.0%
June 30, 2011	\$ 4,497,292	\$ 4,497,292	\$ --	\$ 29,981,949	15.0%
June 30, 2010	\$ 4,850,928	\$ 4,850,928	\$ --	\$ 32,339,522	15.0%
June 30, 2009	\$ 4,804,377	\$ 4,804,377	\$ --	\$ 32,881,432	14.6%

See accompanying notes to required supplementary information.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION  
REQUIRED BY GASB STATEMENT NO. 68  
Fiscal Year Ended June 30, 2018**

**NOTE A - CHANGES OF ASSUMPTIONS**

There were no changes of assumptions or other inputs that significantly affected the measurement of the total pension liability since the measurement period ended June 30, 2016.

Amounts reported in the schedule of the proportionate share of the net pension liability as of the measurement period ended June 30, 2016 (fiscal year ended June 30, 2017) were significantly impacted by the following changes of actuarial assumptions:

- The investment return assumption decreased from 7.65% to 7.00%
- Mortality assumptions were modified to assume longer life expectancies as well as to reflect continuous mortality improvement

Prior to the measurement period ended June 30, 2016 (fiscal year ended June 30, 2017), there were no other factors, including the use of different assumptions that significantly affect trends reported in these schedules.

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF CHANGES IN THE NET OPEB LIABILITY  
AND RELATED RATIOS  
Last Ten Fiscal Years \***

	<u>2018</u>
<b>Total OPEB liability</b>	
Service cost	\$ 2,404,087
Interest on the total OPEB liability	9,685,512
Benefit payments	<u>(5,724,727)</u>
Net change in total OPEB liability	6,364,872
Total OPEB liability - Beginning	<u>140,024,777</u>
Total OPEB liability - Ending	\$ <u>146,389,649</u>
<b>Plan fiduciary net position</b>	
Contributions - employer	\$ 11,724,727
Net investment income	6,029,726
Benefit payments	(5,724,727)
Administrative expense	(13,794)
Other	<u>78,200</u>
Net change in plan fiduciary net position	12,094,132
Plan fiduciary net position - Beginning	<u>59,573,594</u>
Plan fiduciary net position - Ending	\$ <u>71,667,726</u>
<b>Net OPEB liability</b>	\$ <u>74,721,923</u>
<b>Plan fiduciary net position as a percentage of the total OPEB liability</b>	48.96%
<b>Covered-employee payroll</b>	\$ 36,968,407
<b>Net OPEB Liability as a Percentage of Covered-employee Payroll</b>	202.12%

\* This schedule is intended to present information for ten years for each respective fiscal year. Additional years will be built prospectively as information becomes available.

See accompanying notes to required supplementary information.

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF CONTRIBUTIONS (OPEB)  
Last Ten Fiscal Years**

<b>Fiscal Year Ended</b>	<b>Actuarially Determined Contribution</b>	<b>Contributions in Relation to the Actuarially Determined Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered- Employee Payroll</b>	<b>Contributions as a %age of Covered- Employee Payroll</b>
June 30, 2018	\$ 8,467,000	\$ 8,855,338	\$ (388,338)	\$ 38,023,983	23.3%
June 30, 2017	\$ 8,181,000	\$ 11,724,727	\$ (3,543,727)	\$ 36,968,407	31.7%
June 30, 2016	\$ 8,826,000	\$ 11,728,539	\$ (2,902,539)	\$ 35,467,175	33.1%
June 30, 2015	\$ 8,528,000	\$ 10,750,399	\$ (2,222,399)	\$ 34,329,374	31.3%
June 30, 2014	\$ 8,977,000	\$ 11,982,667	\$ (3,005,667)	\$ 32,993,059	36.3%
June 30, 2013	\$ 8,674,000	\$ 12,732,550	\$ (4,058,550)	\$ 30,236,942	42.1%
June 30, 2012	\$ 10,750,000	\$ 10,718,550	\$ 31,450	\$ 30,013,958	35.7%
June 30, 2011	\$ 10,387,000	\$ 12,339,213	\$ (1,952,213)	\$ 30,605,429	40.3%
June 30, 2010	\$ 7,837,000	\$ 6,771,411	\$ 1,065,589	\$ 32,884,807	20.6%
June 30, 2009	\$ 7,533,000	\$ 6,005,502	\$ 1,527,498	\$ 33,385,905	18.0%

See accompanying notes to required supplementary information.

**Board of Water Supply  
City and County of Honolulu  
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION  
REQUIRED BY GASB STATEMENT NO. 75  
Fiscal Year Ended June 30, 2018**

**NOTE A - SIGNIFICANT METHODS AND ASSUMPTIONS**

An actuarial valuation of the BWS's liability associated with other postemployment benefits other than pension provided through the EUTF is performed as of July 1 of each odd-numbered year (e.g. July 1, 2015). This actuarial valuation serves as the basis for developing the annual required contributions ("ARC") for the two fiscal years which begin one year after the actuarial valuation date. For example, the ARC for the fiscal years ended June 30, 2018 and 2017 were developed from the actuarial valuation as of July 1, 2015. Beginning July 1, 2017, the EUTF will be completing an actuarial valuation on an annual basis.

The following summarizes the significant methods and assumptions used to determine the actuarially determined contribution for the fiscal year ended June 30, 2018:

Actuarial valuation date	July 1, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, closed
Equivalent single amortization period	19.9
Asset valuation method	Market
Inflation rate	3.00%
Investment rate of return	7.00%
Payroll growth	3.50%
Healthcare cost trend rates	
PPO	Initial rate of 9%, declining to a rate of 5% after 8 years
HMO	Initial rate of 7%, declining to a rate of 5% after 8 years
Part B	Initial rate of 3% for the first two years, 5% thereafter
Dental	4.00%
Vision	3.00%
Life Insurance	0.00%

The actuarial valuation as of July 1, 2009, which was used to develop the ARC for fiscal year 2011 and 2012, included a reduction to the discount rate used from the prior valuation. The discount rate changed from a blended discount rate of 7% - 8% to 7%. This resulted in an overall increase to the actuarially determined OPEB liability and the ARC.

There were no other factors that significantly affected trends in the amounts reported in the schedule of changes in the net OPEB liability and related ratios or the schedule of contributions (OPEB).

## **SUPPLEMENTARY INFORMATION**

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF BONDS PAYABLE  
June 30, 2018**

	<u>Interest Rate</u>	<u>Bond Dated</u>	<u>Maturing Serially From</u>	<u>Call Dates (1)</u>	<u>Outstanding June 30, 2018</u>
<b>Water System Revenue Bonds</b>					
<b>Series 2012A</b>					
Insured Serial Bonds	4.000%	3/29/2012	7/1/2018	(2)	\$ 3,960,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2019	(2)	4,140,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2020	(2)	2,320,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2021	(2)	6,865,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2022	(2)	8,535,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2023	7/1/2022	3,605,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2024	7/1/2022	3,790,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2025	7/1/2022	3,980,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2026	7/1/2022	4,185,000
Insured Serial Bonds	4.500%	3/29/2012	7/1/2027	7/1/2022	4,390,000
Insured Serial Bonds	4.500%	3/29/2012	7/1/2028	7/1/2022	4,595,000
Insured Serial Bonds	4.500%	3/29/2012	7/1/2029	7/1/2022	4,805,000
Insured Serial Bonds	4.500%	3/29/2012	7/1/2030	7/1/2022	5,025,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2031	7/1/2022	5,270,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2032	7/1/2022	5,540,000
Insured Serial Bonds	5.000%	3/29/2012	7/1/2033	7/1/2022	5,825,000
Bifurcated Serial Bonds	2.000%	3/29/2012	7/1/2020	(2)	<u>2,000,000</u>
					<u>78,830,000</u>
<b>Water System Revenue Bonds</b>					
<b>Series 2014A (Non-AMT)</b>					
<b>Tax-Exempt Serial Bonds</b>					
Insured Serial Bonds	5.000%	12/9/2014	7/1/2023	(2)	5,585,000
Insured Serial Bonds	3.000%	12/9/2014	7/1/2024	(2)	410,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2024	(2)	5,455,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2025	7/1/2024	6,165,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2026	7/1/2024	6,480,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2027	7/1/2024	6,810,000
Insured Serial Bonds	3.000%	12/9/2014	7/1/2028	(2)	930,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2028	7/1/2024	6,215,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2029	7/1/2024	7,505,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2030	7/1/2024	7,930,000
Insured Serial Bonds	3.250%	12/9/2014	7/1/2031	(2)	4,470,000
Insured Serial Bonds	5.000%	12/9/2014	7/1/2031	7/1/2024	3,825,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2032	7/1/2024	6,575,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2033	7/1/2024	6,840,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2034	7/1/2024	8,500,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2035	7/1/2024	8,755,000
Insured Serial Bonds	4.000%	12/9/2014	7/1/2036	7/1/2024	<u>9,205,000</u>
					<u>\$ 101,655,000</u>

(1) Call dates indicated are optional.

(2) Noncallable.



**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF BONDS PAYABLE (Continued)  
June 30, 2018**

	<u>Interest Rate</u>	<u>Bond Dated</u>	<u>Maturing Serially From</u>	<u>Call Dates (1)</u>	<u>Outstanding June 30, 2018</u>
<b>Water System Revenue Bonds</b>					
<b>Series 2014B (AMT)</b>					
<b>Taxable Serial Bonds</b>					
Insured Serial Bonds	1.744%	12/9/2014	7/1/2018	(2)	\$ 4,590,000
Insured Serial Bonds	2.144%	12/9/2014	7/1/2019	(2)	4,680,000
Insured Serial Bonds	2.389%	12/9/2014	7/1/2020	(2)	4,790,000
Insured Serial Bonds	2.619%	12/9/2014	7/1/2021	(2)	2,585,000
Insured Serial Bonds	2.755%	12/9/2014	7/1/2022	(2)	1,540,000
Insured Serial Bonds	2.915%	12/9/2014	7/1/2023	(2)	1,585,000
Insured Serial Bonds	3.135%	12/9/2014	7/1/2024	(2)	1,625,000
Insured Serial Bonds	3.285%	12/9/2014	7/1/2025	(2)	1,670,000
Insured Serial Bonds	3.385%	12/9/2014	7/1/2026	(2)	1,730,000
Insured Serial Bonds	3.485%	12/9/2014	7/1/2027	(2)	1,785,000
Insured Serial Bonds	3.585%	12/9/2014	7/1/2028	(2)	1,845,000
Insured Serial Bonds	3.685%	12/9/2014	7/1/2029	(2)	1,910,000
Insured Serial Bonds	3.760%	12/9/2014	7/1/2030	(2)	1,975,000
Insured Serial Bonds	3.860%	12/9/2014	7/1/2031	(2)	2,045,000
					<u>34,355,000</u>
					<u>\$ 214,840,000</u>

(1) Call dates indicated are optional.

(2) Noncallable.

**Board of Water Supply  
City and County of Honolulu  
SCHEDULE OF NET REVENUE REQUIREMENT  
Fiscal Year Ended June 30, 2018**

<b>REVENUES</b>		
Water sales	\$	229,526,599
Interest		6,097,077
Other		<u>3,303,197</u>
Total revenues		<u>238,926,873</u>
<b>DEDUCTIONS</b>		
Operating expenses		197,745,380
Less: depreciation expense		(47,337,006)
Less: allocated depreciation charges		<u>(1,587,002)</u>
Total deductions		<u>148,821,372</u>
Net revenues	\$	<u>90,105,501</u>
<b>NET REVENUE REQUIREMENT</b>		
Greater of:		
1) Aggregate debt service	\$	17,844,248
Required deposits		<u>---</u>
	\$	<u>17,844,248</u>
2) Aggregate debt service	\$	17,844,248
Minimum required debt service ratio	x	<u>1.20</u>
Net revenue requirement	\$	<u>21,413,098</u>
Net revenue to aggregate debt service ratio		<u>5.05</u>

ITEM FOR INFORMATION NO. 2

"January 28, 2019

FINANCIAL  
UPDATE

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chair and Members:

Subject: Financial Update for the Quarter Ended December 31, 2018

The following Board of Water Supply's financial reports and graphs are attached:

- Budget vs Actual Revenue and Expense Totals
- Statement of Revenues, Expenses and Change in Net Assets
- Current Quarter Statement of Revenues, Expenses and Change in Net Assets
- Balance Sheet
- Budget vs Actual Appropriation Budget – Total BWS Summary
- Graph Representing Operating Expenditures by Category
- Graphs of Total Budgeted Operating Expenditures and Total Budgeted Operating Revenues

Respectfully submitted,

/s/ for ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:

Joe Cooper, Waterworks Controller provided the Financial Update Report on the quarterly performance for the first six months of Fiscal Year 2019, July 1, 2018 to December 31, 2018.

Mr. Soon asked Manager Lau regarding the 20% less on personnel and supplies if BWS are accomplishing less. Due to BWS being a public agency that raises money in order to provide service, are we providing less service, fewer projects, completing less lines? What is the impact of reduced spending?

Manager Lau explained the challenges filling permanent positions with the competitive market and finding qualified people. Generally, we are able to keep up by using the consultants and people on Personal Services Contracts. We are able to keep up with Capital Projects Division by utilizing the consultant services to help until we find enough engineers, inspectors,

and support techs. Manager Lau gave examples of the challenges such as hiring for a Board Secretary, exhausting the list of qualified names, how when offered not accepted because a better offer comes up and then we will need to recruit again. Field Operations is feeling the effect from a freeze a number of years ago on hiring including apprentices. We can only hire so many apprentices because we have to comply with the Department of Labor and Industrial Relations requirements of the ratio of journeyman to apprentice.

Manager Lau suggested that for next year's budget to narrow the personnel budget versus the actual and look at probably moving some money into other programs and more into our CIP because in reality it takes longer to fill positions.

Chair Andaya asked if the Apprenticeship Program is still in place. Manager Lau responded yes, it's good and solid, they become Pipefitters, Lead Pipefitters, and Supervisors. Chair Andaya suggested to focus on recruitment, even if we do hire consultants you need people to manage the programs and contracts.

Chair Andaya asked for further questions or comments.

Audience Member who identified himself as Bruce Wayne with Olelo and he suggested using the Olelo network as a way to recruit BWS opportunities. BWS thanked Mr. Wayne for his input. Chair Andaya inquired with Michelle Thomas, Human Resources if there anything her office needs. Ms. Thomas indicated Hawaii's unemployment rate right now of 1.8%, and it's very, very difficult to recruit.

Budget vs. Actual  
Revenue and Expense Totals  
As of December 31, 2018

	YTD Actuals	YTD Budget	Favorable/ (Unfavorable) Variance
Revenues	122,657,000	121,283,000	1,374,000
Operating Expenses	(80,174,000)	(90,275,000)	10,101,000
Net Revenues (expenditures)	<u>42,483,000</u>	<u>31,008,000</u>	<u>11,475,000</u>

Board Of Water Supply  
Statement of Revenues, Expenses And Change In Net Assets  
As of December 31, 2018

Current Month Actual	% Revenue	Last Year Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
				REVENUE					
18,163,305.17	100.00	19,308,631.33	100.00	OPERATING REVENUE	120,128,110.48	100.00	125,568,143.49	100.00	4.33-
18,163,305.17	100.00	19,308,631.33	100.00	REVENUE	120,128,110.48	100.00	125,568,143.49	100.00	4.33-
				OPERATING EXPENSES					
2,980,988.24-	16.41	2,935,885.09-	15.21	LABOR COSTS	18,115,261.71-	15.08	18,043,840.31-	14.37	.40
2,785,549.61-	15.34	2,363,700.01-	12.24	SERVICES	11,299,939.50-	9.41	10,607,590.59-	8.45	6.53
25,883.69	.14	375,416.42-	1.94	SUPPLIES	2,089,143.68-	1.74	1,913,198.82-	1.52	9.20
18,007.40-	.10	3,555.50-	.02	EDUCATION & TRAINING	65,973.16-	.05	72,956.65-	.06	9.57-
1,573,882.02-	8.67	2,191,991.90-	11.35	UTILITIES	11,407,376.74-	9.50	9,944,510.49-	7.92	14.71
87,429.00-	.48	242,578.45-	1.26	REPAIR AND MAINTENANCE	804,502.15-	.67	950,062.64-	.76	15.32-
1,634,389.53-	9.00	989,901.09-	5.13	MISC	9,987,799.51-	8.31	8,151,738.58-	6.49	22.52
1,811,305.14-	9.97	1,572,034.25-	8.14	RETIREMENT SYSTEM CONTRIBUTIO	10,266,203.57-	8.55	11,716,853.27-	9.33	12.38-
44,526.71	.25	73,848.38	.38	MISC EMPLOYEES' BENEFITS	1,561,183.03-	1.30	30,131.09-	.02	5,081.30
10,821,140.54-	59.58	10,601,214.33-	54.90	OPERATING EXPENSES	65,597,383.05-	54.61	61,430,882.44-	48.92	6.78
1,082,757.86	5.96	1,392,083.77-	7.21	NON OPERATING REVENUE AND EXPE	1,530,152.10-	1.27	3,327,750.91-	2.65	54.02-
804,376.53	4.43	1,504,803.25	7.79	CONTRIBUTION IN AID	4,744,833.70	3.95	5,891,852.25	4.69	19.47-
3,969,601.98-	21.86	4,091,979.56-	21.19	OTHER EXPENSES	24,230,248.51-	20.17	24,764,667.37-	19.72	2.16-
5,259,697.04	28.96	4,728,156.92	24.49	Change In Net Assets	33,515,160.52	27.90	41,936,695.02	33.40	20.08-

Board Of Water Supply  
Balance Sheet  
As of December 31, 2018

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Board Of Water Supply  
Statement of Revenues, Expenses And Change In Net Assets  
Quarter Ending December 31, 2018

Current Quarter Actual	% Revenue	Last Year Quarter Actual	% Revenue	Description	Year to Date Actual	% Revenue	Last Year to Date Actual	% Revenue	% Change
REVENUE									
56,032,663	100.00	59,013,167	100.00	OPERATING REVENUE	120,128,110	100.00	125,568,143	100.00	-4.33
56,032,663	100.00	59,013,167	100.00	REVENUE	120,128,110	100.00	125,568,143	100.00	-4.33
OPERATING EXPENSES									
-9,171,930	16.37	-9,052,745	15.34	LABOR COSTS	-18,115,262	15.08	-18,043,840	14.37	0.40
-7,419,451	13.24	-6,296,042	10.67	SERVICES	-11,299,940	9.41	-10,607,591	8.45	6.53
-1,532,647	2.74	-977,911	1.66	SUPPLIES	-2,089,144	1.74	-1,913,199	1.52	9.20
-35,730	0.06	-28,648	0.05	EDUCATION & TRAINING	-65,973	0.05	-72,957	0.06	-9.57
-6,029,768	10.76	-5,741,921	9.73	UTILITIES	-11,407,377	9.50	-9,944,510	7.92	14.71
-546,717	0.98	-527,650	0.89	REPAIR AND MAINTENANCE	-804,502	0.67	-950,063	0.76	-15.32
-5,276,503	9.42	2,416,271	-4.09	MISC	-9,987,800	8.31	-8,151,739	6.49	22.52
-5,439,495	9.71	-7,682,670	13.02	RETIREMENT SYSTEM CONTRIBUTIO	-10,266,204	8.55	-11,716,853	9.33	-12.38
228,168	-0.41	74,759	-0.13	MISC EMPLOYEES' BENEFITS	-1,561,183	1.30	-30,131	0.02	5081.30
-35,224,073	62.86	-27,816,555	47.14	OPERATING EXPENSES	-65,597,383	54.61	-61,430,882	48.92	6.78
-889,104	1.59	-3,790,995	6.42	NON OPERATING REVENUE AND EXPE	-1,530,152	1.27	-3,327,751	2.65	-54.02
2,047,007	-3.65	3,611,196	-6.12	CONTRIBUTION IN AID	4,744,834	3.95	5,891,852	4.69	-19.47
-12,366,322	22.07	-12,253,159	20.76	OTHER EXPENSES	-24,230,249	20.17	-24,764,667	19.72	-2.16
9,600,171	17.13	18,763,653	-31.80	Change In Net Assets	33,515,161	27.90	41,936,695	33.40	-20.08



## Budget vs Actual Appropriation Budget - Total BWS Summary

(\$000's)

CIFIS 19820-3021

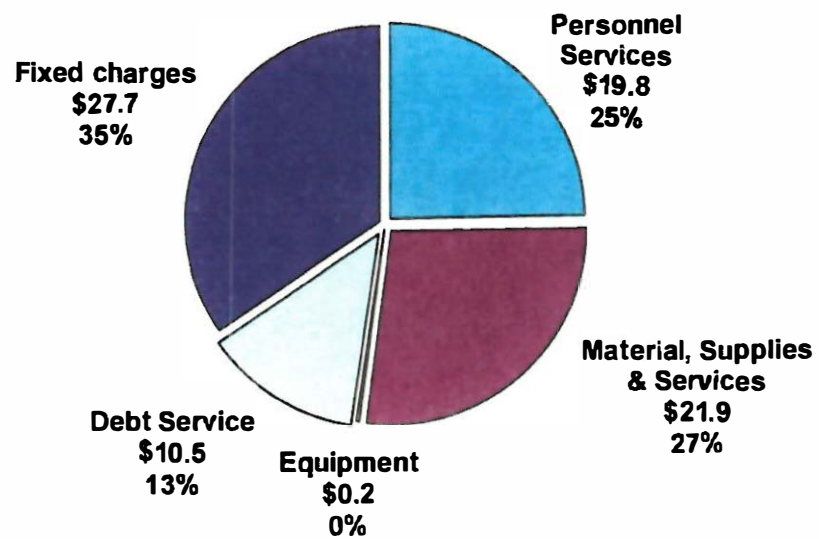
AS OF 12/31/2018

OPER UNIT ALL

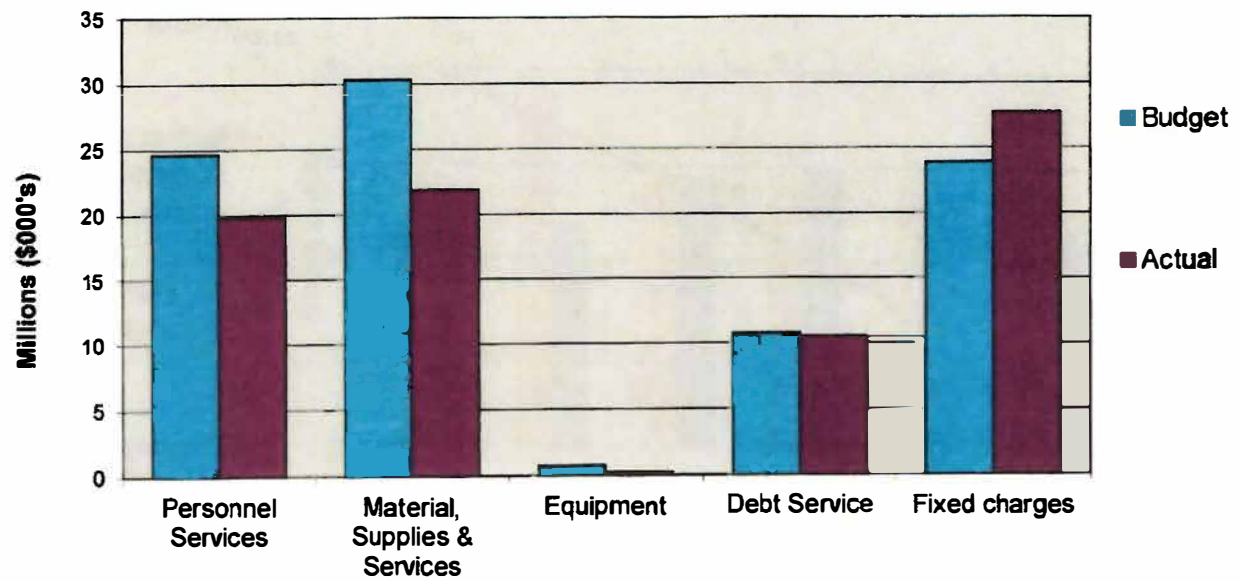
BUSINESS UNIT ALL

YTD-TO-DATE				Object Description	FOR THE FISCAL YEAR				
YTD Actuals	YTD Budget	Avail/ (Over)	%		Revenues/ Expend	Open Encumb	Annual Budget	Avail/ (Over)	%
<u>122,657</u>	<u>121,383</u>	<u>(1,374)</u>	<u>113-</u>	<u>REVENUE</u>	<u>122,657</u>		<u>239,236</u>	<u>116,579</u>	<u>48.73</u>
				OPERATING EXPENSES:					
19,821	24,631	4,810	19.53	Personnel Services	19,821		48,939	29,118	59.50
				MATERIALS AND SUPPLIES					
10,229	14,921	4,692	31.45	Services	6,646	3,583	32,571	22,342	68.59
4,427	7,179	2,752	38.33	Supplies	3,463	964	14,224	9,797	68.88
96	359	263	73.26	Education & Training	96		785	689	87.77
				Utilities					
979	1,403	424	30.22	Repairs & Maint	854	125	2,905	1,926	66.30
6,171	6,460	289	4.47	Misc	5,749	422	11,996	5,825	48.56
249	704	455	64.63	Equipment	148	101	5,365	5,116	95.36
10,509	10,722	213	1.99	Debt Service	10,509		21,657	11,148	51.48
				FIXED CHARGES:					
12,114	11,605	(509)	4.39-	Utilities	12,114		23,210	11,096	47.81
1,650	1,650			Case Fees	1,650		3,300	1,650	50.00
5,962	5,050	(912)	18.06-	Retirement System Contribution	5,962		10,100	4,138	40.97
7,967	5,591	(2,376)	42.50-	Misc Employees' Benefits	6,441	1,526	11,237	3,270	29.10
<u>80,174</u>	<u>90,275</u>	<u>10,101</u>	<u>11.19</u>	<u>TOTAL OPERATING EXPENDITURES</u>	<u>73,453</u>	<u>6,721</u>	<u>186,289</u>	<u>106,115</u>	<u>56.96</u>
42,483	31,008	(11,475)		NET REVENUES (EXPENDITURES)	49,204	(6,721)	52,947	10,464	

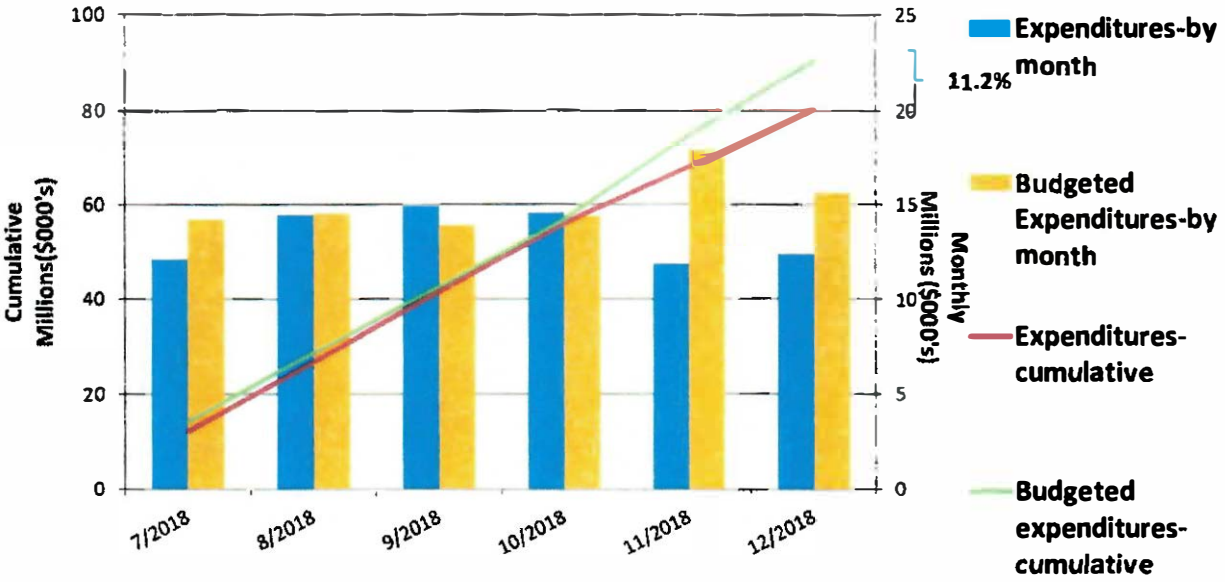
**Total Operating Expenditures - \$80.2**  
**As of December 31, 2018**  
(millions of dollars)



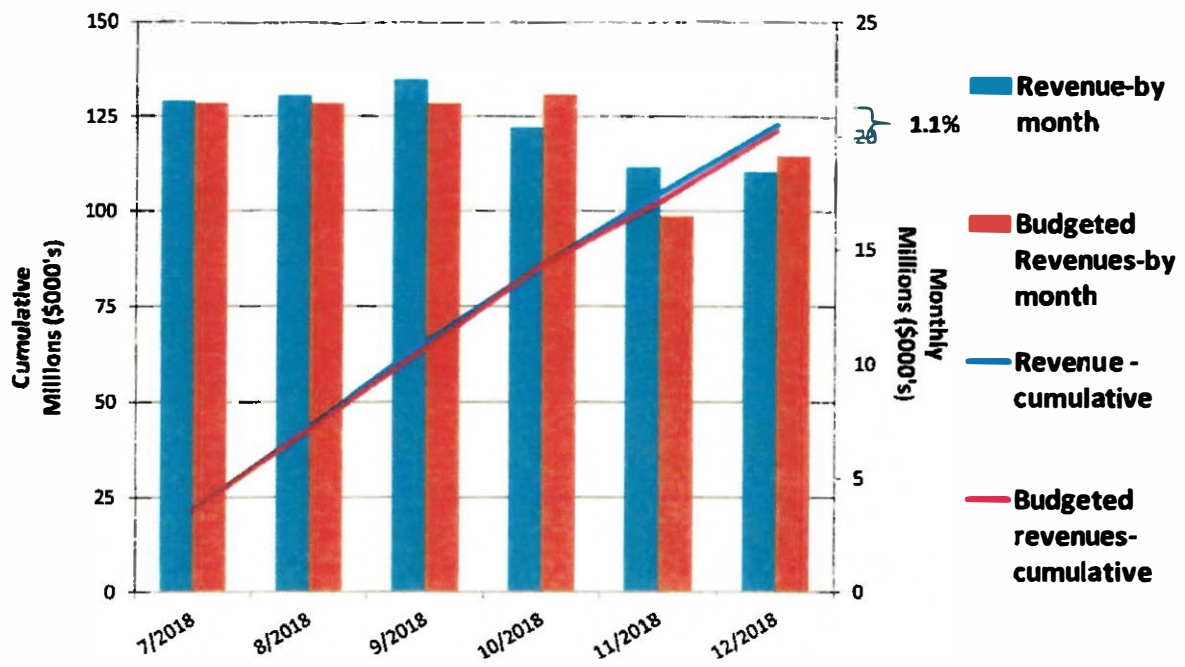
**Operating Expenditures by Category (Budget vs. Actual)**  
as of December 31, 2018 (millions of dollars)



**BUDGETED OPERATING EXPENDITURES FY 2019**



### BUDGETED OPERATING REVENUES FY 2019







**WATER FOR LIFE**

*Safe, dependable, and affordable water now and into the future*



**Board of Water Supply**  
City and County of Honolulu

# Financial Performance

July 2018 – December 2018







## Budget to Actual July 2018 – December 2018

- Actual Revenue \$123 million vs.  
Budgeted Revenue \$121 million
- Operating costs are \$80 million vs.  
Budgeted costs of \$90 million
- Actual Net Revenue \$42 million vs.  
Budgeted Net Revenue \$31 million





## Cost Drivers

Year to Date December 2018

	Actual (millions)	Budget (millions)
• Personnel	\$20	\$25
• Services/Supplies	\$15	\$22
• Repairs & Misc.	\$ 7	\$ 8
• Equipment	\$ 0.2	\$ 0.7
• Utilities	\$ 12	\$ 12

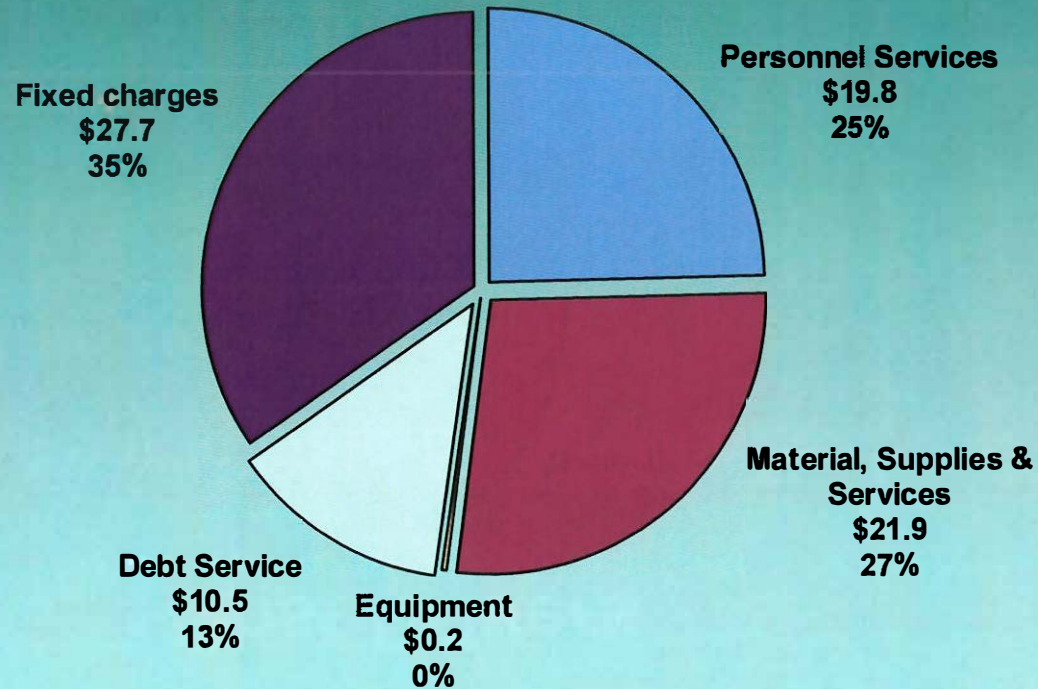
# WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

**Total Operating Expenditures - \$80.2**  
**As of December 31, 2018**  
(millions of dollars)





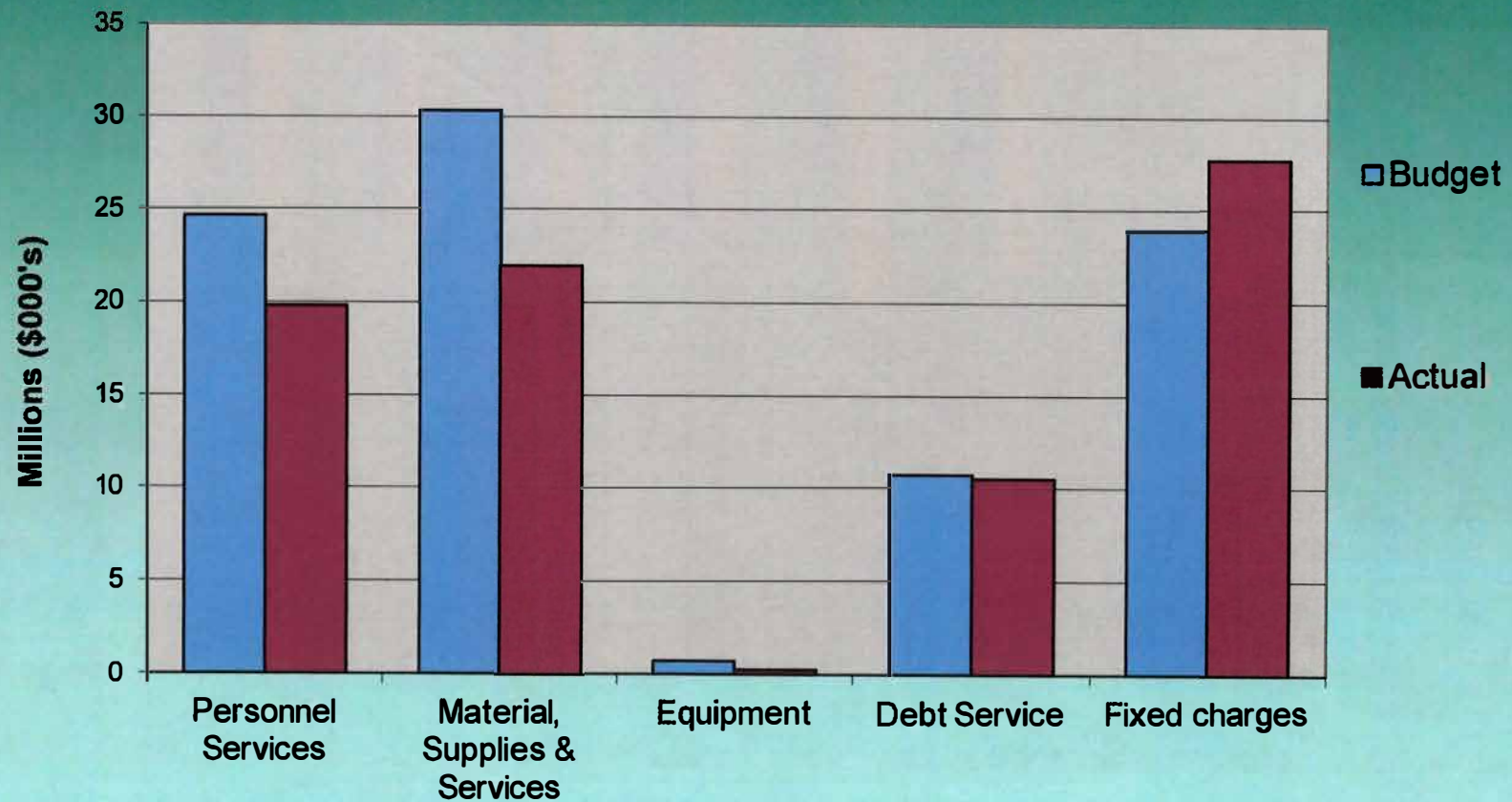
# WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## Operating Expenditures by Category (Budget vs. Actual) as of December 31, 2018 (millions of dollars)



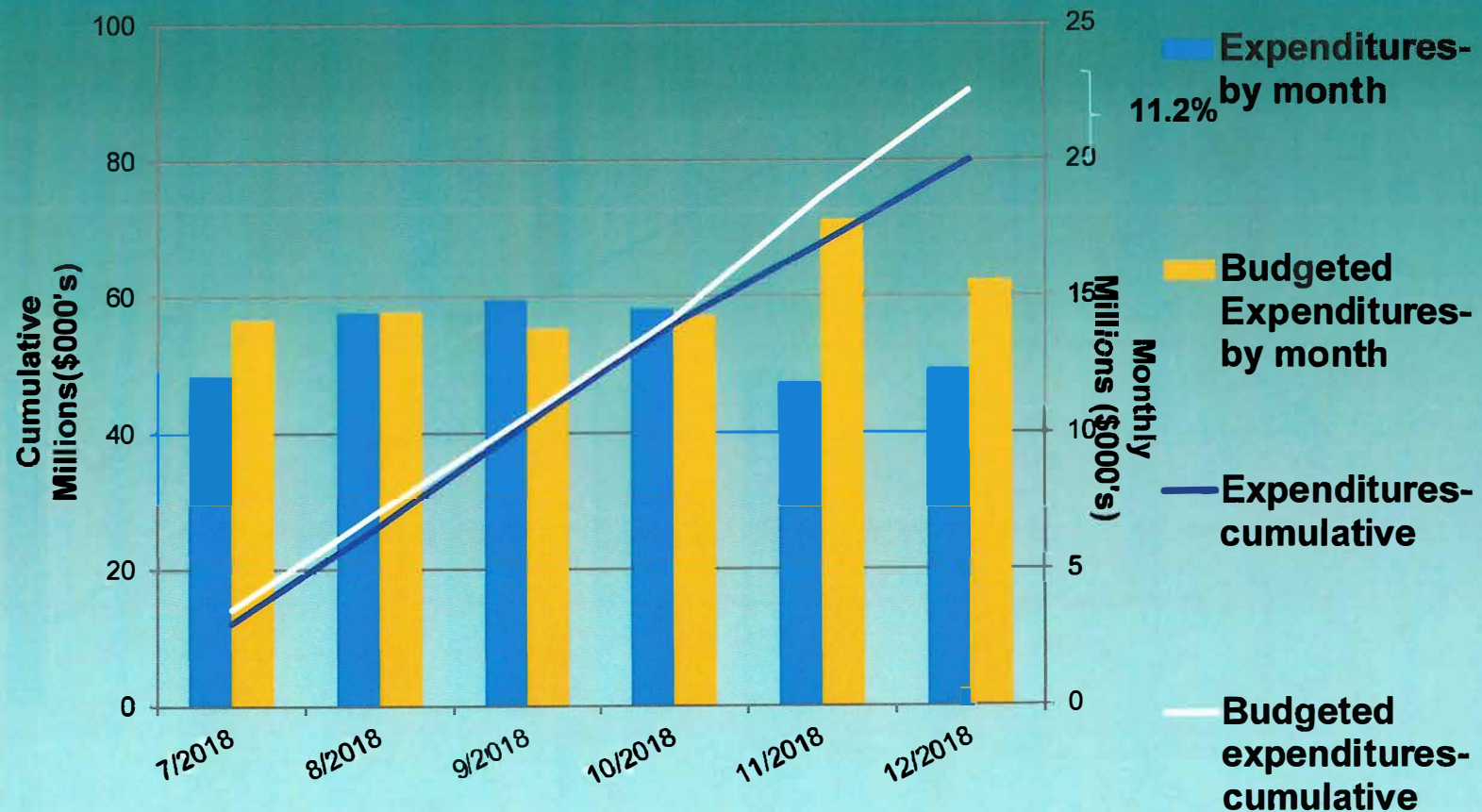
# WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## BUDGETED OPERATING EXPENDITURES FY 2019





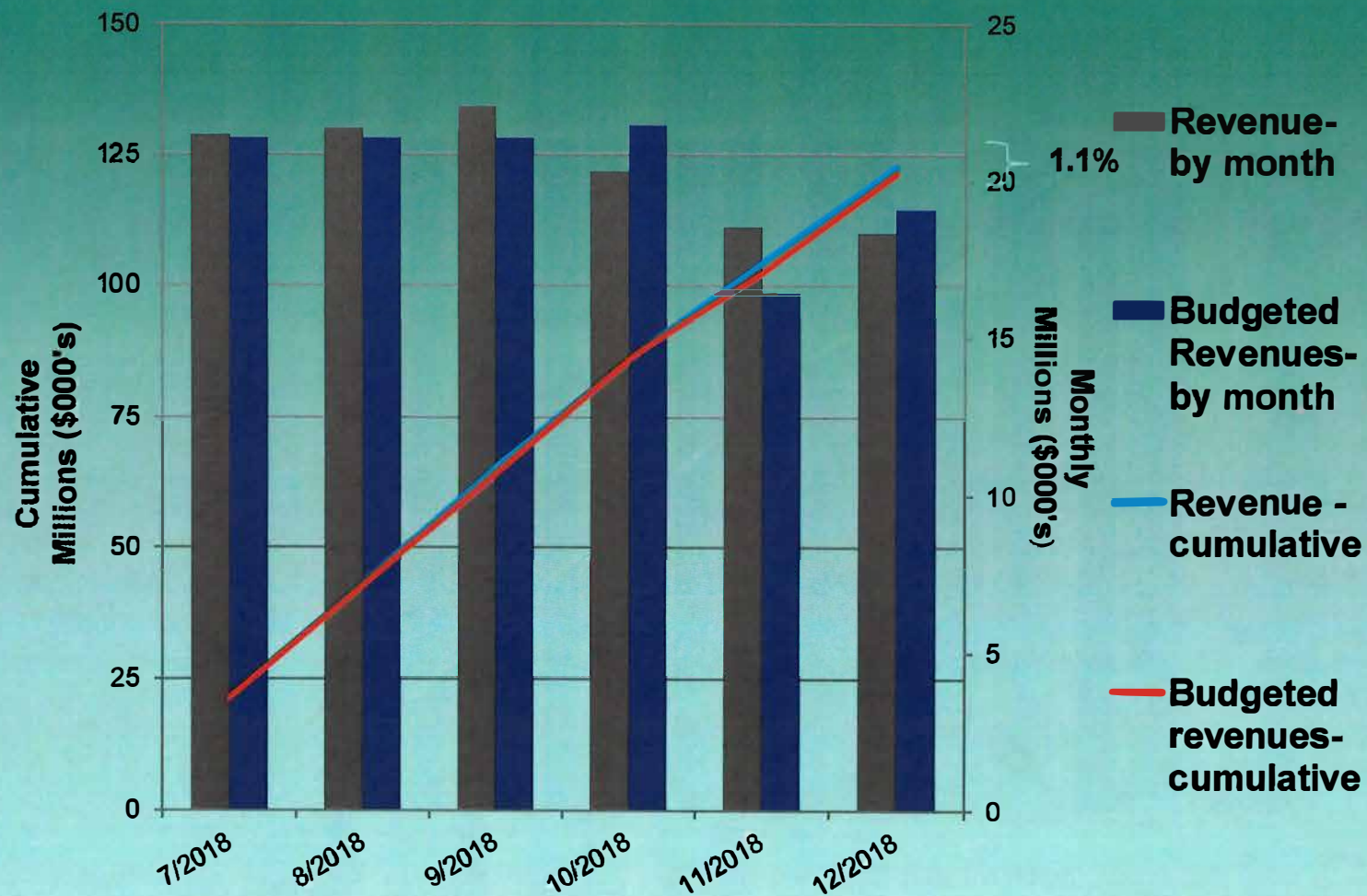
# WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



Board of Water Supply  
City and County of Honolulu

## BUDGETED OPERATING REVENUES FY 2019



# WATER FOR LIFE

*Safe, dependable, and affordable water now and into the future*



**Board of Water Supply**  
City and County of Honolulu

Questions  
or  
Comments



ITEM FOR INFORMATION NO.3

"January 28, 2019

RED HILL  
UPDATE

Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chair and Members:

Subject: Red Hill Bulk Fuel Facility Update

Erwin Kawata, Water Quality Division Program Administrator, will be presenting an update on the Red Hill Bulk Fuel Storage Facility.

Respectfully submitted,

/s/ ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

The foregoing was for information only.

DISCUSSION:

Erwin Kawata, Water Quality Division Program Administrator, gave the presentation.

Mr. Kawata presented an update on the department's current understanding of the data and facts to date reviewed under the Red Hill Bulk Fuel Storage Facility Administrative Order on Consent (AOC) meeting process. He began with a brief overview of Oahu's groundwater aquifer and the location of the Red Hill tanks. He then discussed Navy data showing the presence of fuel contaminants in the rocks and groundwater underneath the tanks and Navy reports documenting past fuel releases.

Mr. Kawata also reviewed the Navy's proposed six tank upgrade options (TUA) including a site uphill of the existing Red Hill tanks including the Navy's estimated costs and time required to complete each option. The Navy's August 15, 2018 stated the Navy's proposed TUA option 1A is to "continue with sustainment / maintenance of the existing tanks in accordance with current procedures as the Navy's initial best available practicable technology (BAPT) decision". The department's review finds the Navy is relying on interim and preliminary studies to support TUA option 1A. Existing methods used by the Navy cannot find and fix all of the areas on the tank that needs to be repaired due the tank's enormous size. Secondary containment provides the best protection from leaks both large and small.

Samples taken by the Navy from Tank 14 showed corrosion occurring on the backside of the steel liner. The Navy's interim groundwater model prediction

of groundwater flow direction and water levels is inconsistent with measurements and data being observed in the field. The United States Environmental Protection Agency (EPA) and Hawaii Department of Health (DOH) also expressed concerns with the Navy's groundwater model.

Mr. Sword asked whether the department sent a letter to DOH requesting the opportunity to comment on the Navy underground storage tank (UST) permit application that must be submitted to DOH and if and when DOH will approve the permit. Mr. Kawata responded that a letter was sent and the DOH agreed to allow BWS review and comment on the application. At this time, the Navy has not submitted an application.

Manager Lau concurred that BWS has not received any information on the permit application by the Navy. However, they have until the middle of the year to submit a permit. Mr. Kawata stated it would be July this year.

Mr. Sword suggested that an extension of the decision be made to cover until the next Board meeting. Manager Lau said that BWS has already been preparing comments on the permit and do not need Board authorization at this time.

Manager Lau added that the Tank Upgrade Alternative (TUA) decision maybe delayed due to the Federal government shutdown for 35 days which impacted the EPA Region 9 staff who are on furlough. Because of the furlough, the Navy could not get in touch with them which may have delay the TUA decision process and extend the timeline.

Manager Lau also mentioned that the TUA decision is very critical. Therefore, BWS is preparing comments on what is anticipated based on what has been revealed by the Navy. At the appropriate time, BWS will share this information with the Board.

In addition, Manager Lau informed the Board that a presentation similar to one given today was recently presented to the Stakeholder Advisory Group. They expressed great concern about the situation, had a lot of good questions and good discussion. One of the members suggested that this message be shared with the broader community.

Mr. Sword asked if EPA and DOH have expressed the same concerns as those discussed today. Manager Lau answered that EPA and DOH have expressed the same concern in writing covering similar concerns as BWS. The questions for them would be if EPA and DOH will hold the Navy accountable to addressing their concerns in their letter. Manager Lau expressed concern that the Navy will not be held or required to address those concerns before making a decision on the tank upgrade option or alternative.

Mr. Kawata concurred with Manager Lau in that the EPA has had a lot of discussion with the Navy about airing some of the concerns about the groundwater model, the report, and the technical correctness of that particular report, but BWS has not seen the actual, final Tank Upgrade



Alternative report. It is unclear how much it has impacted the quality of Navy's final work products.

The Board reviewed photos of 10 pieces of steel cut out of the Tank 14, each of which is a foot by foot square. Those pieces of steel plate from the tank were sent to a laboratory in Kentucky to be tested. They will analyze corrosion on each of the plates. The Navy should have received the analysis report. The tests were done about two to three months ago and BWS is waiting for a copy of this important report.

You have to actually go into the tank to see the corrosion. From the inside the metal is scanned through the steel to figure out how deep the rust has penetrated through that steel plate. The quarter-inch plate is not very thick. The question is how reliable is that process identifying each location of the 70,000 square feet of steel plate and being able to tell them to patch it when you need to prevent a leak of fuel. The BWS is anxious to receive the report and see if it validates or supports that the current method of maintaining these tanks is reliable.

Mr. Kawata stated that it is probably nearly impossible because every square inch of the 70,000 square feet would have to be scanned. In addition, you'd have to look at the welds between the plates which is about two miles of welds in each tank.

Vice Chair Sproat said that she was looking forward to the legislative informational briefing on Red Hill that was planned for January 15. That meeting would have been a good opportunity to get more information. Is there any update on whether or when it is going to be held? Now that the furlough is completed maybe the Navy will be available.

Manager Lau answered that the meeting was cancelled and has not been rescheduled. BWS is monitoring the state legislature for two bills being introduced at the legislature. One is House Bill 661 to create a fuel tank task force led by the Governor's office with an invite of the BWS's participation also in the task force to study and report back to the legislature an update on the Administrative Order Consent.

Also being introduced is Senate Bill 1372 which proposes the tanks be upgraded to double-walled tanks. This bill is similar to a bill introduced last session.

Vice Chair Sproat asked about the USGS model to do 3D modeling which is more accurate than what the Navy has done and is wondering when there might be information.

Manager Lau responded that there is no update probably due to the furlough. He noted that USGS is about two years away from finishing the model.

Chair Andaya stated that BWS has been in contact with the Department of Health, the regulatory agency, in this matter. Manager Lau reported that they had a meeting with interim Director of Health, Dr. Bruce Anderson.

Dr. Anderson may have also stated publicly that from his perspective that those tanks should be relocated because they pose a great risk to the drinking water resources for the long-term. What would happen short term within 20 years?

There was a voluntary agreement signed with the Federal entities and the State of Hawaii Department of Health, the U.S. Navy, the Defense Logistics Agency, and the U.S. EPA. BWS is not sure if the AOC would have to be amended to reflect DOH's position should they change their position. However, Dr. Anderson recognized the risk to the water resources and, for the long term, he felt that it should be moved.

Chair Andaya stated that if the Department of Health could be the lead agency especially because of their regulatory power it would be a great news for BWS.

Manager Lau pointed out that for the Board of Water Supply, our vision is Ka Wai Ola, Water for Life. The mission is safe, dependable, and affordable water now and into the future for our customers. Protecting the drinking water of the aina is important to us, drinking water is needed for life itself because there can be no life without pure drinking water on this island. Drinking water, good supply of adequate, clean drinking water, is also an important foundation for our economy to grow and exist. Businesses, industrial operations cannot exist without safe drinking water. Being on an island we have a finite amount of drinking so we need to malama that drinking water. It is finite and we need to care for it. It is also important to our economy and our ability for our economy to grow.

Mr. Soon asked if there have been any studies about alternate locations for the tank?

Mr. Kawata reported that the Navy did conduct a study to look at alternative locations. The criteria under which the alternate locations were evaluated were based on the existing Red Hill tanks. The site that the Navy selected was 40 new tanks further up the ridge from the existing tanks.

Mr. Soon asked if they were away from the aquifer, and Mr. Kawata said yes. The Navy expressed concerns about the distance, costs to pump fuel from the large distances, the vulnerability of above ground tanks to attack versus underground tanks protected from kinetic attacks. Each one of the different sites had several criteria that was not acceptable to the Navy, and they had great concerns and ended up with the 40 tanks.

Mr. Soon asked if any of the other locations were acceptable to BWS. Manager Lau explained that if the Navy can live with the tanks being in multiple locations so they are not concentrated in one location, then there are viable locations either on military property, not over the drinking water aquifer, or also going to private storage at Campbell Industrial Park. The way the criteria was set up according to the study drove it to one location that they really want to try to maintain and protect.

Mr. Soon commented that if you multiply 20 new tanks times the cost, it comes to \$5 billion and it may not be possible to get \$5 billion. He suggested that reality has to guide the strategy.

Manager Lau agreed with Mr. Soon. According to Manager Lau, the whole project cost for these different alternatives, the tank within the tank and the new tanks actually are the largest cost about \$5 billion to \$10 billion, but if you look at the time at which the work gets done. It would not be necessary to fund the entire project, but the cost would be spread out over time.

As an example, 40 new tanks would be somewhere between \$125 million to \$300 million a year. The tank within the tank would be about \$100 million to \$253 million a year. The restoration of the existing tanks which is the status quo approach that they are taking right now to clean, inspect, and patch it, would be \$15 million to \$30 million a year. From the Navy's perspective, it is very attractive to them because that is something the Defense Logistic Agency (DLA) has indicated dollars in that amount as something they have the funds not subject to Congressional appropriations.





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Board of Water Supply  
City and County of Honolulu

# Red Hill Bulk Fuel Storage Facility

## Information Update

Board Meeting  
January 28, 2019





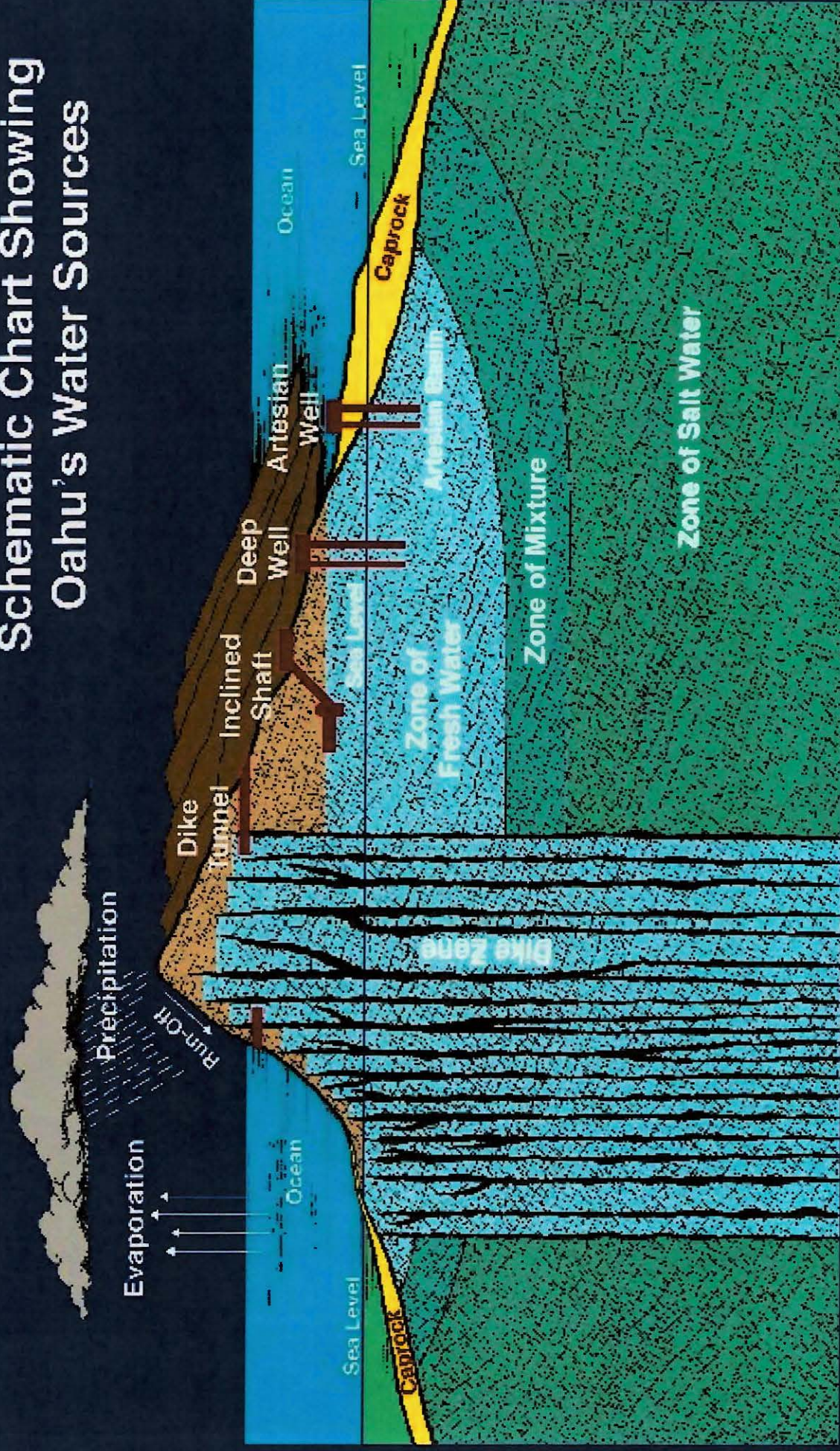
## Today's Discussion

- Review BWS understanding of data and facts to date
  - Navy proposed Tank Upgrade Alternative (TUA) Way Forward
  - Tank 14 coupons
  - Interim groundwater model report





# Schematic Chart Showing Oahu's Water Sources



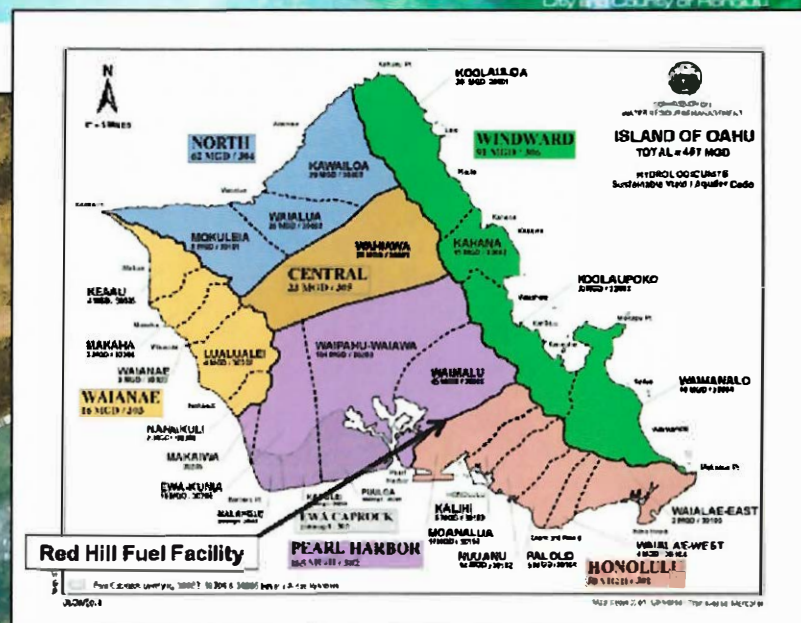
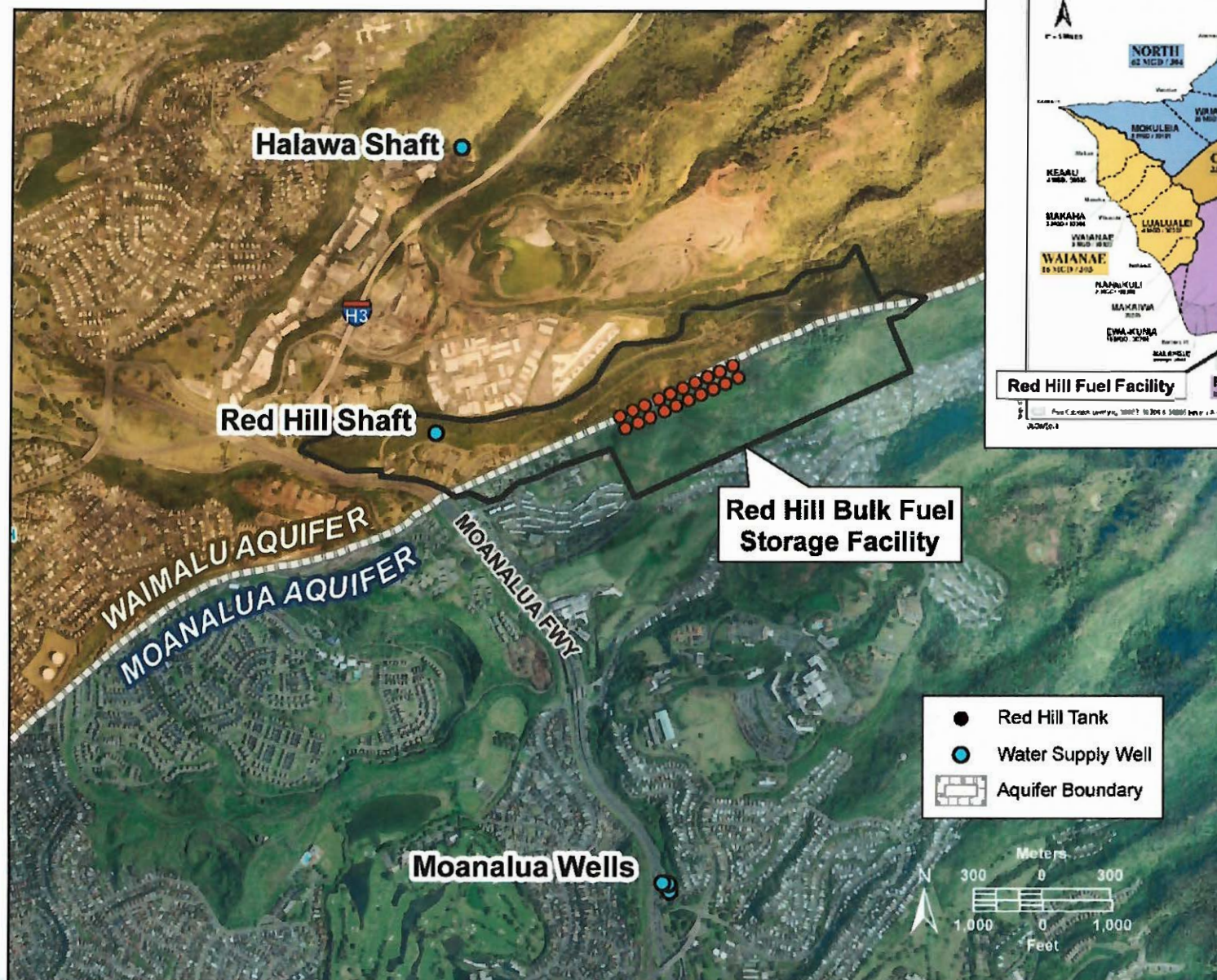


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City and County of Honolulu







## Red Hill Facts

- Oahu's sole-source groundwater aquifer provides critical drinking water supplies and cannot be replaced.
- Enormous amount of fuel stored 100 feet over a major drinking water resource.
- Petroleum chemicals detected in groundwater and rocks underneath the tanks.





## 2014 Release is NOT the Only Release

- A release from Tank 6 was reported by the Navy in 2002 (Navy, 2002).
- Tanks 15 and 16 also had fuel releases after 1988 (Navy, 2014).
- Navy TIRM report indicate that Tank 5, Tank 10, Tank 17, Tank 19, Tank 20 underwent inspections after 1988 that identified through-wall corrosion and therefore possibly leaks below the detection limit (Navy, 2016).
- The groundwater data from 2005 to present show petroleum chemical contaminants in groundwater samples.
- Petroleum staining found in cores taken before 2014 beneath 19 of 20 tanks (AMEC, 2002).
- Navy's Red Hill Facility Groundwater Protection Plan (GWPP) report documents leaks from various tanks from 1940s – 1980s (Navy, 2008).



<b>TUA</b>	<b>Description</b>	<b>ROM cost per Tank (\$M)</b>	<b>Number of Tanks (% capacity)</b>	<b>Project End Date</b>	<b>Years to Complete</b>	<b>Cost per Year (\$M)</b>
1A	Restoration of Existing Tank	10 – 25	18 (100%)	2031	12	15 – 38
1B	Restoration of Existing Tank + Coating	25 – 100	18 (100%)	2037	18	38 – 100
1D	Remove existing liner, Install New Steel Liner	100 – 250	18 (100%)	2038	19	95 – 237
2A	Composite Tank (Double wall) Carbon Steel	25 – 100	20 (88%)	2040	21	24 – 95
2B	Composite Tank (Double wall) Stainless Steel	100 – 250	20 (88%)	2037	18	111 – 278
3A	Tank within a tank (Carbon Steel)	100 – 250	20 (80%)	2038	19	105 – 263
Alt	New Tanks	100 - 250	40 (100%)	2051	32	125 – 312



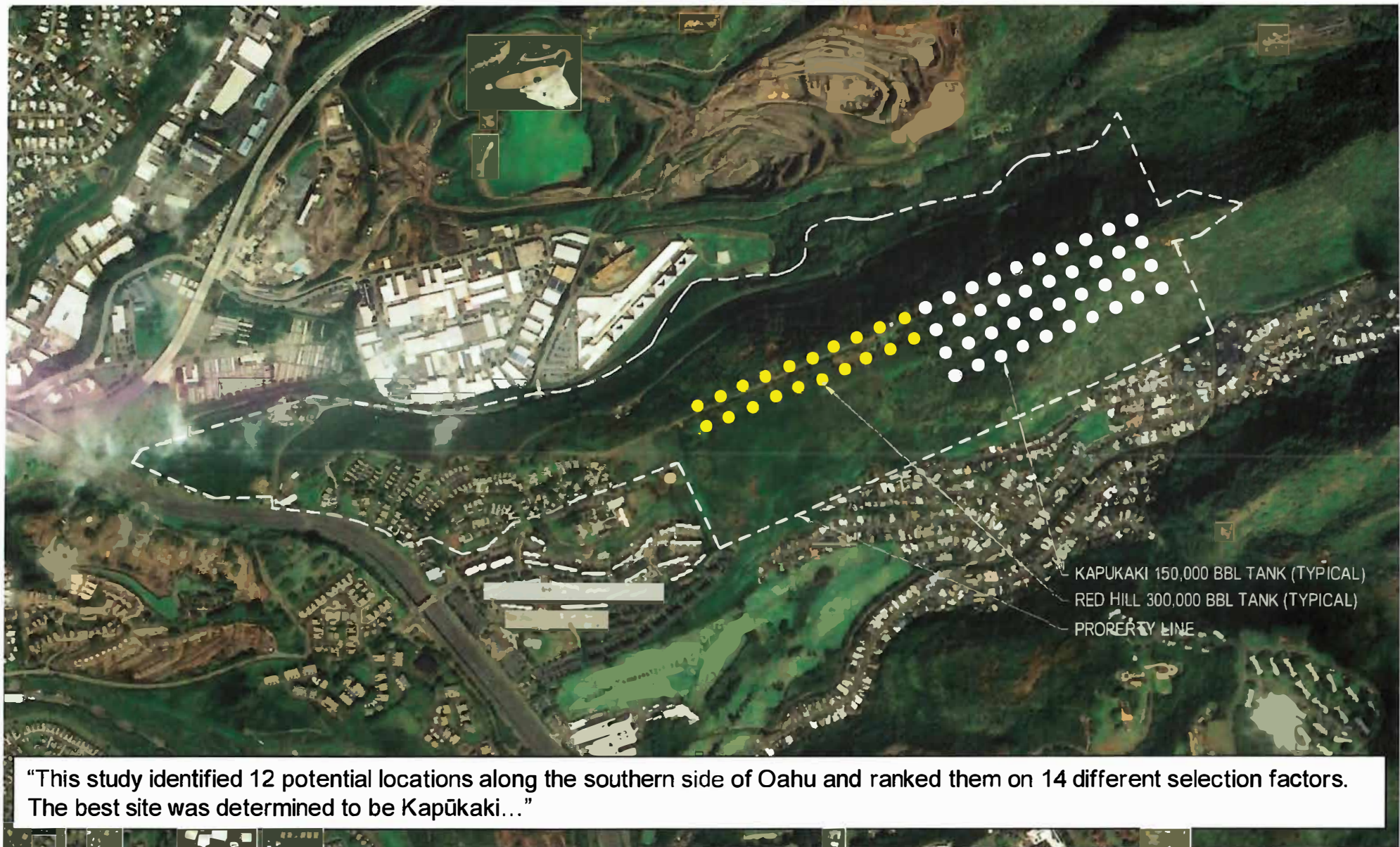


Figure 7.1-1 Kapūkaki Tank Layout

Ref: Red Hill Alternative Locations Study, Revision 3, Austin Brockenbrough Engineering and Consulting, February 5, 2018.



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Board of Water Supply  
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## Navy Identifies Existing Single-Wall Tank (TUA 1A) as Proposed TUA Way Forward

“The Proposed TUA Way Forward. At this time, the Navy and DLA will:

- Continue with sustenance / maintenance of the existing tanks in accordance with current procedures as the Navy's initial best available practicable technology (BAPT) decision submittal.”

Ref:

<https://www.cnic.navy.mil/regions/cnrh/om/environmental/red-hill-tank.html>

other stakeholders such as the U.S. Geological Service and the Board of Water Supply. This series of meetings could take up to several months, but once complete, the Navy and DLA will have 60 days to submit a formal TUA recommendations report for regulatory agency approval.

The Proposed TUA Way Forward. At this time, the Navy and DLA will:

- Continue with sustenance/maintenance of the existing tanks in accordance with current procedures as the Navy's initial best available practicable technology (BAPT) decision submittal.
- Propose a pilot for regulatory approval of application of an interior epoxy coating to one tank to determine feasibility of this unproven coating method.
- Fund an upgrade to the leak detection system.

As part of this way forward, there are preventive actions being taken by Indo-Pacific Command, the Joint Chiefs of Staff, and the Institute for Defense Analysis to validate the fuel in the Indo-Pacific Command Area of Responsibility. The fuel requirement validation and logistics laydown term plan for Red Hill. Moving forward, these studies BAPT decisions by stakeholders, recognizing that changes of other alternatives and should be feasible for the first.



DEPARTMENT OF THE NAVY  
COMNAVFOR  
NAVY REGION HAWAII  
300 KAHANUI AVENUE  
JOPHIN HI 96821-0101

August 15, 2018

Aloha, Stakeholder,

This is the Navy's tenth and my third stakeholder letter to the community to share news from Navy Region Hawaii. This letter also coincides with completion of my first year of service as the Regional Commander. As I have shared with everyone I have met over the last year, my number one priority remains the warfighting readiness of our infrastructure and the force protection of that infrastructure. That most certainly includes the Red Hill Bulk Fuel Storage Facility.

**Navy Leadership and Red Hill.** I assure you Red Hill has the attention of our leaders both in Hawaii and in Washington, D.C. Commander, U.S. Pacific Fleet, Admiral Chris Auliano, toured Red Hill shortly after his change of command in May, and then he personally led our Secretary of the Navy, the Honorable Richard Spencer, on a tour of the facility just last month. This is all in advance of Secretary Spencer providing testimony to the House Armed Services Committee in 2019 on the future funding of Red Hill upgrades. Leadership, on and off island, understands the national strategic importance of Red Hill and the absolute necessity of protecting public health by keeping our drinking water safe.

**Red Hill Engagement.** In addition to meeting with many neighborhood boards this year, we also hosted an open forum in March where we publicly presented the possible Red Hill upgrades for the first time. Both regulators, the Environmental Protection Agency (EPA) and Hawaii Department of Health (DOH), were in attendance as were other members of the public to include many from the Sierra Club. Open and professional dialogue is an important aspect of my command and this particularly applies to Red Hill. In March, I also toured several Hawaii State Legislators through Red Hill and provided testimony to two House Committees. I was very pleased that the Governor's office championed a additional engagement meeting on Red Hill to include both the Board of Water Supply and the Sierra Club. At all of these engagements, I took the opportunity to talk about not only the strategic importance of Red Hill but our commitment to ensure we never spill another drop of fuel. Most importantly, these engagements, like the one at the Governor's office, allow stakeholders the opportunity to speak with each other, not just to each other. That's the spirit of Aloha.

**Our Approach to the Tank Upgrade Alternative (TUA) Decision.** On May 21 of this year, the EPA and DOH approved our TUA report. In accordance with the Administrative Order on Consent, the required brief both regulators within 60 days on our TUA selection and proposed way forward. On July 20, I had phone calls with both the EPA and DOH to discuss our proposal. As you would expect, our preferred TUA option and proposed way forward was coordinated with numerous senior military staffs to include U.S. Pacific Fleet, U.S. Indo-Pacific Command, Defense Logistics Agency (DLA), Navy Installations Command and the Navy Staff, and both the Secretary of the Navy and the Secretary of Defense staffs. As I opened with in this letter, Red Hill has the attention of our leaders both in Hawaii and Washington D.C.

My phone calls to the EPA and DOH were just the first step, though. This week actually began a series of face-to-face meetings in Hawaii amongst the Navy, the regulators, and many

**TUA Way Forward.** The Red Hill fuel tanks were built for long-service life. A Tank Tightness Test for each tank with federal and state regulators utilizing the Mass Flow Precision Mass Measurement System. Since we have never failed. Further, in 2016 the EPA used to baseline evaluation of the systems, management procedures, at Red Hill with respect to 10 industry and 10 American Petroleum Institute, the American Society for Society of Civil Engineers, the American Society of Society for Testing and Materials, and the National Fire team found that the systems, inspection technologies/ment practices in place at Red Hill meet or exceed best tank and storage facilities. Moreover, new equipment and for fidelity.

Our plan additionally provides a multi-pronged approach drinking water. Specifically, we have collected samples beneath all tanks and volatile organic compound concentrations using a photo-sampling. Samples are drawn from monitoring wells in the Red Hill lower access tunnel. Oil/water interface measurements are taken monthly at the water level at each well is gauged and measured for the various phase liquids using an interface meter.

part of our critical infrastructure, both in the event of conflict and humanitarian missions.

Very Respectfully,

B. P. PORT  
Rear Admiral, U.S. Navy



## Existing Single Wall Tank (TUA 1A) as the Navy's TUA Way Forward

- Proposed TUA Way Forward is relying on interim and preliminary studies.
  - Laboratory analysis of Tank 14 coupons not yet available to SMEs for review and comment.
  - Interim groundwater flow model report.
  - Risk and vulnerability study not yet complete.





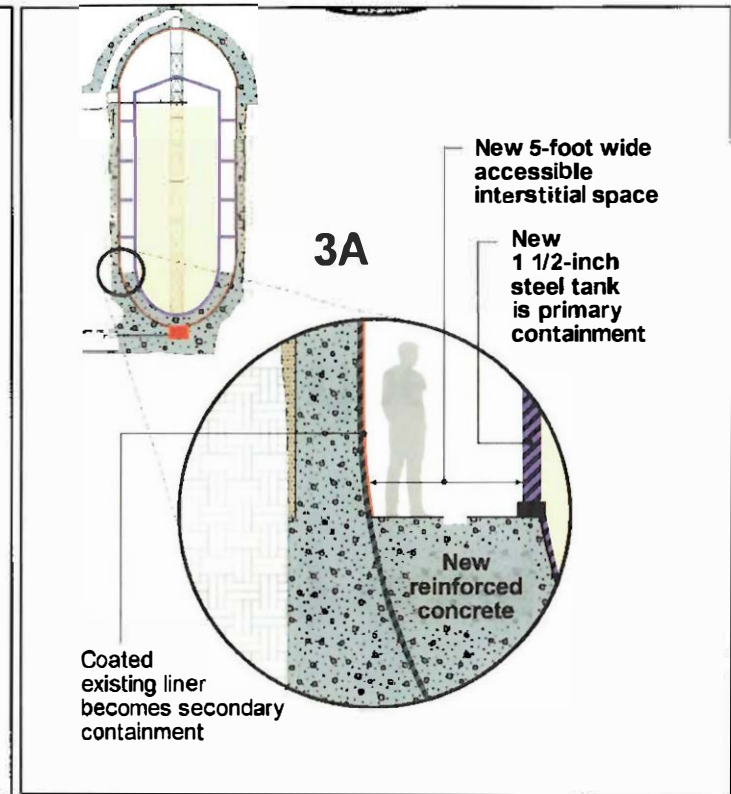
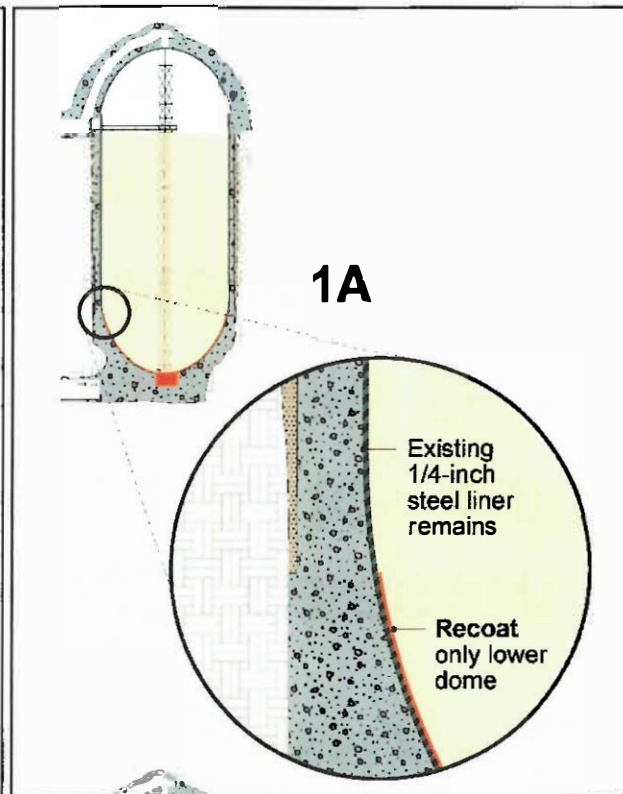
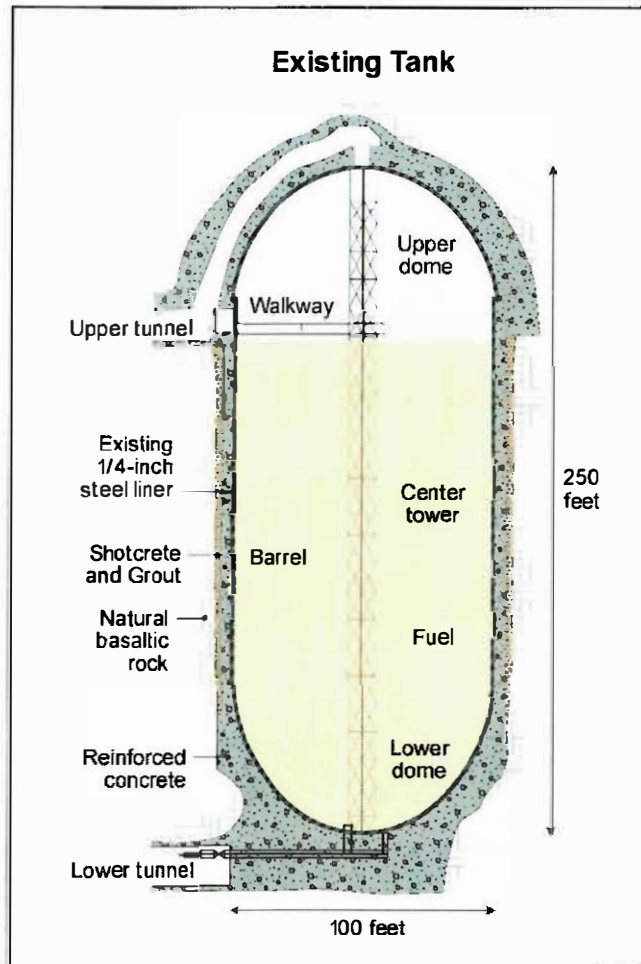
## **Existing Single Wall Tank (TUA 1A) as the Navy's TUA Way Forward – cont.**

- Installing new leak detection technology does not prevent releases to aquifer.
- Citing human error with Tank 5 repairs does not stop tank deterioration that required the repair in the first place.
- Secondary containment or tank relocation away from the aquifer affords the best protection of the aquifer.





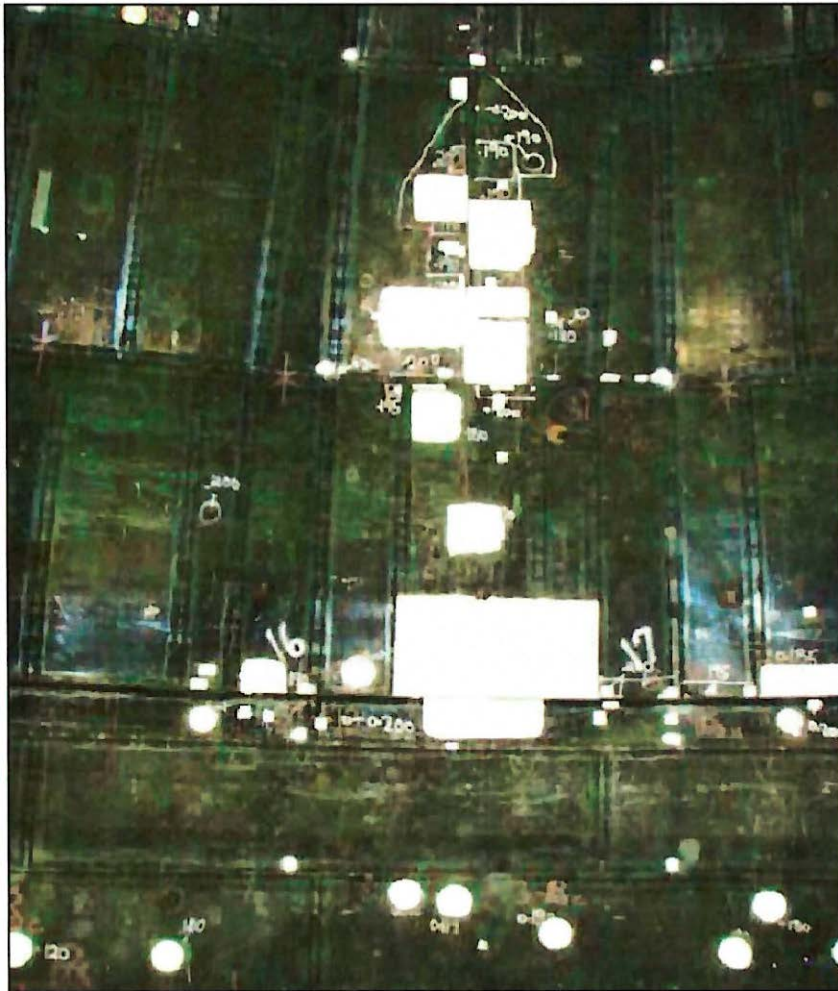
## Single wall v. Secondary containment



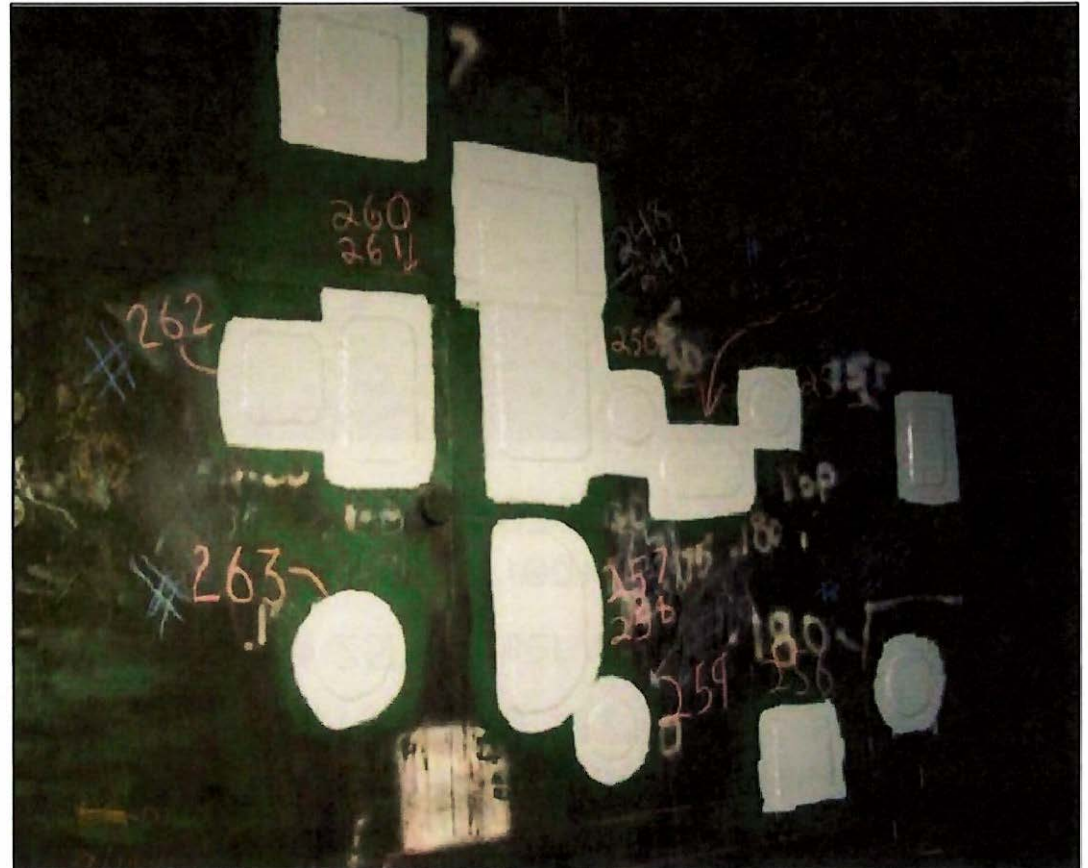
Secondary containment affords the best protection from leaks both large and small.



Existing methods cannot possibly find and fix every thinned area in need of repair in the tank due to Tank's enormous size.



Typical Patch Plate Repairs on Tank 6, Dunkin & Bush, Inc. Report on Tank 6 As Built Repairs, Contract Number N62742-03-C-1402. June 2007 (Navy, 2016).



Typical patch plate repairs in Tank 15 Dunkin & Bush Inc., Report on Tank 15 Phase 2 As Built Repairs, Contract number N62742-03-C1402, Clean and Repair Tanks 1, 6, 15, and 16, at Red Hill Fleet and Industrial Supply Center, Pearl Harbor, Hawaii, Dunkin & Bush, Inc., March, 2006 (Navy, 2016).



## Tank 14 (Coupon #7) Barrel – Back side

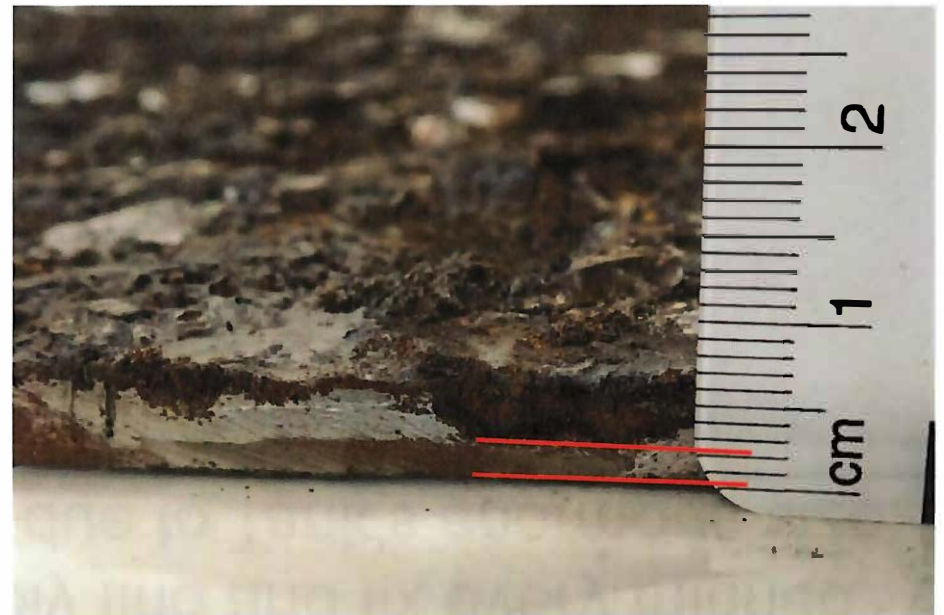


### NDE Predictions:

- Minimum remaining thickness:  
0.135" to 0.187"

### June 25<sup>th</sup> Observations:

- Apparent remaining thickness:  
2mm = 0.079"





## Tank 14 Coupon Inspection

- Concrete Tank Cannot Contain Fuels
  - Concrete was never was meant to contain fuel that why it was designed with ¼-inch steel liner
  - Concrete is porous, shrinks and cracks over time – not effective fuel barrier
  - Porous nature of concrete is demonstrated by 2014 leak and staining underneath most tanks
- Fuel Release Depends on Integrity of ¼-inch 75-year old steel liner
  - Liner outside surface cannot be protected from corrosion – it cannot be maintained, repaired, or painted
  - BWS concerned that thinnest areas of liner (from rust or other defects) will lead to a through wall hole
  - Navy has **not** demonstrated that that they can find **all** areas that need repairing (are thinner than 0.160-inches)





## Interim Groundwater Flow Model Report

- Provide input into the TUA decision process.
- Report conclusions
  - Undetected chronic release of 2,300 gallons per year per tank biodegrades before reaching groundwater.
  - Sudden release of approx. 120,000 gallons stays underground and/or at the water table.
  - Document implies that a release as large as 700,000 gallons would not cause concern for contamination of groundwater.

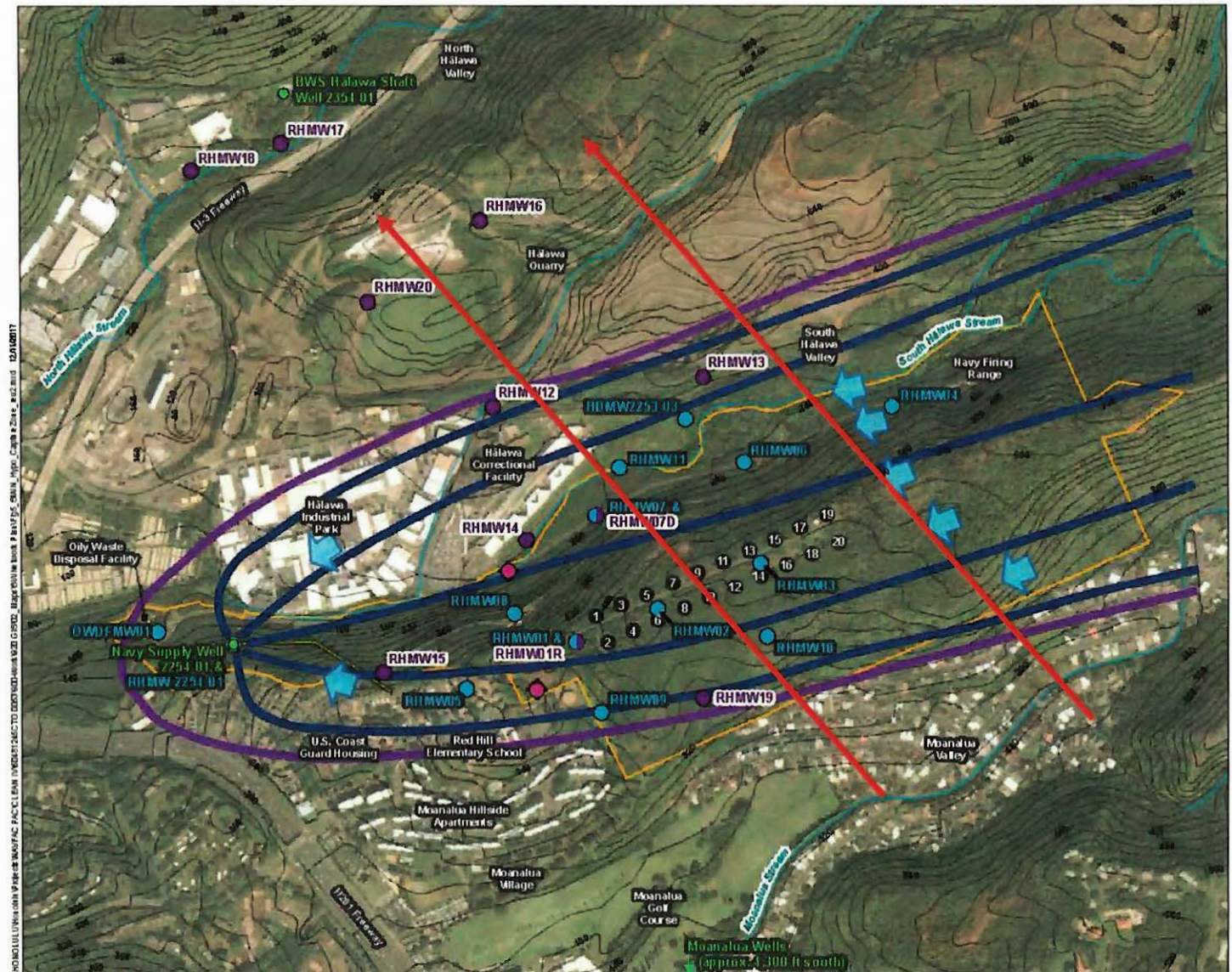




## BWS Review – GW Flow

Navy presents that there is no GW flow from Red Hill to any BWS wells and that Red Hill Shaft captures all groundwater flow from beneath the tanks.

**BWS: Pumping test data from 2017-18 show water level changes across the valleys. EPA and DOH have asked the Navy to look at this stating some of the field data contradict Navy interim groundwater model flow paths.**



Ref. Sentinel Well Network Development Plan, Red Hill Bulk Fuel Storage Facility, Dec. 11, 2017



## BWS Review – GW Flow – cont.

Navy Interim GW model calculation of groundwater levels at Navy monitoring wells (blue line) does not match with measurements collected in the field (yellow line)

**BWS: Lack of correlation between observed and model simulation means the model is not calibrated. This is a fundamental requirement of a good model and it's ability to produce reliable results. DOH and EPA share this same concern.**

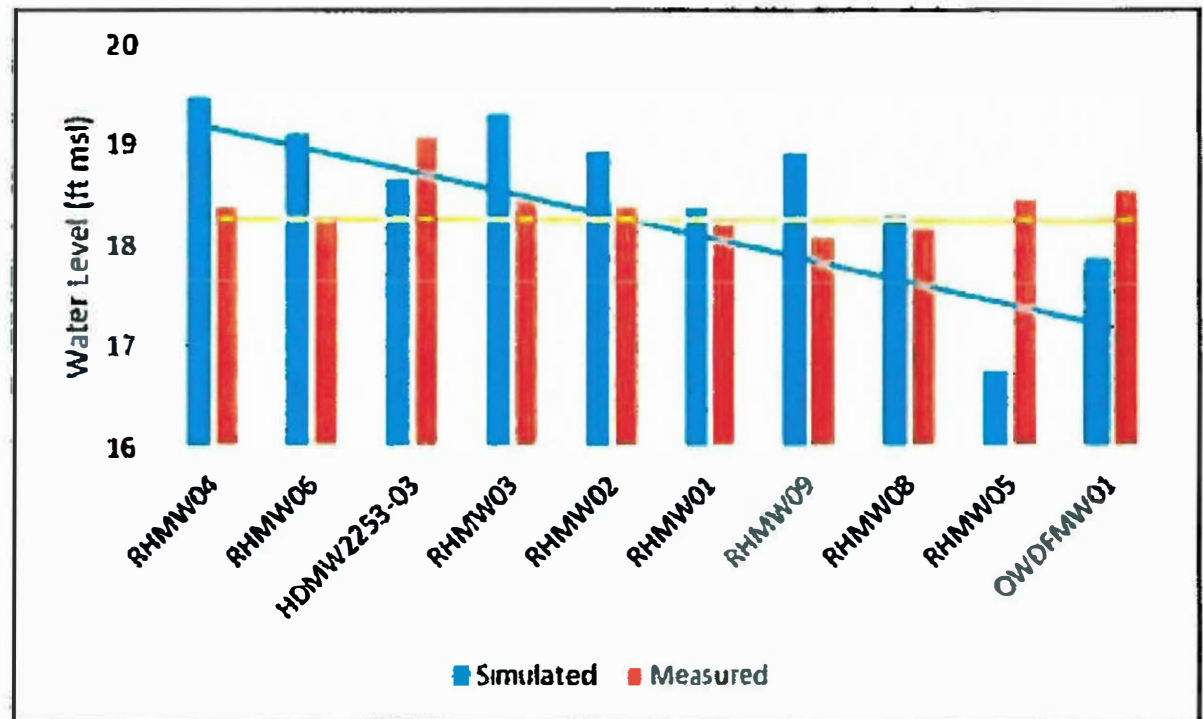


Figure 1. A comparison of the simulated and measured groundwater elevations in the RHMW. RHMW07 is excluded from this graph since the water level in this well is very anomalous. The Red Hill Shaft (2254-01) is also excluded due to questions about the top of casing reference. Ref. Hawaii Department of Health memorandum to G. Fenix Grange from Robert Whittier re: Comments on the Progress of the Red Hill Groundwater Flow Model, February 20, 2018.

∴ Model not calibrated.

## Interim Groundwater Model Report – cont.

- Navy's TUA Way Forward (TUA 1A) is relying on interim groundwater flow report that contains conclusions that have been considered to be faulty and incorrect by EPA, DOH, and BWS.
- Tank relocation away from the aquifer is the safest option.
- If the Navy wants to store millions of gallons of fuel 100 feet above the aquifer, secondary containment affords the best protection of the aquifer.





## Summary

- If secondary containment (i.e. tank within a tank) is not selected then relocation should be strongly considered.
- Adequate supply of safe drinking water is critical to our economy.
- Question: Is the Navy listening and adopting our recommendations?
- BWS providing AOC input to inform the parties on what we believe they need to know – not what they want to hear.







## Summary – cont.

- Facility is over 75 years old and continues to age.
- 1/4-inch steel plates keeping fuel in the tanks continues to rust.
- Fuel contamination already present in groundwater and rocks underneath facility.
- Large volume of fuel stored 100 ft. above aquifer poses unacceptable risk to drinking water.





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Board of Water Supply  
City and County of Honolulu

## Questions/Discussion



ITEM FOR INFORMATION NO. 4

"January 28, 2019

GROUNDWATER  
LEVELS      Chair and Members  
Board of Water Supply  
City and County of Honolulu  
Honolulu, Hawaii 96843

Chair and Members:

Subject:      Status Update of Groundwater Levels at All Index Stations

There were no aquifer index wells within low groundwater status for the production month of December 2018. The monthly production average for December 2018 was 127.52 million gallons per day (mgd).

The Board of Water Supply rainfall index for the month of December 2018 was 89 percent of normal; with a 5-month moving average of 151 percent. As of January 8, 2019, the Hawaii Drought Monitor shows abnormally dry to moderate drought conditions for the leeward side of Oahu, from Ewa to Waianae.

Most monitoring wells are showing increasing trends, likely resulting from decreased pumping during the winter months.

Respectfully submitted,

/s/ for ERNEST Y. W. LAU, P.E  
Manager and Chief Engineer

Attachment"

The foregoing was for information only.

DISCUSSION:      Barry Usagawa, Water Resources Division Program Administrator, gave the report. There were no comments or discussion.



**PRODUCTION, HEAD AND RAINFALL REPORT  
MONTH OF DECEMBER 2018**

**POTABLE**

STATION	MGD
HONOLULU (1)	
KULIOUOU	0.06
WAILUPE	0.08
AINA KOA	0.18
AINA KOA II	0.79
MANOA II	0.68
PALOLO	1.19
KAIMUKI HIGH	1.29
KAIMUKI LOW	2.44
WILDER	6.78
BERETANIA HIGH	4.23
BERETANIA LOW	7.38
KALIH HIGH	1.93
KALIH LOW	2.35
KAPALAMA	0.55
KALIH SHAFT	8.70
MOANALUA	1.18
HALAWA SHAFT	0.00
KAAMILO	0.89
KALAUAO	6.29
PUNANANI	10.01
KAHUMANU	0.24
HECO WAIU	2.78
MANANA	0.24
WELLS SUBTOTAL:	60.25
MANOA TUNNEL	0.17
PALOLO TUNNEL	0.23
GRAVITY SUBTOTAL:	0.40
HONO. SUBTOTAL:	60.65

STATION	MGD
WINDWARD (2)	
WAIMANALO II	0.34
WAIMANALO III	0.00
KUOU I	0.80
KUOU II	0.11
KUOU III	0.68
LULUKU	0.97
HAIKU	0.00
IOLEKAA	0.00
KAHALUU	0.83
KAHANA	0.00
PUNALUU I	0.00
PUNALUU II	0.37
PUNALUU III	1.15
KALUANUI	0.00
MAAKUA	0.15
HAUULA	0.27
WELLS SUBTOTAL:	5.67
WAIM. TUNNELS I & II	0.00
WAIM. TUNNELS III&IV	0.19
WAIHEE INCL. WELLS	0.64
WAIHEE TUNNEL	5.40
LULUKU TUNNEL	0.13
HAIKU TUNNEL	0.94
KAHALUU TUNNEL	1.89
GRAVITY SUBTOTAL:	9.20
WIND. SUBTOTAL:	14.87

STATION	MGD
NORTH SHORE (3)	
KAHUKU	0.34
OPANA	0.03
WAIALEE I	0.44
WAIALEE II	0.47
HALEIWA	0.00
WAIALUA	1.33
N.SHORE SUBTOTAL:	2.61

STATION	MGD
MILILANI (4)	
MILILANI I	1.75
MILILANI II	0.00
MILILANI III	0.65
MILILANI IV	1.45
MILILANI SUBTOTAL:	3.84

STATION	MGD
WAHIAWA(5)	
WAHIAWA	1.45
WAHIAWA II	1.19
WAHIAWA SUBTOTAL:	2.64

STATION	MGD
PEARL CITY-HALAWA (6)	
HALAWA 277	0.62
HALAWA 550	0.00
AIEA	1.10
AIEA GULCH 497	0.35
AIEA GULCH 550	0.19
KAONOH I	0.98
WAIMALU I	0.00
NEWTOWN	0.80
WAIU	0.65
PEARL CITY I	0.51
PEARL CITY II	1.00
PEARL CITY III	0.33
PEARL CITY SHAFT	0.92
PEARL CITY-HALAWA SUBTOTAL:	7.46

STATION	MGD
WAIPAHU-EWA (7)	
WAIPIO HTS.	0.13
WAIPIO HTS. I	0.29
WAIPIO HTS. II	0.16
WAIPIO HTS. III	1.21
WAIPAHU	5.64
WAIPAHU II	1.89
WAIPAHU III	1.48
WAIPAHU IV	1.77
KUNIA I	3.36
KUNIA II	1.65
KUNIA III	1.51
HOAEAE	4.48
HONOULIULI I	1.30
HONOULIULI II	7.15
MAKAKILO	0.28
WAIPAHU-EWA SUBTOTAL:	32.30

STATION	MGD
WAIANAE (8)	
MAKAHA I	0.22
MAKAHA II	0.03
MAKAHA III	0.07
MAKAHA V	0.14
MAKAHA VI	0.00
MAKAHA SHAFT	0.00
KAMAILE	0.02
WAIANAE I	0.11
WAIANAE II	0.38
WAIANAE III	0.60
WELLS SUBTOTAL:	1.58
WAI. C&C TUNNEL	1.40
WAI. PLANT. TUNNELS	0.16
GRAVITY SUBTOTAL:	1.56
WAIANAE SUBTOTAL:	3.14

**NONPOTABLE**

NONPOTABLE	MGD
KALAUAO SPRINGS	0.69
BARBERS POINT WELL	1.12
GLOVER TUNNEL NP	0.41
NONPOTABLE TOTAL:	2.22

**RECYCLED WATER (NOVEMBER 2018)**

RECYCLED WATER	MGD
HONOULIULI WRF R-1	6.06
HONOULIULI WRF RO	1.85
RECYCLED WATER TOTAL:	7.91

**PRODUCTION, HEAD AND RAINFALL REPORT  
MONTH OF DECEMBER 2018**

**PRODUCTION SUMMARIES**

TOTAL WATER	MGD
PUMPAGE	116.36
GRAVITY	11.16
POTABLE TOTAL:	127.52
NONPOTABLE	2.22
RECYCLED WATER	7.91
TOTAL WATER:	137.65

CWRM PERMITTED USE AND BWS ASSESSED YIELDS FOR BWS				
POTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE/ BWSYLDS	B DEC 2018	C DIFF. A-B
1	HONOLULU	82.93	60.25	22.68
2	WINDWARD	25.02	8.83	16.19
3	NORTH SHORE	4.74	2.61	2.13
4	MILILANI	7.53	3.84	3.69
5	WAIHAWA	4.27	2.64	1.63
6	PEARL CITY-HALAWA	12.25	7.46	4.79
7	WAIPAHU-EWA	50.63	32.30	18.33
8	WAIANAE	4.34	1.58	2.76
TOTAL:		191.71	119.51	72.20

CWRM PERMITTED USE FOR BWS				
NONPOTABLE SOURCES				
WATER USE DISTRICTS		A PERMITTED USE	B DEC 2018	C DIFF. A-B
7	WAIPAHU-EWA (BARBERS POINT WELL)	1.00	1.12	-0.12
TOTAL:		1.00	1.12	-0.12

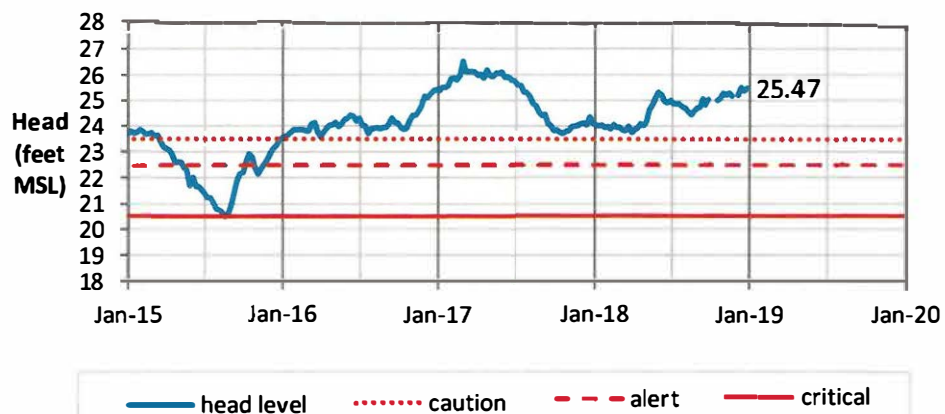
**EFFECTIVE WATER DEMAND PER DISTRICT**

IMPORT/EXPORT BETWEEN WATER USE DISTRICTS			
FROM	TO		MGD
2	1	WINDWARD EXPORT	1.15
7	8	BARBERS PT LB	5.91

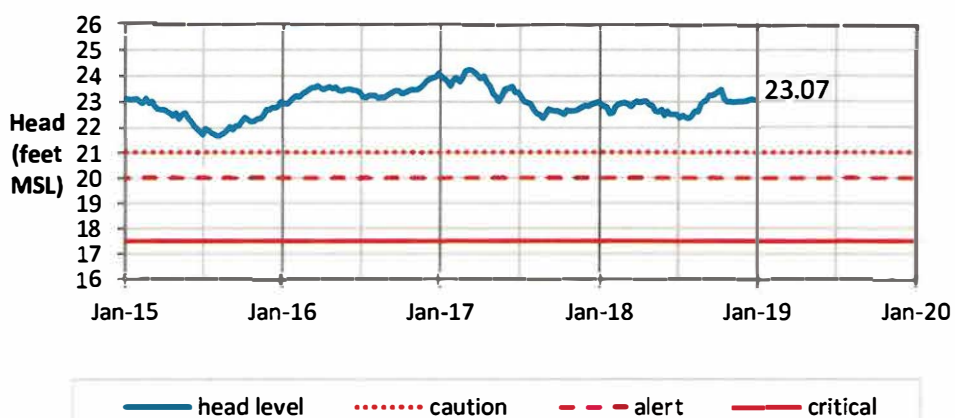
WATER USE DISTRICTS		SUBTOTAL	IMPORT	EXPORT	EFFECTIVE WATER DEMAND
1	HONOLULU	60.25	1.15	-	61.41
2	WINDWARD	8.83	-	1.15	7.67
3	NORTH SHORE	2.61	-	-	2.61
4	MILILANI	3.84	-	-	3.84
5	WAIHAWA	2.64	-	-	2.64
6	PEARL CITY-HALAWA	7.46	-	-	7.46
7	WAIPAHU-EWA	32.30	-	5.91	26.39
8	WAIANAE	1.58	5.91	-	7.49
TOTAL:		119.51	7.06	7.06	119.51

## Weekly Head Report

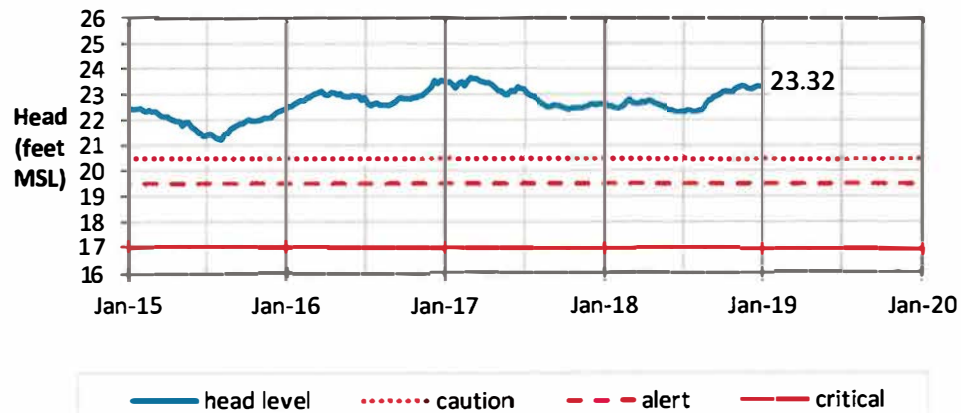
### Kaimuki 01/03/19



### Beretania 01/02/19



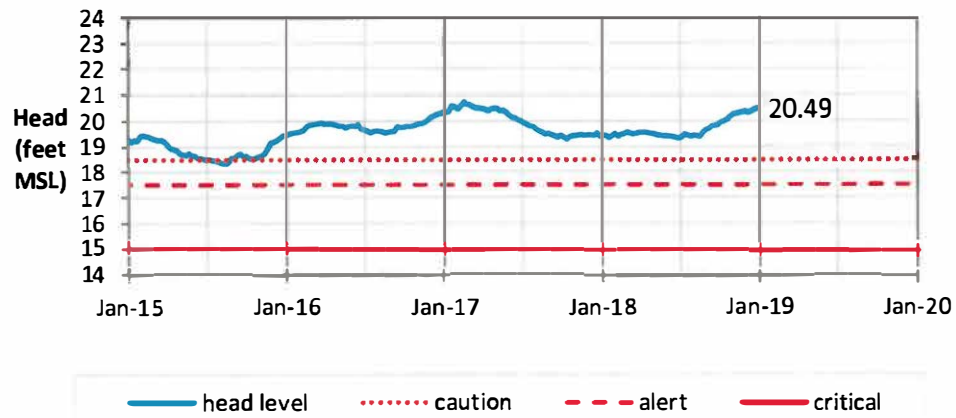
### Kalihi 01/02/19



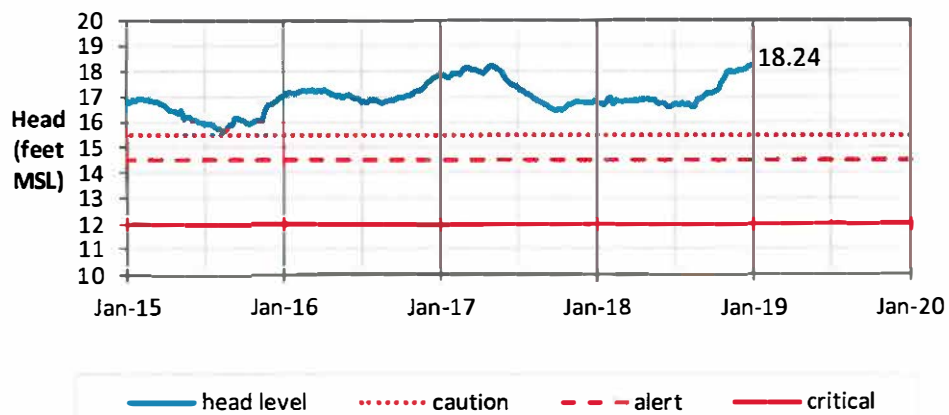


## Weekly Head Report

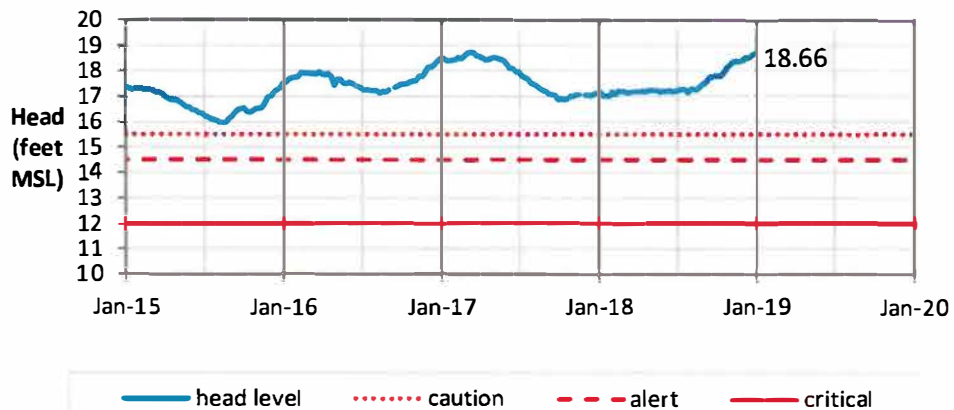
### Moanalua 01/02/19



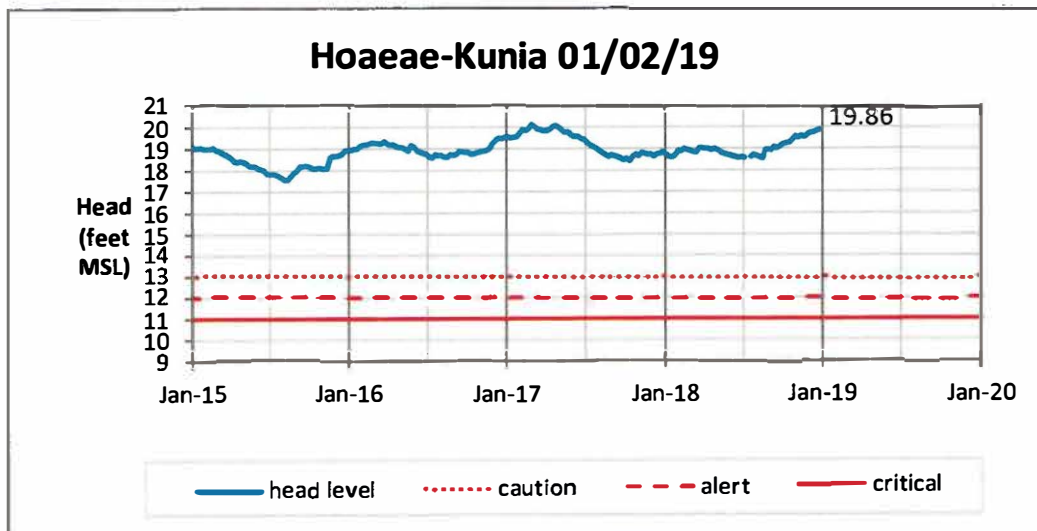
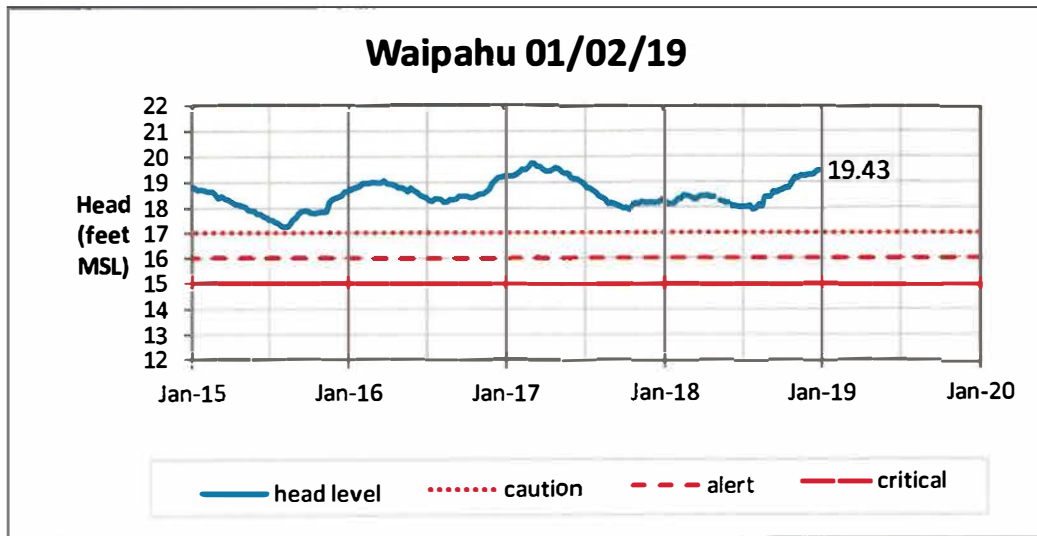
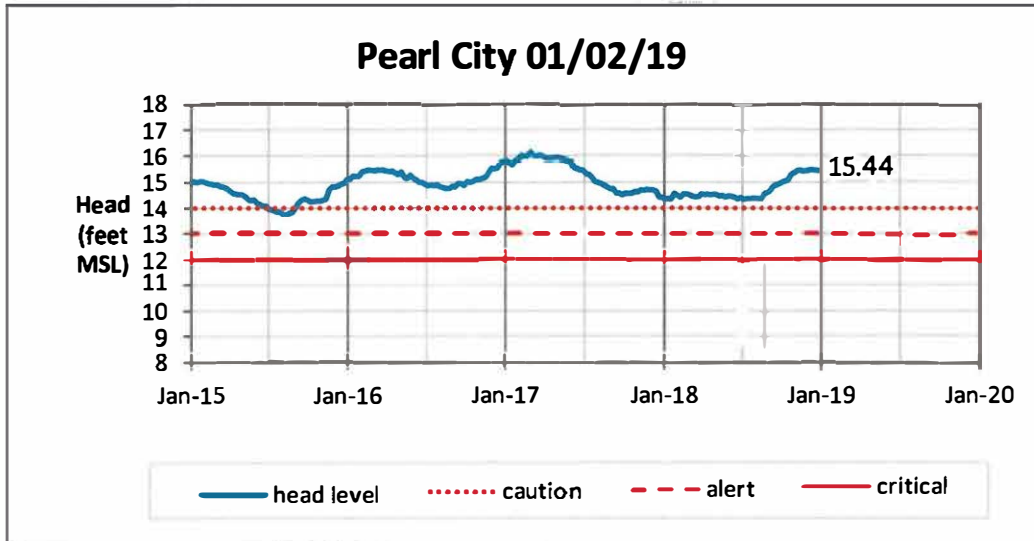
### Halawa 01/02/19



### Kalauao 01/02/19

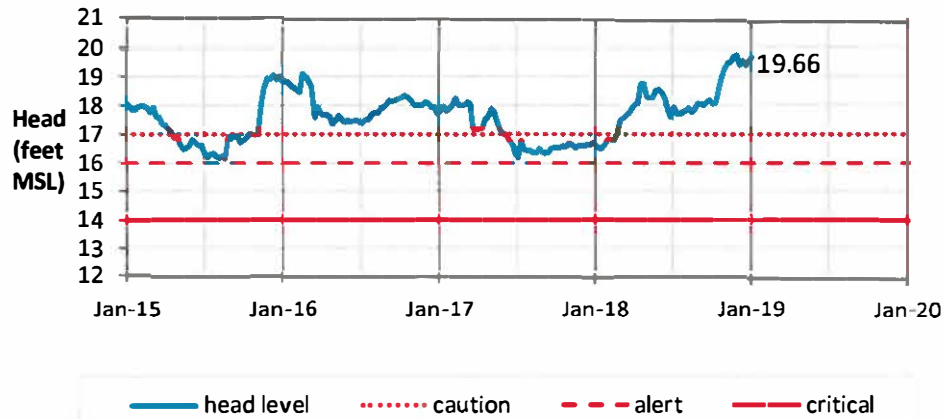


## Weekly Head Report

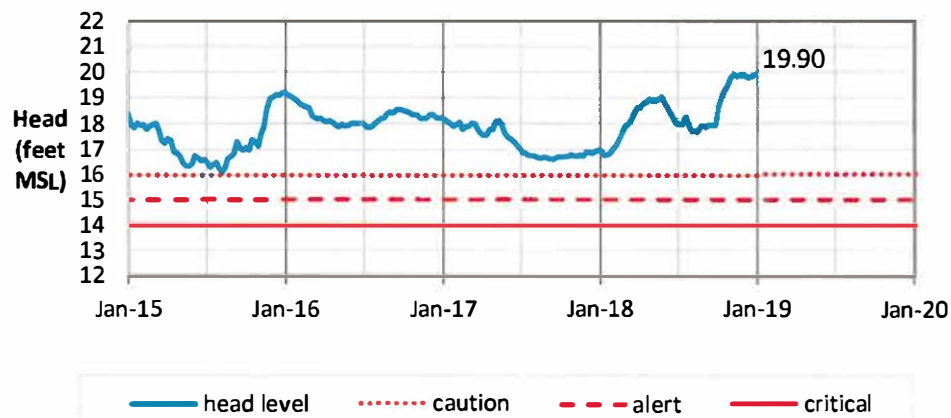


## Weekly Head Report

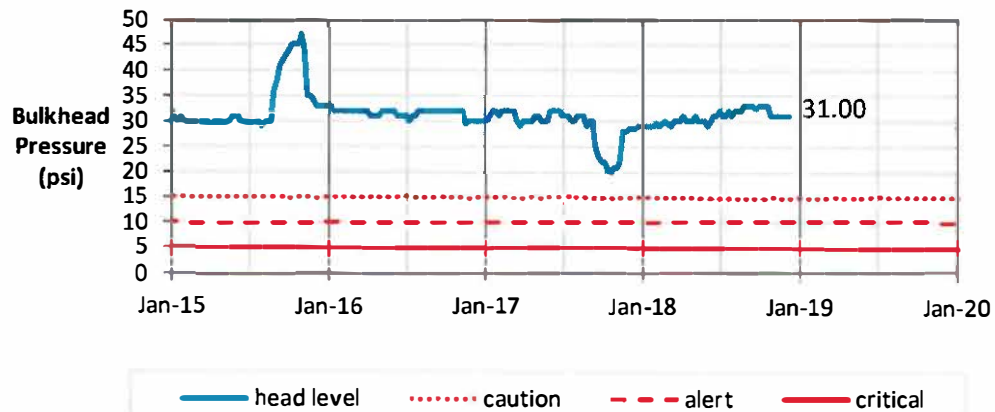
### Punaluu 01/07/19



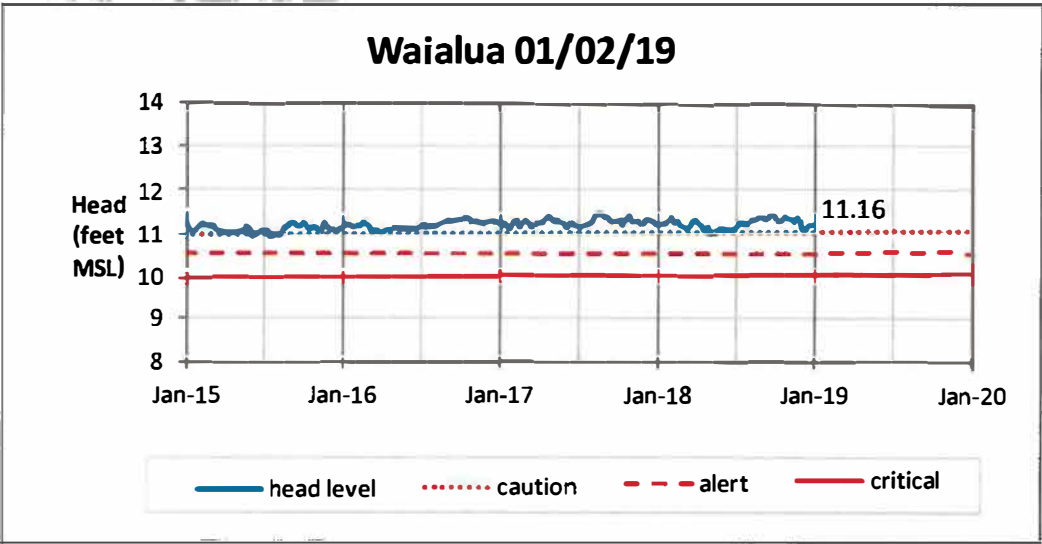
### Kaluanui 01/02/19



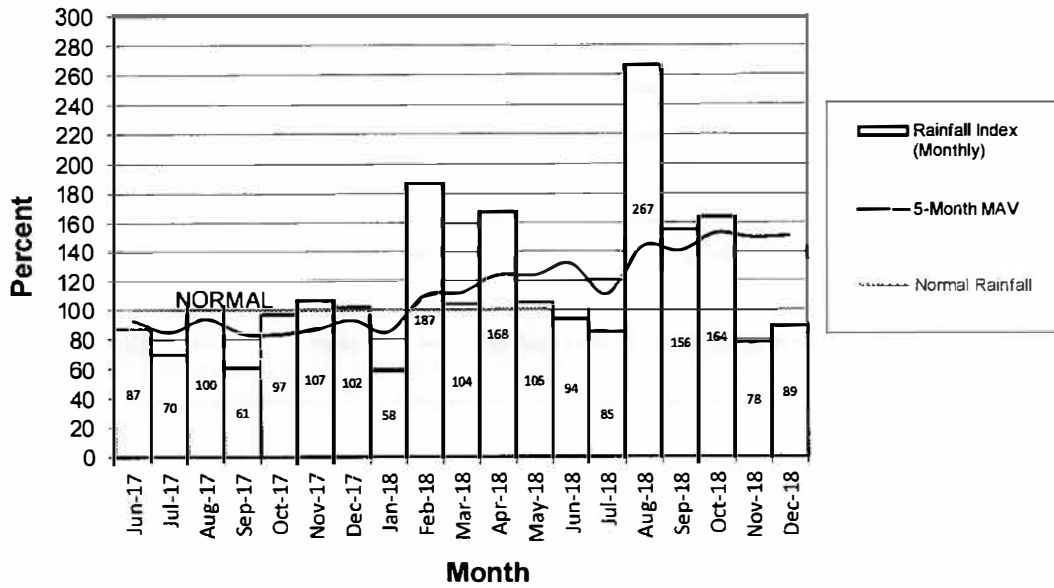
### Waihee Tunnel 01/07/19



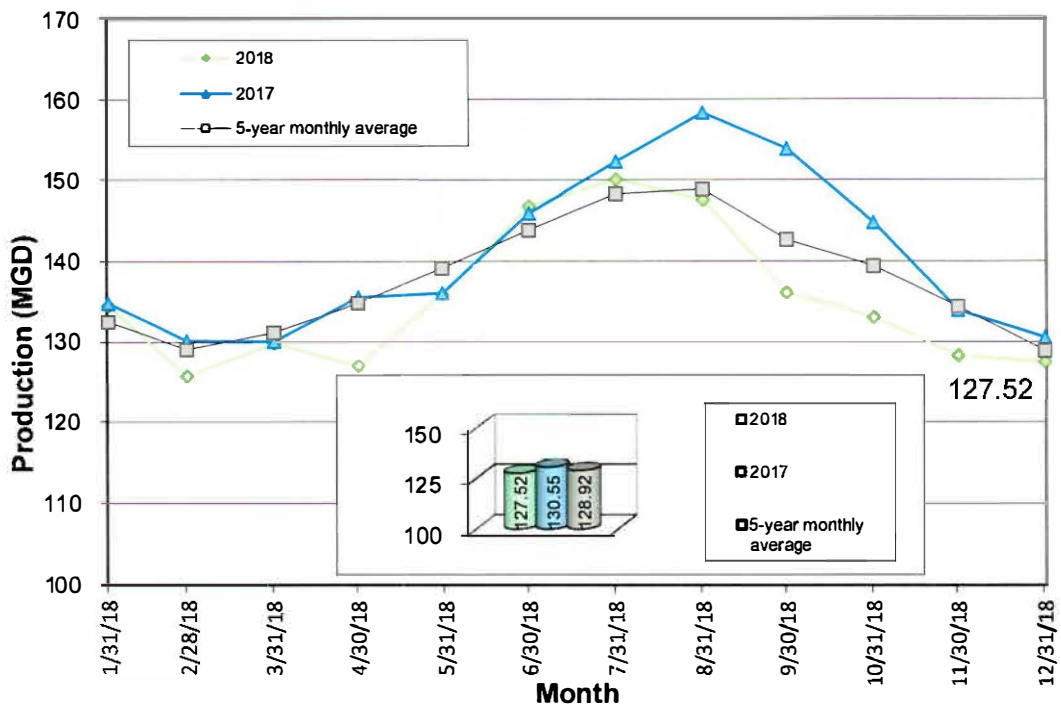
# Weekly Head Report



## HONOLULU WATERSHED AREA Rainfall Intake



## Monthly Production

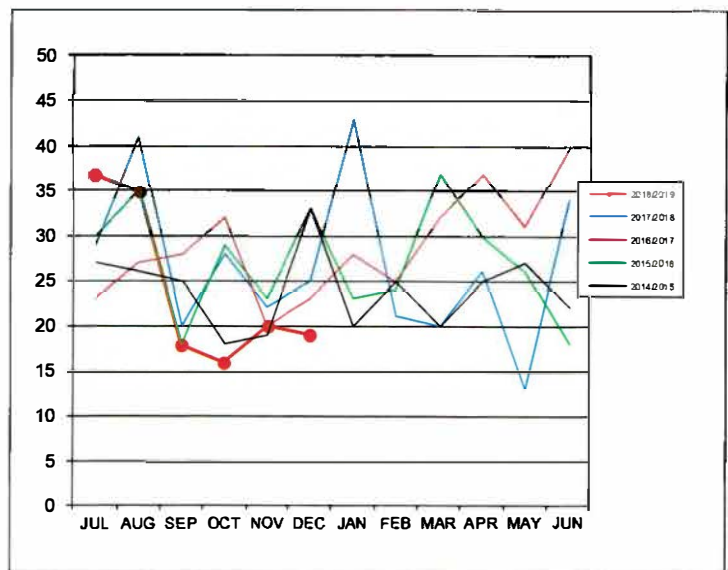


ITEM FOR INFORMATION NO. 5

**WATER MAIN REPAIR REPORT**  
**for December 2018**

	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Total
2018/2019	37	35	18	16	20	19							145
2017/2018	29	41	20	28	22	25	43	21	20	26	13	34	322
2016/2017	23	27	28	32	20	23	28	25	32	37	31	40	346
2015/2016	30	35	18	29	23	33	23	24	37	30	26	18	326
2014/2015	27	26	25	18	19	33	20	25	20	25	27	22	287

Date	Address	Size (in)	Pipe Type
12/9/2018	1 Auhii Pl, Wahiawa	8	CI
12/9/2018	3123 Kahako Pl, Kailua	8	DI
12/10/2018	1220 Punana Loop, Kailua	8	CI
12/11/2018	91-420 Pupu St, Ewa Beach	8	CI
12/12/2018	3123 Kahako Pl, Kailua	8	DI
12/13/2018	98-421 Pono St, Aiea	8	CI
12/13/2018	3014 Hibiscus Dr, Honolulu	6	CI
12/13/2018	1267 Kaluawaa St, Honolulu	6	CI
12/16/2018	5627 Kawaikui St, Honolulu	6	CI
12/16/2018	94-119 Pupupuhi St, Waipahu	8	CI
12/16/2018	1245 Pua Kipa St, Pearl City	8	PVC
12/20/2018	2985 Tantalus Dr, Honolulu	8	CI
12/20/2018	2007 Liliha St, Honolulu	12	PVC
12/20/2018	86-243 Kawili St, Waianae	8	PVC
12/22/2018	2331 Kuaheha St, Honolulu	8	CI
12/24/2018	98-1475 Hoonouua St, Pearl City	8	CI
12/28/2018	1651 Pensacola St, Honolulu	4	CI
12/30/2018	2296 Waiomao Rd, Honolulu	8	CI
12/30/2018	2181 Palolo Ave, Honolulu	12	CI



26 miles of pipelines were surveyed by the Leak Detection Team in the month of December.

DISCUSSION: Mike Fuke, Field Operations Division Program Administrator, gave the report. There were no comments or discussions.





MOTION TO  
RECESS INTO  
EXECUTIVE  
SESSION

Upon unanimously approved motion, the Board recessed into Executive Session Pursuant to [HRS §92-5(a)(2)] at 3:00 PM to Consider Issues Pertaining to Matters Posted for Discussion at an Executive Session.

OPEN SESSION

The Board reconvened in Open Session at 3:17 PM.

MOTION TO  
ADJOURN

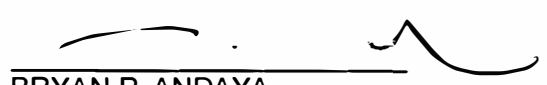
There being no further business Chair Andaya at 3:19 PM called for a motion to adjourn the Open Session. Ray Soon so moved; seconded by Jade Butay and unanimously carried.

Respectfully submitted,



DONNA A. KUEWA

APPROVED:



BRYAN P. ANDAYA  
Chair of the Board

FEB 25 2019

Date

THE MINUTES OF THE REGULAR SESSION BOARD MEETING ON JANUARY 28, 2019 WERE APPROVED AT THE FEBRUARY 25, 2019 BOARD MEETING			
	AYE	NO	COMMENT
BRYAN P. ANDAYA	X		
KAPUA SPROAT	X		
KAY C. MATSUI			ABSENT
RAY C. SOON	X		
ROSS S. SASAMURA	X		
JADE T. BUTAY	X		
MAX J. SWORD	X		

