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**OFFICE OF THE CITY MANAGER**

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July 8, 2015

Honorable Lesley D. Holland, Presiding Judge  
San Joaquin County Superior Court  
P. O. Box 201022  
Stockton, CA 95201

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

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The following is in response to the findings and recommendations by the San Joaquin County Grand Jury investigation of Case No. 1412.

**Findings**

**1.0 Delta Water Treatment Plant/Intake and Pump Station Facility**

**F1.1** *Non-pile supported areas at the IPS are shifting as evidenced by changes in ground elevation, which has caused concern about employee safety and the integrity of equipment and buried electrical systems and conduits in the generator yard and other areas.*

**Response:** The City of Stockton disagrees partially with this finding. The Municipal Utilities Department (MUD) made a sensible engineering design decision during the planning phase of the IPS to pile support only the pump station and not non-critical ancillary facilities to minimize overall project and construction costs. Grade elevation changes were anticipated at the site based on geotechnical analysis and those changes have been monitored since construction was completed. The City of Stockton agrees that a change in elevation of the non-pile supported area at the IPS has occurred. However, at no time has the IPS Facility been in jeopardy of failure or have water diversions been prevented due to this settlement. In addition, as elevations changed over the past three years, employee safety at the site was considered and appropriate steps were taken to prevent tripping hazards and other unsafe conditions. There are cost-effective ways to mitigate for this settling such as the installation of flexible electrical conduits and pipe fittings with flexible gaskets to compensate for ongoing measured levee settlement and movement. As with most

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

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facilities built on Delta levees containing peat soils, there will likely be continued settlement and movement requiring periodic attention throughout the life of the facility.

**Recommendation**

**R1.1** *The City Council direct (through the City Manager) the Director of MUD to complete needed repairs at the IPS by September 2015 to ensure work areas are safe for employees and to report back annually to the Council regarding the status of IPS ground settling and associated repairs and costs.*

**Response:** This recommendation has been implemented and will be completed in 2016. Repairs to all electrical conduits where flexible conduit was installed between the building and the non-pile supported area at the IPS were completed in May 2015. In an effort to provide a remedy to the change in grade elevation, MUD has retained an engineering firm to prepare a design plan that will address needed repairs and help predict future conditions due to ongoing settlement. This peer-reviewed plan will form the basis from which the City will make informed decisions regarding anticipated settlement, planned repairs and maintenance as well as funding that will be reported to the Council annually in the budgeting process. The development of the engineering design plan while underway will take several months to complete. From this, construction plans will be formulated together with appropriate environmental and permitting documents. Following this, MUD will seek City Council approval for construction repairs to take place under contract. All this work will not be completed by September 15, 2015. It is anticipated at this time that construction repairs would be completed by the summer of 2016.

**Findings**

**F1.2** *The DWTP was shut down for approximately four months in calendar year 2014 due to low staffing levels, which caused an increase in the SEWD pumping tax and further depleted declining water supplies.*

**Response:** The City of Stockton disagrees partially with this finding. In the spring of 2014, the DWTP was not completely shut down due to low staffing levels; rather it operated on a periodically reduced production schedule due to the lack of qualified plant operators. Low staffing levels were temporary and all plant operator positions have been filled since May 17, 2014. Vacancies had been predominately due to various disciplinary personnel actions or staff resignations that occurred at that time. The HR Department hired an experienced professional with utilities experience on October 15, 2014 to assist MUD with recruitments and class specification needs.

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

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In order to meet the City's water system demand, MUD supplied groundwater and SEWD treated surface water to make up for lost production at the DWTP. The groundwater pumping tax paid to SEWD is based on the use of groundwater in the City and was implemented many years ago to incentivize the use of treated surface water from SEWD. The City together with California Water Service Company have made very significant investments to provide treated surface water to the City beginning with the SEWD treatment plant and now the DWTP. As a result, the groundwater aquifer level has improved and in some places as recovered by as much as 32 feet. Under some circumstances such as drought, high-water demand or infrastructure service and maintenance, groundwater pumping is increased in order to meet needed water demand. With increased pumping comes increased pumping tax cost to the City. In 2014, during the time of reduced production at the DWTP, groundwater pumping costs increased. However, some of the tax costs paid to SEWD for increased groundwater pumping were offset by lower costs associated with the reduction of power, chemicals and staff vacancies.

In addition, it is important to note that during 2014, groundwater pumping increased across the entire Stockton Metropolitan Area served by the City, California Water Service Company and San Joaquin County through the Lincoln Village and Colonial Heights Maintenance Districts due to drought conditions and reduced surface water from SEWD. Treated surface water delivery from SEWD was 18% lower. The reduction in treated water delivery from SEWD coupled with reduced DWTP production resulted in increased groundwater pumping across the entire Metropolitan Area. The City's groundwater pumping increased by 87% compared to the previous year and the California Water Service Company's groundwater pumping increased 66% during the same period. Even with an increase in groundwater pumping that resulted in an overall average withdrawal rate of 0.28 acre-feet per acre across the Stockton Metropolitan Area, the groundwater withdrawals remained well within the groundwater basin sustainable yield standard of 1.0 acre-feet per acre and well below the accepted target yield of 0.60 acre-feet per acre.

While the reduction in staffing at the DWTP had a direct effect on the overall increase in the City's groundwater pumping in 2014, it was not the only factor that contributed to increased cost as it was exacerbated by the reduction in Stockton East Water District treated water production to the entire Stockton Metropolitan Area due to drought.

**Recommendation**

**R1.2** *The City Council direct (through the City Manager) the Director of MUD to determine what portion of the SEWD pumping tax is directly related to DWTP shutdown due to the lack of qualified staff in calendar year 2015 and report findings to the City Council by January 2016.*

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

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**Response:** The recommendation will not be implemented because it is not warranted. There have been no shutdowns of the DWTP due to the lack of qualified staff to date in calendar year 2015.

**Findings**

**2.0 Safety and Infrastructure Concerns**

**F2.1** *Both the US Peroxide study in 2012 and the AMEC analysis in 2014 recommended biofilm shocking and/or continuous chemical treatment for H<sub>2</sub>S, yet none was conducted by MUD for more than two years, allowing continued sewer pipe corrosion.*

**Response:** The City of Stockton disagrees partially with this finding. The US Peroxide report that the Grand Jury considered during its investigation contained information on the extent of hydrogen sulfide gas impacts on only a very small portion (about 1.2%) of the City's sewer collections system. It was a report prepared by a chemical manufacturer with the intent of selling product to the City. The AMEC report in 2014 was focused on the extent to which additional loading on System #8 might occur with the arrival of a new industrial user. In each case, the reports had little scientific basis and limited relevance to establish a significant treatment program that could cost the City hundreds of thousands of dollars each year.

When the new Director joined MUD in 2012, he requested that a re-assessment of the collection system chemical conditioning program be completed to determine past effectiveness and examine the most cost effective path going forward. Past programs made only limited improvements overall and caused associated impacts while costing the utility millions. Five potential chemical vendors provided product and equipment information to the department over the course of that year.

When the new Deputy Director for Maintenance and Collection Systems joined MUD in February 2013, he was directed by management to focus his attention on not only meeting the requirements of the California Sportfishing Protection Alliance (CSPA) Consent Decree for sanitary sewer overflow reduction, but also the implementation of a chemical conditioning program in Sanitary Sewer Collection Systems #7 and #8 for H<sub>2</sub>S reduction based on the reassessment of the program. By 2014, the re-assessment program plan was completed and a plan to reduce H<sub>2</sub>S production using sodium hydroxide was developed. MUD utilized the Bay Area Chemical Consortium (BACC) cooperative purchasing agreement to obtain more competitive chemical pricing in 2014, and a Pilot Study was implemented. The Pilot Study is using sodium hydroxide as a chemical treatment solution to reduce overall H<sub>2</sub>S production in these collections systems. In January 2015, tanks and associated equipment were purchased for

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

chemical treatment application at the intersections of Industrial Drive and Pock Lane (System #8) and Perlman Drive and Duck Creek (System #7). The first application of 50% sodium hydroxide began on June 1, 2015 for a 3-month trial (June through August 2015). MUD staff will make a determination of future chemical treatment options based on Pilot Study results. See Attachment A [Item Nos. F2.1 and R2.1 – Chemical Addition to Sewer System #7 and #8] for more information.

**Recommendation**

**R2.1** *The City Council direct (through the City Manager) the Director of MUD to make a presentation to the Council no later than September 2015 identifying the process and timeline to manage the H<sub>2</sub>S problem in the sewer pipeline system.*

**Response:** The City of Stockton has implemented this recommendation and anticipates a final recommendation to manage H<sub>2</sub>S production by the end of 2015. H<sub>2</sub>S is a byproduct of conveying raw sewage in pipes and is a common problem for sanitary sewer systems anywhere in the world. MUD, not unlike any other sewer utility, is tasked with ongoing sewer repair and replacement due to H<sub>2</sub>S corrosion. In an effort to extend sewer system life and to reduce foul odors due to H<sub>2</sub>S release, MUD will complete the sodium hydroxide Pilot Study by the end of August 2015. The results of this test will be shared with the City Council no later than December 2015 after the Pilot Study data has been analyzed. The department will formulate plans for economical chemical addition programs to be implemented in areas of most need in the sewer collection system.

**Findings**

**F2.2** *The utility vault at the southeast corner of Van Buskirk Park is extensively corroded and at times emits a strong H<sub>2</sub>S odor, which raises concerns about public safety.*

**Response:** The City of Stockton agrees with this finding. Turbulent flow in the outlet vault (downstream flow) is causing H<sub>2</sub>S to be released from the sewage and into the atmosphere resulting in a corrosive condition within the vault and a source of odor at the ground surface. MUD's evaluation of the flow through the vault suggested that flow modifications or a better (air-tight) containment system would reduce H<sub>2</sub>S generated, or released to the atmosphere at this location. Design modification to replace the corroded metal cover (at both inlet and outlet vaults) with a new air-tight concrete cover was completed within the past month and a contractor has installed the new concrete covers to prevent the release of H<sub>2</sub>S to the atmosphere at these locations. MUD staff will continue to monitor H<sub>2</sub>S at these locations as part of the Pilot Study of sodium

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

hydroxide addition at the previously mentioned upstream locations. See Attachment B [Item Nos. F2.2 and R2.2 for the before (with corroded cover) and after (with new concrete cover) condition for both inlet and outlet vaults].

**Recommendation**

**R2.2** *The City Council direct (through the City Manager) the Director of MUD to ensure the utility vault at Van Buskirk Park is safe for the public (i.e. determine H<sub>2</sub>S exposure level and integrity of corroded vault doors) and report back to the Council by September 2015 identifying what repairs are necessary, why the cyclone fence and posts 26 feet away are showing signs of corrosion, and what effect H<sub>2</sub>S exposure may have on people in the vicinity.*

**Response:** The City has implemented this recommendation. As mentioned in F2.2 above, utility vault modifications have been completed. One element of the modification is the installation of a new concrete cover with an air-tight composite utility vault access cover. The exterior of both structures have been cleaned and coated with corrosion-resistant polymer products, and the fence line has been repaired. These modifications will prevent the release of H<sub>2</sub>S from the sewer system at this location and the area has been restored appropriately. These completed modifications have eliminated the public's exposure to H<sub>2</sub>S at these locations. Ongoing monitoring within the sewer will provide MUD with the data necessary to determine if the upstream treatment efforts are effective. See Attachment B [Item Nos. F2.2 and R2.2 for the before (with corroded cover) and after condition (with new concrete cover) for both inlet and outlet vaults].

**Findings**

**3.0 Management**

**F3.1** *MUD failed to develop a succession plan as recommended in its 2009 Business Plan, causing difficulties during transitions and the unnecessary loss of valuable institutional knowledge*

**Response:** The City of Stockton disagrees partially with this finding. While it is true a formal succession plan was not developed with the 2009 Business Plan, many of MUD's management decisions since 2012 have resulted in the development and promotion of qualified internal candidates coupled with ongoing recruitment efforts. Particular attention has been placed on the recruitment and retention of operations staff. In 2013, MUD cross-trained three Water System Operators in water treatment in an effort for those employees to gain the knowledge and experience to qualify for water treatment certification. Those employees are now fully engaged in water treatment as certified operators and accumulating the hours needed to qualify for the next higher

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

water treatment certification. This is one example of how MUD develops internal expertise to fill the vacancies that will inevitably occur within the Plant Operator series. Similarly in wastewater treatment, MUD's efforts to educate and train wastewater operators resulted in three plant operators obtaining the level of Grade 3 wastewater treatment plant operator certification (journey-level) and opportunity for internal promotion.

In 2014, MUD offered employees access to math review classes without cost to prepare for upcoming State certification exams. This tutoring program helped a number of employees gain the knowledge and confidence needed to pass the certification exam math sections. This was critical to help with the Department's "Grow-Your-Own" staffing planning. These state certifications are required for the operations employees and by gaining certifications, the Department's staff and succession planning is improved. While MUD staff did not prepare a formal succession plan in 2009, the education and cross-training experience opportunities are examples of succession planning that have helped the Department with its ongoing staffing challenges. In addition, MUD continues to actively recruit for and hire the most qualified candidates for open positions both internally and externally to the organization.

As noted in the response to F1.2 above, the HR Department hired an experienced professional with utilities background to focus on filling vacancies and assisting with job classification language to promote advancement opportunities as an element of the Department's succession planning efforts.

**Recommendation**

**R3.1** *The City Council direct (through the City Manager) the Director of MUD to develop and implement a succession plan by September 2015.*

**Response:** This recommendation has been implemented. To date, filling vacancies has been the priority. As part of the Department's Strategic Business Plan a succession plan will be developed over the next year in conjunction with the HR Department. Recruitment, retention and succession planning is a broader city-wide priority. A distinct focus has been placed on filling vacancies, and in fact the HR Department obtained additional personnel resources to facilitate MUD hiring. The HR Department is completing a total compensation survey for all positions and is working to develop an overall approach to succession planning consistent with the City's priorities. Additionally, the 2015-16 Budget includes an increase of \$435,000 for all staff training, development and recognition to ensure a well equipped work force.

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

**Findings**

**F3.2** *As of March 10, 2015 MUD had 27 vacancies. Staff shortages contributed to delays in progress of capital improvement projects, caused more than \$1 million in annual overtime costs in 2014, and threaten the operation of critical facilities if qualified technical positions are not filled.*

**Response:** The City of Stockton disagrees with this finding. Typically, overtime costs of 5% would be considered normal for a utility. The Department's annual budget in 2014 was nearly \$140 million with expenditures for staff salaries at approximately \$12 million. Given the number of staff vacancies in 2014, the necessary work and the built-in overtime in the 12-hour schedules of operations staff due to the nature of 24/7 365-day utility operations, the \$1 million or 8% of staff salaries spent on overtime in 2014 was not out of the ordinary compared to other similar utilities. Furthermore, just over half of the overtime expense is directly related to the 12-hour schedules, it is planned for, and it is budgeted.

\$520,000 of the overtime costs were budgeted in water and wastewater treatment plant operations due to the 12 hour shift work schedule. The 12-hour schedule consists of one 36 hour and one 48 hour workweek, with eight hours of overtime per two week period for each plant operator position. This overtime cost is planned and budgeted annually. In addition to the built-in overtime, much of MUD's overtime costs are attributed to meeting the CSPA Consent Decree for reducing sanitary sewer overflows. The Consent Decree mandates MUD to televise and clean all 900+ miles of sewer pipeline prior to the end of 2015. MUD's collection system crews work a 9/80 schedule with every other Friday off. In order to meet that Consent Decree deadline, it has been necessary for Collection System crews to work every other Friday, which is paid at an overtime rate. This effort was more economically sound for the City rather than contracting additional support at a higher cost. The amount of \$200,000 was anticipated and budgeted in 2014 for this anticipated overtime.

There are always additional concerns when staff vacancies are higher than normal. More energy and attention is put into staff recruitment rather than other efforts. Work flow often slows, more contract or temporary support is necessary to keep work on task and according to established timelines. In 2014, staff vacancies in the Engineering Division contributed somewhat to delays in some CIP projects but other factors such as funding, permitting, easements and other issues also played a part. However, as already discussed, these vacancies did not threaten the operation of any critical facilities. As of the date of this letter, seven vacancies have been filled and 20 vacancies remain.



**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

**Recommendation**

**R3.2** *The City Council direct the City Manager to conduct a salary and compensation comparison study of municipal utility technical positions and prioritize the hiring of these essential positions by December 2015. [Note: MUD employees are paid through Enterprise Funds, which will not affect the City's General Fund.]*

**Response:** The City of Stockton agrees with this finding. The HR Department is currently conducting an organization wide study of our standard 16 comparator cities and agencies. HR Department completed a Plant Operator comparison study of other cities and water/wastewater agencies in April, 2014 which expanded on our standard comparators. From early March to now, MUD's vacancies were reduced from 27 to 20. Of the remaining 20 vacancies, six are on hold for job specification changes and/or budget reasons. The remaining 14 are at various points in the recruitment process. The current 20 vacancies equate to a 9% vacancy rate, which will drop shortly as current recruitments are completed. It is reasonable and expected that an agency of MUD's size and complexity of operation would experience a vacancy rate of around 5%. It is expected that with the impending placement of current recruitments, MUD's vacancy rate will be within the industry norm.

**F3.3** *The independent, full-time position of Safety Program Manager has been vacant since May 2013 and the decision to fill the position on an interim basis with the Deputy Director of Wastewater caused some employees to perceive it to be a conflict of interest.*

**Response:** The City of Stockton disagrees with this finding. The Department does not have a position of Safety Program Manager in its workforce. Currently, the only full-time position allocated to the Department's safety program is the Occupational Health and Safety Specialist that was vacated in 2013. MUD is pursuing an immediate recruitment of the Occupational Health and Safety Specialist position and intends to have this position filled in the current 2015-2016 fiscal year.

Over the past two years, the Deputy Director of Wastewater, an expert in the safety field, has been assigned these duties. In addition, the entire safety program for the Department was evaluated in 2014 and a new program developed with expert consultant support under the review and support of the City's Risk Management Division and Cal/OSHA staff. The MUD will continue with consultant services in 2015-16 to develop policies and evaluate the ongoing need for a Safety and Training Program Manager position in future years as the policies are available for the manager to implement.

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

---

**Recommendation**

**R3.3** *The City Council direct (through the City Manager) the Director of MUD to formulate the job description and organizational development for the position of MUD Safety Program Manager and initiate the hiring process by September 2015.*

**Response:** The City disagrees with this recommendation. MUD staff, in conjunction with a consultant under contract, is preparing a Safety Program that consists of twenty five (25) program elements over the next 24-months. As program elements are completed, each element is reviewed and recommended for approval by the Department's Safety Committee and with Union concurrence prior to finalization by the Department Head and training staff. It is more efficient to utilize the consultant expertise to develop the program consistent with industry standards in a more timely manner. The need for the position will be evaluated in the future, and hiring is dependent upon sufficient program development to warrant a position.

**F3.4** *Complaints regarding safety concerns have often been filed directly to Cal/OSHA by MUD employees intimating a lack of trust in management personnel to solve issues.*

**Response:** The City of Stockton disagrees partially with this finding. Staff may contact their direct supervisor, union representative, manager, employee Safety Committee, Deputy Director, Director, the City's Risk Management Division and the City Manager's Office regarding safety concerns. It is also the prerogative of any MUD employee to contact Cal/OSHA at any time if he or she feels they have a safety concern in the workplace so that an employee need not only address their concerns with MUD management. Over the past few years, many staff safety concerns have been brought to the attention of management staff, safety committee and addressed accordingly. Therefore, the City of Stockton disagrees with the part of the finding holding that there is or was a lack of trust in MUD management to solve such issues. This has been a cooperative effort between staff, the Department's Safety Committee and management. As a result, millions of dollars have been spent on staff safety training and infrastructure improvements throughout all the divisions and department-wide to address concerns and improve safety for all employees.

MUD has developed a Safety Program Manual that identifies a total of 25 Program Elements, seven of which have been completed with four in draft form as of the date of this letter. These Program Elements are developed by NES, Inc., reviewed by the Safety Committee and signed by the assigned manager, Safety Committee Chairperson and the Director of MUD prior to distribution to a total of 37 control copy binders throughout the Department. Once the Program Element has been issued, training is then conducted specific to the Program Element. Specific changes are being developed to address concerns and being implemented.

**RESPONSE TO GRAND JURY FINAL REPORT CASE NO. 1412**  
**CITY OF STOCKTON MUNICIPAL UTILITIES DEPARTMENT**

**R3.4** *The City Council direct (through the City Manager) the Director of MUD to assign and meet benchmarks for the safety programs being developed by NES, Inc. and by December 2015 prepare a timeline for completion of the safety project and report to the Council annually on its progress.*

**Response:** The recommendation to develop a project timeline will be completed by December 15, 2015. In addition, MUD has developed a system to report and track staff safety concerns. Beginning on June 17, 2015, the Safety Committee will receive a copy of the tracking system at each monthly meeting. All concerns will be tracked on the distributed list until adequately addressed. Safety Committee members will post the list on their respective work area safety bulletin boards. All staff will be informed on how to get their concerns to the safety program manager or assignee at all of the scheduled OSHA-required safety training meetings. Annual program updates will be communicated to the City Council as part of the budget process and through the Council Water Committee and the Water Advisory Group.

Please do not hesitate to contact me if you have any questions.

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KURT WILSON  
CITY MANAGER

KW:

Attachment A - Item Nos. F2.1 and R2.1  
Attachment B - Item Nos. F2.2 and R2.2

c: Mayor and City Council  
C. Mel Lytle, Director of Municipal Utilities Department  
John M. Luebberke, City Attorney  
Trisa Martinez, Staff Secretary                      via e-mail: [grandjury@sjcourts.org](mailto:grandjury@sjcourts.org)

**Item Nos. F2.1 and R2.1 – Chemical Addition to Sewer System Nos. 7 and 8**



Tanks Delivered



Industrial Drive and Pock Lane (System 8)



Perlman Drive and Duck Creek (System 7)



Chemical Addition started June 1, 2015

**Item Nos. F2.2 and R2.2 – Van Buskirk Park**



Van Buskirk Vault - “Old” fence



Van Buskirk Vault - “New” fence



**Item Nos. F2.2 and R2.2 – Van Buskirk Park**



Van Buskirk Outlet Vault-Corroded Cover



Van Buskirk Outlet Vault- Air Tight Cover

**Item Nos. F2.2 and R2.2 – Van Buskirk Park**



Van Buskirk Inlet Vault- Corroded Cover



Van Buskirk Inlet Vault- Air Tight Cover