



- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

7/9/2024 Board Meeting

---

7-2

## **Subject**

---

Authorize an agreement with Arcadis, U.S. Inc., in an amount not to exceed \$1.525 million for Data Management and Data Analytics Consulting & Implementation Services to implement Phase 1 of the Data Analytics project; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## **Executive Summary**

---

This project will modernize Metropolitan's data analytics capabilities empowering staff (users) to access and analyze data to support decision-making and reporting more efficiently. Arcadis was chosen as the successful respondent to Request for Proposal (RFP) DH-1348, published on May 24, 2023. This project will establish a centralized standard data warehouse to facilitate efficient data-driven decision-making, reduce data quality issues and eliminate extensive manual report preparation.

During an extensive process, staff from all groups were interviewed, and 25 priority use cases were defined. A Data Analytics use case is the use of an automated processes to access multiple data sources to efficiently create useful information that informs decision-making and routine reporting. In addition to the design and implementation of the data warehouse that will support the 25 priority use cases, this first phase of the project will develop two of the 25 priority use cases including: (1) Developing an Automated Water Operations Dashboard and (2) Automating financial reporting activities.

## **Timing and Urgency**

There is currently no centralized enterprise data warehouse that allows sharing and meaningful integration of data across the enterprise to serve quick business analytics for decision-makers and analytics users. Currently, significant staff time is dedicated to collecting data and generating reports every time certain data is requested because of the limited availability of a centralized enterprise data warehouse.

There are a few data marts currently managed by Metropolitan's Business Intelligence team which are used to generate some key analytics such as limited financials, project controls, water sales, etc. However, the data processes and data management techniques are outdated and need redesign, automation, and modernization due to the ever-increasing volume of business data and the introduction of new business-specific applications. Additionally, there are currently no fundamental data governance guidelines in place across the organization, at the enterprise level or at the business group level.

## **Proposed Action(s)/Recommendation(s) and Options**

---

### **Staff Recommendation: Option #1**

#### **Option #1**

Authorize an agreement with Arcadis, U.S. Inc., in an amount not to exceed \$1.525 million for Data Management and Data Analytics Consulting & Implementation Services to implement Phase 1 of the Data Analytics project.

**Fiscal Impact:** Expenditures of \$1.880 million in capital funds for 2024-2026

**Business Analysis:** This option would implement the prerequisite data management processes, including the design of the enterprise data warehouse and the development of reporting dashboards for two high-priority use cases.

### Option #2

Authorize an agreement with Arcadis, U.S. Inc., in an amount not to exceed \$945k for Data Management and Data Analytics Consulting & Implementation Services to implement a subset of Phase 1 of the Data Analytics project.

**Fiscal Impact:** Expenditures of \$1.3 million in capital funds for 2024-2026

**Business Analysis:** This option would implement the prerequisite data management processes, including the design of the enterprise data warehouse and the development of reporting dashboards for one high-priority use case.

### Option #3

Do nothing at this time

**Fiscal Impact:** No expenditures of capital funds

**Business Analysis:** Metropolitan will continue generating manual reports to support business decisions.

## Alternatives Considered

---

Option #2 and Option #3

## Applicable Policy

---

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

## Related Board Action(s)/Future Action(s)

---

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/23 and 2023/2024.

## California Environmental Quality Act (CEQA)

---

### CEQA determination for Option #1:

The proposed action is exempt from CEQA because there is no potential for the activity in question to have a significant effect on the environment. (State CEQA Guidelines Section 15061(b)(3).)

### CEQA determination for Option #2 and Option #3:

None required

## Details and Background

---

### Background

Metropolitan has numerous data repositories within its enterprise systems, including Oracle Financials (EBS), Supervisory Control and Data Acquisition system, and Water Information System, among other enterprise applications.

Data from these systems should be optimized in order to be analyzed, retrieved, governed, stored, and shared across various business groups. As a prerequisite, there is a need to collect and integrate data from the applicable systems, design and develop new data marts, and develop an enterprise data warehouse which would facilitate implementation of various data analytics use cases, as well as enable self-service analytics and reporting.

RFP DH-1348 was issued for Data Management and Data Analytics Consulting & Implementation Services on May 24, 2023, and closed on July 7, 2023. Metropolitan received a total of nineteen responsive proposals from the competitive process. The Business Outreach participation goal designated for this solicitation was ten percent.

Proposals were reviewed by staff from the groups. After careful deliberation, the evaluation team chose Arcadis as the winner of the RFP. Arcadis has 30+ years of experience in delivering these types of services and is qualified as both a Small Business Enterprise and a Regional Business Enterprise. Based on their proposal, references, and experience, the RFP evaluation panel recommended this vendor be awarded all components of the work.


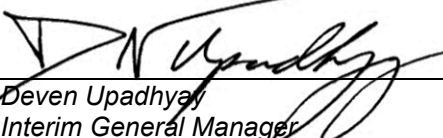
### Scope of Work

The scope of work for this project includes:

- Analyze, review and assess the selected two use cases under Phase 1.
- Engage Metropolitan Stakeholders and business groups in multiple workshops/working sessions.
- Finalize and document requirements, data sources, and use case definitions.
- Build the technical foundation for the data analytics project to implement 25 use cases.
- Based on the updated data sources and other key use case components from these working sessions, design, architect and develop additional data marts that are not currently present but are needed for the selected use cases.
- Redesign the existing data marts to incorporate common/conformed facts and dimensions to allow the information to be combined with other data sources, upgrade data load processes, tune for performance, and enhance data integrity.
- Design, architect and implement the end-to-end solution for the selected use cases under Phase 1 (includes data models, automated data processes, and analytics dashboards).
- Provide knowledge transfer sessions for Metropolitan users.
- The technical foundation will result in reduced costs for the remaining use cases. Staff will return to the Board with a detailed plan for implementing the remaining priority use cases.

This action authorizes \$1.880 million for the Data Management and Data Analytics Consulting and Implementation Services Project. The total project budget includes funds for awarding a new contract with Arcadis for \$1.525 million for professional and technical services. Other costs included are \$250k for internal labor costs by Metropolitan staff, including owner costs and project management, and \$105k in contingency funds. Most of the costs will be used for building the data marts and integrations between systems in order to produce the data necessary for the two high-priority use cases. Less back-end development work will be required for the remainder of the 25 use cases. Upon completion of Phase I, future phases will be brought to the Board for authorization for the development of the remainder of the 25 use cases.

This project has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team, and funds are available within the fiscal year 2022/24 capital expenditure plan. See **Attachment 1** for the Financial Statement.

	6/24/2024
Charlie Eckstrom Group Manager, Information Technology	Date
	6/28/2024
Deven Upadhyay Interim General Manager	Date

### Attachment 1 – Financial Statement

Ref# IT12691559

**Allocated Funds for Enterprise Data Analytics**

---

	<b>Current Board Action (July 2024)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt.)	250,000
Submittals Review & Record Drwgs	-
Construction Inspection & Support	-
Metropolitan Force Construction	-
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	1,525,000
Equipment Use	-
Contracts	-
Remaining Budget	105,000
<b>Total</b>	<b>\$ 1,880,000</b>