Midpeninsula Regional
Open Space District

R-24-42
Meeting 24-08
March 27, 2024

AGENDA ITEM 10

AGENDA ITEM

Informational Presentation on the Geographic Information System (GIS) Strategic Plan Project

GENERAL MANAGER'S RECOMMENDATION(S) *dewk*

Receive an informational presentation on the GIS Strategic Plan Project and provide feedback to help prioritize GIS technology services and offerings. No Board action required.

SUMMARY

The Midpeninsula Regional Open Space District (District) is conducting a comprehensive needs assessment and developing a three-year strategic plan for the District's Geographic Information Systems (GIS) Program, a unit within the Information Systems and Technology (IST) Department. This project aims to evaluate existing GIS technology utilization at the District, gather needs of internal and external stakeholders, and make recommendations to improve the sustainability, endurance, and enterprise of the GIS Program. In fall 2023, the General Manager awarded a contract to Geographic Technologies Group (GTG) to support the District in carrying out the project. GTG is completing a three-phase, eight-step GIS Needs Assessment to inform the development of a Three-Year Strategic Plan (see Attachment 2 for an overview of their scope of work).

DISCUSSION

Background
The 2015 IT Master Plan recommended the District develop a GIS Master Plan as one of nine initiatives to improve GIS technology, data, processes, and access for staff and the public. In 2017, the District completed an Enterprise GIS Planning and Implementation Project that modernized GIS operations and service delivery. Through investment in IT hardware and software licensing, the District deployed ArcGIS Enterprise, a robust geospatial platform that provides staff access to a secure database repository of more than 200 layers and over 100 self-service web mapping applications. In 2018, the District implemented Cityworks, a work order and asset management system, for Land & Facilities Department staff to log service requests, schedule work tasks, and track asset history. In 2023, the GIS Program launched Open Data Midpen, an ArcGIS Hub site used to share data and web mapping applications with the public. Today, these platforms are critical business systems that streamline workflows, enhance understanding, and improve decision-making for the District activities.

As the District continues to enhance GIS technology, it is increasingly vital to ensure resources are directed towards the most impactful and relevant mapping applications. Moreover, new demands and opportunities are emerging on the already-full GIS Program work plan, including:

- Various District programs, such as Wildland Fire Resiliency, Conservation Grazing, and Grants, require substantial GIS Program support for planning, tracking, reporting, decision-making, and/or communications.
- District land holdings are rapidly expanding on the San Mateo County coast where real property transactions are increasingly complex, requiring frequent coordination with the GIS Program.
- Technology advancements are rapidly changing the GIS industry, with drones, artificial intelligence, and big data emerging as the next chapter.
- Public engagement is increasing for District projects and initiatives, with diversity, equity and inclusion at the forefront of these efforts. Web-based GIS solutions like Story Maps can play a pivotal role, but these immersive, media-driven tools are time-consuming to plan, design, develop, launch and promote.

The GIS Strategic Plan aims to provide a three-year road map for addressing these demands and identified gaps. This well-defined plan will enable the IST Department to prioritize and focus its resources on the highest, most critical needs. The plan is guided by a Six Pillar framework of GIS Sustainability that gauges the health and maturity of an organization's GIS operations. This framework is the foundation of a successful, strategic, and innovative GIS Program. Definitions of these pillars are provided in Attachment 1.

Public Engagement Strategy
The internal needs assessment phase of the GIS Strategic Plan is nearing completion. To gather the ideas and needs of external stakeholders, the District shared an online survey with the public, including partner organizations and District volunteers, through direct email and notices posted on the District's website, eNews, and social media platforms beginning on March 1. The survey will remain open until 11:59 pm Sunday March 31.

Board Engagement
As part of this Agenda Item, the Board will receive an overview of the GIS Strategic Plan Project and have the opportunity to provide feedback on the direction of the GIS Program. This feedback will be incorporated into the GIS Strategic Plan's needs assessment phase and help prioritize GIS technology services and offerings.

FISCAL IMPACT

There is no fiscal impact associated with the recommendations at this time. Funding for future years budgets will be requested as part of the annual Budget and Action Plan process.

PRIOR BOARD AND COMMITTEE REVIEW

None

PUBLIC NOTICE

Public notice was provided as required by the Brown Act. Furthermore, an online survey was shared with the general public through the District website, eNews, and social media throughout March 2024.

CEQA COMPLIANCE

This item is not a project subject to the California Environmental Quality Act.

NEXT STEPS

Feedback received by the Board will be incorporated into the needs assessment phase of the project. During summer 2024, an Executive Summary Report will be presented to the Board with the final recommendations of the GIS Strategic Plan.

Attachment(s)
1. Six Pillars of GIS Sustainability Framework Definitions
2. Scope of Work

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The Six Pillars of GIS Sustainability

GTG uses its philosophy, the Six Pillars of GIS Sustainability, to build Midpen's GIS Strategic Plan. These pillars cover the critical components that must be planned for and work well to have an effective GIS. Any weak pillar poses a risk to the stability of the entire GIS program.

1. **GIS Governance** – A review of governance principles, definitions, concepts, enterprise organizational models and options, assessment of current GIS staff levels, departmental and GIS staff responsibilities, and description of how the GIS staffing structure and job descriptions compare to organizations of similar size and characteristics.
2. **GIS Digital Data and Databases** – A thorough documentation and evaluation of data and data structure, database design, data stewards/custodians, and data security.
3. **Procedures, Workflow, and Integration** – Documentation and recommendations on how GIS integrates with existing IT systems.
4. **GIS Software Solutions** – Determining the best software solutions to meet the needs of the organization and constituents, including the potential benefits of new and emerging technologies.
5. **IT Infrastructure** – An examination of the underlying IT systems that are essential to the performance of the GIS data and software.
6. **GIS Training, Education, and Knowledge Transfer**—A detailed look at the organization's training and education needs. A detailed training plan is key for local government organizations to sustain an effective and enduring GIS program. Training plans include training options, specialized training opportunities, GIS conferences, and educational seminars.

Attachment 2: Scope of Work Overview

Midpeninsula Regional Open Space District (Midpen) has approximately 200 employees in 13 departments and has a mature enterprise GIS program. Midpen requires an experienced Geographic Information Systems (GIS) Strategic Planning consultant to conduct a GIS Needs Assessment and develop a Three-Year GIS Strategic Roadmap.

The following proposed scope of services includes three phases and eight steps:

◆ Phase I: GIS Needs Assessment

   ◆ Step 1: Online Questionnaire
   ◆ Step 2: Kick-Off Presentation and Technology Seminar
   ◆ Step 3: Stakeholder Interviews, Benchmarking, GAP, and SWOT Analysis
   ◆ Step 4: GIS Needs Assessment Report

◆ Phase II: System Design and Governance Model Development

   ◆ Step 5: Proposed System Design

◆ Phase III: Implementation Plan

   ◆ Step 6: Return on Investment (ROI) Analysis
      o Costs and benefits of a Drone Program Analysis
   ◆ Step 7: Three-Year GIS Strategic Plan
   ◆ Step 8: Presentation of GIS Strategic Plan to Stakeholders

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
Three-Year GIS Strategic Plan

Phase I				Phase II	Phase III		
STEP 01 Online Questionnaire	**STEP 02** Kick-Off Presentation & Technology Seminar	**STEP 03** Stakeholder Interviews Benchmarking, GAP, and SWOT Analysis	**STEP 04** GIS Needs Assessment	**STEP 05** System Design and Governance Model Development	**STEP 06** Return on Investment (ROI) Analysis	**STEP 07** PRODUCT: GIS Strategic Plan	**STEP 08** Presentation of Strategic Plan to Stakeholders

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