



MHFD
September
Anniversaries!
Lindsay Franklin - 1 year
Jen Winters - 1 year

We exist to protect people, property, and our environment through preservation, mitigation, and education.

2023

ANNUAL REPORT

MHFD

MILE HIGH FLOOD DISTRICT

Protecting people, property, and our environment through preservation, mitigation, and education.



A NOTE FROM MHFD EXECUTIVE DIRECTOR LAURA KROEGER

WE BEGAN 2023 WITH THE theme “Moving Forward Together”. This involved physically moving into our new office space and collaborating with our partners to develop our strategic plan.

After working remotely for several weeks, we were thrilled to return to a shared workspace in early May. Thanks to the hard work of our design, construction, and management teams, our building remodel was completed within a year, allowing us to host a grand opening event in the fall. Our new conference and training rooms are now frequently used, and it’s great to have face-to-face interaction with our partners again.



MHFD Annual Symposium in Downtown Denver

Having successfully completed our previous strategic plan, we were ready to look ahead to the next three to five years. Our process involved extensive outreach to gather feedback from key stakeholders on our strengths, areas for improvement, and opportunities for industry advancement. We are grateful to all who participated and shared their thoughts. This valuable community feedback helped redefine our core values and develop focused initiatives to reach our mission and vision. The common thread of our plan is continuous improvement. We recognize that we cannot meet the needs of the community or our partners without evolving and adapting our practices. Over the next several years, we are looking forward to collaborating with our partners and implementing our new initiatives to continue to drive the stormwater industry forward and improve the quality of life in the Denver metropolitan area. The strategic goals we identified as part of the plan are highlighted in this annual report.

Our prestigious Friend of the District Award was given to Scott Tucker for his longstanding service and leadership. Mr. Tucker served as the District’s Executive Director from 1972 to 2004 and was a founding member of the National Association of Floodplain and Stormwater Management Agencies, advocating at the state and federal levels.



The MHFD Team in our new building

I am grateful for a passionate and talented internal team that continues to energize the industry and for a Board of Directors who model effective governance, support our team, and engage in our work to reduce flood risks. As a team, we are moving forward together!

BOARD OF DIRECTORS



CHAIR
Bud Starker
Mayor
City of Wheat Ridge



CHAIR PRO TEM
Stephanie Piko
Mayor
City of Centennial



SECRETARY
Jan Kulmann
Mayor
City of Thornton



TREASURER
Tracy Kraft-Tharp
Commissioner
Jefferson County



MEMBER-AT-LARGE
Nancy McNally
Mayor
City of Westminster

GOVERNING BODY

22

Locally-appointed
Elected Officials

2

Licensed Professional
Engineers

BOARD MEMBERS

Deputy Mayor Laura Aldrete
City and County of Denver

Mr. Michael Anderson
Engineer, Retired

Commissioner Lynn Baca
Adams County

Mayor Guyleen Castriotta
City and County of Broomfield

Council Member Jolon Clark
City and County of Denver

Mayor Tracy Engerman
City of Castle Pines

Mayor Pro Tem Curtis Gardner
City of Aurora

Council Member Stacie Gilmore
City and County of Denver

Mr. Robert Harberg
Engineer, Retired

Council Member Paul Kashmann
City and County of Denver

Mayor Meredith Leighty
City of Northglenn

Mayor Dennis Maloney
City of Louisville

Mayor Kyle Schlachter
City of Littleton

Commissioner Ashley Stolzmann
Boulder County

Commissioner George Teal
Douglas County

Mayor Pro Tem Mark Wallach
City of Boulder

Mayor Marc Williams
City of Arvada

CONSTRUCTION HIGHLIGHT

HAPPY CANYON CREEK

PRIOR TO THIS PROJECT, HAPPY CANYON CREEK WAS experiencing severe erosion, threatening the stability of local roadways and the I-25 roadway corridor. In addition to transportation risks, the erosion degraded ecological function and created watershed-wide sediment deposition issues. The team worked hard to protect valuable existing vegetation while balancing the need for substantial channel upgrades. Through the use of a sculpted concrete drop structure, riffle and cascade style drop structures, and a strategic revegetation plan, the project restored 3,050 linear feet of Happy Canyon Creek and established a stable corridor which spans portions of Douglas County and the City of Lone Tree. This channel reach will continue to be a community asset well into the future. We are very proud of the project team’s contributions and dedication to MHFD, the project sponsors, and to the Happy Canyon Creek project.

PROJECT SPONSORS

- MHFD
- Douglas County
- City of Lone Tree
- Cherry Creek Basin Water Quality Authority (CCBWQA)
- Colorado Department of Transportation (CDOT)

MHFD TEAM

- Bao Chongtoua
- Kurt Bauer
- Kate Kerstiens
- Mike Sarmento
- Jim Watt

DESIGN TEAM

- Muller Engineering Company, *Engineer*
- ERO Resources Corporation, *Environmental Permitting and Ecological Restoration*
- Otak, *Geomorphologist*
- Aztec Consultants, *Survey*
- SurvWest, *SUE*
- Stantec, *Paleontological Monitoring*
- CTL Thompson, *Geotechnical Engineer*

CONSTRUCTION TEAM

Naranjo Civil Constructors, Civil Contractor

AloTerra Restoration Services, Revegetation Specialists

Pase Contracting, Revegetation Specialists and GESC

CONSTRUCTION COMPLETED

Fall 2023

TOTAL PROJECT COST

Approx. \$5.4M



RESEARCH PROJECT HIGHLIGHT

STORM DRAIN SAFETY GRATE PHYSICAL AND CFD MODELING STUDY

EVERY YEAR PEOPLE DROWN AFTER disappearing into storm drains during floods. Most of those lost are children and first responders. The most dangerous storm drains have been small pipe openings and culvert inlets with no safety grate covering the opening.

MHFD partnered with Colorado State University’s Hydraulics Laboratory (CSU), AECOM, and Larimer County Dive Rescue Team (LCDRT) to conduct flume tests and computational fluid dynamics (CFD) modeling to assess various culvert grate configurations and determine conditions that limited a person’s ability to self-rescue. The study helped inform new criteria for when to include a safety grate and how to design it.



- This research has been highlighted repeatedly in a series of articles published by Propublica. As a result of this press, consideration of safety grates was included in a new rule published by the Housing and Urban Development Department (HUD) in 2024.
- In addition to the literature review, the team researched over 40 pipe-related injuries and fatalities to understand under what scenarios and configurations injury is most likely to occur.
- This study was the first to use human subjects in a flume to provide data to support design of safety grates.
- Computational fluid dynamics (CFD) modeling was consistent with measurements taken in the flume and helped expand the limitations of the study to maximize benefit.

PROJECT HIGHLIGHTS

WATERSHED PROJECTS COMPLETED IN 2023

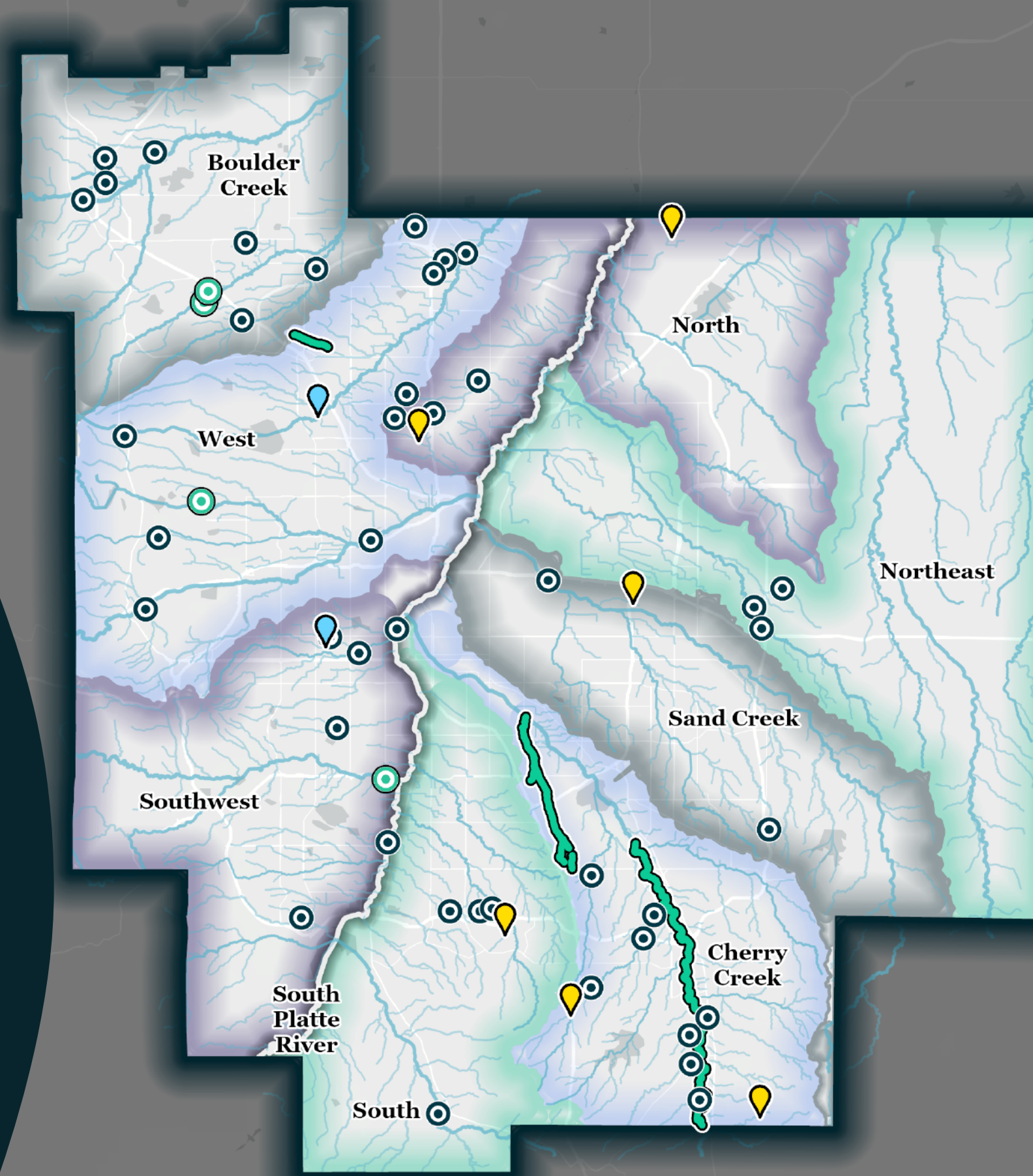
- ◎ **42** Floodplain Letters of Map Change

- 📍 **6** Capital Improvement Projects

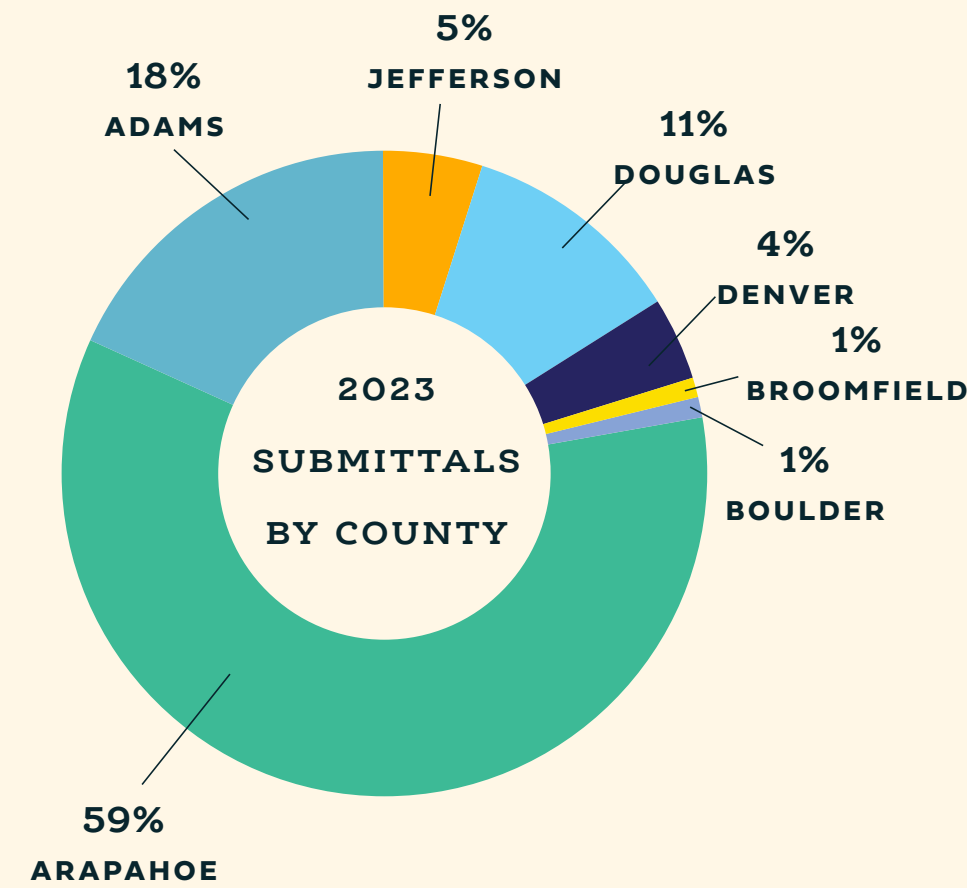
- ◎ **4** Property Acquisition Projects

- 📍 **2** Restoration Projects

- **3** Stream Studies Covering 29 Stream Miles



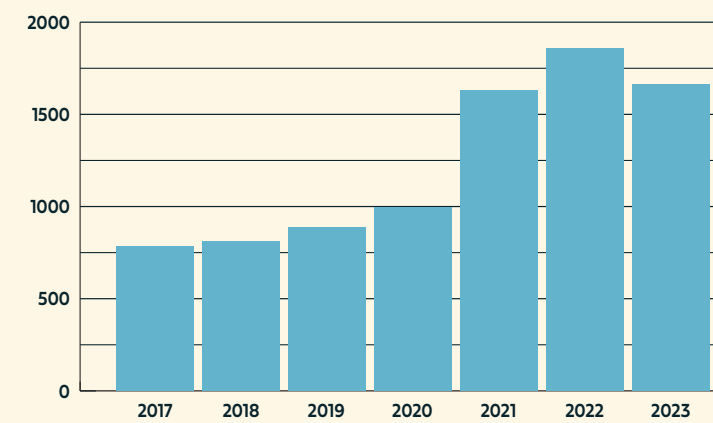
MEP WORK COMPLETED



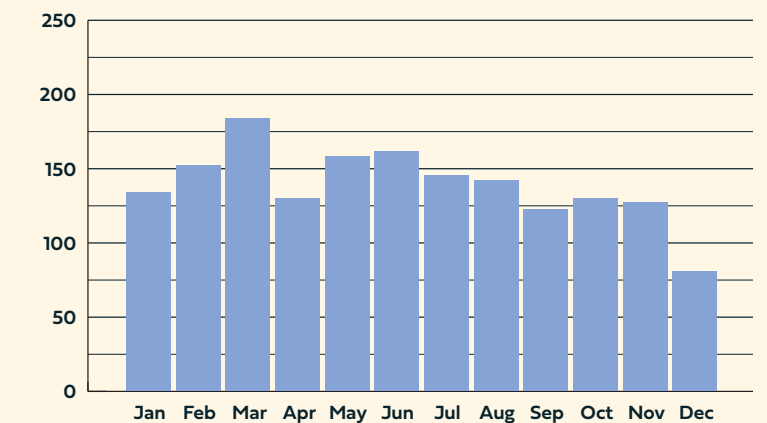
MHFD ASSISTS LOCAL GOVERNMENTS WITH reviews of development projects through the Maintenance Eligibility Program (MEP). By successfully completing the MEP process, projects are eligible for maintenance assistance by MHFD.



SUBMITTALS OVER THE YEARS



2023 SUBMITTALS BY MONTH



EDUCATION & OUTREACH

IN 2023, MHFD CONTINUED OUR ANNUAL PROGRAMMING while also starting new initiatives in education and outreach. Here are some highlights from the year:

- We were thrilled to host our biggest annual symposium event yet with over 600 attendees!
- The Stream Management Academy continued in 2023 with a combination of classroom and field time.
- We continued partnerships with the Colorado Stormwater Center and the APWA Public Works Institute by hosting and co-instructing classes.
- We spearheaded a new initiative establishing the GLO (Grassroot Leadership Opportunities) Ambassadors Program – a youth led community engagement and outreach team that engages youth within their communities and ensures we have meaningful outreach on our projects.
- MHFD engaged our local schools. One of our 2023 partnerships included DSST: Cedar High School in Denver where we worked with a group of students that developed a new way for concerned residents and public officials to report potentially unsafe pipe and culvert inlets. This effort stemmed from the safety grate research project highlighted within this annual report.
- MHFD continued our partnership with The Greenway Foundation (TGF) to sponsor and participate in events to promote watershed stewardship and provide outreach and education to the public.

42K+
Flood Hazard Brochures delivered to residents in higher-risk areas

3800+
Professional Development Hours granted through MHFD and partner programming

3000+
Hours of MHFD YouTube Content Watched

658
MHFD Annual Symposium Registrants

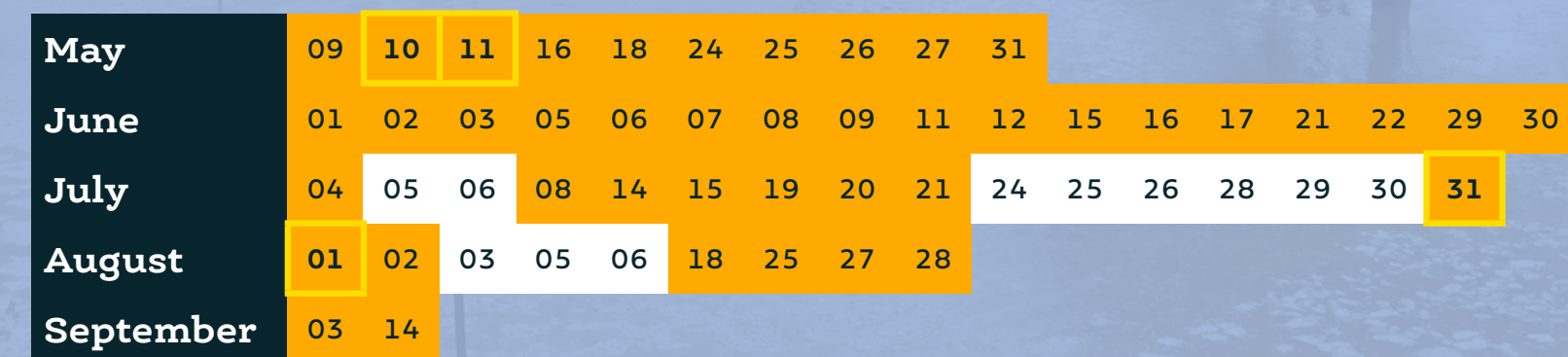
18
New Watershed Ambassadors graduated from the Stream Management Academy

49K+
MHFD YouTube Views



MHFD staff engaging the public at TGF's CrossCurrents event

54 DAYS WITH FLOOD POTENTIAL IN 2023

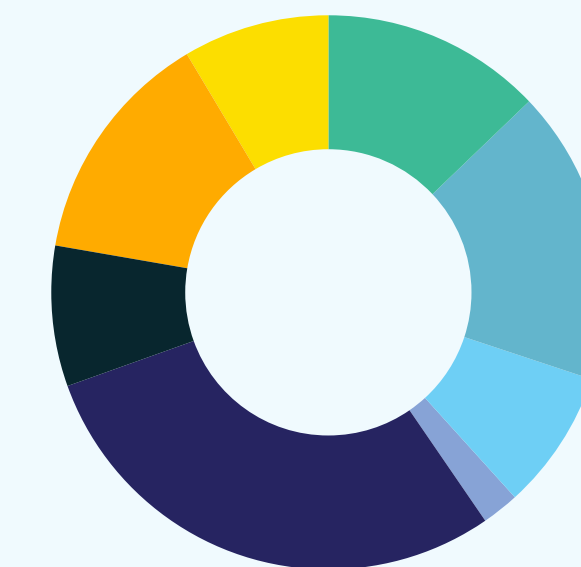


LEGEND Flood Potential Flood Potential and Rain Alarm Occurred National Weather Service Flash Flood Warning

2023 FINANCIALS

County Revenues	Amount
Adams County	\$9.5 M
Arapahoe County	\$12.8 M
Boulder County	\$6.1 M
Broomfield County	\$1.6 M
Denver County	\$21.6 M
Douglas County	\$6.1 M
Jefferson County	\$10.2 M
Miscellaneous	\$6.3 M
Total Revenue	\$74.2 M

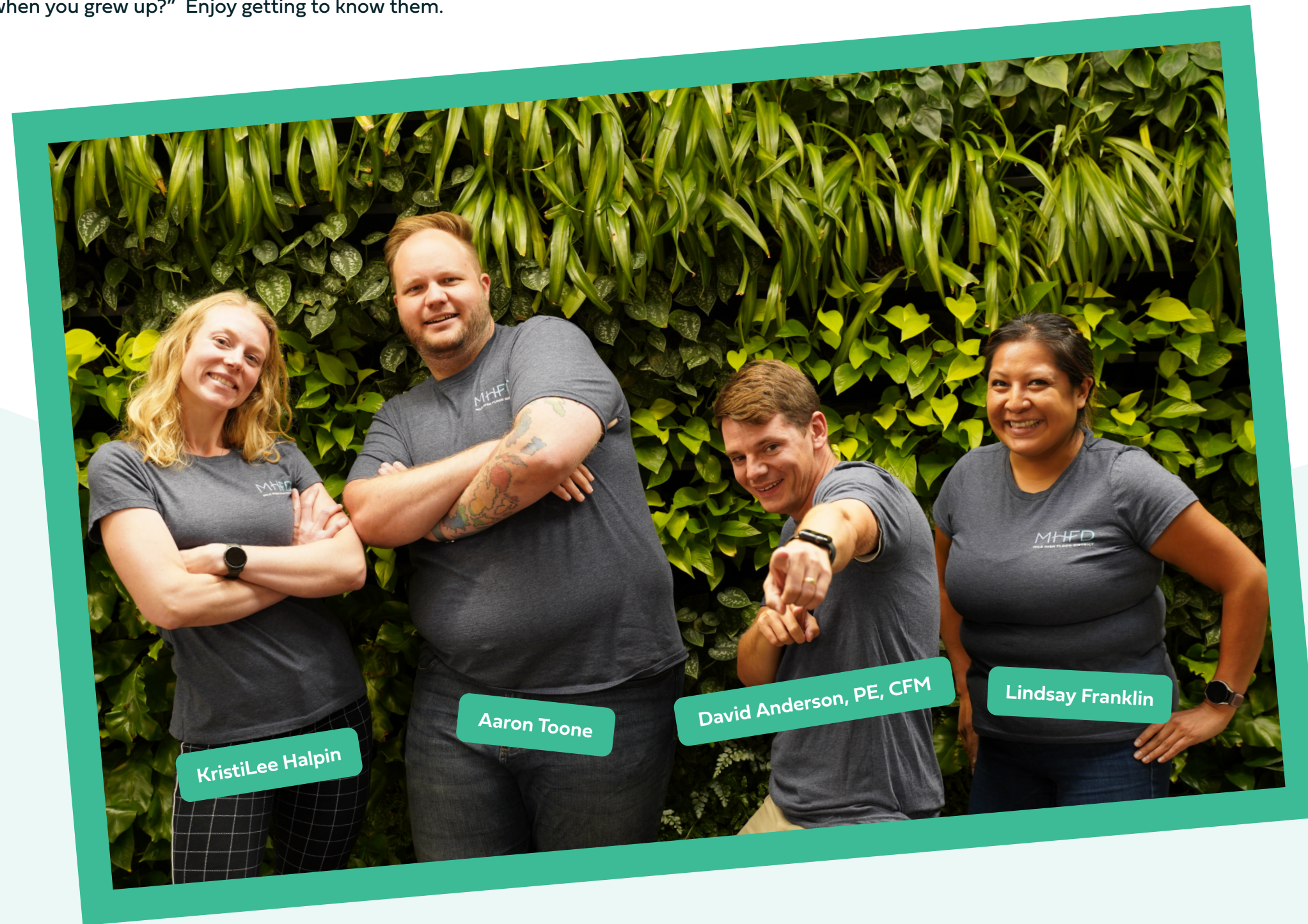
Service Expenditures	Amount
Construction Projects	\$26.8 M
Maintenance Services	\$19.4 M
Payroll and Benefits	\$8.4 M
South Platte River	\$6.7 M
Future Base of Operations Reserve	\$2.5M
Operations and Development	\$1.5 M
Operating Costs	\$2.8 M
Floodplain Preservation	\$2.2 M
Floodplain Management	\$1.1 M
Watershed Planning Studies	\$1.4 M
Flood Warning	\$1.2 M
Contract Services	\$0.4 M
Total Expenditures	\$89.8 M



Development Services Enterprise	
Land Development Projects	\$15.4 M

WELCOME TO THE TEAM!

In 2023, we welcomed four amazing new team members, each bring a unique talent to the District. Please meet the newest additions to the MHFD Team. Just for fun, in addition to the normal-get-to-know-you details, we've included their answers to the age-old question: "When you were a kid, what did you want to be when you grew up?" Enjoy getting to know them.



KristiLee Halpin Hired in July, KristiLee Halpin joined the Environmental Team as our very first Environmental Specialist. With over 9 years of experience in environmental permitting, habitat assessments, and ecological restoration - 5 of those years on District projects - it's no wonder she fit right in on day one. Originally from Central New York, KristiLee has called Colorado home since 2016. She holds a BS in Zoology from the State University of New York and an MS in Environmental Science from Iowa State University.

When you were a kid, what did you want to be when you grew up? When I was a kid, I wanted to become a marine biologist. Growing up on an acreage surrounded by a diverse mosaic of prairie, wetlands, and forest, with a fishing pond as a centerpiece, I spent countless hours by the water's edge. I was captivated by the fish swimming in the pond and enjoyed catching frogs. My fascination deepened after watching a TV show about the marine life of coral reefs, which sparked my desire to work with aquatic life in the ocean.

Aaron Toone Hired in November, Aaron Toone joined MHFD as a Senior Accountant, bringing over 8 years of accounting experience to our small but mighty Accounting Team of two! A Utah native and avid "Utes" fan, Aaron loves football, disc golf, d&d, cars, and spending time in nature. He holds a BS in Business Administration from Independence University.

When you were a kid, what did you want to be when you grew up? What I wanted to be when growing up was an ever-evolving question, every time someone asked me, I had a new answer but things that interested me the most was a police officer, pilot, lawyer or doctor. It always seemed to be a mix of careers that focused on helping others or had to do with something that had an engine.

David Anderson, PE, CFM Hired in June, David Anderson joined the District as a Hydraulic Modeler and soon transitioned to Project Engineer, earning the award of most title changes in the shortest time. Born and raised in Cleveland, Ohio, David now resides in the City of Edgewater with his wife and their old English sheepdog named Abby. He holds a BS in Civil Engineering from the University of Ohio.

When you were a kid, what did you want to be when you grew up? When I was a kid, I wanted to be an engineer. My grandpa was a successful mechanical engineer specializing in ball bearings and lubricants that worked at NASA for 35 years. His stories inspired me to become an engineer to try to improve the world we live in.

Lindsay Franklin Hired in January, Lindsay Franklin took immediate charge as MHFD's Office Coordinator. Lindsay brings several years of experience in office and administrative work as well as store management. Lindsay is passionate about music, travel, hiking, and gluten-free establishments

When you were a kid, what did you want to be when you grew up? When I was a kid, I dreamed of becoming a lawyer. At an early age, I was fascinated by John Grisham's books and it was all I wanted to become.

2023 – 2027 STRATEGIC GOALS

Advocacy

A trusted voice and positive influence in policy and regulation that promotes systems thinking in stormwater management.

Empowerment

Everyone is entrusted and confident to be a champion of holistic thinking and solutions.

Knowledge Leadership

Collaboratively develop and share information, technology, and tools to meet current and future needs.

Workforce

Our industry is an inclusive culture that promotes collaboration, accountability, and aspirational work.



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[MHFD.org](https://www.mhfd.org)
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