

JOURNAL OF COMMISSION WORK SESSION

March 4, 2014

City Commission Work Session
Civic Center, Gibson Room 212

Mayor Winters presiding

CALL TO ORDER: 5:30 p.m.

ROLL CALL: City Commissioners present: Michael J. Winters, Bill Bronson, Fred Burow, Bob Jones, and Bob Kelly.

STAFF PRESENT: City Manager; Deputy City Manager; City Attorney; Directors of Fiscal Services, Park and Recreation, Planning and Community Development, and Public Works; Senior Transportation Planner; Fire Chief; Police Chief; and the Deputy City Clerk.

1. RIVER'S EDGE TRAIL MAINTENANCE PLAN

Park and Recreation Director Marty Basta introduced Senior Transportation Planner Andrew Finch, TD&H Engineering Trail Consultant John Juras, and Giant Springs State Park Manager Jason Pignanelli. Director Basta, Mr. Finch, and Mr. Juras provided and discussed a PowerPoint presentation on the Rivers Edge Trail Maintenance Plan.

<p>PRESENTATION PURPOSE:</p> <ul style="list-style-type: none"> - Inform - Obtain Commission Input - Request Ultimate Adoption of the Plan 	<div style="background-color: #0070C0; color: white; padding: 10px; text-align: center;"> <h2 style="margin: 0;">RIVER'S EDGE TRAIL MAINTENANCE PLAN</h2> </div> <p style="text-align: center; font-weight: bold;">FOR</p> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 20px;"> <div style="background-color: #0070C0; color: white; padding: 10px; text-align: center;"> <h3 style="margin: 0;">FEBRUARY 2014</h3> </div>  </div>
<div style="background-color: #000080; color: white; padding: 10px;"> <p style="font-size: 0.9em; margin: 0;">The City, RTI and MT State Parks assembled a funding Package to develop the Maintenance Plan.</p> <p style="font-size: 0.9em; margin: 5px 0 0 0;">PPL/Riverfund \$21,500 Private \$13,500 Agency \$7,500</p> </div>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; font-size: 0.8em; margin: 0;">MISSOURI-MADISON RIVER FUND RECREATION PROJECT APPLICATION FORM (01)</p> <p style="font-size: 0.8em; margin: 0;">Project Name: River's Edge Trail Maintenance Plan Reservoir or River Segment: Great Falls Area Reservoir (Black Eagle, Madison, Cochran, Ryan and Murray) Reservoirs & Canals Site Name and/or Legal Location: River's Edge Trail Applicant Name: Andrew Finch Position (if applicable): Senior Transportation Planner (Trail Working Group Coordinator) Address: Great Falls Planning & Community Development Dept., P.O. Box 5023, Great Falls, MT 59404 Telephone #: 406-455-8424 E-mail Address: andrewfinch@mtstate.gov Project Sponsor: City of Great Falls A detailed application of work a Project Sponsor. Project services are on Missouri-Madison Regional Working Group, and include representatives of the U.S. Forest Service, Bureau of Land Management, Montana Fish, Wildlife & Parks, local government, Montan, Indian, Shoshone, Cheyenne, Lewis and Clark, or Cascade Counties, PPL, Missouri and the Bureau of Reclamation. See page 1 of the Comprehensive Recreation Plan for a list of 2012 members of the Regional Working Group (www.mtstate.gov/mtmrfund). Project Sponsor Name: City of Great Falls Position (if applicable): Andrew Finch, Senior Planner Address (as above): E-mail (as above): E-mail Address (as above): Total Project Cost: \$ 27,000 Applicant Contribution: \$ 2,000 Other Contributions (Please list by amount): Bismarck Trail, Inc. (RTI) (cash) \$ 1,000 Basta & PPL (cash) \$ 1,000 Basta & PPL (materials) (cash) \$ 1,000 Bismarck Trail, Inc. (materials) (cash) \$ 1,000 City of G.F., Bismarck & PPL (job items) \$ 1,000 RTI (job items) \$ 1,000 PPL, Missouri, March & Pignanelli \$ 2,000 River Trail Request \$ 1,000 Proposed Project Period: 2012 Please note: Element all in-kind support and contributed services from project partners under Section C (page 3). Has this project been previously submitted for funding consideration by the River Fund Board, either as a separate project or part of another project? Yes X No 0 "Yes," please identify which year the application was submitted and if the project was previously funded, list the amount funded by year. Is the proposed project at one of the 17 Project 2008 license sites identified in the Missouri-Madison MRF and listed on page A5.2 of the Comprehensive Recreation Plan? Yes X No Page 1 - River Fund Application</p> </div>  <p style="font-size: 0.8em; margin-top: 10px;">The Great Falls Cross Country Club and its members provided over \$5,000 to help fund the Maintenance Plan.</p>



Trails Working Group

Established in 1991 to guide development of new rail-to-trail being developed along Black Eagle Dam portion of the River (south side). Because of different ownership and maintenance of the various trail segments, this group was essential to the "piecing together" of the Trail over the last 20 years.

Began as "interested individuals and staff", eventually settled upon participation from:

- Recreational Trails, Inc.
- City Planning
- City Park & Recreation
- City Engineering
- MDT
- FWP
- PP&L Montana
- City Police Department



Trails Working Group (continued)

While originally tasked with building the trail, the TWG now acts largely as a forum for operation of the Trail. The TWG provides for continual and on-going multi-agency coordination to ensure a seamless experience for users through:

- Cooperative pursuit of grants
- A venue to communicate problems, needs, upcoming events, and trail development or promotion efforts of mutual interest – and to find solutions with the input of peers
- A consensus-building forum to ensure mutual support for trail efforts

Although each agency has slightly differing goals and objectives, the group's current broad priorities are:

- **Filling the gaps** in the trail system
- **Connecting to neighborhoods** and on-street facilities
- **Enhancing the visitor and user experience**, and expanding awareness of the Trail as a destination
- Ensuring a safe, predictable and convenient trail system – one component of which is **MAINTENANCE**



Value of Maintenance Plan

A trail is an asset, owned by the City and others. As a public asset, built largely with public dollars, the trail sees much of the recreational use of residents and visitors to the Great Falls area. It is incumbent upon trail managers to ensure the public investment is well cared for and is, therefore, safe and functional, both for present and future users.

A Maintenance Plan provides the framework for ensuring the Trail serves its intended purpose. It provides answers to not only the "What," but "Who," "When," and (sometimes) "How." It also makes a good start at the all important bottom line - "How Much".



Why Now?

Ad-hoc or "as needed" trail maintenance can work when a facility is relatively new, relatively small and has an active, experienced trail manager with intimate knowledge of its condition and needs...

River's Edge Trail is now aging, has expanded beyond "small", and may soon lose its most experienced manager.



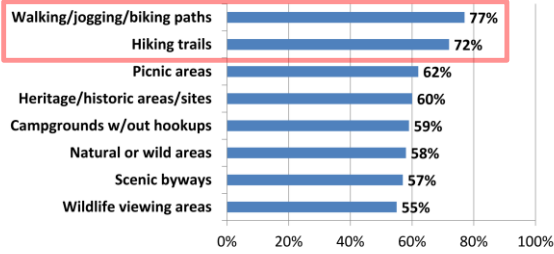
Age, Size, and Experience

1. Our trail is aging, and trail managers are concerned. Trails are overlaid, on average, at about 17 years – most asphalt segments are nearing or beyond that age.
2. Only a few miles long in 1990, the success of the Trail has been largely due to its continued expansion to connect the entire community (21 paved miles).
3. Our long-time trail manager, with intimate knowledge of trail assets and needs, will be retiring in the next few years.
4. Finally, as major facilities need repair or maintenance, cost becomes more and more important.



Residents like it here!

MT resident use of facilities and recreation areas in the state



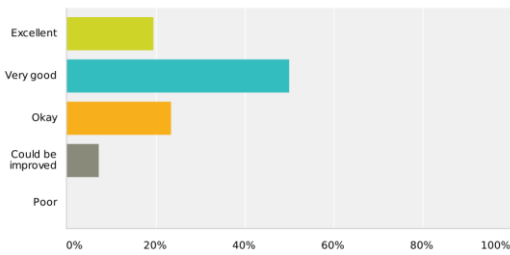
INSTITUTE FOR
TOURISM & RECREATION RESEARCH
UNIVERSITY OF MONTANA

1. Survey Highlights
2. Summarize system assets/ responsibilities
3. Maintenance Tasks
4. Trails Manager
5. Normal Maintenance Costs
6. Pavement Maintenance Costs
7. Funding

RIVER'S EDGE TRAIL MAINTENANCE PUBLIC OPINION SURVEY

Q2 What is your overall opinion of the maintenance of River's Edge Trail.

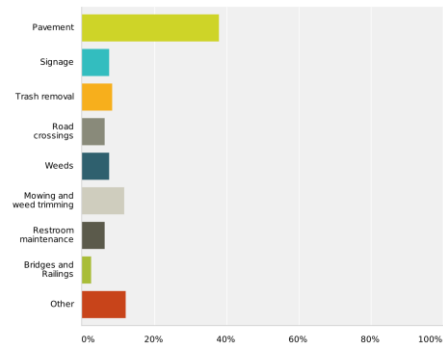
Answered: 252 Skipped: 5



RIVER'S EDGE TRAIL MAINTENANCE PUBLIC OPINION SURVEY

Q4 What category of trail maintenance do you think needs the most attention?

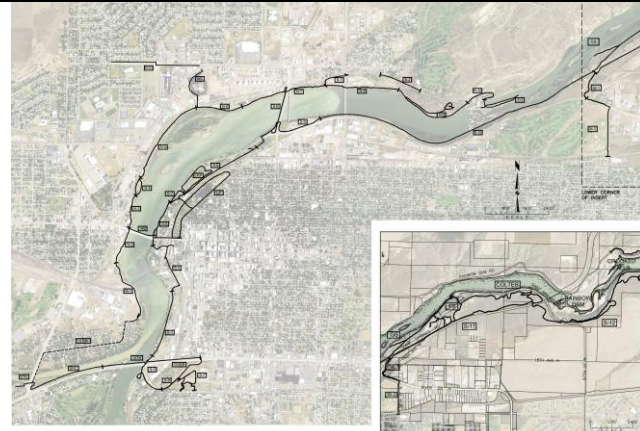
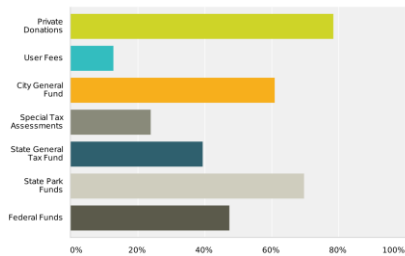
Answered: 240 Skipped: 17



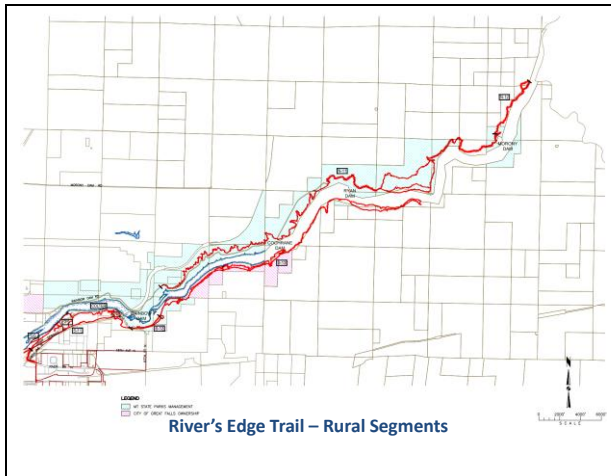
RIVER'S EDGE TRAIL MAINTENANCE PUBLIC OPINION SURVEY

Q3 National studies show that maintenance of a paved trail network costs around \$5,000 per mile, per year. What funding sources should be used to pay for maintenance of the River's Edge Trail? (Mark all that apply)

Answered: 251 Skipped: 6



River's Edge Trail – Urban Segments



Segment No.	Trail Segment	Description	City O.F. Number	Distance (feet)	Width (feet)	Distance (miles)
SOUTH SHORE TRAILS						
S-1	Warden Park	Separated trail through Warden Park		1759	9	0.33
S-2	Overlook Drive 1	Asphalt curbwalk	MDT project	946	8	0.30
S-3	Overlook Drive 2	Concrete curbwalk, sign and barrier	MDT project	2298	10	0.44
S-4	Washwater Flint	Separated trail from S&W follows to intersection with River Dr S		2526	10	0.40
S-5	Railroad Square Bypass	Mix of trail types		2155	Varies	0.45
S-6	West Dr South	Separated trail from N River Dr to S River Dr crossings	1025.1	1472	10	0.48
WB	Wrennham Bridge	River crossing		1060	12	0.30
S-8	Skat Trail	Separated trail from Railway to Dog Park		2122	8	0.33
S-9	9th Street Bridge	MDT bridge over river		4409	8	0.24
S-10	River Dr North	Separated trail from Dog Park to Falls Coned picnic table	MDT Project	1370	10	0.24
S-11	Rail Trail	Separated trail from Falls Coned picnic table to Giant Springs Rd Underpass		11359	10	2.15
S-12	Wild West Segment	Giant Springs Rd to Lens and Clark Overlook	O.F. 1029.1	11559	10	2.19
S-13	PWP East Segment	Lens and Clark Overlook to Crooked Falls Overlook	O.F. 1029.5	4011	10	0.76
S-13	South Shore Network	Single Track		8478		13.02
NORTH SHORE TRAILS						
N-1	Bay Drive separated trail	10' wide Separated trail	O.F. 1306.5	2526	10	0.48
N-2	Bay Drive separated trail	10' wide Separated trail	O.F. 1126.9	1110	10	0.25
N-3	Courthouse Trail	10' wide Separated trail	O.F. 1029.1	1080	10	0.21
N-4	West Bank Park Sidewalks	Narrow Sidewalk		1794	4	0.34
N-5	West Bank Park Trail	Separated Trail		2648	10	0.60
N-6	Washwater Flint	Separated Trail	O.F. 1306.0	2070	10	0.39
N-7	Refinery to Black Eagle	Separated Trail	O.F. 1306.0	2525	10	0.56
N-8	North River Rd	Separated Trail	O.F. 1306.1	2252	10	0.52
N-9	Refinery to Black Eagle	Separated Trail from River Rd to RR Powerhouse Complex	O.F. 1306.1	4449	10	0.77
N-10	Black Eagle Power House	Separated Trail through RR Dam complex		2111	Varies	0.40
T-1	Trailrace Island	Gravel & Concrete		2095	10	0.51
N-11	North Shore Network	Single Track		107		0.06
N-11	North Shore Network	Single Track		4850		13.20
ASSOCIATED TRAILS						
ODWR	Overlook Drive TAP Project 2015	Curbwalk		1460	8	0.28
ODTR	Warden Bridge Bridge Trail	Separated Trail/Curbwalk		2785	8	0.72
SRC	San River Connector	Future Trail	O.F. 1576	2800	10	0.53
SDTR	4th St Sid Underpass	Separated Trail		1178	8	0.20
RVC	Riverview Connection	Separated Trail	O.F. 1506	3300	8	0.63
WCC	Washwater Connection	Separated Trail		1008	8	0.20
B-1	Black Eagle Connector	Mostly separated trail		1490	9	0.30
B-2	Black Eagle Community Center Trail	Single Track		1005	6	0.28
ACH	Waterfall Trail	Single Track		1069	6	0.30
ESL	Elks Riverside Park Loop	Separated Trail		1205	6	0.61
ESR	Elks Riverside Park Loop	Separated Trail		1174	10	0.51
ES-2	8th Street Connection	Separated Trail		1814	10	0.53
GS-1	Giant Springs Spur	Separated Trail from GS Rd to Springs		6391	Varies	2.21
GS-2	Giant Springs Spur through Heritage Park	Loop, bridge, 6.5, Tunnel to Springs to rd		7449	Varies	0.56
Colbr	Colbr Trail	Single Track		2984		1.44
SP-1	South Springs Trail	Single Track Hiking		10177		1.97
PS-1	Intergrative Center Area Trails	Separated Trail, Single Track	O.F. 1126.4	1100		0.21

River's Edge Trail is more than just a strip of asphalt or concrete. The Trail includes:

Many hundreds of acres lands and vegetation owned and managed by agencies.	Many hundreds of acres of lands under easement to agencies for trail purposes
15 bridges	17.2 miles of asphalt trail
6 tunnels	4.0 miles of concrete trail
13 underpasses	2.7 miles of gravel trail
3 miles of yellow centerline	22.6 miles of earth trail
19 paved or gravel surfaced trailhead parking areas	13 Trailhead information kiosks with weather resistant maps and trail information
8 vault toilets, 4 flush toilets	26' gazebo, public telescope and binoculars
15 trash can, containers	9 composite/wood benches
4 seasonal drinking water fountains	3 composite tables
5,260' of 4' chain link fencing	Sculptures and special landscape features
2,335' of guardrail	Interpretive panels
535' of steel tube fencing	Miles of drainage swales
1,284' of wood fencing	Dozens of culverts
765' of heavy post and timber railing	14 At-grade crossings
18 locking bollards	96 memorial benches
18 wood picnic shelters	57 memorial concrete tables
Hundreds of signs	Dozens of Stop, Yield and directional signs

Task	Description	Schedule												Date Completed
		1	2	3	4	5	6	7	8	9	10	11	12	
PAVEMENT MAINTENANCE TASKS														
1	Pavement Inspection - Full length of Pavement System													
2	Prioritize Recommended Maintenance													
3	Project work and funding													
4	Crack Sealing Filling													
5	Asphalt Overlay													
6	Surface Treatment													
7	Asphalt Overlay													
8	Asphalt Overlay													
9	Pavement Marking													
10	Pavement Marking													
11	Full Depth Reclamation with Concrete													
ROUTINE MAINTENANCE TASKS														
1	Inspection													
2	Mowing and String Trimming													
3	Trail Edge and Gravel Path Wood Control													
4	Map review and problem areas for County													
5	Trim branches/vegetation away from trail													
6	Trail Cleaning													
7	Debris Collection													
8	Sign Placement													
9	Block Clean Restrooms													
10	Pump Valve Tights													
11	Water Fountains													
12	Picnic Tables and Tables													
13	Irrigation System Maintenance													
14	Sign/Lighting Review													
REMEDIAL TRAILSIDE MAINTENANCE TASKS														
1	Site Inspection/Documentation													
2	Prioritize/Plan/Staff Recommended Tasks													
3	Slope Failures													
4	Bank/Soil Damage													
5	Fire Damage													
6	Sign Replacement													
7	Landfill Removal													
8	Debris Wood Control													
9	Culvert and Ditch Cleaning													
ROUTINE SINGLE TRACK TRAIL MAINTENANCE TASKS														
1	Site Inspection/Documentation													
2	Prioritize/Plan/Staff Recommended Tasks													
3	Sign Placement													
4	Ditch Clean away from Trail													
5	Prune Branches													
6	Remove Debris													
7	Maintain Bank/Drainage													
8	Repair Trail Trail													
9	Remove Loose Rocks													



Typical Maintenance Activity - Annual crack sealing of asphalt trails

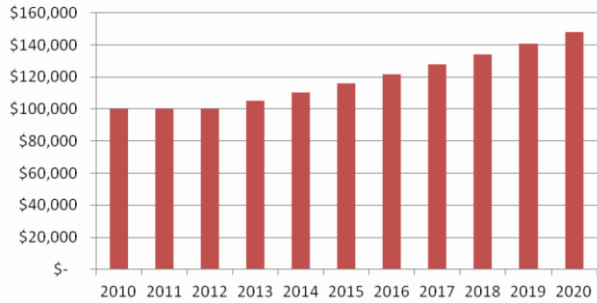


Current Budget Limitations – Preventative Maintenance

Trails Manager Position



Projected Trail O&M Costs



RAIL-TRAIL MAINTENANCE & OPERATION

Table 4: Who Performs and Pays for Maintenance

ENTITY	PERFORMS MAINTENANCE	PAYS FOR MAINTENANCE
Federal government	0	2
State government	28	27
County government	20	23
Municipal government	32	26
Nonprofit entity	See below	34
Nonprofit paid staff	5	N/A
Trail group (volunteer)	46	N/A
Scouts	8	N/A
Other community groups	16	N/A
Persons with mandatory community service	13	N/A
Contractor	13	N/A
Other	5	6

How to pay for Operations and Pavement Maintenance?

1. City General Fund
2. Park District
3. Impact Fees
4. Bed Tax Revenue
5. Public Works Paving
6. Planning & Community Development targeted funds
7. MT State Parks Operations
8. River Fund
9. Sustained Private Giving
10. Other State / Federal



Park and Recreation Survey January 20, 2009

Top 6 Utilized Facilities

- Paved Trails 69.4%
- Civic Center 64.8%
- Playgrounds 45.8%
- Water Park 42.3%
- Unpaved Trails 37.6%
- Golf Courses 36.4%

Note: Respondents were allowed to add any other facilities that weren't stated on the survey, and the top two most frequently mentioned facilities were: [Rivers Edge Trail](#) and [Whisper Park](#).

Director Basta noted the Rivers Edge Trail is a product of a public private partnership with thousands of volunteer hours and millions of dollars in grants and investments, and the partnership has yielded a nationally recognized recreation trail for the City.

Mr. Juras believes that an important part of moving Trail maintenance forward is to staff the Trails Manager position with a senior Park and Recreation employee who could draw from the necessary resources. He also believes the cost of hiring a Trails Manager could be double what is paid the current Trails Manager.

City Manager Greg Doyon believes General Fund support for the Trail must come off the list of funding sources, at least for the foreseeable future.

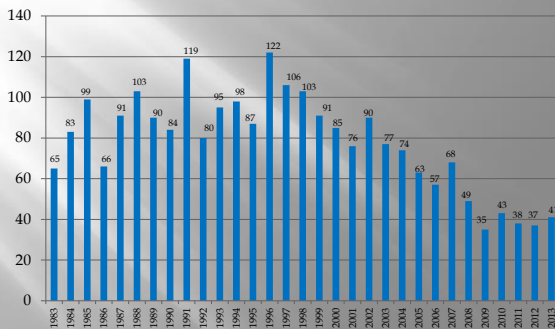
2. UTILITY RATES

Public Works Director Jim Rearden introduced City Engineer Dave Dobbs; Water Plant Supervisor Mike Jacobson; Utilities System Supervisor Mike Judge; Project Engineer Courtney Lyerly; Fiscal Services Director Melissa Kinzler; and Fiscal Services Operations Supervisor Laura Lynch. He also introduced Greg Dye of Black & Veatch, Helena. He provided and discussed handouts for Water, Storm Drain, and Sewer Cash Flow Analysis as of February 24, 2014, and Future Capital Improvement Projects through 2018.

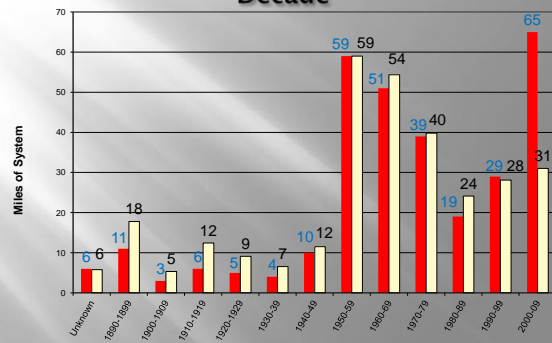
Director Rearden and Mr. Dye provided and discussed a PowerPoint presentation on utilities, Water Treatment Plant upgrades, and utility rates.

<p>CITY OF GREAT FALLS UTILITIES</p> <ul style="list-style-type: none"> □ Provides water, sewer and storm drain services to: <ul style="list-style-type: none"> □ Approximately 18,700 Residential Properties □ Approximately 2,300 Commercial Properties (64,000+ users) <p><small>This includes operations, maintenance, replacement, upgrade of 660+ miles of utility pipes, treatment plants and appurtenances.</small></p>	<p>Proposed Rate Adoption Process</p> <ul style="list-style-type: none"> □ Proposed Rates are being presented at tonight's March 4, 2014 City Commission Work Session □ March 4, 2014 - City Commission sets the Public Hearing Date □ Public Notices will be published three times □ Individual Customer Notices will be mailed □ Public Hearing to be held at the April 15, 2014 City Commission Meeting □ New Rates to take effect at least 10 days after City Commission adoption. Proposed for May 1, 2014.
<p>Rates = Ability to Serve</p> <p><i>O & M</i> Providing for Today</p> <p><i>Debt</i> Paying for the Past (CIP)</p> <p><i>C. I. P.</i> Provide for Future Capital Improvement Programs (CIP)</p>	<p>An Aggressive Capital Improvements Program Results In:</p> <ul style="list-style-type: none"> □ Lower Maintenance Costs □ Lower Future Capital Improvement Costs □ Lower Future Rate Increases

WATER MAIN BREAKS (1983-2013)



Water Mains Installed/Replaced by Decade



WATER SYSTEM PIPE AGE COMPARISON

CITY	OLDEST PIPE	AVERAGE PIPE AGE
BILLINGS	1889	27.0
BOZEMAN	1888	30.0
KALISPELL	1924	31.4
GREAT FALLS	1890	41.5

WATER MAIN REPLACEMENT

YEAR	COST	FOOTAGE	MILES
2008	\$1,948,587	11,688	2.21
2009	\$2,187,471	17,672	3.35
2010	\$2,335,886	15,923	3.02
2011	\$1,556,083	13,072	2.48
2012	\$1,531,862	9,246	1.75
2013	\$2,015,709	14,120	2.67

Water Treatment Plant Facility Upgrades

Project Priorities:

- Employee Safety
 - Ammonia Feed upgrades
- Regulatory Compliance
 - UV Disinfection
- Reliability
 - Replace Main Electrical Switchgear
 - Replace Aging Infrastructure
- Site security/visitor access
 - Administration Building
 - Substation Upgrades



Chemical Feed & Disinfection System Upgrades

- ▶ Ultraviolet (UV) light disinfection
- ▶ Surge Tank
- ▶ Chemical Feed and Storage Systems
 - Ammonia replacement
 - Chlorine
 - Lime
 - Corrosion Inhibitor
 - Sulfuric Acid



UV Disinfection System Selection Methodology

- ▶ Questionnaire sent to manufacturers
- ▶ Received information from six manufacturers
- ▶ Screened down to four manufacturers
- ▶ Issued Request for Proposals
- ▶ Received eight proposals
- ▶ Screened down to four proposals
- ▶ Performed detailed evaluation



Proposal Evaluation Results

CATEGORY	EVALUATION CRITERIA	EVALUATION WEIGHT (%)	SCORE			
			Calgon 24-in Sentinel	Medium Pressure Trojan UV/Swift 4L24	Trojan UV/Torion 16SL48	LPHO WEDECO K143 12/9(6)
DESIGN & SERVICE CONSIDERATIONS	1 VALIDATION & DESIGN	10	7.5	7.2	8.8	8.5
	2 UV SYSTEM OPERATION, MONITORING & MAINTENANCE	10	8.6	8.0	8.2	7.2
	3 MANUFACTURER EXPERIENCE QUALIFICATIONS & SUPPORT	10	8.7	9.3	8.3	10.0
	4 FACILITIES	10	9.3	8.3	6.5	6.3
SCORE:			34.0	32.8	31.9	32.0
PRESENT WORTH	1 UV Equipment capital cost (inc. alt. C deduct)	60	\$561,301	\$467,000	\$812,000	\$522,500
	2 O&M present-worth costs		\$321,955	\$404,050	\$209,763	\$210,927
	3 TOTAL PW COST		\$883,256	\$871,050	\$1,021,763	\$733,427
	PW SCORE:		49.8	50.5	43.1	60.0
TOTAL SCORE (out of 100):			83.8	83.3	74.9	92.0

Recommendation – Wedeco K143

- ▶ Lowest total present worth cost
- ▶ Robust design with minimal equipment needed for future expansion
- ▶ Reputable manufacturer with experienced service and local support



Switchgear Replacement

- ▶ Existing equipment is 50+ years old.
- ▶ Spare part availability is an issue.
- ▶ Replacing failed parts requires shutdown of existing system.



Site Security Upgrades

- ▶ Replace existing substation
- ▶ New standby generators to power facilities during a power outage
- ▶ Bury existing overhead electrical feeders to substation



New Administration Building

- ▶ Training and conference room
- ▶ Receiving area for water quality samples
- ▶ Visitor entry and site security
- ▶ Staff offices
- ▶ Records storage
- ▶ Break room



Seasonal Clearwell Replacement

- ▶ The existing Seasonal Clearwell needs repairs and it is less expensive to construct a new tank than to make repairs.
- ▶ The storage volume to replace the Seasonal Clearwell will be incorporated into the Surge Tank.



Pump Station Upgrades

- ▶ Improve reliability by relocating motors out of potential flood zone
- ▶ Add variable-speed-drives to provide for matching of pumping rates
- ▶ Overhaul pumps to improve operation and performance
- ▶ Improve access to equipment



New Machine Shop

- ▶ Dedicated ventilation for painting operations
- ▶ Dual voltage electrical service
- ▶ Overhead crane for equipment handling
- ▶ Separate space for welding



Site Upgrades

- ▶ Access for sludge removal trucks
- ▶ Piping to connect new facilities to existing system
- ▶ Electrical duct bank to power new facilities



Project Implementation

- ▶ Upgrades designed and constructed in phases to address priorities and meet financial constraints
- ▶ Priorities:
 - 1st – address safety and regulatory requirements
 - 2nd – improve accommodations for workers and security, and replace aging infrastructure
 - 3rd – address anticipated treatment needs
- ▶ Multiple phases are planned
- ▶ Additive alternate bid items will be used to construct as much as possible in each phase

Phase 1 – Facilities and Cost Opinion

Upgrade	Opinion of Probable Construction Cost (\$M)
Base Project	
Wedeco UV disinfection system, Surge Tank, switchgear replacement, ammonia storage and feed replacement	\$ 25
Additive Alternate Items	
Administration Building	\$ 2
Substation replacement	\$ 5

Future Phases - Facilities and Cost Opinion

Upgrade	Opinion of Probable Construction Cost (\$M)
Pump Replacement and Rehabilitation	\$ 1
Additional Chemical Feed Components	\$ 2
Low Service Pump Variable Speed Drives and Soft Starters	\$ 2
High Service Pump Soft Starters	\$ 5
Standby Power Generator for Headhouse, Filter Building and Admin. Building	\$ 2
Sulfuric Acid Storage and Feed Building	\$ 1
Machine Shop	\$ 1
Emergency Power System Upgrades to Operate WTP at 5 mgd	\$ 5
Miscellaneous	\$ 1

Project Schedule

Milestone	Date
Notice to Proceed	August 2012
Preliminary Engineering Report	May 2014
Phase 1 Construction Bid Opening	2 nd Quarter 2015
Phase 1 Construction Complete	4 th Quarter 2016
Future Phase Engineering & Construction	TBD

WATER CIP

CITY OF GREAT FALLS
CAPITAL IMPROVEMENT PLAN
WATER SYSTEM
PROJECT COSTS
001 10-000

LINE	PROJECT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1000	Water Treatment Plant	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
...

WATER CASH FLOW

City of Great Falls, Montana

Water Fund

Cash Flow Analysis as of 2/24/14 - 5 Year Projection (5% to 10% revenue increases and 5% expense increases)

	Actual 2011	Actual 2012	Actual 2013	Unaudited Projected 2014	Unaudited Projected 2015	Unaudited Projected 2016	Unaudited Projected 2017	Unaudited Projected 2018	Unaudited Projected 2019
Beginning Unrestricted Cash Balance	\$1,565,073	\$1,428,856	\$2,528,648	\$3,831,865	\$3,818,909	\$7,302	\$139,258	\$139,258	\$35,837
Revenue from water charges	\$7,771,289	\$9,986,179	\$10,951,478	\$9,362,468	\$9,830,591	\$10,322,121	\$11,304,333	\$12,499,786	\$13,726,743
Interest income	\$47,660	\$27,400	\$15,089	\$15,000	\$36,188	\$734	\$1,968	\$1,363	\$358
Bond proceeds	\$18,736	\$2,000,000	\$2,000,000	\$9,730,000	\$21,140,250	\$7,000,000	\$7,000,000	\$10,000,000	\$10,000,000
Miscellaneous revenue	\$19,026	\$17,773	\$28,431						
Total Revenue	\$8,069,991	\$9,669,320	\$10,726,793	\$11,377,668	\$11,596,710	\$13,463,105	\$18,356,302	\$18,481,159	\$23,753,101
Expenses	\$4,563,915	\$5,314,803	\$6,438,571	\$5,864,422	\$6,156,483	\$6,463,218	\$6,765,278	\$7,134,955	\$7,460,835
Operation and maintenance expense (5%)	\$19,937	\$0	\$2,040,644	\$150,000	\$129,730	\$1,585,519	\$325,000	\$325,000	\$750,000
Increased (Decreased) reserve requirement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expense	\$224,780	\$216,180	\$10,148	\$300,130	\$202,610	\$202,610	\$201,360	\$201,640	\$201,842
Ending bonds (SRF 2000)	\$809,790	\$723,128	\$1,528,330	\$0	\$0	\$0	\$0	\$0	\$0
Ending bonds (SRF 2008)	\$158,284	\$286,860	\$286,989	\$262,511	\$261,600	\$261,600	\$262,258	\$261,670	\$261,625
Ending bonds (AFRA 2009)	\$40,116	\$18,238	\$20,785	\$20,515	\$20,235	\$19,955	\$19,675	\$19,395	\$19,395
Bonds for construction \$2,000,000				\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000
Bonds for construction \$24,500,000				\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000
Bonds for construction \$4,000,000				\$985,000	\$985,000	\$985,000	\$985,000	\$985,000	\$985,000
Bonds for construction \$7,000,000				\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000
Bonds for construction \$10,000,000				\$814,000	\$814,000	\$814,000	\$814,000	\$814,000	\$814,000
Capital improvements - debt funded	\$2,489,551	\$1,877,437	\$3,296,663	\$3,193,646	\$3,430,000	\$3,660,000	\$4,415,000	\$4,475,000	\$4,250,000
Capital improvements - unrestricted cash	\$2,235,207	\$6,581,262	\$3,837,574	\$1,685,824	\$3,142,248	\$3,178,947	\$16,412,844	\$18,564,580	\$23,827,807
Total Expenses	\$7,215,118	\$11,099,765	\$14,525,210	\$12,123,896	\$12,545,518	\$12,635	\$15,580	\$16,532	\$16,415
Annual Surplus (Deficiency)	\$854,873	\$1,569,555	\$2,201,583	\$2,513,872	\$2,751,292	\$2,997,890	\$2,771,327	\$2,949,204	\$2,338,286
Ending Unrestricted Cash Balance	\$1,428,856	\$2,998,411	\$3,831,865	\$3,818,909	\$7,302	\$139,258	\$139,258	\$35,837	\$136,851
Restricted Cash	\$4,004,848	\$4,087,803	\$2,022,159	\$2,172,159	\$2,301,909	\$3,887,428	\$4,412,428	\$4,937,428	\$5,462,428
All bonds financed at 4% SRF									

STORM DRAIN CIP

CITY OF GREAT FALLS
CAPITAL IMPROVEMENT PLAN
STORM DRAIN SYSTEM
PROJECT COSTS
001 10-000

LINE	PROJECT	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1000	Storm Drain System	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	
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STORM DRAIN CASH FLOW

City of Great Falls, Montana

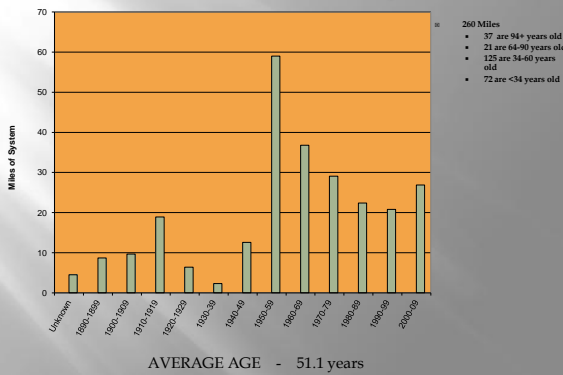
Storm Drain Fund

Cash Flow Analysis as of 2/24/14

10% Revenue increases in 2016, 5% Operating expense increases

	Actual 2011	Actual 2012	Actual 2013	Unaudited Projected 2014	Unaudited Projected 2015	Unaudited Projected 2016	Unaudited Projected 2017	Unaudited Projected 2018	Unaudited Projected 2019
Beginning Unrestricted Cash Balance	\$1,000,000	\$1,000,000	\$2,000,000	\$4,000,000	\$1,000,000	\$1,000,000	\$900,000	\$2,000,000	\$1,487,500
Revenue	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Revenue from storm drain charges	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Interest income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Bond proceeds	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000
Expenses	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Operation and maintenance expense (5%)	\$19,937	\$0	\$2,040,644	\$150,000	\$129,730	\$1,585,519	\$325,000	\$325,000	\$750,000
Increased (Decreased) reserve requirement	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expense	\$224,780	\$216,180	\$10,148	\$300,130	\$202,610	\$202,610	\$201,360	\$201,640	\$201,842
Ending bonds (SRF 2000)	\$809,790	\$723,128	\$1,528,330	\$0	\$0	\$0	\$0	\$0	\$0
Ending bonds (SRF 2008)	\$158,284	\$286,860	\$286,989	\$262,511	\$261,600	\$261,600	\$262,258	\$261,670	\$261,625
Ending bonds (AFRA 2009)	\$40,116	\$18,238	\$20,785	\$20,515	\$20,235	\$19,955	\$19,675	\$19,395	\$19,395
Bonds for construction \$2,000,000				\$146,000	\$146,000	\$146,000	\$146,000	\$146,000	\$146,000
Bonds for construction \$24,500,000				\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000	\$1,795,000
Bonds for construction \$4,000,000				\$985,000	\$985,000	\$985,000	\$985,000	\$985,000	\$985,000
Bonds for construction \$7,000,000				\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000	\$1,240,000
Bonds for construction \$10,000,000				\$814,000	\$814,000	\$814,000	\$814,000	\$814,000	\$814,000
Capital improvements - debt funded	\$2,489,551	\$1,877,437	\$3,296,663	\$3,193,646	\$3,430,000	\$3,660,000	\$4,415,000	\$4,475,000	\$4,250,000
Capital improvements - unrestricted cash	\$2,235,207	\$6,581,262	\$3,837,574	\$1,685,824	\$3,142,248	\$3,178,947	\$16,412,844	\$18,564,580	\$23,827,807
Total Expenses	\$7,215,118	\$11,099,765	\$14,525,210	\$12,123,896	\$12,545,518	\$12,635	\$15,580	\$16,532	\$16,415
Annual Surplus (Deficiency)	\$284,882	\$498,235	\$475,790	\$876,104	\$494,482	\$497,000	\$500,000	\$495,000	\$487,500
Ending Unrestricted Cash Balance	\$1,284,882	\$1,493,235	\$1,969,025	\$2,845,129	\$3,339,611	\$3,836,611	\$4,336,611	\$4,831,611	\$5,329,111

Sewer Mains Installed by Decade



SANITARY SEWER COLLECTION REHAB AND REPLACEMENT

YEAR	COST	FOOTAGE	MILES	EMER. REPAIRS
2008	\$394,849	5,528	0.76	\$ 0
2009	\$133,494	4,000	1.05	\$149,735
2010	\$536,736	6,420	1.22	\$ 26,616
2011	\$1,218,161	11,475	2.17	\$ 55,745
2012	\$1,223,120	14,760	2.80	\$ 66,846
2013	\$ 380,000	13,400	2.54	\$ 47,815

Increased sewer main rehabilitation from 20 blocks per year to 40 blocks per year.

MPDES Discharge Permitting

- Permit expired in 12/31/2004
- 6-year permit negotiation process
 - Multiple permit applications
 - Numerous meetings with MDEQ
 - Appeal of Permit
- Permit renewed on 12/1/2010
- City Contracted with HDR/MMI in August of 2011 to provide:
 - Disinfection Alternatives Evaluation
 - Ammonia and Metals Compliance Evaluation
 - Mixing Zone Study
 - Flow Monitoring Evaluation
 - Final Design and Construction Services for Recommended Alternatives

Recommended Improvements

- Ultraviolet Light Disinfection
 - UV equipment pre-selection
- Biological Treatment Expansion for Ammonia Removal
 - Conversion to turbo blowers with fine bubble diffusion
 - Turbo blower equipment pre-selection
 - Nitrification/Denitrification capability
 - Expandable to BNR
- Influent Pumping Improvements
- Flow Metering Improvements

Disinfection and Ammonia Removal Improvements Project

Disinfection and Ammonia Removal Improvements

Overall Project Cost Summary

Project Element	Final Design Estimated Cost 3/5/2013	Actual Costs	Diff.
UV Disinfection	\$2,754,154		
Bioreactor 1 and 2 Improvements	\$3,580,595		
Bioreactor 3	\$5,502,080		
Blower Building	\$3,466,385		
Clarifier No. 4 (Bid Alternate A)	\$816,675		
Flow Monitoring Improvements	\$3,364		
Westside Pump Station Pump Addition	\$1,094,463		
Pipe Gallery	\$720,653		
Control Structure Modifications	\$549,883		
Pipe Gallery (Bid Alternate B)	\$67,541		
Total Construction Cost	\$18,105,793	\$14,346,582	
Design Engineering	\$1,700,000	\$1,700,000	
Construction Services	\$1,570,000	\$1,570,000	
Total Project Cost	\$21,375,793	\$17,616,582	\$3,759,157

LINE ITEM	DESCRIPTION	2010		2011		2012		2013		2014	
		ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL		
100	CONSTRUCTION	18,105,793	14,346,582	18,105,793	14,346,582	18,105,793	14,346,582	18,105,793	14,346,582	18,105,793	14,346,582
101	DESIGN	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000
102	CONSTRUCTION SERVICES	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000	1,570,000
103	TOTAL PROJECT COST	21,375,793	17,616,582	21,375,793	17,616,582	21,375,793	17,616,582	21,375,793	17,616,582	21,375,793	17,616,582

WASTEWATER CASH FLOW

City of Great Falls, Montana
Sewer Fund
Cash Flow Analysis as of 12/31/14 (Various increases in operating revenue & 5% operations)
Capital Outlay Needed (with permit volume upgrades & extra strength)

	Actual 2011	Actual 2012	Actual 2013	Proposed 2014	Proposed 2015	Proposed 2016	Proposed 2017	Proposed 2018	Proposed 2019
				(% Increase)	(% Increase)	(% Increase)	(% Increase)	(% Increase)	(% Increase)
Beginning Unavailable Cash Balance	\$2,543,931	\$2,282,781	\$1,988,376	\$1,974,624	\$2,261,328	\$2,588,724	\$2,294,482	\$2,151,833	\$2,151,788
Revenue from Existing Rates	\$7,289,265	\$8,252,783	\$9,285,282	\$8,789,264	\$8,789,264	\$8,228,812	\$8,690,274	\$8,174,788	\$10,653,027
City Strategic Charge	\$692,261	\$714,783	\$851,252	\$857,052	\$857,052	\$857,052	\$857,052	\$857,052	\$857,052
Storm Drain AWD Meter Charge	\$154,278	\$102,000	\$154,261	\$153,288	\$153,288	\$153,288	\$153,288	\$153,288	\$153,288
Manufacturing Recharge	\$200,000	\$22,970	\$8,812	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Interest Income	\$95,993	\$45,939	\$14,763	\$0	\$0	\$0	\$0	\$0	\$0
Other Income	\$172,248	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Receipts - Other Financing Sources	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Increase/Decrease in Cash	\$8,224	\$210,009	\$1,317,913	\$1,150,291	\$1,202,000	\$0	\$0	\$0	\$0
Net Increase/Decrease in Cash	\$8,224	\$210,009	\$1,317,913	\$1,150,291	\$1,202,000	\$0	\$0	\$0	\$0
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224
Operating and Maintenance Expenses	\$4,983,883	\$4,783,249	\$5,146,672	\$5,454,000	\$5,474,209	\$5,077,023	\$5,228,816	\$5,588,006	\$6,897,027
Decrease in Payable Settlement	\$245,155	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000	\$245,000
Capital Expenditure Requirements	\$9,492	\$0	\$143,821	\$978,779	\$623,000	\$0	\$0	\$0	\$0
Net Available Cash	\$1,068,238	\$1,542,786	\$1,988,376	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224	\$2,024,224

2014 UTILITY SERVICE RATE REVIEW

CITY OF GREAT FALLS 1" meter, 1250 ccf water, 650ccf sewer 7, 500 sq foot residential lot

	2013	2014 (Proposed)	INCREASE
WATER	\$28.63	\$30.05	\$1.42
SEWER	\$22.90	\$22.90	\$0.00
STORM DRAIN	\$4.27	\$4.27	\$0.00
TOTAL	\$55.76	\$57.24	\$1.42

2014 CITY COMPARISON (Residential)

Monthly water and sewer costs based on:
1" meter, 1250 ccf water, 650 ccf sewer

(With 5% Increase Water & 0% Increase Sewer)

	WATER	SEWER	TOTAL	DIFF.
BOZEMAN	54.73	35.38	90.11	1.02
MISSOULA	69.41	19.32	88.73	1.97
KALISPELL	46.17	38.24	84.41	5.62
BUTTE	50.58	22.50	73.08	10.07
HELENA	38.15	23.39	61.54	2.70
BILLINGS	34.66	25.98	60.64	6.31
GREAT FALLS	30.05	22.90	52.95	1.42

2014 CITY COMPARISON (Commercial)

Monthly water and sewer costs based on:

1" meter, 1250 ccf water, 1250 ccf sewer

(With 5% Increase Water & 0% Increase Sewer)

	WATER	SEWER	TOTAL
KALISPELL	46.17	59.69	105.86
BOZEMAN	42.61	53.61	96.22
MISSOULA	69.41	25.91	95.32
BUTTE	50.58	35.07	85.65
HELENA	39.69	39.05	78.74
BILLINGS	29.26	42.48	71.74
GREAT FALLS	26.20	38.18	64.38

City Manager Greg Doyon noted the Water Treatment Plant facility upgrades are due to a regulatory requirement imposed upon the City by EPA.

ADJOURN

There being no further discussion, Mayor Winters adjourned the informal work session of March 4, 2014, at 6:53 p.m.