



**CITY COUNCIL MEETING  
TUESDAY, FEBRUARY 20, 2024  
HELD REMOTELY & IN PERSON AT CITY HALL  
124 S. LEFEVRE ST.**

- Sign up to provide Public Comment at the meeting via calling in
- Submit Written Public Comment Before 4 pm on (February 20, 2024) - \*SEE NOTE\*
- Join the Zoom Meeting –

<https://us06web.zoom.us/j/84851216659?pwd=bHj9VdmN4dTbX65lKZulqGraqyHpT6.1>

Meeting ID: 848 5121 6659

Passcode: 582941

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Find your local number: <https://us06web.zoom.us/j/keGXLoTtJD>

**WRITTEN PUBLIC COMMENTS**

If you wish to provide written public comments for the council meeting, please email your comments to [sweathers@medical-lake.org](mailto:sweathers@medical-lake.org) by 4:00 p.m. the day of the council meeting and include all the following information with your comments:

1. The Meeting Date
2. Your First and Last Name
3. If you are a Medical Lake resident
4. The Agenda Item(s) which you are speaking about

\*Note – If providing written comments, the comments received will be acknowledged during the public meeting, but not read. All written comments received by 4:00 p.m. will be provided to the mayor and city council members in advance of the meeting.

**Questions or Need Assistance? Please contact City Hall at 509-565-5000**

**REGULAR SESSION – 6:30 PM**

- 1. CALL TO ORDER, PLEDGE OF ALLEGIANCE, ROLL CALL**
- 2. AGENDA APPROVAL**
- 3. INTERESTED CITIZENS: AUDIENCE REQUESTS AND COMMENTS**
- 4. ANNOUNCEMENTS / PROCLAMATIONS / SPECIAL PRESENTATIONS**
- 5. REPORTS**
  - A. Public Safety
  - B. Council Comments
  - C. Mayor
  - D. City Administrator & City Staff
- 6. WORKSHOP DISCUSSION**
  - A. Healing Waters Strategic Plan – Vision, Mission, and Values
  - B. Historic Preservation Ordinance 1122
  - C. Administration Self-Assessment Annual Report
  - D. SCRAPS Agreement Review
  - E. Barr-Tech Biosolids Agreement Extension (24-661)
  - F. Coney Island Dock RFP
  - G. Cascade Vendor Agreement (24-656)
  - H. Budget Amendment for Bus (24-662)
- 7. ACTION ITEMS**
  - A. Consent Agenda
    - i. Approve **February 6, 2024**, minutes.
    - ii. Approve **February 20, 2024**, Claim Warrants numbered **51007** through **51053** in the amount of **\$223,074.11**, Payroll Claim Warrants numbered **50999** through **51006**, and Payroll Payable Warrants **30082** through **30090** in the amount of **\$156,610.42**.
- 8. RESOLUTIONS**
  - A. 24-654 Cintas Cooperative Acceptance Agreement
- 9. PUBLIC HEARING** – None scheduled.
- 10. ORDINANCES** – None scheduled.
- 11. EXECUTIVE SESSION** – None scheduled.
- 12. EMERGENCY ORDINANCES** – None.
- 13. UPCOMING AGENDA ITEMS**
- 14. INTERESTED CITIZENS**
- 15. CONCLUSION**

**CITY OF MEDICAL LAKE  
City Council Regular Meeting**

6:30 PM  
February 6, 2024

**MINUTES**

Council Chambers  
124 S. Lefevre Street

**NOTE: This is not a verbatim transcript.** Minutes contain only a summary of the discussion. A recording of the meeting is on file and available from City Hall.

**COUNCIL AND ADMINISTRATIVE PERSONNEL PRESENT**

**Councilmembers**

Chad Pritchard  
Keli Shaffer  
Don Kennedy  
Lance Speirs  
Bob Maxwell  
Ted Olson  
Tony Harbolt

**Administration/Staff**

Terri Cooper, Mayor  
Sonny Weathers, City Administrator  
Missy Eaker, Administrative Clerk  
Scott Duncan, Public Works Director  
Glen Horton, Parks & Recreation Director  
Koss Ronholt, Finance Director  
Roxanne Wright, Administrative Assistant  
Sandy Nettleton, Administrative Clerk

**REGULAR SESSION – 6:30 PM**

**1. CALL TO ORDER, PLEDGE OF ALLEGIANCE, ROLL CALL**

- A. Mayor Cooper called the meeting to order at 6:30 pm, led the Pledge of Allegiance, and conducted roll call. All council members were present in person.

**2. AGENDA APPROVAL**

- A. Motion to approve agenda made by councilmember Kennedy, seconded by councilmember Shaffer, carried 7-0.

**3. INTERESTED CITIZENS: AUDIENCE REQUESTS AND COMMENTS**

- A. Mayor Cooper acknowledged e-mail comments from a citizen that all council members received.
- B. Tammy Roberson, resident of Medical Lake – spoke on wetlands. See attached.
- C. Gerri Johnson, resident of Medical Lake – Thanked council for working on the vacant property ordinance. As the owner of a local small business, Farm Salvation, she expressed the difficulty of having closed businesses around hers and the negative impact it has on her business.

**4. ANNOUNCEMENTS / PROCLAMATIONS / SPECIAL PRESENTATIONS – None.**

**5. REPORTS**

- A. Council Comments
  - i. Councilmember Pritchard – shared about a new area on north Brooks that is available for PFAS testing. Citizens can request testing by going to the Department of Ecology website or contacting him directly.
  - ii. Councilmember Shaffer – Finance Committee reviewed claims vouchers and the 2023 Q4 budget review Mr. Ronholt will give later in the meeting.

- iii. Councilmember Speirs – went to his first STA board meeting. Found it very interesting with lots of information. Meetings are recorded if anyone wants to watch.
- iv. Councilmember Kennedy – replied to Ms. Roberson’s question at the last meeting regarding the amount of time given for citizen comments. He was acting as Mayor Pro Tem at that meeting and did not have an answer at that time, so he wanted to address it now.
- v. Councilmember Maxwell – no report.
- vi. Councilmember Olson – no report.
- vii. Councilmember Harbolt – Parks & Recreation Committee update. See attached.

**B. Mayor**

- i. Thanked councilmember Kennedy for covering for her at the last council meeting. Shared about Olympia trip. Met with twenty-three legislators to request assistance for the Gray Fire recovery. Spoke on some of the bills that are important for the city and encouraged council support. The city’s new website is moving ahead.

**C. City Administrator & City Staff**

- i. Sonny Weathers, City Administrator – also shared about the Olympia trip. Engagement with state government is just as important as at the city level. Encouraged council to stay engaged as the session moves forward. Responded to the speeding concerns on Stanley Street presented at the last meeting. Patrols and speed trailers have been utilized in the past and will continue. Updated on progress at Waterfront Park; trail still not open, crews need ground to dry out, remaining in close communication with the state.
- ii. 2023 Q4 Code Enforcement Report – Dave Yuhas, Code Enforcement Officer gave a presentation. See attached.
- iii. 2023 Q4 Budget Update – Koss Ronholt, Finance Director, gave a presentation. See attached.

**6. WORKSHOPS**

**A. SCRAPS Agreement Review**

- i. Mr. Weathers – Councilmember Olson asked for a review of the current agreement with SCRAPS. Mr. Yuhas shared information received from SCRAPS that shows the city’s usage. In 2021 there were seventy requests, forty-six impounds, zero emergency calls, and zero trappings. In 2022 there were forty-four requests, sixty impounds, two emergency calls, and one trapping. In 2023 there were sixty-one requests, forty-five impounds, three emergency calls, and zero trappings. Mr. Weathers said that the more citizens call, the better the service. Explained that SCRAPS fulfills all duties of animal control officer referred to in our ordinance.
  - 1. Councilmember Kennedy – asked about fees for services. Mr. Ronholt - monthly fee of \$1770. Councilmember Speirs – asked if there has been a rate increase. Mr. Ronholt will investigate. Mayor Cooper asked to add another workshop at the next meeting to review the contract and see if it is on auto-renewal, etc. Councilmember Speirs – requested to review animal control codes. Mr. Yuhas will provide them to all council members.

**B. Cintas Cooperative Acceptance Agreement (24-654)**

- i. Mr. Weathers – Explained purpose of the agreement. Currently, the staff at WWTP takes care of supplies, etc. on their own. This service would take that over, removing the responsibility from staff, allowing them to spend time on primary functions. Service would include all city departments, not just WWTP. Discussed cost and contract details. Council in agreement to bring back as a resolution at the next meeting.



- C. Historic Preservation Services Agreement with Spokane County (24-655)
  - i. Logan Camporeale, Historic Preservation Specialist at the Spokane City/County Historic Preservation Office gave a presentation. See attached. They received a call from a Medical Lake resident asking to place a building on the register. The City of Medical Lake does not currently have a preservation ordinance, so they are unable to assist. Discussed option of an ILA.
    - 1. Discussion was held on details of ILA.
    - 2. The council agrees to bring an ordinance forward at the next meeting to begin the process.
- D. Lefevre Street Restriping Design Review
  - i. City engineer Tom Haggerty and Scott Duncan, Public Works Director – provided video of Barker Street improvements. Mr. Haggerty explained what is proposed for Lefevre Street, including a ten-foot turn lane.
  - ii. Discussion held regarding sidewalks, parking, pros, and cons of design.
  - iii. The council agrees to the design as is. Mr. Duncan will provide a review of all planned summer projects at the next meeting.

## 7. ACTION ITEMS

- A. Consent Agenda
  - i. Approve **January 16, 2024**, minutes.
    - 1. Motion to approve made by councilmember Kennedy, seconded by councilmember Maxwell, carried 7-0.
  - ii. Approve **February 6, 2024**, Claim Warrants for the **2023 13<sup>th</sup> Month** numbered **50944** through **50951** in the amount of **\$6,909.74** and Claim Warrants numbered **50952** through **50988** in the amount of **\$149,669.94**.
    - 1. Finance committee reviewed. Motion to approve made by councilmember Shaffer, seconded by councilmember Kennedy, carried 7-0.

## 8. RESOLUTIONS

- A. 24-653 Void Certain Outstanding Warrants
  - i. Mr. Ronholt explained the reason for the resolution. Total of \$4166.61 to be voided.
  - ii. Motion to approve made by councilmember Kennedy, seconded by councilmember Shaffer, carried 7-0.
- B. 24-657 Agent Designation for Backup Power for Critical Infrastructure Resilience
  - i. Mr. Weathers reviewed.
  - ii. Motion to approve made by councilmember Pritchard, seconded by councilmember Kennedy, carried 7-0.
- C. 24-658 Agent Designation for GIS Mapping of Water, Wastewater, and Stormwater Infrastructure
  - i. Motion to approve made by councilmember Kennedy, seconded by councilmember Pritchard, carried 7-0.
- D. 24-659 8X8 Phone Service Agreement
  - i. Mr. Ronholt reviewed. Replacement of current phone service, which is very old. The city's IT company is working to modernize, and this is the system they use. The agreement would be a decrease in monthly cost. Falls within limits for procurement.
  - ii. Councilmember Olson expressed concerns over the contract regarding possible cost increases and terms of service. Mr. Ronholt addressed concerns and explained that legal has been involved. Legal counsel provided some insight as well.

- iii. Motion to approve made by councilmember Olson, seconded by councilmember Pritchard, carried 7-0.

**9. PUBLIC HEARING – none**

**10. ORDINANCES**

- A. Second Read 1113 Vacant Commercial Properties
  - i. Legal counsel read the ordinance onto the record.
  - ii. Mr. Weathers reviewed the timeline of the ordinance preparation and subsequent adjustments.
  - iii. Discussion.
  - iv. Under section 14.16.120 Annual Report - Change to state “the building official or designee shall make a report to the City Council during the first quarter of every year on the status of the Vacant Commercial Space registration program”.
    - 1. Motion to approve amendments made by councilmember Speirs, seconded by councilmember Kennedy, carried 7-0.
  - v. Motion to approve ordinance as amended made by councilmember Pritchard, seconded by councilmember Harbolt, carried 7-0.
- B. First Read 1119 Special Events
  - i. Legal read onto the record.
  - ii. Mr. Horton reviewed and explained the need for the ordinance.
  - iii. Discussion held regarding verbiage on approvals and authority. The mayor and council have some changes they would like to see made.
  - iv. Mayor Cooper explained the options. Motion to continue first read to the next meeting made by councilmember Olson. Mayor Cooper asked him for clarification. He would like some amendments made. No second, motion failed.
  - v. Mayor Cooper again explained the options to either move forward as is to a second reading and bring any amendments at that time or continue the first read to the next meeting.
  - vi. After further discussion and clarification of options, a motion to continue the first read to the next meeting was made again by councilmember Shaffer, seconded by councilmember Kennedy, and carried 7-0.

**11. EXECUTIVE SESSION - none**

**12. EMERGENCY ORDINANCES - none**

**13. UPCOMING AGENDA ITEMS - none**

**14. INTERESTED CITIZENS: AUDIENCE REQUESTS AND COMMENTS**

- A. Kathleen Morse, new owner of the old veterinary building on Lake Street. Voiced appreciation that council passed the vacant property ordinance. Excited for the future and to be part of the community.
- B. Tammy Roberson, resident of Medical Lake – continued wetland comments.
- C. Chad Pritchard spoke as a citizen and not council member – encouraged council and audience to vote for kids (MLSD levy). Ballots are due February 13, 2024.

**15. CONCLUSION**

- A. Motion to conclude the meeting at 8:49 pm made by councilmember Pritchard, seconded by councilmember Harbolt, carried 7-0.

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Terri Cooper, Mayor

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Koss Ronholt, Finance Director/City Clerk

DRAFT

# Wetlands and Natural Disasters (Wildfires and Droughts) Superpower Ecosystems/Nature's Shock Absorbers

Educational Presentation

## 1<sup>st</sup> COMMENTS - City Council Meeting 6 Feb 2024

(As of: 6 Feb 2024)

**"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."**

**WETLANDS AND PEOPLE. WE NEED EACH OTHER.**

I have decided to briefly recap why Medical Lake wetlands are of high value and even critical to our City's health. But first, a simple question.

Since the PC is in the process of updating the Comprehensive Plan, did you know one of the mandatory elements is climate change and resiliency?

I will speak on what I consider to be the top two wetland contributions (protection and resilience) to natural disasters and hazards -- especially after the Gray Fire.

During my 2<sup>nd</sup> appearance, I will speak on a few possible solutions on what needs to be done by those in charge to hopefully, put an end to humanity destroying wetlands.

**Wetlands are nature's guardians (superpower ecosystems & shock absorbers) against climate change and are a natural defense against wildfires and droughts by providing resilience to extreme weather events.**

- ❖ Wetlands enhance wildfire resilience.
  - The extent to which an ecosystem can buffer against extreme events depends on the ecosystem's health and the intensity of the event.
  - When wetlands are healthy, they are natural sponges and soak up a huge amount of water.
  - A wetland can act as a natural fire break and reduce the intensity of a wildfire.
  - Moisture-laden wetlands help prevent fires and can act as natural barriers to the spread of forest fires by regulating the frequency and magnitude of the fire events.
  - As one knows, wet soggy soil does not burn well.

- ❖ Wetlands enhance drought resilience and stabilizes local microclimates.
  - Wetlands store water from precipitation and slowly releases it to the surrounding environment which provides a buffer against droughts, recharges groundwater aquifers and maintains atmospheric water cycles.
  - Evaporation and the transpiration of water from wetland vegetation has a local cooling effect – reducing extreme temperatures.
  - Wetland degradation reduces local water storage and can lead to increases in local daytime temperatures.
- ❖ Rapid environmental assessments conducted after a disaster (i.e., Gray Fire) should consider options for wetland restoration as a contribution to environmental recovery, reconstruction, and future resilience.

Another simple question – Does the City have a Disaster Risk Reduction (DRR) Policy currently in place?

Please stand by for “the rest of the story” coming shortly...



Tammy M. Roberson, MBA  
SMSgt USAF Retired  
Disabled Veteran (100% service connected)  
Concerned ML Resident/Wetland Owner and Advocate

**WETLANDS. NATURE'S GREATEST RESOURCE.**

**WETLANDS AND PEOPLE. WE NEED EACH OTHER.**

**EVERY WETLAND MATTERS. EVERY EFFORT COUNTS.**

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# Wetlands and Natural Disasters (Wildfires and Droughts) Superpower Ecosystems/Nature's Shock Absorbers

Educational Presentation

## City Council Meeting 6 Feb 2024

(As of: 6 Feb 2024)

**"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."**

Good evening, Mayor, City Council Members and City Officials.

I have decided to recap why Medical Lake wetlands are of high value and even critical to our City's health. But first, a couple of "did you know" questions.

- 1) Did you know the Planning Commission/City Planner is currently updating Medical Lake's Comprehensive Plan which is mandatory per the Growth Management Act (GMA)?
- 2) Did you know one of the mandatory Comp Plan elements is climate change and resiliency?

### Table of Contents:

- 1) The first two paragraphs will only cover what I consider to be the top two wetland contributions (protection and resilience to natural disasters and hazards) in assisting the City of Medical Lake in updating their Comprehensive Plan (climate change and resiliency portion) and their Disaster Risk Reduction (DRR) policy involving wildfires, droughts, etc.
- 2) The third paragraph relates to some solutions on what needs to be done by those in charge to hopefully put an end to humanity destroying wetlands.
- 3) The fourth paragraph gives some ideas on how individuals can do their part to save these threatened superpower ecosystems.

Although, there is much more at stake here involving these highly valued/productive and vulnerable ecosystems than is generally even recognized by City Officials and the public.

Some of these examples include: 1) Wetlands provide a connection to nature that contributes to improved mental health and wellbeing. 2) Wetlands are lungs with great world importance, generating pure air. 3) Wetlands are natural filters that reduce pollution.

## **1) Wetlands are a natural defense against wildfires and droughts.**

- ❖ Wetlands enhance wildfire resilience.
  - When wetlands are healthy, they are natural sponges and soak up a huge amount of water.
  - A wetland can act as a natural fire break and reduce the intensity of a wildfire.
  - Moisture-laden wetlands help prevent fires and can act as natural barriers to the spread of forest fires by regulating the frequency and magnitude of the fire events.
  - Wet soggy soil does not burn well.
- ❖ Wetlands enhance drought resilience and stabilizes local microclimates.
  - Wetlands store water from precipitation and slowly releases it to the surrounding environment which provides a buffer against droughts, recharges groundwater aquifers and maintains atmospheric water cycles.
  - Evaporation and the transpiration of water from wetland vegetation has a local cooling effect – reducing extreme temperatures.
  - Wetland degradation reduces local water storage and can lead to increases in local daytime temperatures.
- ❖ Rapid environmental assessments conducted after a disaster (i.e., Gray Fire) should consider options for wetland restoration as a contribution to environmental recovery, reconstruction, and future resilience.

## **2) Wetlands are nature's guardians (superpower ecosystems/shock absorbers) against climate change by providing resilience to natural hazards/extreme weather events.**

- ❖ The extent to which an ecosystem can buffer against extreme events depends on the ecosystem's health and the intensity of the event.
- ❖ Healthy and well-functioning wetlands can reduce the impact of many hazards.
  - Abundant plant life in wetlands absorbs waste which helps to purify the water.
  - Wetlands capture CO<sub>2</sub> from the atmosphere and their soils hold a disproportionate share of the earth's total carbon. When wetlands are disrupted (drained, deforested, dredged, etc.), the carbon stored in the soils is released as CO<sub>2</sub>.
  - Erosion and landslides – maintaining and restoring wetland vegetation can stabilize the soil and reduce the risk of erosion.

## **3) We ALL must act now & TOGETHER to support wetlands for humans are destroying wetlands.**

- ❖ As cities grow and the demand for land increases, wetlands are degraded/harmed by development activities in and adjacent to wetlands.
- ❖ Stop the loss of wetlands.
  - Remove the stressors and pressures on wetlands.

- Recognize human activities (such as encroachment by development, buffer averaging, and incomplete/inaccurate wetland reports, etc.) that threaten them.
- This is the best practice for preventing further loss and degradation to wetlands.
- ❖ Prioritize the protection and restoration of wetlands.
  - Restoration is NOT a substitute for protecting and ensuring the wise use of wetlands.
  - Restoration is NOT a justification or a suitable tradeoff for the continued degradation of wetlands.
- ❖ Consequences of wetland management and mismanagement affect all sectors of society.
  - Values which people assign to wetlands and the impacts of wetland management decisions are not always adequately considered in development planning and other decision-making.
  - When stakeholders in one sector make decisions based only on their interests, benefits to parties in other sectors may be undermined or lost, perpetuating wetland degradation and limiting options for wise use.
  - Disasters and the associated fatalities, losses, and damage often result from poor decisions and actions regarding wetlands that make hazards more severe and communities more vulnerable to their impacts.
  - Recognizing and assessing the full range of values is essential to making informed decisions on wetlands.
- ❖ Protection and restoration of wetlands is a key component of the measures needed to mitigate (stabilize) climate change and reduce disaster risks (i.e., wildfires, droughts, heat waves, etc.).
  - Ecosystem-based solutions should complement other risk management measures such as early warning, evacuation, and contingency planning in addition to disaster risk reduction (DRR) policies.
  - Emphasize within state and local government policies (particularly those related to Disaster Risk Reduction) that degradation of wetlands can cause disasters and amplify their impacts on water, food, energy, security, and human health.
  - Natural infrastructures, including wetlands, can help provide communities with resilience to these natural hazards whereby structural approaches offer little benefit once breached.
  - Studies have shown that it is often most cost-effective to invest in the conservation of these ecosystems than in constructing hard infrastructures to enable resilience.
  - Promote collaboration between the development, humanitarian, and environment sectors to design and implement wetland-related solutions to increase resilience to disasters.
  - The value of wetlands in countering disasters is seldom understood, and they are too rarely considered in disaster risk reduction (DRR) policies.

#### **4) Individuals can act now to care, nurture, and support wetlands – our lives are interlaced.**

- ❖ Educate yourself and others about how wetlands and human wellbeing are interconnected.
- ❖ Become a super-hero wetland champion/advocate and be the voice for these threatened biodiverse superpower ecosystems.



- ❖ Inspire the public to take action for healthy wetlands.
- ❖ Raise wetland awareness and capacity in development planning to promote nature-based approaches.
- ❖ Create an advocacy effort that encourages local and state governments to prioritize wetlands as part of their sustainable development and climate action efforts.

**Attachment #A** is Ecology's "Celebrating World Wetlands Day" email dated 2 Feb 2024 (3 pages).

Wetland information stated above can be found on [www.worldwetlandsday.org](http://www.worldwetlandsday.org) and also on [www.ramsar.org](http://www.ramsar.org) – **Attachment #1**: "Wetlands restoration: unlocking the untapped potential of the Earth's most valuable ecosystem" (6 pages); **Attachment #2**: Ramsar Policy Brief 1: "Wetlands for disaster risk reduction: effective choices for resilient communities" (4 pages); **Attachment #3**: Ramsar Briefing Note 10: "Wetland Restoration for Climate Change Resilience" (11 pages); and **Attachment #4**: "Integrating multiple wetland values into decision-making" (9 pages).

Additional information about wetlands and wildfires can be found in: **Attachment #5**: "Wetlands – natural defense against wildfires" by Cathy Vaughan, 23 Oct 2023 (4 pages); **Attachment #6**: "Low-Tech Restoration Improves Forest Resilience" dated 20 Feb 2023 by Forest Service Employees for Environmental Ethics (FSEEE)/Forest News Fall 2023 (5 pages); **Attachment #7**: "Wetlands and resilience to natural hazards" (2016) (2 pages); and **Attachment #8**: "How to fight wildfires and climate change with wetlands" (4 pages).

May God's grace and protection be with humanity and the City's wetlands.



Tammy M. Roberson, MBA  
 SMSgt USAF Retired  
 Disabled Veteran (100% service connected)  
 Concerned ML Resident/Wetland Owner and Advocate

**WETLANDS. NATURE'S GREATEST RESOURCE.**  
**WETLANDS AND PEOPLE. WE NEED EACH OTHER.**  
**EVERY WETLAND MATTERS. EVERY EFFORT COUNTS.**

**"Fighting Wildfires Is Pricy. [Protecting Our Wetlands Is Priceless.](#)"**

9 Attachments (see above for details)

# Wetlands and Natural Disasters (Wildfires and Droughts) Superpower Ecosystems/Nature's Shock Absorbers

Educational Presentation

## 2<sup>nd</sup> COMMENTS - City Council Meeting 6 Feb 2024

(As of: 6 Feb 2024)

***WETLANDS. NATURE'S GREATEST RESOURCE.  
EVERY WETLAND MATTERS. EVERY EFFORT COUNTS.***

Now for the "rest of the story"...

**We ALL must act TOGETHER & TODAY to support wetlands -- humans are destroying wetlands.**

- ❖ As cities grow and the demand for land increases, wetlands are degraded/harmed by development activities in and adjacent to wetlands.
- ❖ Stop the loss of wetlands.
  - Remove the stressors and pressures.
  - Recognize human activities (such as encroachment by development, buffer averaging, and incomplete/inaccurate wetland reports, etc.) that threaten them.
  - This is the best practice for preventing further loss and degradation.
- ❖ Prioritize the protection and restoration.
  - Restoration is NOT a substitute for protecting and ensuring the wise use of wetlands.
  - Nor is it a justification or a suitable tradeoff for the continued degradation.
- ❖ Consequences of wetland management and mismanagement affect all sectors of society.
  - Values which people assign to wetlands and the impacts of wetland management decisions are not always adequately considered in development planning and other decision-making.
  - When stakeholders in one sector make decisions based only on their interests, benefits to parties in other sectors may be undermined or lost, continuing wetland degradation and limiting options for wise use.
  - Disasters and the associated fatalities, losses, and damage often result from poor decisions and actions regarding wetlands that make hazards more severe and communities more vulnerable to their impacts.
  - Recognizing and assessing the full range of values is essential to making informed decisions on wetlands.
- ❖ Protection and restoration of wetlands is a key component of the measures needed to mitigate climate change and reduce disaster risks such as wildfires, droughts, heat waves, etc.

- Ecosystem-based solutions should complement other risk management measures such as early warning, evacuation, and contingency planning in addition to disaster risk reduction policies.
- Emphasize within local government policies that degradation of wetlands can cause disasters and amplify their impacts on water, food, energy, security, and human health.
- Natural infrastructures, including wetlands, can help provide communities with resilience to these natural hazards whereby structural approaches offer little benefit once breached.
- Studies have shown that it is often most cost-effective to invest in the conservation of these ecosystems than in constructing hard infrastructures to enable resilience.
- Promote collaboration between the development, humanitarian, and environment sectors to design and implement wetland-related solutions to increase resilience to disasters.
- The value of wetlands in countering disasters is seldom understood, and they are too rarely considered in disaster risk reduction (DRR) policies.

Possible actions individuals can take to care, nurture and support wetlands are stated in my handout.

May God's grace and protection be with humanity and the City's wetlands.



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 Disabled Veteran (100% service connected)  
 Concerned ML Resident/Wetland Owner and Advocate

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***"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."***

# Wetlands restoration: unlocking the untapped potential of the Earth's most valuable ecosystem

Inextricably linked to the ecological health of our planet and to the socio-economic well-being of all peoples across the globe, wetlands serve and sustain us in immeasurable ways. In fact, they are vital for our survival. Yet, the world has lost 87% of its wetlands since 1700 — and they continue to disappear at an alarming rate, even today. The Convention on Wetlands recognizes that the restoration of the Earth's wetlands must be a key priority for ensuring a sustainable future. The United Nations Decade on Ecosystem Restoration 2021-2030 represents a distinct and timely opportunity for joining efforts and making meaningful headway worldwide in preventing, halting, and reversing the degradation of our planet's wetlands.

## Why are wetlands so important?

Wetlands are crucial for our existence. Among the world's most productive environments, they provide essential benefits and serve us in many ways:

### Wetlands provide food and water, often in areas of extreme poverty

- Wetlands provide desperately needed drinking water. In fact, almost all the world's consumption of freshwater is drawn either directly or indirectly from wetlands.
  - Only 0.75% of the world's freshwater is accessible for direct human use. The UN estimates that in just a few years, by 2025, 2 billion people will not have access to safe drinking water.
- More than one billion people worldwide rely on fish harvested from

wetlands as their primary source of protein. For another two billion people, the fish harvested from wetlands account for at least 15% of the animal protein in their diets.

- Rice production is the primary source of employment and the livelihood of more than a billion households in Asia, Africa, and the Americas.

### Wetlands are critical to biodiversity

- With 40% of all the world's species living and breeding in these environments, wetlands help sustain the Earth's biodiversity.
- Wetlands are home to more than 100,000 freshwater species. They are essential for many amphibians, reptiles, and migratory birds.

## WHAT ARE WETLANDS?

Wetlands are precious environments that teem with life, service, and value for all of society. They serve us in many important and surprising ways.

Covering more than 12.1 million kilometers worldwide, wetlands encompass rivers, streams, natural lakes, ponds, and aquifers; peatlands, including bogs, mires, and fens; marshes and swamps, including flood plains; lagoons and coastal estuaries, including unvegetated tidal flats and salt marshes; seagrass beds, mangroves, and coastal deltas; man-made wetlands, such as rice paddies; and our quickly dying coral reefs—among other specifically defined areas of land that are saturated or flooded with water, either seasonally or permanently.

### Wetlands serve as an important source of employment and income

- Wetlands provide more than a billion jobs and services – valued at \$47 trillion a year worldwide.
- More than 660 million people around the world live off fishing and aquaculture-related activities.
- Wetlands tourism accounts for 8.9% of the world's employment.

### Wetlands enrich quality of life, offering opportunities for relaxation and ties to local culture

- Wetlands offer natural beauty and open areas for recreation and exercise.
- Often, they hold cultural and spiritual importance to local communities and are part of regional identity.
- About 50% of international tourists go to wetland areas to relax.

### Wetlands are vital in the fight against climate change and help with sustainable development

- Wetlands provide natural infrastructure that can help meet a range of policy objectives.
- Peatlands, mangroves, and seagrasses are the most effective carbon sinks on earth. Combined, wetlands store more carbon than any other ecosystem on the planet.
- Not only are they critically important to water quality and availability, but wetlands also have proven invaluable in mitigating and adapting to the effects of climate change.
  - For example, salt marshes, mudflats, mangroves, and other wetland habitats serve as buffers against the catastrophic effects of extreme weather by storing water in times of flooding and preserving surface water in times of drought.

- The many benefits that wetlands provide support human health and livelihoods, sustainable local development, and efforts to eradicate poverty.

The wise use of wetlands depends on our fully recognizing their value and the many diverse benefits they provide. Moreover, understanding the critical role they play in sustainable development and in securing a viable future for societies across the globe is essential for ensuring that their vital importance is reflected in global policy processes – including the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), the Sendai Framework for Disaster Risk Reduction, the Paris Agreement on Climate Change, and the UN Decade on Ecosystem Restoration.

## Why should we restore wetlands?

The Ramsar Convention on Wetlands defines restoration in its broadest sense, including activities that promote a return to previous conditions – as well as activities that improve the functioning of a wetland without necessarily seeking to return it to its pre-disturbance condition (Ramsar HB19).

Thirty-five percent of the world's wetlands have been lost since the 1970s. And the continued rate of degradation and loss of these life-supporting ecosystems – because of human activity – is staggering. When wetlands are degraded, the broad range of benefits they produce begins to deteriorate. Eventually, they vanish altogether.

Contracting Parties to the Convention have prioritized restoration of degraded wetlands in Target 12 of the Convention's

Strategic Plan, with priority given to wetlands that are relevant for biodiversity conservation, disaster risk reduction, livelihoods, and climate change mitigation and adaptation. Specific data on this Target is provided by Contracting Parties in the National Reports, as well as in the Ramsar Sites Information Service.

### The restoration of wetlands yields many far-reaching benefits

- Restoring lost or degraded wetlands presents a valuable and cost-effective opportunity for society to recover and enhance benefits for human health and well-being.
- The total value of benefits that flow from a restored wetland are often several times higher than the cost of restoration.

- Restoration interventions can bring back lost ecosystem services, increase the spatial extent of wetlands, and increase the heterogeneity of wetland functions and biodiversity.
- Wetland restoration can be a cost-effective, long-term strategy for simultaneously achieving conservation and development objectives.
- Maintaining and restoring wetlands also lead to cost savings when compared to manmade infrastructure solutions, in many cases.



## Key takeaways

**Stop the loss of wetlands.** Despite their value and potential policy synergies, wetlands have been – and continue to be – lost or degraded. This inevitably leads to the deprivation of important ecosystem services. And it results in biodiversity loss – as wetlands are some of the most biodiverse areas in the world and provide essential habitats for many species.

**Recognize the full suite of wetland restoration benefits directly delivers on the Sustainable Development Goals (SDGs).**

Decision-makers should take immediate and appropriate measures to recognize the full suite of environmental, cultural, and socio-economic benefits gained from wetlands restoration. The restoration of freshwater wetlands directly delivers on SDGs. More specifically, increasing the extent of water-related ecosystems

contributes to SDG Goal 6 Indicator 6.6.1: “Change on the extent of water related ecosystem,” for which the Convention and UNEP are co-custodians.

**Prioritize the protection and restoration of wetlands.** Removing the stressors and pressures on wetlands is the best practice for preventing further loss and degradation. When this is not feasible – or when degradation has already occurred – wetland restoration must be considered as a potential response option.

**Understand the appropriate role of wetland restoration.** Restoration is not a substitute for protecting and ensuring the wise use of wetlands. That is, the potential to restore a wetland is not a justification or a suitable trade-off for the continued degradation of wetlands.

## RELEVANT CONVENTION GUIDELINES ON WETLAND RESTORATION

The Conference of the Parties of the Ramsar Convention have agreed principles and guidelines for wetland restoration (adopted as the annex to Resolution VIII.16 (2002), Recommendation 4.1: *Wetland restoration*, Recommendation 6.15: *Restoration of wetlands*, Resolution VII.17: *Restoration as an element of national planning for wetland conservation and wise use*, Resolution VIII.16: *Principles and guidelines for wetland restoration*, Resolution XII.11: *Peatlands, climate change and wise use: Implications for the Ramsar Convention*, Resolution XIII.13: *Restoration of degraded peatlands to mitigate and adapt to climate change and enhance biodiversity and disaster risk reduction*; Briefing Note No.4: *The benefits of wetland restoration*, Briefing Note 10: *Wetland restoration for climate change resilience*.



Wetland of International Importance Peel-yaigorup System, Australia (Photo: David Rennie)



# Notable examples of wetlands restoration

## Djébadji Lagoon Ramsar Site, Benin

Heavy dependence on mangrove wood harvesting – the exploitation and use of wood for salt production – is threatening the mangroves of the Djébadji Lagoon in Benin, in West Africa. By putting significant pressure on the ecological character of the site’s mangroves, the wood harvesting has caused significant deforestation and loss of essential ecosystem services.

In collaboration with the Benin government and local communities in the face of climate change project “Hydrological restoration of mangroves in the Djébadji Lagoon, Benin”, the Coordination for Research and Development in the Environment a Benin Based NGO implemented a pilot restoration at Ouidah, in the District of Djébadji.

### Scope of the project

- Earth channels flowing natural water tracks were identified and established – drawing from indigenous-community knowledge – in order to re-establish the tidal flow of water-degraded sites.
- A community nursery was established, and clear gender roles led to the cost-effective production of more than 50,000 seedlings of *Avicennia germinans*.
- Thirty hectares of degraded mangrove area was reforested, with an 80% success rate, by planting more than 250,000 mangrove seedlings of *Avicennia germinans* and *Rhizophora racemosa*, which were native to the degraded sites.
- A community monitoring system that went on for more than 400 days was implemented.
- The reforestation led to the recovery of essential fish assemblages – such as *Hippoglossus* (Flétan) and *Clarias gariepinus* (Poisson chat) – which were commercially crucial to the local communities and endemic, resident and migratory birds.



The central canal that was built to let in water to the restoration site at Djébadji, Ouidah, Benin.



Reforestation results achieved with *Rhizophora racemosa*, at Djébadji, Ouidah, Benin.

## Boracay Island, Philippines

Once a top tourist destination with more than 2 million visitors each year, unregulated and unsustainable activities by tourism resort operators degraded the clean beaches and shallow waters of Boracay Island in the Philippine archipelago into a waste dump and breeding ground for coliform bacteria – with devastating consequences to biodiversity, the health of corals, and local livelihoods.

In 2018, with the country's support, the Department of Environment and Natural Resources (DENR) launched a massive rehabilitation project for the entire island – including its wetlands.

## Scope of the project

- Illegal structures along the beachfront were closed and dismantled, while solid waste was managed to prevent direct discharge of untreated wastewater from establishments near the beachfront.
- Beaches and coastal waters of the island were cleaned up.
- A mechanism to ensure regular monitoring of the protection and conservation of the wetlands in and around the island was established.
- A public-private partnership program was established, culminating in the country's most significant efforts to undertake environmental projects in six of the nine wetlands on the island.



A beach on Boracay Island following rehabilitation efforts ([Photo](#) from DENR-FMB — Department of Environment and Natural Resources - Forest Management Bureau).



## Everglades National Park, Florida, United States

Located in South Florida, established in 1947, and designated as a Ramsar Site in 1987, Everglades National Park is the largest subtropical wilderness reserve in North America.

The site was designated as a National Park to protect the abundant and diverse biological resources of its ecosystems. The biodiversity of these wetlands has long suffered the destructive impact of extensive human modification to South Florida. And they have felt the devastating effects of the poor quality and flow of water entering the park from upstream – a result of five Water Conservation Areas (WCAs) created in 1948. In 1993, Everglades National Park was added to the list of World Heritage sites in Danger, and to the Montreux Record of the Convention on Wetlands.



Everglades National Park, United States of America (UNESCO, 2009).



Everglades National Park, United States of America (OUR PLACE, The World Heritage Collection, 2015).

## Scope of the project

- In 2006, a series of site-specific conservation measures were developed to deal with four of the major threats to the site: alterations of the Natural Hydrologic Regime, adjacent urban and agricultural growth, increased nutrient pollution, and impacts to the protection and management of Florida Bay.
- Examples of these conservation measures include:
  - the construction of a 2,201 hectare flood mitigation system,
  - the building of 18,211 hectares of storm water treatment areas in 2006, with an additional 4,856 hectares built in 2012 – to mitigate increased pollution levels at the site, and
  - the purchase of 44,000 hectares of the East Everglades privately owned parcels, bringing them into federal ownership for their protection.
- By 2019, all initial measures were completed, with early results showing that water quality had improved substantially throughout much of the Everglades' marsh. However, with continuing deterioration of the Everglades – and given the loss of ecosystem benefits from trying to balance restoration, water supply, and flood control during the implementation phase – it was determined that the initial projects were insufficient for achieving the desired state of conservation of the site.
- Additional, larger-scale projects were approved in response to these shortfalls, and they are moving forward – with benefits expected by 2030.
- In addition, the state of Florida pledged in 2019 to advance the Everglades' restoration, making a \$625 million commitment for water resource projects, including water storage reservoirs and targeted water quality projects.

### The Ramsar Convention on Wetlands

The Convention on Wetlands is a global intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

# Wetlands for disaster risk reduction: Effective choices for resilient communities

Degradation of wetlands reduces resilience against water-related hazards such as floods, droughts and storm surges. Integrating wetlands as natural infrastructure for disaster risk reduction (DRR), alone or in conjunction with traditional “hard” infrastructure, can mitigate hazards and increase the resilience of local communities and those living across entire river basins or coastal zones.

## Policy recommendations

Policy-makers should:

- Recognize the roles of wetlands in DRR, emphasizing the value of their wise use as a significant and cost-effective component of DRR strategies.
- Embed wetland wise use within ecosystem-based DRR (eco-DRR) policies and programmes, and broader development plans, developed in the context of international processes such as the Sendai Framework for Disaster Risk Reduction, the Paris Agreement on climate change and the Sustainable Development Goals.
- Promote collaboration between the development, humanitarian and environmental sectors to design and implement wetland-related solutions to increase resilience to disasters.
- Emphasize within sectoral policies and programmes, particularly those related to DRR, that degradation of wetlands can cause disasters and amplify their impacts on water, food and energy security, and human health.
- Recognize that ecosystem-based solutions alone may not address all forms and scales of disaster risks, and that they can be applied together with other risk management measures such as early warning, evacuation and contingency planning, and traditional infrastructure such as dams, dykes and seawalls.





## The issue

Across the world, natural disasters continue to have a severe impact on people, their livelihoods and their environment. Over 90% of natural disasters are caused by water-related hazards such as floods, droughts and storm surges. Climate change is increasing the frequency of the extreme weather which causes these hazards. From 2006 to 2015, the percentage of lives lost due to weather- and climate-related disasters increased to nearly 49% of all lives lost to natural hazards in that period, up from around 40% in the previous decade.

Disasters and the associated fatalities, losses and damage often result from poor decisions and actions that make hazards more severe and communities more vulnerable to their impacts. There is a need for better integration between environmental, development and humanitarian actors, to enable effective prevention, response and recovery.

Wetlands are natural water infrastructure, which can help to mitigate the physical impacts of hazards. The services which healthy wetlands provide, including food and clean water, can mitigate the humanitarian impacts of disasters, enhancing the immediate coping capacities of communities and their sustainable long-term recovery.

Wetlands provide multiple benefits and services. For example:

- Inland wetlands collect and hold water during floods, and release it gradually, regulating water flows and ensuring consistent supply. Many wetland types, such as fishponds and rice paddies, also contribute to food production.
- Coastal wetlands such as mangroves provide spawning and feeding grounds for fish, providing food and livelihoods; they also act as buffers against storm surges.
- Healthy peatlands store carbon and thereby mitigate the impacts of climate change.

However, the value of wetlands in countering disasters is seldom understood, and they are too rarely considered in DRR policies and programmes. Despite the many benefits which wetlands provide, more than 64% of the world's wetlands have been lost since 1900, and wetland loss and degradation continue at alarming rates around the world, contributing to lower resilience to disasters.



## Why wetlands are important for DRR

The sustainable management of wetlands, and the restoration of those which have been degraded, can help reduce the impact of hazards and help communities recover from disasters. Wetlands can also work effectively alongside traditional “hard infrastructure” to enable such resilience.

Studies have shown that it is often more cost-effective to invest in the conservation of these ecosystems than in constructing hard infrastructure. A recent review of nature-based DRR projects, including 12 mangrove projects, found that mangrove management costs from two to six times less than submerged breakwaters, the most commonly used alternative. This figure does not take into account the added benefits which mangroves provide, such as food, timber, medicines, habitat and nurseries for fish and other wildlife.

- The storm protection value of coastal wetlands lost in the State of Louisiana (United States of America) before and during Hurricane Katrina in 2005 has been estimated at USD 850 million per year. Following Katrina, the State and the City of New Orleans have adopted a multi-pronged approach to increase the city's resilience to sea level rise, hurricanes and river flooding. Wetlands such as marshes have been restored to act as buffers between the sea and the city.
- The Netherlands, as part of the “Room for the River” initiative, has restored the natural floodplains of the Rivers IJssel, Rhine, Lek and Waal, to reduce the impact of floods and improve overall water and land management.
- The storm protection benefits of mangroves in southern Thailand have been valued at USD 10,821 per hectare. At the Krabi River Estuary Ramsar Site, mangroves are being restored to protect vulnerable coastal communities against tropical storms, as well as to mitigate the effects of sea-level rise.
- In Hubei Province (China), lakes and marshes have been reconnected to the Yangtze River to reduce flood impacts. The restored wetlands have led to an increase in fish stocks and improved water quality for local communities.
- The degradation and draining of peatlands, coupled with El Niño Southern Oscillation drought conditions, resulted in devastating fires which swept through Indonesia and South-east Asia in 2015 and 2016. In response, Indonesia created the Peatland Restoration Agency to restore five million acres (two million hectares) of peatlands.

## Ecosystem-based DRR approaches within global agreements

Conservation and wise use of wetlands is increasingly recognized as a part of the “eco-DRR” approach. Eco-DRR entails the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim of achieving sustainable and resilient development.

The Ramsar Convention, the Convention on Biological Diversity and the Paris Agreement, as well as global policy frameworks such as the Sendai Framework on Disaster Risk Reduction and the Sustainable Development Goals, clearly recognize that nature-based solutions for reducing disaster risk are vital for a sustainable and secure world. The Sendai Framework explicitly recommends taking into account the role of ecosystems, including wetlands, within disaster planning. There is an urgent need to apply these instruments through concrete actions, to increase global efforts and scale up investments in wetland conservation and restoration.

## Integrating wetlands within national DRR strategies

Assessment and communication of the potential contributions of wetlands to reducing the impacts of hazards can strengthen the case for the integration of wetland management into DRR planning. By combining “natural” and “hard” engineering techniques, the needs of different sectors and stakeholders regarding water, energy, food security and human health can be addressed.

A growing number of national governments are integrating wetlands within national policies and plans for DRR, such as the Philippines’ disaster prevention and recovery programme, and India’s National Disaster Management Plan.

For wetland solutions to contribute effectively to DRR the following should be considered:

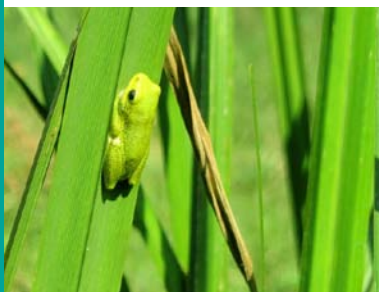
- Development, humanitarian and environmental agencies should collaborate to ensure that their management frameworks and actions are coherent.
- Wetlands and the benefits they provide should be taken into account within disaster risk assessments. Their impacts should be considered across entire river basins or coastal zones, rather than within administrative and political boundaries.
- Relevant links between development planning and land use changes, wetland degradation and disaster risk patterns should also be taken into account, building on or promoting transboundary cooperation.
- Wetland managers should recognize that wetlands and the ecosystem services they provide are themselves vulnerable to disasters as well as the impacts of climate change. Analysis of these vulnerabilities should be incorporated into wetland site management plans and response options. This would support adaptive management and help minimize adverse impacts that may undermine the contributions of wetlands to disaster resilience, response, recovery and reconstruction.
- Rapid environmental assessments conducted after a disaster should consider options for wetland restoration as a contribution to environmental recovery, reconstruction and future resilience.
- Assessment of immediate and longer-term costs, benefits and trade-offs for different risk management scenarios should fully capture gains or losses in wetland service provision that impact on disaster risk and resilience. Mapping the full range of ecosystem services and values of wetlands, including their role in DRR, can inform this process.



## Policy considerations for effective integration of wetlands in DRR strategies

**Put in place enabling policies and legislation.** Integrating wetland considerations and other ecosystem-based approaches in long-term visions and national development plans can provide an enabling environment. Combining top-down and bottom-up approaches, and including traditional, indigenous and local knowledge, can make policy-making more effective. Gender mainstreaming should form a significant aspect of integration of wetlands in DRR.

**Include wetland indicators within monitoring systems for global processes.** Wetlands and DRR should be integrated in national policies and measures to implement them in the context of the Sendai Framework, Sustainable Development Goals and the Paris Agreement. The inclusion of wetland-related indicators can link implementation of the Ramsar Convention and its Strategic Plan for 2016-2024 to track progress on these mechanisms.



**Promote use of environmental and social risk reduction safeguards by different sectors.** Incorporating environmental and social risk reduction safeguards into environmental impact assessments and strategic environmental assessments can help reduce risks from unintended impacts of development projects.

**Raise awareness and capacity in development planning.** Engaging universities and training institutions, and including wetland management courses in learning programmes, can help cultivate policy makers, researchers and practitioners who promote nature-based approaches. Enhancing awareness within the private sector will help make the business case for natural infrastructure solutions; high-profile “ambassadors” who are able to explain and promote wetlands can provide strategic support.

**Restoring and sustainably managing wetlands should complement other risk management measures.** The capacity of wetlands to help mitigate hazards and reduce disaster risk can depend on local geographical conditions and socio-political contexts. Policy-makers and decision-makers should consider an array of solutions including those which combine natural and hard engineered infrastructure. Ecosystem-based solutions should complement other risk management measures such as early warning, evacuation and contingency planning.

**New investment may not be required.** A sizeable proportion of DRR investment is allocated to hard infrastructure solutions. Investment in wetlands as stand-alone or hybrid infrastructure, in most circumstances, will not require new resources and financing, rather reallocation of existing funds. The expertise, resources and networks of private sector partners may be harnessed to encourage and scale up investments in wetland solutions.

## Limitations and further research

To make informed choices on the use of ecosystem-based approaches for DRR, it is important to continue investing in research into ecosystem resilience thresholds. Collaborative research with humanitarian and development partners can greatly assist in integrating wetland solutions for enhancing resilience, from a socio-ecological systems perspective. Further quantification of performance of ecosystem-based solutions, in varied geophysical and socio-economic contexts, using metrics to assess infrastructure efficiency, is required to enable planners to make informed decisions on combining natural and traditional infrastructure solutions for DRR.

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## The Ramsar Convention



The Convention on Wetlands, also known as the Ramsar Convention, is a global inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is the only global treaty to focus on one single ecosystem.



# Wetland Restoration for Climate Change Resilience

## Purpose

This Briefing Note aims to support wetland managers by highlighting the benefits for climate mitigation and adaptation of restoring wetlands and managing them effectively.

## Background

The Scientific and Technical Review Panel (STRP) of the Ramsar Convention on Wetlands recommended in its 2016-2018 work plan the development of a Briefing Note highlighting the reasons and potential for restoring wetlands in the context of a changing climate, building on Ramsar Briefing Note No.4: *The benefits of wetland restoration*. The Standing Committee identified this as one of the STRP's highest priority tasks.

As the climate continues to change, our ability to adapt will depend on our ability to put in place a range of responses. Key among these are the wise use of wetlands and the restoration of degraded wetlands. Harnessing the natural capacity of wetlands to buffer communities against the adverse effects of climate change can increase climate resilience.

This Briefing Note highlights key information from recent reports on wetlands and climate change mitigation and adaptation. It includes assessments of carbon uptake and storage, which find that the continuing loss and degradation of wetlands has resulted in significant losses of their stored carbon to the atmosphere. Evidence of the value of wetlands in reducing disaster risk is reviewed, showing that the loss of wetlands is associated with greater human and ecological impacts, and economic costs. It also includes a discussion of approaches to wetland restoration to help recover these benefits. It uses the term restoration in the broadest sense of the Ramsar Convention, which includes both projects that aim to return sites to their original conditions and projects that improve wetland functions without necessarily promoting a return to pre-disturbance conditions.

## Key messages

1. **The wise use and restoration of wetlands is essential to protect stored carbon and reduce avoidable carbon emissions.** Wetlands are globally important carbon sinks, storing vast amounts of carbon and thereby helping to mitigate climate change. Peatlands hold a disproportionate amount of the earth's soil carbon, and coastal wetlands such as mangroves, salt marshes and sea grass beds are vital for the sequestration of "blue carbon". Together, they store more carbon than all of the world's forests combined.
2. **Prioritizing wetland protection and restoration can enhance climate adaptation and resilience.** As extreme weather events such as storms, flooding, droughts and heat waves increase in frequency, wetland protection and restoration increases climate resilience by buffering communities from coastal storm surges, reducing wave damage and floods, and stabilizing shorelines, water supplies and local microclimates. As such, wetlands are a critical part of ecosystem-based adaptation practices designed to build community resilience and reduce disaster risk.





## Relevant Ramsar documents

Recommendation 4.1: *Wetland restoration*

Recommendation 6.15: *Restoration of wetlands*

Resolution VII.17: *Restoration as an element of national planning for wetland conservation and wise use*

Resolution VIII.16: *Principles and guidelines for wetland restoration*

Resolution XII.11: *Peatlands, climate change and wise use: Implications for the Ramsar Convention*

Briefing Note No.4: *The benefits of wetland restoration*

3. **Wetlands play a vital role in retaining water on the landscape, maintaining local climate and water cycles and reducing temperature extremes.** Wetlands store water from precipitation and slowly release it to the surrounding environment, which can also recharge groundwater aquifers and maintain atmospheric water cycles. Evaporation and the transpiration of water from vegetation have a local cooling effect. Draining wetlands reduces local water storage and can lead to increases in local daytime temperatures.
4. **Protecting and restoring wetlands to increase climate mitigation and resilience delivers many co-benefits.** Wetland conservation and restoration help protect against the effects of a changing climate. However, there are many other ecological, cultural and socio-economic benefits that wetlands provide that contribute to human wellbeing, such as the provision of food, energy and clean water, support to livelihoods and biodiversity, and sites of spiritual and cultural importance. Identifying and valuing the full suite of wetland ecosystem services provide a strong rationale for restoration.
5. **Protecting and restoring wetlands for climate mitigation and adaptation reflects a key tenet of Ramsar's Strategic Plan and represents progress towards meeting the Sustainable Development Goals and the Paris Agreement on Climate Change.** Efforts to protect and restore wetlands and promote their wise use will help countries achieve Nationally Determined Contributions under the Paris Agreement on climate change, and contribute towards the SDGs, Aichi Targets and other important global policy goals.

### Box 1. Key terms used in climate change assessments

*Greenhouse gas balance* is the contribution of net carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) uptake or release to global warming. One molecule of CH<sub>4</sub> contributes approximately 34 times as much to global warming as one molecule of CO<sub>2</sub> (IPCC 2013a). The greenhouse gas balance is expressed in CO<sub>2</sub>-equivalents per area and time.

*Methane emission rate* is the CH<sub>4</sub> release per area per time. Methane emission rates vary strongly in time and across ecosystem types. As the production of CH<sub>4</sub> is suppressed in the presence of sulfate, saltwater and brackish systems tend to have much lower methane release rates than freshwater systems. In the presence of oxygenated topsoil, methane oxidation may occur, resulting in negative methane emission rates.

*Carbon sequestration* is the removal of carbon from the atmosphere and its storage in an ecosystem in a given area over a given time. This is caused by biological processes such as photosynthesis.

A *carbon sink* results from the long term (of at least one year) sequestration of carbon by an ecosystem (i.e., more carbon is taken up than is released). Living and dead vegetation, as well as soil carbon, constitute the carbon sink.

*Carbon stock* is the total carbon stored in an ecosystem, regardless of the time it took to build up this stock.

## Introduction

The earth's climate is changing at an unprecedented rate. The effects of a changing climate are many and vary by location, with intensifying storm activity, rising sea levels and more frequent floods and droughts predicted (IPCC, 2013b). Globally, the risks of climate-related disasters are increasing, and an estimated 90% of disasters are estimated to be water-related (UNISDR, 2015). Costs are high: between 2006 and 2015, the proportion of lives lost due to weather- and climate-related disasters increased from 40% to nearly 49% of lives lost due to natural hazards (UNISDR, 2015; see also Kumar *et al.* 2017). The need for strategies to mitigate climate change and adapt to its changing conditions has become urgent.

The protection and restoration of wetlands is a key component of the measures needed to mitigate climate change and reduce disaster risks. Wetlands, particularly peatlands and coastal systems (salt marshes, mangroves and sea grasses), store vast amounts of carbon, both in plant biomass and especially in their soils. The drainage or conversion (loss) of wetlands not only reduces their ability to take up and store carbon, but can cause large quantities of previously accumulated carbon to be lost, moving it from the soil to the atmosphere as carbon dioxide (CO<sub>2</sub>).

Wetlands also increase the resilience of communities to damage caused by storms and extreme weather. Many types of wetlands, such as mangroves, floodplains, coral reefs and coastal peatlands are natural buffers against weather hazards, and wetland loss and degradation in many regions is strongly linked to increases in climate-related impacts.

## Wetland loss and degradation

The global extent of wetlands is estimated to have declined by between 64% and 71% in the 20th century (Davidson, 2014). Over the long term, inland wetlands have declined more rapidly (averaging 61% loss) than coastal wetlands (46% lost). Wetland area has declined in all regions, by 12% in Oceania and as much as 59% in Latin America, and recent data shows that about 35% of inland and marine/coastal wetlands were lost between 1970 and 2015 (Ramsar Convention on Wetlands, 2018). The rate of loss has been increasing, with the rate in the past century estimated to be 3.7 times greater than in previous centuries (Davidson, 2014). Impacts on ecosystem services include decreased rates of carbon sequestration, reduced protection of coastal zones, increasing flood flows, more variable water supplies, and the loss of habitat for fisheries (Duarte *et al.* 2013).

## Wetlands as high-carbon ecosystems

Wetland soils contain a disproportionate share of the earth's total carbon. Although they occupy only between 5% and 8% of the earth's total land surface, their soils hold 35% or more of the estimated 1,500 gigatons (Gt, or billion metric tonnes) of organic carbon that is stored in soils (Mitsch & Gosselink, 2015).

Wetlands International, a partner of the Ramsar Convention on Wetlands, has established a fund for community-based peatland restoration initiatives called the Indonesian Peatlands Partnership Fund (IPPF). On the picture: Peatland restoration by local community in Indonesia, blocking drainage channel



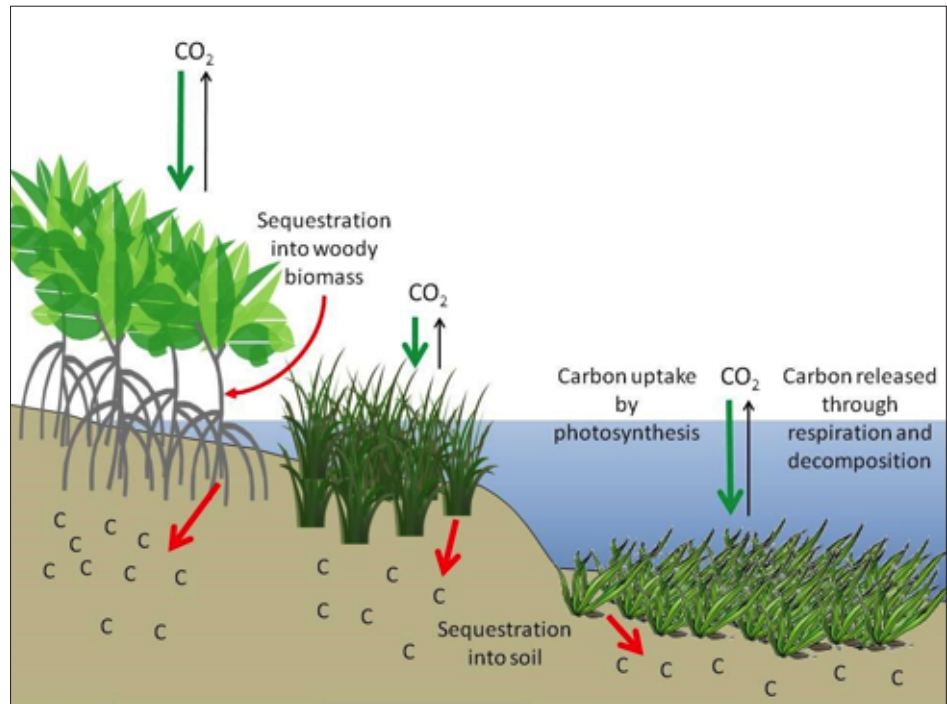


Wetland plants take up carbon via photosynthesis and build plant biomass, which can accumulate in the soil as organic matter. Wetlands also release carbon to the atmosphere in the form of the greenhouse gases CO<sub>2</sub> and CH<sub>4</sub> (methane). The balance between carbon uptake and release varies by wetland type and determines their ability to act as a carbon sink (Table 1).

**Figure 1**

Carbon take-up and release by coastal wetlands

Intact coastal wetlands (from left to right, mangroves, tidal marshes and sea-grasses) take up carbon (green arrows) where it is sequestered for the long term in woody biomass and soil (red arrows) or respired back to the atmosphere (black arrows). When they are drained, deforested, dredged or converted for agriculture, the carbon stored in the soils is released as CO<sub>2</sub>. (Howard et al. 2017).



**Table 1: Relative rates of carbon fluxes and capacity to build long-term carbon stocks for different wetland types**

Wetland Type	Soil Carbon Sequestration Rate	Methane Emission Rate	Ability to act as Net GHG Sink	Long Term Carbon Stocks
Salt Marsh	High	Low	High	High
Mangrove	High	Low to High	Moderate to High	High
Freshwater Tidal Marsh	High	High	Low	Moderate
Estuarine Forest	High	Low	High	Moderate
Sea grass Bed	High	Low	High	High
Tropical Peatland	Low	Moderate to High	Moderate	Very High
Temperate-Boreal Peatland	Low	Moderate to High	Moderate	Very High
Inland Freshwater Mineral Soil Wetlands	Low to High	Moderate to High	Low to Moderate	Low to Moderate
Forested Freshwater Wetlands	High	Moderate	Moderate	Very High

Adapted from Crooks et al. 2011. Note that there may be some overlap in the wetland types shown.

## Peatlands

Peatlands excel at carbon storage. They are considered carbon “hot-spots”, holding the largest long-term store of carbon of any ecosystem type (Joosten *et al.* 2016). Peat typically accumulates over thousands of years, making it the most space-effective stock of organic carbon in the biosphere. They are found in 90% of the world’s countries. They cover only about 3% of earth’s land surface, yet they hold twice as much carbon as all of the world’s forests combined; estimated at between 180 and 450 Gt globally (Joosten *et al.* 2016). In total, peatlands make up over 30% of inland wetlands (Ramsar Convention on Wetlands, 2018). Northern peatlands are the largest in area (4 million square kilometres (Yu, 2012), concentrated in North America and Eurasia, while tropical peatlands make up at least 10 to 12% of the total peatland resource (Joosten, 2016). Estimates of the extent of tropical peatlands are rising as new areas are discovered, such as the Cuvette Centrale depression in central Congo, where a wetland complex covering 145,500 km<sup>2</sup> holds an estimated 30.6 Gt of carbon (Dargie *et al.* 2017). The largest peatland, found in Western Siberia, is the size of France and Germany combined and holds billions of tons of carbon (MacDonald *et al.* 2006). Because they provide an enormous long-term carbon sink, undisturbed peatlands are a critical global asset in the effort to regulate climate.

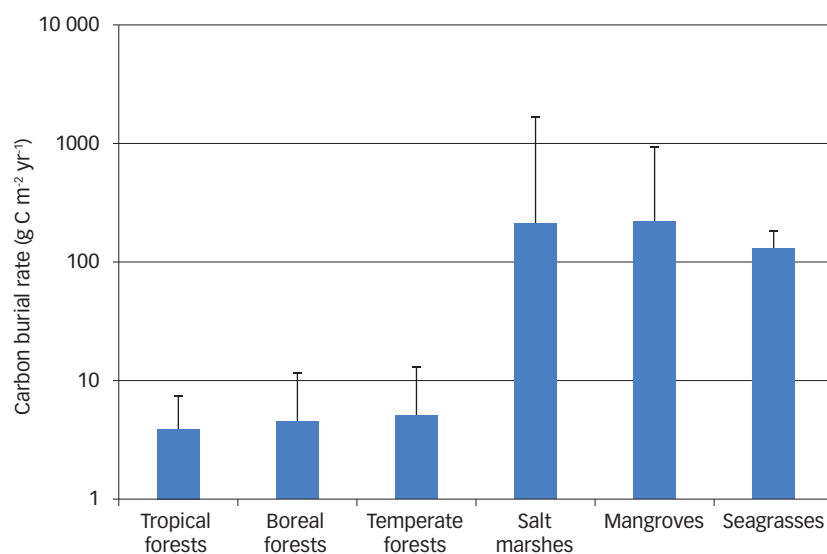
## Coastal wetlands and blue carbon

Coastal wetlands (with a focus on intertidal sites) also excel at sequestration, of what is called “blue carbon” (McLeod *et al.* 2011). Blue carbon is the high-density carbon that accumulates in coastal systems as a result of their high productivity and sediment-trapping ability. Estimates show that the rate of carbon sequestration in coastal wetlands is greater than in all of the terrestrial forests combined, despite forests having a much larger area (Figure 2) (McLeod *et al.* 2011). On average, sea grasses, saltmarshes and mangroves sequester carbon 35 to 57 times faster than tropical forests (McLeod *et al.* 2011).

The world’s tidal salt marshes store an estimated 437 to 1,210 million tonnes of carbon in their vegetation and soils (Siikamäki *et al.* 2012), while mangroves store an estimated 5 Gt of carbon (Chmura *et al.* 2003).

Carbon storage in mangroves is exceptionally high compared with most forest types. Mangroves may sequester carbon in the form of organic soil and peat. A study of mangroves in desert inlets on the coast of Baja California (Ezcurra *et al.* 2016) shows that organic soils have been accumulating for nearly 2,000 years and harbour an average below-ground carbon content of 1,130 ( $\pm$  128) metric tonnes of carbon per hectare. Another study found a mean storage of 968 metric tonnes of carbon per hectare, to a depth of 5 meters or more (Murdiyarto *et al.* 2009; Donato *et al.* 2011).

**Figure 2**  
Average annual rates of soil carbon sequestration in terrestrial forests compared to coastal wetlands. Error bars indicate maximum rates recorded for each ecosystem type (note the logarithmic scale on the y-axis; from McLeod *et al.* 2011).



# Carbon emissions through wetland drainage and degradation

## Peatland losses

Drained or damaged wetlands are a major source of greenhouse gas emissions. Human disturbance, particularly drainage, releases carbon in CO<sub>2</sub>, leading in years to the loss of carbon that accumulated over centuries or millennia. Current rates of release are equivalent to nearly 6% of global human CO<sub>2</sub> emissions (Joosten *et al.* 2016).

In the tropics, forested peat domes, where peat accumulates into thick, dome-shaped expanses, have been subject to clearing and agriculture, with many deforested for paper production, then drained and replanted with palm oil plantations. This liberates large quantities of carbon and makes them vulnerable to wildfires that, once started, can burn for years (Figure 3; Bell, 2016). Recent peat fires in Indonesia made it the third largest emitter of CO<sub>2</sub> globally, behind China and the United States (Biello, 2009). Approximately 65 million ha (or 15%) of the world's peatlands have been drained due to agriculture, grazing, peat mining and bioenergy production (Biello, 2009). The total CO<sub>2</sub> emissions from drained peatlands, in combination with releases from peat fires (mainly in Southeast Asia, Russia and Canada), are estimated at over 3 Gt of CO<sub>2</sub> per year (Biello, 2009).

## Coastal wetland losses

Drainage or conversion of coastal wetlands is widespread, particularly for agricultural use. Between 1970 and 2015, 35% of the total global area of mangroves was cleared and drained (Ramsar Convention on Wetlands, 2018). Aquaculture is a driver of wetland loss, as mangrove forests are converted to shrimp ponds that subsequently become emitters of CO<sub>2</sub>. Shrimp ponds in Southeast Asia, for example, release an estimated 5.8 to 14 million tonnes CO<sub>2</sub> per year, which is comparable to the greenhouse gas emissions from the conversion of forested peatlands in Indonesia (Sidik & Lovelock, 2013). In total, emissions from mangrove conversion account for nearly one fifth of the total global emissions from deforestation, resulting in damages costing between USD 6 billion and USD 42 billion annually (UNEP, 2014).

## Restoration to reduce emissions and enhance carbon stocks

### Peatland restoration

Restoring wetlands using techniques such as rewetting peatlands to raise the water table and re-saturate soils in order to reverse the effects of drainage is an effective means to decrease CO<sub>2</sub> emissions and preserve existing carbon stocks.

In this type of restoration effort, there are two primary goals:

1. to reduce or avoid carbon emissions, thus preserving the carbon they currently hold; and
2. to rebuild carbon stocks by recreating the processes that lead to carbon sequestration.

Best practices for peatland restoration include the following:

- Rewetting can be accomplished using simple methods to reestablish hydrology. Installing weirs or blocking drains and ditches to prevent water leaving the site can be effective over relatively small areas but can be difficult to accomplish over large, drained peatland expanses. Blocking larger canals and drainage ways within a site can rewet larger areas. Typically, a series of plugs are needed to disperse water (Dommain *et al.* 2010). In any project, the local landscape and hydrology must be integrated into restoration planning.
- Paludiculture<sup>1</sup>, or the rewetting of former drained peatlands for wet cultivation, is a means to incentivize restoration by governments and the private sector. Typically, paludiculture focuses on reed mowing and biomass production for fuel, with the protection of peat as the primary goal. Sphagnum farming for horticultural uses may also be permitted on rewetted bogs in order to reduce mining of intact systems. Benefits include protection of stored



Manglares de Nichupté, These dense strips of mangrove protect inland areas against hurricanes and storms. Ecological restoration work has led to an average survival rate of 91% of mangrove introduced through reforestation.

1 See Resolution X.25: Wetlands and "biofuels".

More than 150 million mangrove trees have been planted in approximately 500 villages in the Sine Saloum delta and in the Casamance. This result makes it the largest example of mangrove reforestation in the world. In total, almost 12,000 hectares of mangrove have been restored by the people of Senegal.



carbon, the provision of renewable fuels and the protection of biodiversity and cultural practices (Wichtmann *et al.* 2016).

- The benefits of wet cultivation practices in protecting organic soils extend to other wetland types, for example, wet meadows for grazing and mowing, floodplain forestry and reed and willow production.
- The most effective long-term strategy for restoration is community-based engagement, at all stages of a project from the design to implementation. This promotes local stewardship through the use of local knowledge and builds capacity for effective management within communities.
- The Ramsar Convention on Wetlands recognizes<sup>2</sup> the value of peatlands for climate change mitigation, maintaining biodiversity and other ecosystem services, emphasizing that in any restoration plan it is important to incorporate the principles of wise use to promote sustainable management.

Rewetting degraded peatlands significantly reduces carbon emissions from soils as waterlogging slows peat oxidation and allows vegetation to re-establish. Although rewetting may lead to an initial increase in methane emissions, those emissions tend to decrease over the first few years to levels consistent with undisturbed natural sites (IPCC, 2013a; Joosten *et al.* 2016). Rewetting also reduces the emissions of nitrous oxide, another potent greenhouse gas.

Research has shown that, compared to degraded sites, restored peatlands have lower carbon emission rates and over time, can become net carbon sinks (Joosten *et al.* 2016). In a project to restore peat swamps around Moscow that burned in a 2010 heatwave, 35,000 ha are being restored by blocking drains and replanting vegetation, and CO<sub>2</sub> emissions have decreased by 200,00 tonnes of carbon per year as a result (Pearce, 2017).

Table 2. Reduction of GHG emissions from peatlands drained for different human activities after rewetting

Human land use on drained peatlands	Reduction in carbon emissions after rewetting (tonnes CO <sub>2</sub> ha <sup>-1</sup> yr <sup>-1</sup> )	
	Temperate zone	Boreal zone
Forest	6	2
Cropland	28	34
Grassland	20	25
Peat	9	11

From Barthelmes *et al.* 2015.

## Restoring coastal wetlands for blue carbon storage

The restoration of coastal wetlands has the potential to decrease greenhouse gas emissions, increase rates of carbon sequestration and build long-term carbon stocks, as well as provide other ecosystem services related to disaster risk reduction. Research has been underway for several decades, and projects are increasingly extensive (1,000 ha to 5,000 ha; Crooks *et al.* 2011) in order to create substantial regional benefits.

<sup>2</sup> See Resolution XII.11: *Peatlands, climate change and wise use: Implications for the Ramsar Convention and Resolution VIII.17: Principles and guidelines for wetland restoration.*



Restored coastal marshes begin accumulating carbon almost immediately, at rates equivalent to natural reference sites, although they may lag in total carbon storage, which takes longer to rebuild (Craft *et al.* 2003). The outcomes of mangrove restoration vary, but recent studies show that following mangrove re-forestation, soil carbon concentrations increase significantly with forest age. Soil carbon stocks can reach the level of natural sites within ten years of restoration, despite lower tree biomass in the restored sites (Delvecchia *et al.* 2014).

Best practices for coastal wetland restoration include:

- In tidal marsh restoration, the tidal regime and land elevation are critical parameters because they determine the extent, duration and timing of submergence. This is essential for success because they largely determine how much sediment deposition or erosion will occur, which in turn determines if a site can adjust to rising sea levels.
- Restoring and managing water levels, capturing the full range of tidal exchange to promote vegetation reestablishment and sediment trapping, and planning restoration in the context of the surrounding landscape adds resilience to the restored site and assists in the recovery of the processes that lead to carbon accumulation.

It is important to also note the value of inland freshwater wetlands for carbon uptake and storage. Less attention has been paid to freshwater inland sites which, in the United States of America for example, hold about five times as much carbon as the U.S.A.'s coastal wetlands, due to their much larger extent (Nahlik & Fennessy, 2016). On a regional basis, wetlands may contain disproportionately large carbon stocks that might be targets for the implementation of policies related to climate protection.

## Wetlands for disaster risk reduction

### *Coastal wetlands*

The frequency of natural disasters has doubled over the past 35 years, and the majority of those disasters are water-related. Coastal communities are among those most at risk from increasingly frequent natural disasters, including storm surges, flooding and inundation from sea level rise. Some 40 million people live in flood-prone coastal cities, and this figure is projected to rise to 150 million by 2070 (Temmerman *et al.* 2013). Salt marshes and mangroves arguably provide the best natural defense. For instance, narrow bands of mangrove forest along a coastline can decrease wave height and energy, by an average of between 13% and 66% over a distance of 100 metres, preventing wave damage and erosion during high tides.

Rates of sea level rise are expected to increase by as much as a metre over the next century (IPCC, 2013b). Because coastal wetlands accrete vertically (accumulating carbon as they do so), they are able to keep pace with rising sea levels, protecting human activities further inland (Church *et al.* 2001).

Wetland restoration and management techniques are critical to ecosystem-based adaptation practices designed to build community resilience and reduce disaster risk. They are generally more sustainable, cost effective and ecologically sound than conventional hard engineering practices (Temmerman *et al.* 2013). The construction of sea walls, groynes or dikes is often seen as the solution to mitigate flood risks. However, their usefulness can be limited by the costs and challenges of maintenance, and the need to expand engineering defenses as storm intensity increases. In addition, these physical structures alter the natural patterns of sediment accumulation, reducing the ability of coastal zones to keep pace with sea level rise, further increasing risk (Temmerman *et al.* 2013).

Wetland restoration not only reduces human vulnerability to weather-related events, but also provides important co-benefits. For example, mangrove restoration not only offers protection from storm surges and enhances carbon sequestration, but it also provides habitat for a wealth of species, increases fish and shellfish production, creating livelihood opportunities and thereby counters poverty (Lo, 2016). Utilization of wetland ecosystem-based adaptation employs the principles of ecological engineering which approach restoration with the goal of “integrating human society with its natural environment for the benefit of both” (Cheong *et al.* 2013, Mitsch & Jorgensen, 1989).

Substantial mangrove restoration efforts are taking place in Sri Lanka, which has the goal of becoming the first nation in the world to protect all its mangroves by protecting 8,815 hectares and restoring 3,880 additional hectares. Funds are also designated to establish a training and microfinance program to support business start-ups by women in local communities in return for their protection of the mangrove forests<sup>3</sup>.

## Inland wetlands

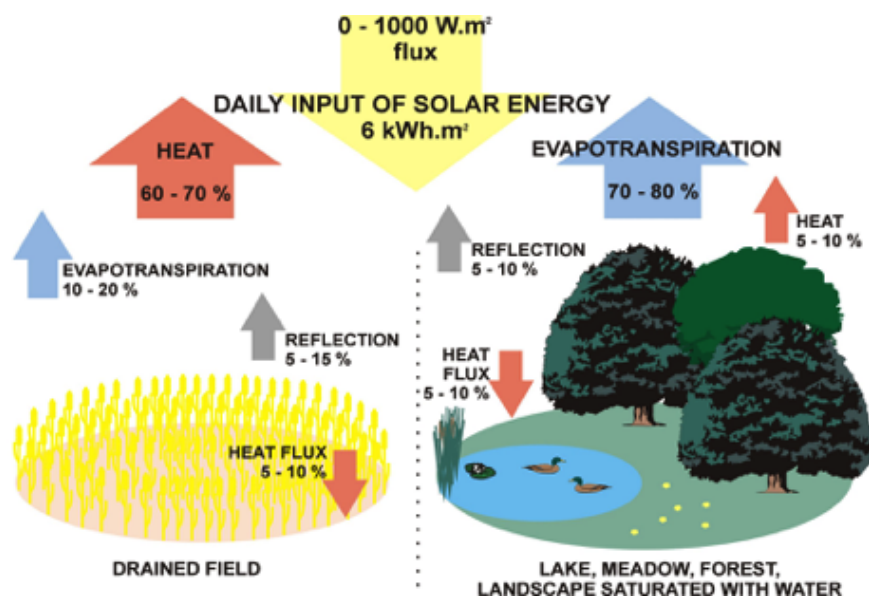
Inland wetlands (including freshwater peatlands) provide a host of ecosystem services that mitigate climate change and reduce disaster risks, including flood protection and the moderation of local climates, regulation of local water cycles and maintenance of water supplies.

Floodplain and riparian wetlands protect downstream areas from flooding and the erosive impact of storms, by storing runoff and reducing peak flows. Many inland floods are exacerbated by engineering measures to channel rivers and the destruction of wetlands from the surrounding landscape. This leads to shorter river lengths and the loss of wetlands that serve as water retention areas (Mitsch and Gosselink, 2015). The economic benefits of restoring floodplain wetlands can be high. During a recent tropical storm, wetlands and floodplains in the Otter Creek watershed in Vermont, U.S.A., reduced flood damage by an estimated 84% to 95%, saving between USD 126,000 and 450,000 in clean-up costs (Watson *et al.* 2016).

Inland wetlands affect local climate, and their loss and degradation can adversely affect climatic conditions (Figure 4). Draining wetlands and clearing vegetation increases temperatures by lowering the surface albedo (reflectiveness), and so increasing the solar energy absorbed (Foley *et al.* 2003). The evapotranspiration of water from wetlands dissipates large amounts of energy (up to 70% of incoming solar energy is stored in the water vapour in the form of latent heat which is released when water condenses on cooler surfaces) while in dry landscapes the majority of solar energy is transformed into sensible heat. The loss of water storage on the landscape can significantly increase local daytime temperatures and may reduce annual rainfall (Pokorný *et al.* 2010a, b). The impact can be substantial, particularly at higher latitudes (between 45 to 90 degrees), where changing land cover overall may increase warming by an additional 1.6 degrees Celsius above the 3.3 degrees predicted from a doubling of atmospheric CO<sub>2</sub> (Costa & Foley, 2000).

**Figure 3**

The dissipation of solar energy. A comparison of heat flows over a drained wheat field and a wetland. Note the differences in solar energy transformation into sensible heat, reaching up to 60% to 70% over a drained crop field compared to only 5% to 10% over an intact wetland. In wetland landscapes, 70% to 80% of heat is dissipated via evapotranspiration. (Based on data measured in Trebon, Czech Republic. Source: Pokorný *et al.* 2010b).



Restoring floodplain and other inland wetlands as green infrastructure has the potential to decrease flooding and flood damages, improve water quality, and moderate local climates. Strategies for restoration depend on the causes of the wetland loss or degradation. In areas where hydrologic alteration is high it may be necessary to plug ditches, remove agricultural or urban drainage structures, and reconnect wetlands and rivers. Past efforts to dewater the landscape may necessitate the restoration of environmental flows to support the full complement of wetland biodiversity and ecosystem services. Large inland restoration projects are currently underway in all Ramsar regions, for example a project to reconnect wetlands to the Yangtze River to reduce flood damages in China (Kumar *et al.* 2017).

Best practices for inland wetland restoration include:

- Planning for restoration at the catchment scale includes connecting floodplains with their rivers and streams to restore the hydrologic benefits of wetlands by reestablishing the natural pattern of floodplain inundation (Craft, 2016). Restoring wetlands not adjacent to rivers can be planned to take advantage of remnant wetland soils and water sources within a catchment basin to maximize the re-establishment of ecosystem services.
- Where possible, engineering techniques should be minimized. Planning restoration to take advantage of the principles of self-design by allowing natural ecological processes to dominate the restoration process and allowing for passive management can lead to resilient ecosystems and minimize costs (Craft, 2016).
- In urban areas, wetland restoration can form a network of sites that benefit human well-being while mitigating flood and climate risks, and recycling water (Niemela *et al.* 2010).

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## The Ramsar Convention



The Convention on Wetlands, also known as the Ramsar Convention, is a global inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is the only global treaty to focus on one single ecosystem.





# Integrating multiple wetland values into decision-making

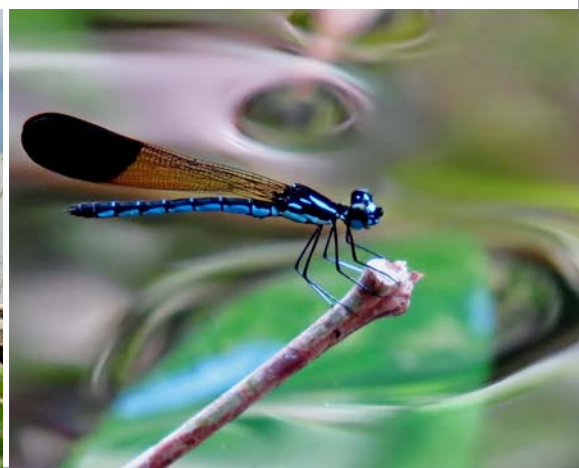
The Ramsar Convention recognizes the interdependence of people on wetlands for their important economic, cultural, scientific and recreational values. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) provides a framework for considering the multiple values of nature, including wetlands, and its benefits to society within policy-making and decision-making processes. The recognition of the diverse values of wetlands is essential to their wise use, and to ensuring that their role is reflected in global policy processes such as the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement on climate change.

This Policy Brief can support policy-makers by informing and facilitating the integration of the multiple values of wetlands across sectors, supported by improved valuation studies, to enhance the relevance and impact of policies.

## Policy recommendations

- To achieve wise use, and for wetlands to contribute fully to sustainable development, policy-makers and practitioners<sup>1</sup> (such as site managers) should recognize the multiple values of wetlands, and reflect them in their decisions, policies and actions.
- Assessments of the multiple values of wetlands must include a recognition and consideration of a range of different value systems.
- Multiple wetland values need to inform collaborative, cross-sectoral efforts. The different sectors engaged in wetland governance should communicate and collaborate to ensure that these multiple wetland values are recognized.
- Assessments of the multiple values of wetlands should follow credible, legitimate and relevant processes if they are to be accepted and have an impact on policy.

<sup>1</sup> Resolution XII.5, Annex I, paragraph 54 (ii), defines practitioners as including “wetland managers and stakeholders, but also others from related fields, such as protected area managers and staff of wetland education centres.”





## The issue

Wetlands make diverse contributions to human wellbeing, which people and communities value. The consequences of wetland management and mismanagement affect all sectors of society; however, the values which people assign to wetlands and the impacts of wetland management decisions are not always adequately considered in development planning and other decision-making.

Stakeholders and decision-makers attribute values to wetlands and their benefits to people in diverse ways. Policy-makers within and across all sectors must recognize and take into account these multiple wetland values and their interdependencies if wetland wise use and sustainable development are to be achieved. When stakeholders in one sector make decisions based only on their interests, benefits to parties in other sectors may be undermined or lost, perpetuating wetland degradation and limiting options for wise use.

Beyond the intrinsic value of nature and ecosystem properties, the IPBES considers nature's contributions to people in three broad groups: regulating, material and non-material. In the context of wetlands, these contributions represent different facets of the ways these ecosystems support a good quality of life. They range from meeting basic needs such as for food and water, to regulating the environment and to providing identity and meaning to different social groups.

The way wetlands are valued varies according to how different cultures, social groups and disciplines perceive the relationships between society and nature. Wetland values can be viewed in different ways ranging, for example, from monetary to aesthetic, spiritual or totemic (for example, relating a wetland or wetland species to societal existence). They can be expressed quantitatively (such as yield of fish) or qualitatively, as a principle or core belief (such as the right of species or a community to survive), importance (such as the role of a wetland in disaster risk reduction) or a preference (maintaining wetland ecological character to support tourism). To achieve wise use of wetlands, it is critical to explicitly and transparently recognize, assess and integrate these multiple perspectives in policy-making.

## Recognizing and assessing multiple wetland values

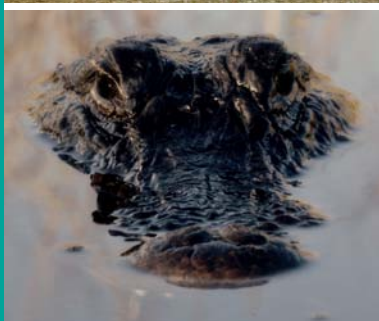
Recognizing and assessing the full range of values is essential to making informed decisions on wetlands. Assessment of multiple values is more effectively achieved by:

- Identifying and agreeing on the purpose of valuation in the context of the overall objectives for the wetland.

### Multiple values of wetlands: The case of Lake Chilika, India

© Lake Chilika, India, by Ritesh Kumar, Wetlands International

INTRINSIC VALUES Wetland ecosystem components and processes		
<b>Non-Material Contributions</b> <ul style="list-style-type: none"> <li>• Sense of place</li> <li>• Cultural identity</li> <li>• Recreation</li> </ul>	<b>Material Contributions</b> <ul style="list-style-type: none"> <li>• Fish as food and source of income</li> <li>• Plants</li> </ul>	<b>Regulating Contributions</b> <ul style="list-style-type: none"> <li>• Flood buffer</li> <li>• Habitat for migratory birds</li> <li>• Climate regulation</li> </ul>



- Engaging all relevant stakeholders, mindful of future generations, throughout the process.
- Using a range of relevant valuation methods.
- Communicating the findings of valuations in terms relevant to the stakeholders.

In order to enhance the policy impact and acceptability of the assessment process, it is important to build:

- Credibility, in terms of perceived quality, validity and appropriateness of the knowledge base, assessment team and process.
- Legitimacy, by ensuring a fair assessment process.
- Relevance, determined by the responsiveness of the assessment process to policy contexts and societal needs.

A step-by-step approach for practitioners on how to assess multiple values, inspired by IPBES, is annexed to this document.

## Policy options and implications for integrating multiple wetland values into decision-making

- Decision-making based solely on monetary values or other one-dimensional perspectives is highly likely to compromise wetland integrity and the continued delivery of a full range of benefits to stakeholders. Decisions are more effectively informed by a richer understanding of the multiple values of wetlands and their contributions to people.
- A pre-requisite for aligning wetland and sustainable development policies and practices is the existence of an integrated, multi-sectoral policy-making environment in which the potential contributions of wetland values to goals of other sectors can be articulated, understood and incorporated into broader landscape-scale policy.
- Addressing multiple wetland values supports the integration and achievement of policy priorities such as poverty alleviation and food, water and climate security, and informs policy tools such as natural capital accounting and strategic economic and environmental assessments. Likewise, it delivers better outcomes through aligning wetland policies to better support global processes, including the Sustainable Development Agenda (Sustainable Development Goals), Sendai Framework for Disaster Risk Reduction (Sendai Targets), and the Paris Agreement on climate change (Nationally Determined Contributions).
- Taking account of multiple values improves the capacity to identify options that optimize overall present and future societal benefits while minimizing trade-offs, thereby contributing to sustaining wetland systems, their resilience and contributions to people.
- Recognition of the multiple values of wetlands can lead to more equitable and more widely accepted decisions.
- Although seemingly complex, recognition and integration of multiple values into on-going policy processes and management decision-making can be achieved using the established processes and tools highlighted in the Annex. The evidence shows that the effort involved is cost-effective and justified by improved policy outcomes.

## Limitations and further research

Methods for assessing all of the diverse values provided by wetlands are in varying stages of maturity, with many requiring further applied research.

An increasingly participatory approach to policy development and decision-making is required to assess the diverse values assigned to wetlands, which takes into account traditional and other forms of knowledge that inform such values. Pragmatic deliberative approaches to achieve this require further uptake and, in some cases, innovation.

Current governance arrangements and associated financing in different policy areas tend to remain fragmented. Further research is required into approaches that effectively enable improved integration between policy areas.

Innovations are required to ensure policy interventions and management practices that transparently improve outcomes across the range of wetland values, optimizing overall present and future societal benefits and wetland resilience.



# Annex: Protocol for assessing multiple values of wetlands

## Introduction

- This protocol is intended to help wetland managers assess the multiple values of these ecosystems and their benefits to people. These values are diverse and extend well beyond those that may be monetized or otherwise quantified. They include intrinsic, regulatory, material and non-material values.
- Valuation is not an end in itself, but a part of a process to better inform policy and practice. Setting the appropriate policy context for the valuation process is vital if the outputs are to be credible, legitimate and relevant.
- At site, river basin, national and global scales, awareness of the multiple values of wetlands can support more integrated and equitable management and policy-making.
- Within river basins and coastal zones, awareness of multiple values can help link wetlands with wider water and land management objectives. At the site scale, multiple values can help demonstrate the connections between the wise use of wetlands and development agendas such as poverty alleviation, food security and human health.
- Recognizing, assessing and explicitly including the multiple values of wetlands in policy-making requires an integrated vision, which is presented in the form of this protocol. This protocol should therefore be read along with the policy brief, which provides the context of integration of the multiple values of wetlands into management.
- This protocol is an adaptation of the IPBES six-step guide for diverse conceptualization of nature and its benefits.

### The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Established in 2012 by over 100 governments, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, [www.ibpes.net](http://www.ibpes.net)) is an intergovernmental body charged with strengthening the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human wellbeing and sustainable development.



## The multiple values of wetlands

The term “value” can mean a **principle or core belief**, a **preference** (for something or a particular state of the world), the **importance** (of something for itself or for other things) or a **measure** (for example the number of species). For example, value attributed to the right of wetland species to survive originates in a principle of equality of life forms on earth. However, the value which communities attribute to maintaining a certain proportion of fish stock of economic value is an expression of their preference. For example, the value of a floodplain wetland for flood control is related to its **importance** for water management objectives, while water levels or water quality parameters of a wetland are **measures** of specific ecosystem components or processes.

Multiple values can be formed within different cultural, social and institutional contexts, and can be interrelated. For example, the ability of a wetland to deliver the material value of reliable and high-quality water, the non-material sense of place that an individual or community feels for the wetland, the importance of the wetland for flood regulation, and the intrinsic right of species to exist can combine as strong values supporting wise use. Values based on market prices reflect only some of these multiple values of wetlands, and so it is important to address the many values held by different stakeholders when designing and negotiating policies, programmes and actions relating to wetlands and their benefits.

### Multiple values of wetlands and their contributions to people

Intrinsic values of wetlands:

- **Ecosystem properties** (such as biota, species assemblages or ecosystem processes) are of intrinsic value, which underpin their ability to contribute benefits to people. Typically these values emanate from ecosystem components (the living and non-living constituents of wetlands) and processes (that occur between organisms, and within and between populations and communities, including interactions with non-living environment).

Values of wetlands' contributions to people:

- **Regulating contributions** comprise functional and structural aspects of wetlands that modify environmental conditions experienced by people, sustaining or regulating the generation of material and non-material benefits. In many cases, these contributions are not experienced directly. For example, by regulating hydrological regimes, some wetland types can reduce the risk of water-related disasters as floods and droughts.
- **Material contributions** include substances, objects or other material elements from nature that sustain people's physical existence and infrastructure. Material contributions are typically consumable, for example fish, food or water harvested from a wetland.
- **Non-material contributions** cover nature's contribution to people's subjective or psychological quality of life, individually and collectively. The sources of these intangible contributions can be physically consumed in the process (such as recreational or ritual fishing) or conserved (such as ecosystems as a source of inspiration).





Table 1. Examples of values of wetlands and their contributions to people

	Focus of value	Example		
Values of wetlands' contributions to people	Material contributions	<b>Food and fibre</b>	Wetlands as source of fish and rice.	
		<b>Water</b>	Wetlands as source of freshwater for human and ecological use.	
		<b>Medicinal, biochemical and genetic resources</b>	Materials derived from wetlands for use as medicine and biotechnology.	
	Non-material contributions	<b>Learning and inspiration</b>	Wetlands as an avenue for research and education on aquatic ecosystems.	
		<b>Physical and psychological experiences</b>	Wetlands as source of recreation and tourism.	
		<b>Supporting identities</b>	Wetlands providing a sense of place and connectedness to communities.	
		<b>Maintenance of options</b>	Capacity of wetlands to support current and future climate change adaptation.	
	Regulating contributions	<b>Habitat creation and maintenance</b>	Wetlands as habitats for migratory birds within flyway.	
		<b>Climate regulation</b>	Role of wetlands as carbon sinks.	
		<b>Regulation of freshwater quantity, flow and timings</b>	Role of wetlands in moderating floods and droughts.	
		<b>Regulation of water quality</b>	Role of wetlands in water purification.	
		<b>Regulation of hazards and extreme events</b>	Role of wetlands in moderating storm surges.	
		<b>Regulation of pests</b>	Dragonflies and insectivorous birds controlling population of pest species such as mosquitoes.	
	Intrinsic values of wetlands	Ecosystem properties	<b>Biota</b>	Species diversity.
			<b>Species assemblages</b>	Population and communities of wetland species.
<b>Ecosystem processes</b>			Energy – nutrient dynamics.	



# Assessing multiple values

Multiple values of wetlands and their contribution to people can be assessed in a six-step sequential chain, illustrated in Figure 1, in which each step is triggered by a set of guiding questions.

Figure 1: Six-step sequential chain for assessing multiple values of wetlands

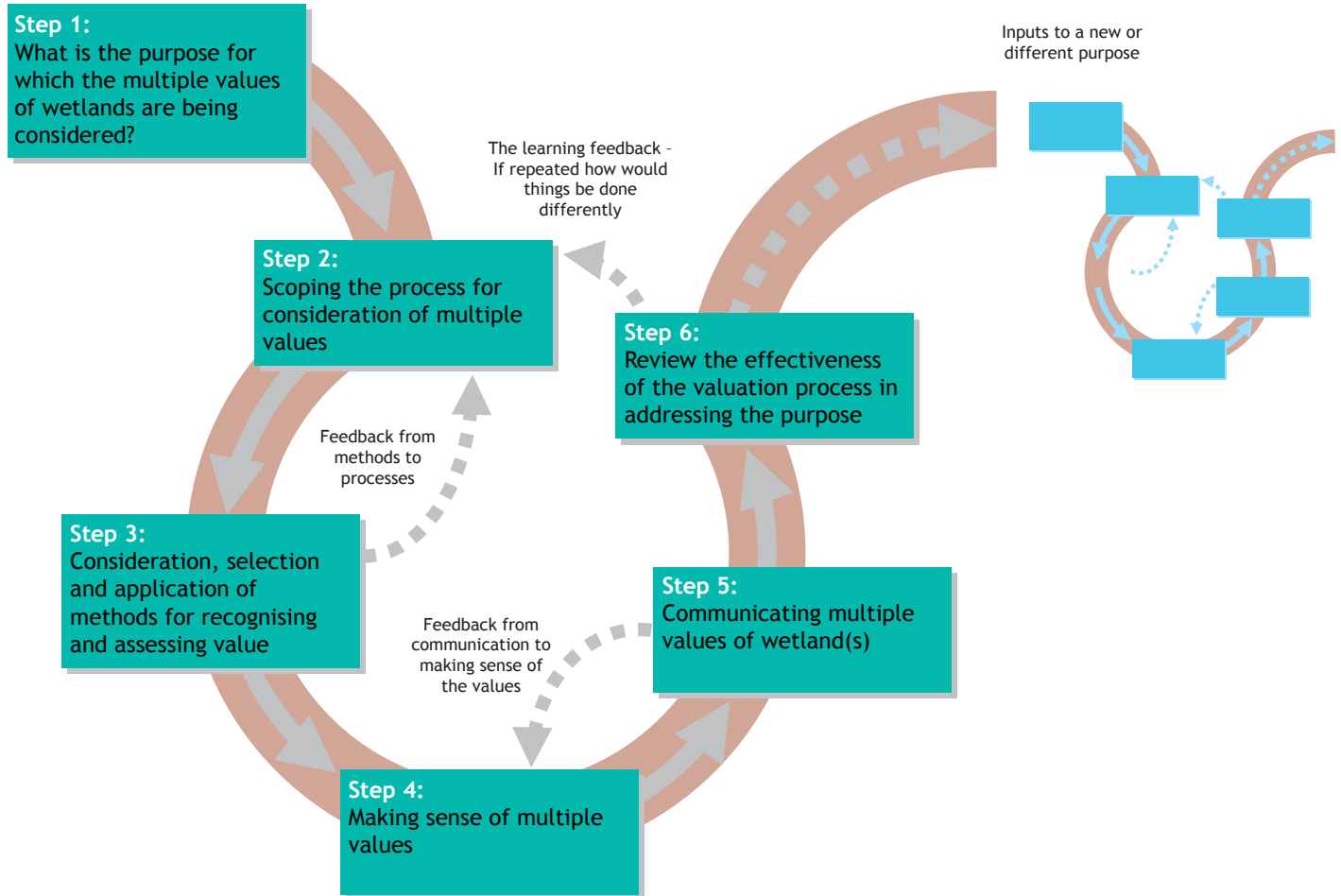




Table 2. The six steps for assessing multiple values of wetlands

Steps	Explanation	Guiding questions
<p><b>Step 1: Determining the purpose for which the multiple values of wetlands are being considered.</b></p>	<p>Assessment of values is not an end in itself, but needs to support a policy or decision-making context. The issues involved and that these issues may differ considerably for different stakeholders.</p> <p>Clarity of purpose is essential to ensure that the results are relevant.</p>	<p>How will values be used?</p> <p>What are the issues and who has stakes?</p> <p>What specific decisions could be informed?</p> <p>What are the timelines of these decisions and how specific are the information needs?</p> <p>What type of values will be best suited to inform the issues?</p>
<p><b>Step 2: Scoping the process for consideration of multiple values.</b></p>	<p>It is important to be explicit about the scope and process followed to derive values associated with the wetland.</p> <p>Identify and design an engagement strategy with key stakeholders.</p> <p>Use Table1 to identify as many of the values and potential stakeholders as possible.</p> <p>Consider current and future values, as well as values expressed at different spatial scales.</p> <p>Account for appropriate different types of knowledge and information.</p> <p>Ensure the process is legitimate, transparent and inclusive.</p>	<p>How is the valuation process organized in terms of human and financial resources?</p> <p>Are all forms of knowledge (scientific as well as traditional) required for an assessment taken into account?</p> <p>Who will you involve in valuations? Who will be informed, when and how?</p> <p>Which values matter to the different stakeholders, who relates with or uses the wetland in what ways?</p> <p>Who is affected by the decisions or changes that might occur – for example, will there be effects downstream?</p> <p>How will inclusiveness or the process and ownership of the outputs be achieved?</p>
<p><b>Step 3: Consideration, selection and application of methods for recognizing and assessing multiple values.</b></p>	<p>In order to select adequate methods and approaches it is important to:</p> <p>Establish the boundaries of resource and resource use being assessed;</p> <p>Select multiple methods and approaches to ensure multiple values are covered;</p> <p>Establish baseline;</p> <p>Assess changes.</p>	<p>What methods are appropriate and proportionate for the purpose of the valuation study?</p> <p>Can simple and rapid assessment methods be applied?</p> <p>Have you interacted with an appropriate range of stakeholders?</p> <p>Have you considered local and indigenous knowledge?</p> <p>What values cannot be assessed adequately and why?</p>
<p><b>Step 4: Making sense of multiple values.</b></p>	<p>Different values can sometimes be integrated or at least linked and presented jointly to inform the purpose, for example by using different approaches (such as narrative, storyboard, diagrams and illustrations and numbers where relevant).</p>	<p>Are you confident that a representative set of multiple values has been assessed?</p> <p>What are the consequences of knowledge gaps? (It is acceptable and likely that there will be gaps, but it is important to consider the consequences of knowledge gaps.)</p> <p>What are the meanings of the multiple values and the gaps at different spatial and temporal scales?</p>



## Step 5: Communicating multiple values of wetland(s).

The outcomes of valuation need to be communicated if they are to be relevant and used, including engagement with key stakeholders during the valuation process, as well as other groups when the study concludes.

Identify the implications of the multiple values for the purpose of the assessment.

Discuss and develop the results with different stakeholders and policy makers.

Be explicit about the gaps and your confidence in the results.

Has a participatory approach been undertaken with stakeholders of the valuation?

Can stakeholders engaged in the valuation become ambassadors or advocates of multiple values?

Who else do you need to communicate with?

What are the appropriate media to reach these diverse stakeholder groups?

How can uptake of the results in the policy and decision-making context be achieved?

## Step 6: Reviewing the effectiveness of the valuation process in addressing the purpose.

It is important to evaluate the effectiveness of the valuation process in serving the purpose for which it was conducted.

Did the valuation achieve the purpose for which it was conducted?

What were its strengths and weaknesses?

How could the valuation process be complemented, extended or improved?

Could the outputs of the valuation be used for other purposes?

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### Further reading

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## The Ramsar Convention



The Convention on Wetlands, also known as the Ramsar Convention, is a global inter-governmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It is the only global treaty to focus on one single ecosystem.



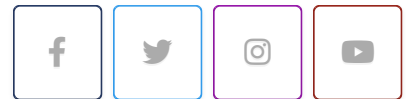
# Williams Lake Conservation Company

Established in 1968 for the Preservation of Williams Lake

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## Wetlands: natural defence against wildfires

 admin  October 23, 2023  Conservation, Flora & Fauna, Watershed, Wildlife



## Wetlands – natural defence against wildfires

by: Cathy Vaughan

**[Reprinted with permission from Chebucto News, October 2023]**

**W**ildfires have slammed our local communities recently and heightened our awareness of the results of human activity on climate change. Besides the practical tasks, such as emergency evacuation preparedness, we are now looking to the science of wetlands as a valuable and available natural defence against wildfires.

Search the WLCC web site:

## Protect the Purcell's Cove Backlands



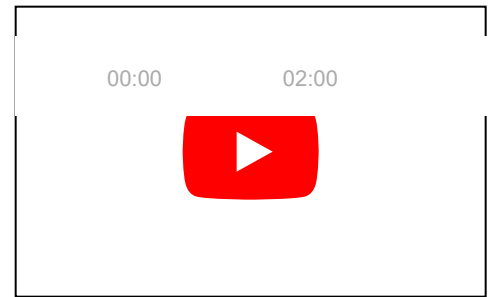
Wildfire in Spryfield stopped at wetlands surrounding Lower Mud Pond in the Backlands, 2009 [photo: David Patriquin]

The Spryfield area is surrounded by an abundance of marshes, swamps, rivers and lakes which contain a valuable fire suppressant – water. These moisture-laden wetlands help prevent fires and can act as natural barriers to the spread of forest fires. Wet soggy soil doesn't burn so well. The volume of water in our local lakes, rivers and ponds also create a wet obstacle which a forest fire can't necessarily cross.

“There are a lot of allies in nature,” according to Mimi O’Handley, Wetlands and Water Coordinator with Ecology Action Centre in Halifax. “When wetlands are healthy, they are natural sponges and soak up a huge amount of water. A wetland can act as a natural fire break and reduce the intensity of a wildfire.”

Two destructive fires in the Spryfield area in 2009 and 2012 forced the evacuation of hundreds of folks between Herring Cove Road and Purcell’s Cove Road. The extensive wetlands in the Purcells Cove Backlands coupled with the positions of Williams Lake and Colpitt Lake, helped stop the fires at their shorelines. Helicopter water-bombers used water from Williams Lake to help douse the wildfires in the forests in the Backlands.

Besides helping to prevent or slow down the spread of fires, wetlands in the Spryfield Backlands also produce other valuable natural services. Research from Ducks Unlimited Canada shows that “wetlands can reduce the severity of flooding and drought, holding excess water during



[Bore Holes at the Dam](#)

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[Williams Lake dam repairs preliminary work begins](#)

[Backlands Coalition submits comments to the Regional Plan Review](#)

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[Wetlands: natural defence against wildfires](#)

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wet periods and slowing releasing it during dry periods. They also store carbon and provide essential habitat for migratory and threatened species.” These wetlands also supply the McIntosh Run, Williams Lake and Colpitt Lake with volumes of water which support the watershed’s important ecosystems and recreational value.

The Nova Scotia Wetland Conservation Policy aims to protect and guide management of wetlands from the impact of development. “Wetlands of Special Significance” is a status assigned to wetlands on protected lands; wetlands that are habitats for endangered or ‘at risk’ species; salt marshes, and wetlands located in areas that are protected for our drinking water. These special wetlands are automatically protected under this conservation policy.

The province maintains a map-inventory of wetlands throughout Nova Scotia but some wetlands, especially small sites, are not included. The conservation policy cautions that the inventory can be used as a guide but should not replace actual on-site field work to identify all wetlands when planning a development project.

Dr. Patricia Manuel, a retired Dalhousie professor from the Faculty of Architecture and Planning, has taught environmental planning for climate change adaptation and continues to conduct applied research projects on watersheds, wetlands, marine coasts and climate change adaptation planning. Manuel and her students use the Williams Lake watershed and the wetlands in the Purcells Cove Backlands as their natural laboratories and research sites. They have documented many small wetlands that, Dr. Manuel says, “ .... could be easily missed in provincial inventories or by developers in their site assessments.”

A report, co-authored by Dalhousie’s Dr. David Patriquin, biologist and member of the board of directors of Williams Lake Conservation Company, suggests “... that conserving the Williams Lake Backlands and the larger Purcells Cove Backlands as natural systems reduces fire risk to adjacent communities compared to allowing more intrusions into the Backlands.” Patriquin recently participated in a webinar on “Wetlands, Adaptation and Extreme Weather Events” hosted by the Ecology Action Centre and Nature Nova Scotia. Like Dr. Manuel, he is also concerned that many of the wetlands in the Backlands do not meet the criteria stated in the 2011 Nova Scotia Wetland Conservation Policy and won’t be protected from urban development in the Spryfield area.

HRM council has recently requested staff to prepare a wildfire risk and strategy report on the “wildfire risk on wild land-urban interface with preparedness strategies.” Staff will identify a list of local communities that border wild land areas which in the event of a wildfire would require

additional emergency evacuation routes and dry hydrants. Dry hydrants are non-pressurized pipe systems that are permanently installed in a lake, stream or pond that can supply water for dousing a fire in an inaccessible wildland area, like the Williams Lake watershed and Backlands.

Fighting wildfires is pricy. Protecting our wetlands is priceless.

Tagged on: [conservation](#) [watershed](#)

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[Happy Halloween, Williams Lake! →](#)

## Recent Additions

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« Sep Dec »

## pmh Interworks Web Design

pmh Interworks

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# Low-Tech Restoration Improves Forest Resilience

by FSEEE | Feb 20, 2023



A recently published [report](#) concludes that restoring headwaters streams and wetlands enhances wildfire and drought resilience. The report, authored by Jackie Corday and published by American Rivers, reviews and synthesizes published and ongoing research on low-tech process-based restoration (LTPBR) in Western headwaters regions.

LTPBR projects include beaver dam analogs (BDAs), temporary structures made with natural materials (e.g., willow branches, native sod, and cobble). BDAs mimic the influence of beaver dams. As they trap sediment, stream levels gradually rise, floodplains reconnect, and aquifers rehydrate. As incised

streams begin to reconnect with their historic floodplains, they become habitable by beavers, which can maintain and expand upon these temporary structures.

With the presence of beavers, a keystone species across North America, streams return to their natural state prior to the intervention of non-indigenous people. Healthy, functioning floodplains attenuate peak streamflows to recharge groundwater, reduce flood risks, filter sediment and toxins, and provide critical plant and wildlife habitat.

The LTPBR report is especially germane to the Forest Service, which manages millions of acres of headwaters lands across the West and recently received **\$3.3 billion** for wildfire risk reduction. With support from the timber industry, much of that money is being directed toward “forest treatment” projects that involve logging carbon-sequestering trees with petroleum-powered heavy equipment — simultaneously reducing carbon sequestration and increasing greenhouse-gas emissions. By comparison, LTPBR projects mainly rely on manual labor and small equipment.

Stream and wetland degradation began with the practical extermination of beavers in the 1800s, long before records were kept to document the damage. Industrial mining, logging and associated road building followed on the heels of beaver removal, intensively degrading thousands of miles of streams and thousands of acres of wetlands in Western national forests. LTPBR offers a practical way forward. The low cost of LTPBR projects enables implementation at a scale capable of responding to the urgent need to address forest resilience in the face of climate change.

Highlights of Corday’s report include a **2020 study** of large Western wildfires that found riparian vegetation around beaver complexes had a three times greater rate of survival than around stream segments without beavers. Since increasingly common weather-driven fires are unstoppable, restoring national forest streams and wetlands can provide critical oases in fires-scorched landscapes, maximizing the survival of iconic species needed for biodiversity.

Case studies cited in Corday’s report also document water-quality improvements resulting from LTPBR projects. According to the Forest Service, national forests and grasslands are “the largest source of fresh water in the U.S.

under a single manager,” supplying some 180 million people. Given well-publicized threats to Western water supplies, Corday’s report provides a timely reminder that LTPBR projects can, in addition to improving drought and wildfire resilience, help address the Forest Service’s original **legislative mandate** “to protect and enhance water supplies.”

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Current Issue of Forest News



# FOREST NEWS

The Newsletter of Forest Service Employees For Environmental Ethics

Fall 2023



## Surviving Wildfire

### Inside

GUEST AUTHOR: RICK BASS / LOGGING NEAR YELLOWSTONE /  
ELM RESTORATION / EASTERN FORESTS, PART 2

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Federal Wildfire Commission Issues Report



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# Wetlands and resilience to natural hazards

## Introduction

Many people in Australia, particularly those living in low-lying coastal regions, are at risk from significant flooding caused by storms, cyclones, storm surges and tsunamis. Under projected climate change scenarios, extreme climatic events, including floods, droughts and storms, are expected to increase in frequency and intensity. Natural infrastructure, including wetlands, can help provide communities with resilience to these natural hazards.

## How do wetlands provide resilience to natural hazards?

Well-managed ecosystems can reduce the impact of many natural hazards, such as flooding, landslides and storm surges. The extent to which an ecosystem can buffer against extreme events depends on the ecosystem's health and the intensity of the event. According to the World Bank (2004), investments in preventative measures, including in maintaining healthy ecosystems, are seven times more effective than the costs incurred by disasters.

While the most extreme events will overwhelm any mitigation approach (whether structural or natural), using natural assets can provide benefits in reducing the severity of the impact of extreme weather events, while structural approaches offer little benefit once breached.

Wetlands can provide resilience to the following natural hazards:

- floods—wetlands on the floodplains along waterways can mitigate the impacts of floods by absorbing excess water and retaining it or returning it to the water table. When a river is cut off from its floodplain and associated wetlands, floodwaters are forced to flow in the main channel, and can create deep and high velocity flows downstream.
- drought—healthy and well-functioning ecosystems can provide a degree of protection from extreme weather events. Wetlands can store water which provides a buffer against droughts.
- fire—wetlands can act as a natural barrier to the spread of fires, regulating the frequency and magnitude of fire events.
- storms—coastal saltmarshes and mangroves act as a frontline defence against incoming storms. They help minimise the impact of storms by slowing the speed and reducing the height and force of waves, by slowing winds and by stabilising soil and sediments. Coral reefs also provide coasts with storm protection, by absorbing wave energy, reducing wave heights and reducing erosion.
- landslides and erosion—maintaining and restoring catchment, riparian and in-stream vegetation can stabilise soil, reduce runoff during storms and slow flood waters, reducing the risk of erosion to catchments and streambanks. Floodplains provide natural flood storage, spreading the flood flow and reducing impacts on downstream areas.

## What can we do?

Healthy and well-managed wetlands can help reduce the exposure of people and their productive assets to hazards. To take advantage of this natural infrastructure we can:

- recognise the natural movements of waterways across floodplains and natural changes in shorelines, and retain undeveloped areas which allow this to happen
- consider the use of natural infrastructure to act as buffers to absorb the energy of floods, wind, storm, rather than, or along with, engineering solutions. Maintaining and restoring coastal wetlands can also offer additional benefits for biodiversity, tourism, recreation and fishing, as well as for carbon capture and storage
- manage and restore wetlands as part of contingency planning to reduce the impacts of natural phenomena such as floods
- integrate ecosystem management, in particular relating to wetland and water management, into national disaster risk reduction and climate change adaptation strategies
- incorporate disaster risk reduction measures in wetland and natural resource management plans and other policies, action plans and programs
- avoid, as far as possible, activities in and adjacent to wetlands, such as in-filling, reclamation and infrastructure development which might reduce the role that the wetlands play in mitigating the impact of disasters
- build the resilience of wetland areas by establishing reserves, removing weeds and pests, maintaining water flows and revegetating degraded areas
- carry out long-term research on wetlands and disaster risk management in the face of climate change.



Photo: Wildfire © Kerry Trapnell and the Department of the Environment and Energy

## Further information

- Ramsar Convention Resolution—Wetlands and Disaster Risk Reduction  
[www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction](http://www.ramsar.org/document/resolution-xii13-wetlands-and-disaster-risk-reduction)
- National Climate Resilience and Adaptation Strategy  
[www.environment.gov.au/climate-change/adaptation/publications/national-climate-resilience-and-adaptation-strategy](http://www.environment.gov.au/climate-change/adaptation/publications/national-climate-resilience-and-adaptation-strategy)
- Fact Sheet—Mangroves and saltmarshes  
[www.environment.gov.au/water/wetlands/publications/factsheet-wetlands-mangroves-saltmarsh](http://www.environment.gov.au/water/wetlands/publications/factsheet-wetlands-mangroves-saltmarsh)
- Programs—National Landcare Programme, Green Army  
[www.environment.gov.au/about-us/grants-funding](http://www.environment.gov.au/about-us/grants-funding)

Recent floods and storms in Australia have caused significant losses, including damage of up to \$1 billion due to storms which flooded the Hunter valley in April 2015, \$206 million losses due to Sydney's Kurnell tornado in December 2015 and losses of \$56 million for floods across Queensland, NSW, Victoria and Tasmania in June 2016.

More than \$226 billion (in 2008 dollars) in commercial, industrial, road and rail, and residential assets are potentially exposed to flooding and erosion hazards at a sea level rise of 1.1 metres (a high end scenario for 2100).

Mangroves protect the coast by absorbing the energy of storm-driven waves and wind. The only two yachts undamaged by Cyclone Tracy in Darwin in 1974 were sheltered in a mangrove creek. In 2006, mangroves protected vessels and the coastline during Cyclone Larry in far north Queensland. The damage bill would have been much higher if it wasn't for the existence of intact mangrove forests.

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A wildfire rips through the forest near Fort McMurray on Highway 63 in May 2016. (THE CANADIAN PRESS/Jonathan Hayward)

## How to fight wildfires and climate change with wetlands

Published: July 4, 2019 4.12pm EDT

### **Mike Waddington**

Professor, School of Geography and Earth Sciences, McMaster University

### **Sophie Wilkinson**

PhD Candidate, School of Geography and Earth Sciences, McMaster University

As unlikely as it may sound, a new approach for fighting the destruction of wildfires in Canada's boreal region may lie in unassuming wetlands packed with soaking wet layers of peat and topped with living moss.

These same humble wetlands can also play a heroic part in curbing the effects of global climate change, but only if we protect those that remain and bring back the ones we humans have already damaged and destroyed.

Certainly, the more glamorous belt of boreal forest that rings the top of the northern hemisphere is vital to the planet's ecology, and it plays a significant part in storing carbon. But between tracts of forest, there is a far bigger, if less familiar repository of carbon stored directly underfoot in large and small tracts of peatlands.

Natural, healthy peatlands hold decaying moss, lots of water and support a living carpet of a special fire-resistant moss called sphagnum. In this way, the peatland can act as a fire break to restrict the fire from spreading and limit the amount of carbon emitted to the atmosphere as it burns.



## Out-of-control peat fires

But the opposite is true for a dried or degraded peatland, which can accelerate, magnify and prolong the threat of fire. A peat fire can survive unseen even through the winter, only to surface again and take down neighbouring forests in the spring and summer.

Dried peat burns readily, releasing carbon that was previously locked away for centuries to millennia, generates thick and potentially deadly smoke and resists being extinguished. In Russia, the smoke from out-of-control peat fires contributed to the deaths of thousands of people in Moscow in 2010.



People staying near the town of Elektrogorsk, Russia, protect themselves from the smoke from burning peat fires in 2010. (AP Photo/Sergey Ponomarev)

Northern peatlands cover 3.5 million square kilometres globally and store an estimated 500 billion tonnes of carbon, which is the equivalent of about 60 years' worth of global carbon emissions from fossil fuels. The world needs our northern peatlands, but they can only help us if they are healthy and wet, and keeping them that way has not been a high priority. Instead, human activity and the unchecked growth of trees in a warming and drying boreal forest is increasingly leaving our peat vulnerable.

In other words, a healthy, wet peatland is a boon. A dried or degraded peatland is a threat.

## Good bog, bad bog

Sometimes the difference is hard to appreciate. The seemingly simple act of building a road across a peatland can, unintentionally and invisibly, turn a beneficial fire break into a menace.

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A Russian Emergencies Ministry soldier floods a peat bog to prevent a fire from spreading near Shatura, Russia, in August 2010. (AP Photo/Ivan Sekretarev)

Road beds can choke off underground water flow, silently transforming healthy, saturated peatlands into hazardous repositories of the worst kind of fuel. Deliberately draining peatlands for agriculture, development or resource extraction can have the same or worse effect often perched at the edge of where people live, work and play.

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McMaster researcher Sophie Wilkinson demonstrates the resistance of super moss to wildfire. She stands next to an unburned mound of wet, spongy sphagnum moss after an experimental fire in a bog, conducted in partnership with FP Innovations, Alberta Agriculture and Forestry, and the Canadian Forest Service. Greg Verkaik, Author provided

We saw and later studied a problematic peatland in Fort McMurray in 2016. The only highway in and out of town, Highway 63, had been built through a drained peatland, which became caught up in the Horse River Creek wildfire — the costliest natural disaster in Canadian history.

We were able to compare the combustibility of the drained and undrained sections of that peatland, and the differences in burn severity and carbon loss were stark, as those who evacuated the terrifying fire as they tried to navigate that highway can attest.

### **Super mosses**

Through this research we determined that the un-checked growth of spruce trees in drained peat can actually further harm a peatland's ability to resist fire. When such trees are allowed to grow tall and wide, they shade out the protective cover of fire-resistant sphagnum “super mosses.” At the same time, they suck up water like giant drinking straws, turning the forest and peat alike into burn-ready fuel.

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A burned peatland in the Fort McMurray wildfire. Mike Waddington, Author provided

As climate change continues to warm and dry the boreal region the threat of mega peat fires and carbon loss will continue to grow.

The fortunate truth is that peatlands, even years after being dried out, can be dragged back to the other side of the wildfire and carbon ledger — from a source of fuel and carbon to a fire break and carbon sink — by strategic re-wetting, selective spruce tree removal and replanting with fire-resistant super mosses.

In fact, the most effective technology for restoring peatlands is a made-in-Canada success story. The restoration technology is expensive, but can save untold costs in terms of wildfire risk protection, air quality and climate mitigation.

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### ***Read more: Fighting historic wildfires amid bad ideas and no funding***

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With over 20 million hectares of degraded northern peatlands in Europe alone and with the threat of climate change mediated peatland drying and degradation expected to impact millions and millions more, we call for planting mosses and peatland restoration to become as common place as planting trees as a means to fight climate change.



Canada is home to one-third of the world's northern peatlands and those peatlands, unlike those in other parts of the world, are currently primarily intact. That is heartening, of course, but it also means we have the responsibility of more to protect.

**Subject:** Celebrating World Wetlands Day  
**From:** "Washington Department of Ecology" <[waecy@public.govdelivery.com](mailto:waecy@public.govdelivery.com)>  
**Sent:** 02/02/2024 15:34:01  
**To:** [tmroberson61@gmail.com](mailto:tmroberson61@gmail.com);



**BLOG**

**February 2, 2024**



## World Wetlands Day

### Protecting Washington's vital wetland resources

Today, Feb. 2, is World Wetlands Day and we're celebrating how our work helps protect, conserve, and restore Washington's wetlands.

Wetlands are land areas saturated or flooded with water, either permanently or seasonally. They provide many environmental benefits such as filtering pollutants and recharging drinking water aquifers, slowing down stormwater runoff during floods, stabilizing shorelines,

drinking water aquifers, slowing down stormwater runoff during floods, stabilizing shorelines, and providing habitat for wildlife and fish, including salmon.

## Wetlands and climate

Wetlands are natural guardians against pollution and climate change. They capture and store more carbon than any other ecosystem on Earth. Peat bogs, for example, store roughly 30% of land-based carbon, twice the amount of all the world's forests. Wetlands help to safeguard the 60% of humanity living along the world's coastlines against storm surges, hurricanes, and tsunamis. An acre of wetland can also store up to 1.5 million gallons of floodwater.

Unfortunately, wetlands are at high risk from climate change, and damage to wetlands can severely impact many economically marginalized people.

## Wetlands and water

Wetlands hold and provide most of our freshwater. They naturally filter pollutants, providing water we can safely drink. Unfortunately, we

currently use more water than nature can replenish. Our water use has increased sixfold in the last 100 years and rises 1% annually. Unfortunately, less than 1% of freshwater is usable and almost all global freshwater sources are compromised. This exposes the world's population to high levels of pollution in their water supply.

World  
Wetlands Day  
2 February 2024



## Wetlands and food

Wetlands have boosted the development of civilizations for thousands of years. They have provided people access to fish and other food, as well as freshwater for crops and livestock. Today, unsustainable agricultural practices around the world are damaging and destroying wetlands.

## Wetlands and livelihoods

Wetlands provide for more than 1 billion livelihoods across the world. There are more than 660 million people that depend on fishing and aquaculture for a living. There are almost 1 billion households in Asia, Africa and the Americas that rely on rice growing and processing for their main livelihoods. Wetlands also offer economic opportunities for indigenous populations including harvesting and processing:

- Medicinal plants
- Dyes
- Fruits
- Reeds and grasses

Ongoing wetland loss is driving a vicious cycle of declining biodiversity and deepening poverty.

## Wetlands and culture

Wetlands are a cherished part of cultural and spiritual life. The wetland landscape reflects the close relationship between humans and wetlands over millennia. Water is known as the sustainer of life and inspired humankind’s creative and spiritual minds from the earliest times.

## How we’re helping Washington’s wetlands

Over the last 30 years, we've been successful in receiving over \$82 million in federal wetland conservation grants, allowing us to help conserve more than 16,000 acres of coastal wetlands. In 2024, The U.S. Fish and Wildlife Service awarded us \$5 million in new [National Coastal Wetlands Conservation grants](#) to fund five coastal wetland projects.

Find out more about these projects [on our blog](#).

[Read more online](#)

**Andy Wineke**

*Communications*

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This email was sent to [tmroberson61@gmail.com](mailto:tmroberson61@gmail.com) using GovDelivery Communications Cloud on behalf of: Washington Department of Ecology · 300 Desmond Drive SE · Lacey, WA 98503





**Subject:** Re[2]: City Council Meeting 6 Feb 2024  
**From:** "Tammy Roberson" <[tmroberson61@gmail.com](mailto:tmroberson61@gmail.com)>  
**Sent:** 02/06/2024 12:48:16  
**To:** "Sonny Weathers" <[SWeathers@medical-lake.org](mailto:SWeathers@medical-lake.org)>;  
**CC:** "Roxanne Wright" <[rwright@medical-lake.org](mailto:rwright@medical-lake.org)>;

Good afternoon, Mr. Weathers,

Thank you for your timely response.

Based on your comments, I would like to be placed on the City Council agenda to give an educational presentation dealing with wetlands (superpower ecosystems/nature's shock absorbers) and natural disasters (wildfires, droughts, etc). Please let me know the date.

I'm very puzzled on why the City administration does not want to be educated about how wetlands are a natural defense against wildfires and droughts (especially since the Gray Fire) - - maybe I am missing something here. BTW I had only requested an additional 4 minutes since I would have 3 minutes during the 1<sup>st</sup> Interested Citizens portion and another 3 minutes during the 2<sup>nd</sup> Interested Citizens portion.

To let me know that the City does not have these extra 4 minutes available to hear a tax paying citizen especially when it deals with something as critical as wildfires, or maybe it's the individual giving the presentation is the reason why...

FYI -- the Planning Commission gives 15 minutes for an educational presentation and one does not need to be on the agenda. They even ask meaningful questions along with some great recommendations/ideas...

Thank you for your time.

Warmest Regards,



Tammy M. Roberson, MBA  
SMSgt USAF Retired  
Disabled Veteran (100% service connected)  
Concerned ML Resident/Wetland Owner  
Wetland Champion/Advocate & Voice

**WETLANDS. NATURE'S GREATEST RESOURCE.**  
**WETLANDS AND PEOPLE. WE NEED EACH OTHER.**  
**EVERY WETLAND MATTERS. EVERY EFFORT COUNTS.**

**"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."**

----- Original Message -----

From "Sonny Weathers" <[SWeathers@medical-lake.org](mailto:SWeathers@medical-lake.org)>

To "Tammy Roberson" <[tmroberson61@gmail.com](mailto:tmroberson61@gmail.com)>

Cc "Roxanne Wright" <[rwright@medical-lake.org](mailto:rwright@medical-lake.org)>

Date 02/06/2024 09:01:39

Subject RE: City Council Meeting 6 Feb 2024

Ms. Roberson,

I received your request to add an agenda item for tonight's council meeting. As previously shared with you, City Council Meeting Agendas are set weeks ahead of schedule and per the City Council Policies and Procedures are determined at the request of the mayor or council members. Additions to the agenda can be made by request of the mayor, city administrator, or a city council member with an explanation of need and majority vote of council before affirming its addition and placement. As city administrator, my recommendations for agenda additions are restricted to time-bound city business.

I have discussed your request with the mayor who is unable to accommodate your request at this time due to an already full agenda. For future reference, expressing your desire is not the only step in arranging a presentation to Council. Additionally, a full read of Paragraph 7.2 includes that, "Citizen/group presentations *scheduled on the agenda* to address the Council ..." which requires satisfaction of Paragraph 4.2, "An item may be placed on a Council meeting agenda by the Mayor and/or City Administrator, according to the Council agenda preparation schedule, by recommendations from Council Committees and requests of Council Members."

In response to your general questions on citizen comments, there is a 3-minute limitation per speaker, or other limitations as the Chair or Council may deem necessary, regardless of the number of speakers. It should not be expected that an individual could use more time if no one else is providing comment.

Kindest regards,



**Sonny Weathers**, City Administrator  
City of Medical Lake  
PO Box 369 | Medical Lake, WA 99022  
509-565-5050  
[sweathers@medical-lake.org](mailto:sweathers@medical-lake.org)

[www.medical-lake.org](http://www.medical-lake.org)

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**From:** Tammy Roberson <[tmroberson61@gmail.com](mailto:tmroberson61@gmail.com)>  
**Sent:** Monday, February 5, 2024 5:08 PM  
**To:** Sonny Weathers <[SWeathers@medical-lake.org](mailto:SWeathers@medical-lake.org)>  
**Cc:** Roxanne Wright <[rwright@medical-lake.org](mailto:rwright@medical-lake.org)>  
**Subject:** City Council Meeting 6 Feb 2024

Good afternoon, Mr. Weathers.

Please acknowledge receipt.

I would like to give an educational presentation about wetlands (superpower ecosystems and nature's shock absorbers) and natural disasters (wildfires and droughts) during the City Council Meeting on 6 Feb 2024.

To give a good educational presentation (without rushing through it all in 3 minutes (6 minutes total in two different time frames), I am requesting please to have 10 minutes to give my presentation during the 1<sup>st</sup> Interested Citizens portion.

According to the City Council Policies and Procedures (Legislative Policy 11.101), para 7.2: "Presentations should be prearranged through the Mayor's Office and be limited to the time allotted, not to exceed twenty (20) minutes, with ten (10) minutes allowed for a question/answer period after the presentation."

In accordance with the above paragraph, I am prearranging this educational presentation through you, the City Administrator (Mayor's Office). It does not indicate a minimum time in advance that it needs to be prearranged. Therefore, I have met this criterion.

I previously sent an email (dated 17 Jan 2024) to the City about some general questions I had regarding the City Council Policies and Procedures which also related to educational comments/presentations with no response given.

More than likely, I will be one of a very few citizens speaking based on history (in accordance with (IAW) para 7.3: "Agenda items "Interested Citizens" shall be limited to a total of thirty (30) minutes each unless additional time or less time is agreed upon by the Council."

By the way, "no news is good news" to me and therefore, I will take this to mean I have 10 minutes to give my educational presentation.

Thank you for your consideration and time.

Warmest Regards,



Tammy M. Roberson, MBA  
SMSgt USAF Retired  
Disabled Veteran (100% service connected)  
Concerned ML Resident/Wetland Owner  
Wetland Champion/Advocate & Voice

***WETLANDS. NATURE'S GREATEST RESOURCE.***  
***WETLANDS AND PEOPLE. WE NEED EACH OTHER.***  
***EVERY WETLAND MATTERS. EVERY EFFORT COUNTS.***

***"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."***



**From:** [Tammy Roberson](#)  
**To:** [Sonny Weathers](#); [Roxanne Wright](#)  
**Cc:** [Don Kennedy](#); [Theodore Olson](#); [Bob Maxwell](#); [Tony Harbolt](#); [Lance Speirs](#); [Keli Shaffer](#); [Chad Pritchard](#)  
**Subject:** Written Comments for City Council Meeting on 6 Feb 2024  
**Date:** Tuesday, February 6, 2024 1:19:57 PM  
**Attachments:** [1.png](#)  
[2 FINAL Wetlands and Natural Disasters 6 Feb 2024 City Council.pdf](#)  
[Attachment #A WA State Dept of Ecology WWD.pdf](#)  
[Attachment #1 factsheet wetland restoration general e 0.pdf](#)  
[Attachment #2 rpb wetlands and disaster risk reduction e.pdf](#)  
[Attachment #3 bn10 restoration climate change e.pdf](#)  
[Attachment #4 rpb values of wetlands e.pdf](#)  
[Attachment #5 Wetlands natural defence against wildfires - Williams Lake Conservation Company.pdf](#)  
[Attachment #6 Low-Tech Restoration Improves Forest Resilience Forest Service Employees for Environmental Ethics.pdf](#)  
[Attachment #7 wetlands and resilience to natural hazards.pdf](#)  
[Attachment #8 How to fight wildfires and climate change with wetlands.pdf](#)  
[City Council Meeting 6 Feb 2024.pdf](#)

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Good afternoon, Mr. Weathers,

**Please acknowledge receipt.**

**Please print in color. Please also include this email in the official record.**

FYI - The last attachment ("City Council Meeting 6 Feb 2024") deals with the City's response in denying me the extra time (a total of 4 minutes) needed to give an educational presentation about how wetlands are a natural defense against wildfires and droughts (especially since the Gray Fire) which is very puzzling to me. Please refer to the attachment for "the rest of the story".

Also, BTW since the clock starts ticking when one states "Good evening Mayor, City Council members and City Officials" - sorry, but I will be leaving this statement out from now on. Although, this greeting will still be in my handouts.

Per the instructions in the City Council's meeting agenda written public comments, here is the requested information:

1. Meeting Date is 6 Feb 2024
2. Tammy Roberson
3. ML City Resident
4. Interested Citizens: Audience Requests and Comments

As previously done in the past, requesting please that the attached handouts become part (an attachment) of the approved final Minutes official record to be posted online.

Thank you for your time.



Tammy M. Roberson, MBA  
SMSgt USAF Retired  
Disabled Veteran (100% service connected)  
Concerned ML Resident/Wetland Owner  
Wetland Champion/Advocate & Voice

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***"Fighting Wildfires Is Pricy. Protecting Our Wetlands Is Priceless."***



## Parks and Recreation Committee Meeting Agenda

February 6, 2024

### Updates:

1. Karate Class
  - a. We currently have 11 registered for Karate Classes.
2. After School Program
  - a. We currently have 11 signed up for After School Program.
3. Summer Concert Series
  - a. We will be making a push for sponsorships in the coming weeks for the Series.
  - b. Added the 4<sup>th</sup> of July concert back on. No decision has been made by Freedom Fest currently.
4. Passenger Bus
  - a. We are estimated to receive the new bus later this week or early next week from an update received on Monday.
  - b. We will need to request a budget transfer for the purchase as the funds were anticipated to come out of the 2023 budget.
5. Kitchen Remodel
  - a. We are looking to receive more quotes for the Architecture bids but no one is interested in giving bids except for the 1 that we have received already.
6. Master Plan
  - a. We will be working on getting pictures of our facilities to insert in our Master Plan.
  - b. We have received 50 survey responses so far.
7. Park Advisor Board
  - a. "First Meeting" had 2 of the 4 members attend. One member got the time wrong and the other was known to be out of town during the meeting. We were not able to have our first official meeting due to not having a Quorum.
  - b. We will be discussing duties of the position, upcoming plans, setting program pricing, etc.
8. Capital Improvements
  - a. Irrigation System
  - b. Dog Park
  - c. Archery/Shooting Range – Grant Available
  - d. Park Maintenance Vehicle
  - e. Playground Upgrades
  - f. Entrance to WF Park
  - g. Any others????

**Council Agenda Items:** Special Events Permit

**Upcoming Agenda Items:** Kitchen Remodel, Code for Subdivisions

**Additions:**

## Historic Preservation Interlocal Agreement with the Spokane Historic Preservation Office

Northwest Museum of Arts & Culture

1

## Agenda

- Why Historic Preservation?
- Certified Local Government
- What Our Office Can Offer
- What an Interlocal Agreement Would Do
- Incentives
- Questions?

2

## Why Protect Your Community's Historic Resources?

- Helps retain a sense of place and community pride
- Historic preservation makes economic sense
- Makes use of existing resources
- Helps highlight a community's unique heritage to visitors
- Tourism

3

## Local Historic Preservation Program

- Pieces of the Program
  - Historic Preservation Ordinance
  - Historic Preservation Commission
  - Historic Preservation Staff
- Spokane Register of Historic Places – individual & districts
  - Ability to identify and protect historic resources
  - 450 individually listed properties and six historic districts
- Incentives
  - Special Valuation
  - Others?

4



## Experienced Historic Preservation Office

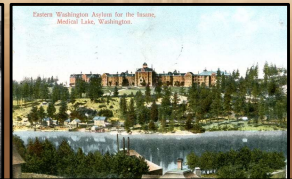
- Historic Preservation Office was founded in 1981
- Two full-time experienced staff
- An established Landmarks Commission
  - 11 members – 2 from outside City of Spokane
- Interlocal agreements with Spokane County and Town of Fairfield
- Experience with grant applications and economic development initiatives
- Website: [historicspokane.org](http://historicspokane.org)



5

## Spokane Register of Historic Places

- Owner consent required for listing a property
- Properties 50+ years old and meet criteria are eligible
- All properties listed on the register are eligible for incentives
- Changes to properties on the register will be reviewed and demolition could be denied



6

## How Would the Interlocal Agreement Work?

1. Medical Lake passes Historic Preservation ordinance
2. Medical Lake, Spokane County, and the Historic Preservation Office sign the Interlocal Agreement
3. Spokane Historic Preservation Office and Spokane Historic Landmarks Commission will begin providing preservation services including:
  - Hearing nominations from Medical Lake to the Spokane Register of Historic Places
  - Administering the Special Tax Valuation Incentive to properties on the historic register
  - Review of changes to properties that are listed on the historic register

7

## What is the Cost?!

- No cost to Medical Lake if County funding remains at current levels – the county is paying for this
- The Spokane Historic Preservation Office will serve as Medical Lake's Historic Preservation Office – providing all services as in unincorporated
- Administrative fees for nomination, design review, and special valuation paid by property owner



8

## Special Tax Valuation

- Enabling legislation passed in 1985
- Local government implements the law through ordinance
- Can be used for a substantial rehabilitation (25% of structure's value) for either residential or commercial property
- 25 month period to complete work prior to application
- Cost spent on rehab subtracted from property value for a period of ten years
- Tax shift – no lost revenue

9

## Special Tax Valuation



Building Value = \$150,000

25% = \$37,500 (minimum)

Actual amount spent on rehab = \$100,000

Building reassessed on normal schedule = \$175,000

Subtract "special valuation" of \$100,000 for 10 years

**Taxed on = \$75,000**

**Save ~\$1100/year x 10**

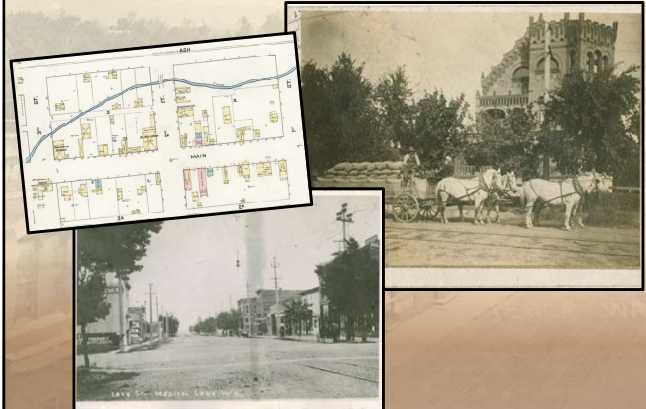
10

## Takeaways

- A local historic preservation program can be a catalyst for sparking investment in your historic properties
- Historic preservation can help protect your community's identity and character
- An interlocal agreement will provide access to historic preservation services and incentives for preserving historic buildings
- Only you know what is worth protecting on the local level - local communities must be proactive toward saving their historic resources

11

## Questions?



12



**SPOKANE CITY/COUNTY  
HISTORIC PRESERVATION OFFICE**

*Providing historic property protection and development services to the City of Spokane and Spokane County.*



**An Interlocal Agreement for Historic Preservation Services in Medical Lake**

**Why protect your community’s historic resources?**

- It helps retain a sense of place
- Historic Preservation makes economic sense
- Makes use of existing resources
- Reflects a community’s unique heritage
- Historic Preservation can promote tourism

<b>Perks to Having a Historic Preservation Program</b>	<b>Costs of Having a Historic Preservation Program</b>
<p>Medical Lake residents can consult SHPO for technical services</p> <p>Properties in Medical Lake can be listed on the Spokane Historic Register</p> <p>Owners of historic properties can receive incentives</p> <p>Retain Medical Lake’s historic character through design review</p>	<p>No cost as long as county funding remains stable</p> <p>Property owners are responsible for the same fees as any other nomination in Spokane County - \$50 residential and \$100 commercial</p>

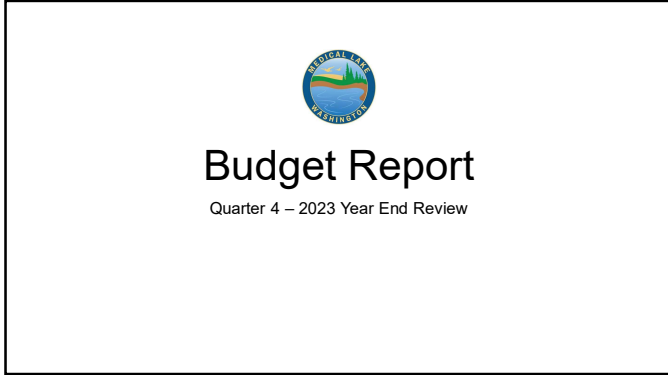
**Special Tax Valuation**

- Enabling legislation passed in 1985
- Local government implements the law through ordinance
- Local government determines which property types are eligible
- Can be used for a substantial rehabilitation (25% of structure’s value) for either residential or commercial property
- 24 month period prior to application
- Amount of rehab subtracted from property value for a period of ten years

**Takeaways**

- A local historic preservation program can be a catalyst for sparking investment in your historic properties
- Historic preservation can help protect your community’s identity and character
- There are incentives for preserving historic buildings
- Only you know what is worth protecting on the local level - local communities must be proactive toward saving their historic resources

808 WEST SPOKANE FALLS BOULEVARD, SPOKANE, WASHINGTON 99201-3333, (509) 625-6300, FAX (509) 625-6013



1

### Budget Report Notes

- Received approximately \$300,000 more in operating revenues than budgeted
- Incurred approximately \$1.2 million less in operating expenditures than budgeted
- No departments incurred more expenditures than budgeted.

2

### General Fund

Account Type	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$2,241,796	\$2,446,185	109%
Expense	\$3,805,695	\$3,229,781	85%

Activity Analysis

- Both revenues and expenditures results are favorable compared to budget.

3

### General Fund Departments

Department	Current Total Budget	Fiscal Activity	Percent Used
Non-Departmental	\$2,547,278	\$2,070,242	81%
Legislative	\$45,017	\$38,467	85%
Court	\$66,500	\$65,428	98%
Executive	\$211,963	\$206,107	97%
Legal	\$132,750	\$123,030	92%
Admin. Svcs.	\$499,423	\$481,301	96%
Code Enforce.	\$204,495	\$162,168	79%
Planning	\$96,493	\$81,264	84%

4



### Special Revenue Funds

Streets 101	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$244,480	\$244,152	100%
Expense	\$264,131	\$239,554	91%
Streets – Restricted 104	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$734,000	\$1,121,840	153%
Expense	\$1,235,000	\$1,192,092	97%
ARPA 107	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$858,422	\$886,858	103%
Expense	\$750,000	\$354,587	47%

5

### Special Revenue Funds (cont.)

Public Safety 110	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$1,201,136	\$745,487	62%
Expense	\$1,155,673	\$297,188	25%
Parks & Rec. 112	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$410,250	\$406,865	99%
Dept.: Parks & Rec.	\$221,926	\$197,830	89%
Dept.: Parks Facilities	\$180,859	\$179,925	99%
City Beautification 125	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$6,500	\$7,002	108%
Expense	\$4,000	\$450	11%

6

### Proprietary Funds

Water 401	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$1,188,050	\$1,145,082	96%
Expense	\$1,680,162	\$1,668,896	99%
Water - Restricted 402	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$360,098	\$363,870	101%
Expense	\$1,266,834	\$30,042	2%
Solid Waste 407	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$667,010	\$703,762	106%
Expense	\$806,424	\$763,401	95%

7

### Proprietary Funds (cont.)

Wastewater 408	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$1,725,500	\$1,801,816	104%
Dept.: WWC	\$400,283	\$331,784	83%
Dept.: WWT	\$1,019,039	\$992,461	97%
Wastewater – Restricted 409	Current Total Budget	Fiscal Activity	Percent Used
Revenue	\$979,902	\$1,183,269	121%
Dept.: WWT	\$245,000	\$107,180	44%

8

# Medical lake Code Enforcement

CITY COUNCIL UPDATE Q4  
Sept - Dec 2023

*Cases*

*Moving  
forward*



# Closed 2023 with 85 Cases

Approximately (7) are still active  
or need some type of follow up.



# Medical lake Code Enforcement

CITY COUNCIL UPDATE Q4  
Sept - Dec 2023

*Cases*

*Moving  
forward*









# *Plans moving forward*

- *Sheriff's Office Commission*
- *Create an internal Code Enforcement Guide Lines*
- *Make adjustments to Codes that are outdated*
- *Test & Evaluate new door knockers*
- *Complaint Referral Guide*
- *Seek out additional training*
- *Learn how to better serve the citizens*



# Door Knocker examples

CODE ENFORCEMENT		CODE ENFORCEMENT	
OFFICER	PHONE	OFFICER	PHONE
			
<p>The City has received/observed a complaint regarding the following; please contact Code Enforcement as soon as possible to avoid further action.</p>		<p>The City has received/observed a complaint regarding the following; please contact Code Enforcement as soon as possible to avoid further action.</p>	
<p>Medical Lake Municipal Code:</p> <ul style="list-style-type: none"> <li>■ Accumulation of garbage, materials, furniture, machinery, etc. <small>MLMC 9.10.030</small></li> <li>■ Junk vehicles. <small>MLMC 8.32.030</small></li> <li>■ Parking restricted for snow removal. <small>MLMC 8.20.050</small></li> <li>■ Blocking sidewalks, right of ways, alleys: Basketball hoops clutter debris, etc. <small>MLMC 11.14.010</small></li> <li>■ RV's, boats, trailers, stored on city streets. <small>MLMC 14.28.180-18.30.030</small></li> <li>■ Shipping containers used as storage buildings. <small>MLMC 17.42.030</small></li> </ul> <p>■ OTHER _____</p>		<p>Medical Lake Municipal Code:</p> <ul style="list-style-type: none"> <li>■ Accumulation of garbage, materials, furniture, machinery, etc. <small>MLMC 9.10.030</small></li> <li>■ Junk vehicles. <small>MLMC 8.32.030</small></li> <li>■ Parking restricted for snow removal. <small>MLMC 8.20.050</small></li> <li>■ Blocking sidewalks, right of ways, alleys: Basketball hoops clutter debris, etc. <small>MLMC 11.14.010</small></li> <li>■ RV's, boats, trailers, stored on city streets. <small>MLMC 14.28.180-18.30.030</small></li> <li>■ Shipping containers used as storage buildings. <small>MLMC 17.42.030</small></li> </ul> <p>■ OTHER _____</p>	
DATE <input type="text"/>		DATE <input type="text"/>	
ADDRESS _____		ADDRESS _____	
 City of Medical Lake S. 124 Lefevre Street P.O. Box 369 Medical lake, WA 99022 Phone (509) 565-5000 Fax (509) 565-5008 City Website: www.medical-lake.org		 City of Medical Lake S. 124 Lefevre Street P.O. Box 369 Medical lake, WA 99022 Phone (509) 565-5000 Fax (509) 565-5008 City Website: www.medical-lake.org	



## For RVs etc parked on city right of way



**Hello Neighbor!**

### Courtesy Notice

18.30.030 - Emergency parking.

Emergency stopping or parking of a travel trailer, motor home or camper for repair purposes is permitted for up to seventy-two hours, subject to any other and further prohibitions, regulations or limitations imposed by the traffic and parking regulations or ordinances of the city.(Ord. 875 §65, 1999).

Medical Lake Municipal Code 9.10.010 does not allow for obstruction of streets or right of ways.

RVs must be placed on private property.

Per Medical Lake Municipal code 17.42.030 Shipping containers require an active permit and must be placed on private property.



# Example of Complaint Referral Guide



## CITY OF MEDICAL LAKE CODE ENFORCEMENT COMPLAINT REFERRAL GUIDE

COMPLAINT	CONTACT DEPARTMENT	CONTACT PHONE
Abandoned Vehicles - Private Property	Code Enforcement	509-565-5000
Abandoned Vehicles - Right-of-Way	Crime Check	509-456-2233
Accident Report - Vehicle	Sharriff's Office	911
Addressing Property	Building Department	509-565-5000
Air Pollution	Spokane Regional Clean Air	509-477-4727
Animals - At Large/Barking	SCRAPS	509-477-2532
Animals - Too Many	SCRAPS	509-477-2532
Animals - Unlicensed	SCRAPS	509-477-2532
Animals (Dead) on Right-of-way	Public Works	509-299-7715
Basketball Hoops in Right-of-way	Crime Check	509-456-2233
Buildings - Dangerous	Building Department	509-565-5000
Buildings - Vacant	Building Department	509-565-5000
Burning, Outdoor Fires	Fire Department/ Spokane County Air Pollution	509-235-6645 509-477-4727
Construction (dirt) on Right-of-Way	Public Works Spokane Regional Clean Air	509-266-7715 509-477-4727
Corner Visibility Problem due to Vegetation or Obstruction on Private Property	Code Enforcement	509-565-5000
Corner Visibility Problem due to Vegetation or Obstruction on Right-of-Way	Public Works	509-299-7715
Dangerous Dogs	Crime Check	509-456-2233
Discrimination (Landlord/Tenant)	NW Fair Housing Alliance	325-2665
Domestic Animals - At Large/Barking	SCRAPS	509-477-2532
Domestic Animals - Too Many	SCRAPS	509-477-2532
Domestic Animals - Unlicensed	SCRAPS	509-477-2532
Electric Power Problems	Avista	(800) 227-9187
Excavations / Fills on Private Property - Unauthorized	Building Department	509-565-5000
Fences - Across Property Lines	NA - Civil Matter	NONE
Fences - Height Issues	Building Department	509-565-5000
Fences - No Permit	Building Department	509-565-5000
Fences - Sight Triangle (Visibility at Intersection)	Zoning Department	498-9221
Garbage - Private Property	Code Enforcement	509-565-5000
Garbage - Right-of-Way	Code Enforcement	509-565-5000
Graffiti	Crime Check	509-456-2233
Illegal Trash Dumping	Crime Check	509-456-2233
Junk Vehicles on Private Property	Code Enforcement	509-565-5000
Junk Vehicles in Right-of-Way	Crime Check	509-456-2233

Legal Questions (Landlord/Tenant)	NW Justice Project	1-888-201-1012
No Permits - Private Property Construction	Building Department	509-565-5000
No Permits - Right-of-Way Construction	Public Works	509-299-7715
Noise - Mechanical	Crime Check	509-456-2233
Noise - Residential or Human Generated	Crime Check	509-456-2233
Parking - Driveways, Blocking of	Crime Check	509-456-2233
Parking - by Fire Hydrants	Crime Check	509-456-2233
Parking - in Handicapped Spaces	Crime Check	509-456-2233
Parking - on Planting Strips/Curbs	Crime Check	509-456-2233
Parking - on Sidewalks	Crime Check	509-456-2233
Parking - Stop Signs, Too Close To	Crime Check	509-456-2233
Parking Ticket	Municipal Court	509-498-9232
Pavement Cuts (Bad) in Street	Public Works	509-299-7715
Permits - Private Property Construction	Building Department	509-565-5000
Permits - Right-of-Way Construction	Public Works	509-299-7715
Potholes	Public Works	509-299-7715
Property Addressing	Building Department	509-565-5000
Sidewalks - Heaved /Broken/ Vegetation	Public Works	509-299-7715
Signs - Illegal Off-Premises	Zoning Enforcement	498-9221
Signs - Sandwich Boards	Zoning Department	498-9221
Snow Removal on Streets	Public Works	509-299-7715
Streetlights (Burned Out)	Public Works	509-299-7715
Tenant/Landlord Disputes	NW Fair Housing	509-325-2665
Traffic Signal Control (Right-of-Way)	Public Works	509-299-7715
Traffic Signal Lights (Burned Out)	Public Works	509-299-7715
Traffic Signs - Vegetation Obstruction / Damage/ Missing	Public Works	509-299-7715
Transient Camps - Public & Private Property	Crime Check	509-456-2233
Trash Dumping	Code Enforcement	509-565-5000
Trash Dumping on Right-of-Way	Public Works	509-299-7715
Trees - On Private Property	N/A - Civil Matter	NONE
Trees - On Right-of-Way	Public Works	509-299-7715
Water Quality	Water Department	509-299-7715
Weeds - Private Property	Code Enforcement	509-565-5000
Weeds - In Right-of-Way, Adjacent to City Property	Public Works	509-299-7715
Zoning Violations	Zoning Department	498-9221

Rev. 12/23





## CITY OF MEDICAL LAKE CODE ENFORCEMENT COMPLAINT REFERRAL GUIDE

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Abandoned Vehicles - Private Property	Code Enforcement	509-565-5000
Abandoned Vehicles - Right-of-Way	Crime Check	509-456-2233
Accident Report - Vehicle	Sheriff's Office	911
Addressing Property	Building Department	509-565-5000
Air Pollution	Spokane Regional Clean Air	509-477-4727
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Garbage - Right-of-Way	Code Enforcement	509-565-5000
Graffiti	Crime Check	509-456-2233
Illegal Trash Dumping	Crime Check	509-456-2233
Junk Vehicles on Private Property	Code Enforcement	509-565-5000
Junk Vehicles in Right-of-Way	Crime Check	509-456-2233

Legal Questions (Landlord/Tenant)	NW Justice Project	1-888-201-1012
No Permits - Private Property Construction	Building Department	509-565-5000
No Permits - Right-of-Way Construction	Public Works	509-299-7715
Noise - Mechanical	Crime Check	509-456-2233
Noise - Residential or Human Generated	Crime Check	509-456-2233
Parking - Driveways, Blocking of	Crime Check	509-456-2233
Parking - by Fire Hydrants	Crime Check	509-456-2233
Parking - in Handicapped Spaces	Crime Check	509-456-2233
Parking - on Planting Strips/Curbs	Crime Check	509-456-2233
Parking - on Sidewalks	Crime Check	509-456-2233
Parking - Stop Signs, Too Close To	Crime Check	509-456-2233
Parking Ticket	Municipal Court	509-498-9232
Pavement Cuts (Bad) in Street	Public Works	509-299-7715
Permits - Private Property Construction	Building Department	509-565-5000
Permits - Right-of-Way Construction	Public Works	509-299-7715
Potholes	Public Works	509-299-7715
Property Addressing	Building Department	509-565-5000
Sidewalks - Heaved /Broken/ Vegetation	Public Works	509-299-7715
Signs - Illegal Off-Premises	Zoning Enforcement	498-9221
Signs - Sandwich Boards	Zoning Department	498-9221
Snow Removal on Streets	Public Works	509-299-7715
Streetlights (Burned Out)	Public Works	509-299-7715
Tenant/Landlord Disputes	NW Fair Housing	509-325-2665
Traffic Signal Control (Right-of-Way)	Public Works	509-299-7715
Traffic Signal Lights (Burned Out)	Public Works	509-299-7715
Traffic Signs - Vegetation Obstruction / Damage/ Missing	Public Works	509-299-7715
Transient Camps - Public & Private Property	Crime Check	509-456-2233
Trash Dumping	Code Enforcement	509-565-5000
Trash Dumping on Right-of-Way	Public Works	509-299-7715
Trees - On Private Property	N/A -- Civil Matter	NONE
Trees - On Right-of-Way	Public Works	509-299-7715
Water Quality	Water Department	509-299-7715
Weeds - Private Property	Code Enforcement	509-565-5000
Weeds - In Right-of-Way, Adjacent to City Property	Public Works	509-299-7715
Zoning Violations	Zoning Department	498-9221



# We plan to have the Complaint Form available to fill and submit on the new website.

**CODE ENFORCEMENT COMPLAINT FORM**

City of Medical Lake  
 S. 124 Lefevre Street P.O. Box 369 Medical Lake, WA 99022  
 Phone (509) 565-5000 Fax (509) 565-5008  
 Code Enforcement Officer: [dyruba@medical-lake.org](mailto:dyruba@medical-lake.org) City  
 Website: [www.medical-lake.org](http://www.medical-lake.org)

**What is Code Enforcement?**  
 Rules governing the use of private property are intended to protect the public health, safety, and welfare of all citizens. The City of Medical Lake is responsible for enforcing the provisions of the Medical Lake Municipal Code, Washington state laws, and other ordinances. Each ordinance also contains penalties that may be imposed when a property owner refuses to correct a cited violation. It is the intention of the Code Enforcement Office and the City of Medical Lake to work with citizens to correct violations that have been brought to our attention. The goal is not to penalize citizens when an effort is being made to correct the problem.

**Who may file a complaint and when may it be filed?**  
 Any citizen may file a complaint whenever they observe conditions, uses of property or structures that are improper or potentially hazardous. Many violations are considered a "nuisance" as defined in the Medical Lake Municipal Code Chapter 9.10 (The Medical Lake Municipal Code is available in its entirety at the City's website [www.medical-lake.org](http://www.medical-lake.org)).

A "nuisance" consists in doing an unlawful act, or omitting to perform a duty, or suffering or permitting any condition or thing to be or exist, which act, omission, condition or thing: (1) Annoys, injures or endangers the comfort, repose, health or safety of others; or (2) Offends decency; or (3) is offensive to the senses; or (4) Unlawfully interferes with, obstructs or tends to obstruct or renders dangerous for passage any stream, public park, parkway, square, street or highway in the city; or (5) in any way renders other persons insecure in life or the use of property; or (6) Obstructs the free use of property so as to essentially interfere with the comfortable enjoyment of life and property.

**NOTE:** All complaints may not be a violation of the Medical Lake Municipal Code. The Code Enforcement Office/City Official shall determine if a violation has occurred and the proper remedy.

**How is a complaint filed?**  
 Except where an immediate life safety hazard exists, compliance actions generally begin with a signed complaint form. Once the complaint form is complete, you may submit the form: by fax to (509) 565-5008, by email to [city@medical-lake.org](mailto:city@medical-lake.org), by mail, or in person to City of Medical Lake Code Enforcement, (P.O. Box 369) S. 124 Lefevre, Medical Lake, WA 99022.

**What happens once I've submitted my written complaint?**  
 The investigation process will typically begin once a complaint has been received and processed. In order for the Code Enforcement Office or City Official to begin compliance actions, the violation must be documented from the road or from a neighboring property who has granted permission to view the site. Actual resolution of the issue can take weeks, months, and possibly longer, depending on the complexity of the issue and legal ramifications.

**INFORMATION OF PERSON FILING THE COMPLAINT**  
 This section must be completed before the City of Medical Lake can act on this matter.

**Please print**

Your Name: \_\_\_\_\_

Your Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: Daytime: \_\_\_\_\_ Evening: \_\_\_\_\_

Email Address: \_\_\_\_\_

If necessary and applicable, may we have permission to enter your property to view the subject violation? YES \_\_\_\_\_ NO \_\_\_\_\_

**Confidentiality:** The information contained in complaints is a public record subject to disclosure under the Washington Public Records Act, Chapter 42.16 RCW, and may be requested and inspected by any person. Disclosure of information revealing your identity will depend on application of the Public Records Act, other applicable statutes, and whether the complaint is criminally prosecuted. Your identity may be withheld from public inspection at the City's discretion if you indicate that disclosure will endanger your life, physical safety, or property. With that understanding, PLEASE INDICATE YOUR DESIRE FOR DISCLOSURE OR NON-DISCLOSURE OF YOUR IDENTITY BY INITIALLING THE APPROPRIATE BOX, AND SIGN AND DATE BELOW

My identity can be disclosed.  Do not disclose my identity. I believe disclosure would endanger my life, physical safety, or property.

Your Signature: \_\_\_\_\_ Date: \_\_\_\_\_



# Medical lake Code Enforcement

CITY COUNCIL UPDATE Q4  
Sept - Dec 2023

*Cases*

*Moving  
forward*



# Medical lake Code Enforcement

CITY COUNCIL UPDATE Q4  
Sept - Dec 2023

*Cases*

*Moving  
forward*



# Thank you



Questions?

# Medical lake Code Enforcement

CITY COUNCIL UPDATE Q4  
Sept - Dec 2023

*Cases*

*Moving  
forward*







To: Mayor and City Council  
From: Glen Horton, Parks and Recreation Director  
**TOPIC: Coney Island Dock RFP**

**Requested Action:**

The Parks and Recreation Department would like to request permission to create a RFP for the Coney Island Dock and Shoreline Restoration.

**Key Points:**

- Dock is included in this year's budget for Capital Improvements
- Shoreline restoration will help with deterioration of shoreline which is a hazard as the grass and soil wash out between the rocks.

**Background Discussion:**

City Council had approved the budget for the Coney Island Dock in the 2024 budget.

**Public Involvement:**

N/A

**Next Steps:**

With Council approval we will create an RFP to go out to the public for bidding. Once RFP deadline has been reached staff will present all bids to Council and approve/disapprove of the bidders proposals.

## **CITY OF MEDICAL LAKE SUPPLY CONTRACT**

This contract is entered into between the City of Medical Lake, a municipal corporation of the State of Washington, hereafter called "City" and **Newco Inc., dba Cascade Columbia Distribution**, a Washington corporation, hereafter called "Contractor."

All notifications necessary under this contract shall be addressed to:

City of Medical Lake  
Attention: Sonny Weathers or  
Steve Cooper

PO Box 369  
Medical Lake, WA 99022  
Telephone: 509-565-5030  
Fax: 509-565-5008  
Email:  
sweathers@medical-lake.org  
scooper@medical-lake.org

Newco Inc., dba Cascade Columbia  
Distribution Cl.

Attention: Lance Jones  
6900 Fox Ave. S.  
Seattle, WA 98108  
Telephone: 206-282-6334  
Fax: 206-282-6330  
Email :  
lancej@cascaDEColumbia.com

1. TERM
  - 1.1. This contract shall be effective from March 1, 2024 through February 28, 2025.
  - 1.2. If this contract crosses fiscal years, funding for future years is contingent upon the City Council adopting appropriations.
2. SCOPE OF SERVICE
  - 2.1. Contractor shall furnish the following chemicals: Polymer.
  - 2.2. The chemical supplier shall not be liable for delays due to causes beyond the supplier's control, such as, acts of God or the public enemy, and priority or allocation order issued by the Federal Government, or any other act of the Federal Government, fires, floods, epidemics, quarantine restrictions, strikes or other labor disputes, and freight embargoes.
  - 2.3. The Contractor's delivery receipt shall be signed by a City representative at the time of delivery.
  - 2.4. All chemicals delivered by the Contractor shall be free from impurities including but not limited to: water, dirt, harmful oils, fibrous materials, and other contaminants. In case of damages directly traceable to chemical contamination, the Contractor shall be responsible for all costs incurred.
  - 2.5. The Contractor shall be responsible for immediately reporting and cleaning up any spillage of chemicals which may occur during transit or unloading operations. Upon failure to do so, the City shall take corrective action and charge the Contractor for all related costs.
  - 2.6. The Contractor shall comply with conditions of the Federal Occupational Safety and Health Act of 1972 (OSHA), and the standards and regulations issued thereunder, and certifies all items furnished and purchased under this order will conform to and comply with said standards and regulations. Contractor further agrees to indemnify and hold harmless the City from all damages alleged or assessed the City as a result of the Contractor's failure to comply with the acts and standards thereunder and for the failure of the items furnished under this order to so comply.
  - 2.7. The Contractor shall provide safety data sheets (SDS) on all products prior to first delivery and whenever product SDS is revised.
3. COMPENSATION
  - 3.1. In consideration of contractor's performance, City agrees to pay Contractor based on quotes submitted on September 13, 2023:
  - 3.2. All prices shall include delivery costs.
  - 3.3. Contractor shall submit invoices to [scooper@medical-lake.org](mailto:scooper@medical-lake.org) at the time of delivery. The Contractor shall be responsible for the accuracy of each invoice. Incorrect invoices may be returned unpaid for correction and reissue. Repetitious incorrect invoicing may be grounds for contract termination.
4. CITY RESPONSIBILITIES
  - 4.1. City agrees to pay Contractor within 30 days of receiving an invoice for services performed. City will report all payments made to Contractor required by the Federal Internal Revenue Service and the State of Washington
5. STATUS

- 5.1. Contractor is retained as an independent contractor and will be responsible for any state or federal taxes resulting from this contract. Contractor is not an “employee” for purposes of OAR 459-10-030(6) Contractor will not be under direct control of City in performing this contract.
  - 5.2. Contractor will not be eligible for any federal Social Security, State Workers’ Compensation, unemployment insurance, or PERS benefits from this contract, except as a self-employed individual or as required by ORS 237.103.
6. CONTRACTOR RESPONSIBILITIES
- 6.1. Contractor will make prompt payment to all persons supplying them with labor or materials for the performance of work under this contract. If Contractor fails to make prompt payment of any claim for labor or services furnished in connection with this contract, City may pay the claim and charge the amount against funds due or which may become due to Contractor.
  - 6.2. Contractor will pay all contributions or amounts due the Industrial Accident Fund for themselves or any sub-contractor resulting from this contract.
  - 6.3. Contractor will not permit any lien or claim to be filed against City on account of any labor or material furnished.
  - 6.4. Contractor will pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
  - 6.5. Contractor shall pay employees for overtime work performed under the public contract in accordance with ORS 279B.020, ORS 653.010 to 653.261 and the Fair Labor Standards Act of 1938 (29U.S.C. 201 *et seq.*). A person performing work under this agreement may not be employed for more than ten (10) hours in any one (1) day, or 40 hours in any one (1) week, except in cases of necessity, emergency or when the public policy absolutely requires it, and in such cases, except in cases of contracts for personal services designated under ORS 279A.055, the employee shall be paid at least time-and-a-half pay as set out in ORS 279B.235.
  - 6.6. Contractor shall promptly, as due, make payment to any person, co-partnership, association, or corporation furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of Contractor, or all sums which Contractor agrees to pay for such services and all moneys and sums which Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.
  - 6.7. Contractor agrees to comply with all applicable local, state, and federal laws, rules, and regulations in the performance of this contract, and to pay all fees required by local, state, or federal bodies in the performance of this contract.
  - 6.8. Contractor agrees to comply with Corvallis Municipal Code chapter 1.25 establishing and implementing the Living Wage. City may terminate this contract at any time if Contractor is found to be in violation of the Living Wage Ordinance and does not correct the violation consistent with section 1.25.090 of the Corvallis Municipal Code.
  - 6.9. Contractor agrees to keep payroll records for employees working on City’s contract and to provide those records to City if requested in accordance with

section 1.25.070 of the Corvallis Municipal Code. Contractor agrees to post the information provided by City about the Living Wage in a location where employees are likely to see the information. Contractor also agrees to give each employee working on City business information provided by City about the Living Wage. Contractor will notify City if they need the information provided in a language other than English.

6.10. Sustainability: The Contractor will be expected to support the City's sustainability objectives by implementing strategies where applicable.

7. CONTRACTOR'S REPRESENTATION AND WARRANTIES:

7.1. Contractor represents and warrants to City that:

7.1.1. Contractor has the power and authority to enter into and perform this Contract.

7.1.2. This Contract, when executed and delivered, is a valid and binding obligation of Contractor, enforceable in accordance with its terms.

7.1.3. Contractor (to the best of Contractor's knowledge, after due inquiry), for a period of no fewer than six (6) calendar years preceding the effective date of this Contract, faithfully has complied with:

7.1.3.1. Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor;

7.1.3.2. Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and

7.1.3.3. Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

8. CONTRACTOR'S COMPLIANCE WITH TAX LAWS

8.1. Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. For the purposes of this Section, "tax laws" includes all the provisions described in Subsection 7.1.3 of this Contract.

8.2. Any violation of Subsection 7.1.3 of this Contract shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty, in Subsection 7.1 of this Contract, that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state, also shall constitute a material breach of this Contract. Any violation shall entitle City to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to:

8.2.1. Termination of this Contract, in whole or in part;

8.2.2. Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to State's setoff



right, without penalty; and

8.2.3. Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. City shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement goods.

8.3. These remedies are cumulative to the extent the remedies are not inconsistent, and City may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

## 9. LIABILITY

9.1. Contractor shall indemnify, protect, defend, and hold City, its officers, agents, volunteers, and employees harmless against any actions, claim for injury or damage and all loss, liability, cost or expense, including court costs and attorneys' fees, arising out of or resulting directly or indirectly from the performance of this contract, except, to the extent not prohibited by ORS 30.140, for that resulting from the sole negligence of the City.

9.2. Contractor shall provide insurance as indicated. All policies must be of the occurrence form with combined single limit for bodily injury and property damage. The issuing insurance companies must have a minimum current A.M. Best rating of A- VII or approved by the City. Any deviation from this requirement must be reviewed and approved by the City Risk Manager. Limits may be provided by Excess or Umbrella policy.

9.3. The types of insurance Contractor is required to obtain or maintain for the full period of the contract will be:

9.3.1. Workers' Compensation insurance in compliance with ORS 656.017, which requires subject employers to provide Oregon workers' compensation coverage for all their subject workers. Any subcontractor hired by the Contractor shall also carry Workers' Compensation and Employer Liability coverage. The insurer shall agree to waive by endorsement, all rights of subrogation against the City, its officers, employees, and agents for losses arising from work performed by the Contractor for the City.

9.3.2. Commercial General Liability insurance, Occurrence Form, including personal injury, bodily injury and property damage with limits as specified below. Limits may be provided by Excess or Umbrella policy:

9.3.2.1. **\$2,000,000 per Occurrence / \$2,000,000 General Aggregate / \$2,000,000 Products and Completed Operations Aggregate.**

9.3.2.2. **Aggregates shall apply per Policy.** It shall include contractual liability coverage for the indemnity provided under this contract, and shall be in a form at least as broad as ISO Commercial General Liability form CG 0001, with CG 25 03 (Amendment Aggregate Limits of Insurance per Policy) or equivalent attached.

9.3.2.3. The Commercial General Liability insurance coverage required for performance of this contract shall be

endorsed to name the City of Corvallis and its officers, agents and employees as Additional Insured on any insurance policies required herein with respect to Contractor's activities being performed under the contract.

- 9.3.3. Limitation of Liability. If under the General Liability policy coverage there is a limitation of liability related to Errors & Omissions or Professional Services, Contractor is hereby required to obtain Professional Liability insurance with a combined single limit or the equivalent of not less \$1,000,000 per claim and \$1,000,000 annual aggregate for Engineers and Architects, with 24-month tail.
- 9.3.4. Business Automobile Liability insurance with a combined single limit, or the equivalent, of not less **\$2,000,000 per accident** including coverage for owned, hired, or non-owned vehicles, as applicable. Coverage shall be as broad as ISO Business Automobile Liability form CA 0001.
- 9.3.5. Pollution Prevention Liability
  - 9.3.5.1. Contractor shall purchase and maintain in force for the duration of the contract insurance for pollution liability applicable to bodily injury; property damage, including loss of use of damaged property or of property that has not been physically injured or destroyed; cleanup costs; and defense, including costs and expenses incurred in the investigation, defense, or settlement of claims; all in connection with any loss arising from the work.
  - 9.3.5.2. Coverage shall be maintained in an amount of at least **\$2,000,000 per occurrence, with an annual aggregate of at least \$2,000,000.**
  - 9.3.5.3. Coverage shall apply to sudden and non-sudden pollution conditions resulting from the introduction, escape or release of any and all pollution causing agents, including but not limited to, smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials, or other irritants, contaminants or pollutants.
  - 9.3.5.4. Insurance as required in this paragraph shall be placed with an insurer acceptable to the City. If coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning from the time that work under this contract is completed.
- 9.4. Contractor shall not cause or allow any insurance policy required above to be suspended, voided, canceled, reduced in coverage or in material limits except as agreed by City. Contractor agrees to have and maintain the policies, endorsements, certificates, and/or binders required under this contract. Such insurance shall include provisions that such insurance is primary insurance with respect to the interests of the City, and that any

other insurance maintained by City is excess and not contributory insurance with the same insurance required hereunder. A lapse in any required insurance coverage during this contract shall be a breach of this contract.

- 9.5. Should any of the above-described policies be subject to cancellation or termination prior to the expiration date of this contract, Contractor shall notify the City in writing by certified mail, return receipt requested, 30 days prior to the cancellation or termination date of such policy.
- 9.6. Contractor shall furnish acceptable insurance certificates to City with original endorsements for each insurance policy signed by a person authorized by that insurer to bind coverage on its behalf. Certificates will be received and approved by City prior to its issuance of a Notice to Proceed. If additional insured status (or subrogation waiver) is requested, each line of insurance shall be marked in the appropriate box on the insurance certificate to indicate the policy endorsement ensuring the City of Corvallis, its officers and employees are an Additional Insured (and/or Subrogation is Waived) subject to the terms and conditions and/or respective to the work under this contract. Insuring companies or entities are subject to City acceptance. Contractor shall be financially responsible for all pertinent deductibles, self-insured retention and/or self-insurance. All such deductibles, retention, or self-insurance must be declared to, and approved by, City.

#### 10. GENERAL PROVISIONS

- 10.1. **ASSIGNABILITY:** This contract is for the exclusive benefits of Contractor and City. Any attempt to assign, transfer, or pledge by either party without the prior written consent of the remaining party is void and unenforceable against the nonconsenting party.
- 10.2. **TERMINATION:** City may terminate this contract in the event Contractor fails to comply with any of the terms or conditions set forth herein or if City determines Contractor is in any way unfit, unqualified, or unable to perform all of the services outlined in this contract. City will provide 30 days' prior written notice by certified mail, return receipt requested of its intent to terminate.
- 10.3. **DISCRIMINATION:** The parties agree not to discriminate on the basis of age, citizenship status, color, familial status, gender identity or expression, marital status, mental disability, national origin, physical disability, race, religion, religious observance, sex, sexual orientation, and source or level of income in the performance of this contract.
- 10.4. **PERSONAL IDENTIFYING INFORMATION:** Contractor agrees to safeguard personal identifying information in compliance with Oregon Revised Statute (ORS) 646A.600, the Oregon Consumer Identity Theft Protection Act and the Fair and Accurate Credit Transaction Act provisions of the Federal Fair Credit Reporting Act.
- 10.5. **WAIVER:** Waiver of any breach of any provision of this contract by either party shall not operate as a waiver of any subsequent breach of the same or any other provision of this contract.
- 10.6. **ATTORNEY'S FEES:** In the event either party shall initiate any suit, action or appeal on any matter related to this contract, then the court before whom



**CITY OF MEDICAL LAKE  
SPOKANE COUNTY, WASHINGTON  
RESOLUTION NO. 24-654**

**A RESOLUTION OF THE CITY OF MEDICAL LAKE APPROVING A  
WORKPLACE SOLUTIONS COOPERATIVE ACCEPTANCE AGREEMENT  
BETWEEN CINTAS AND THE CITY OF MEDICAL LAKE.**

WHEREAS, the City of Medical Lake (“City”) is in need of workplace solutions such as rental of uniforms, floor mats, mops, towels, and other related services; and

WHEREAS, Cintas has a procured cooperative agreement number 001299 with the University of Nebraska through Omnia Partners, a purchasing cooperative, for workplace solutions; and

WHEREAS, Omnia Partners is a nationally recognized purchasing cooperative that is verified by the Institute for Public Procurement and grants contract piggybacking access to all public sector entities; and

WHEREAS, Omnia Partners has complied with RCW 39.34.030(5)(b), statutory contracting and solicitation requirements, to procure Cintas as a purchasing cooperative vendor; and

WHEREAS, the City desires to piggyback on Cintas contract number 001299, Exhibit B, for workplace solutions, and as allowed by RCW 39.34.030.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MEDICAL LAKE, WASHINGTON as follows:

**Section 1. Award of Bid.** The City Council hereby approves the cooperative acceptance agreement, as detailed in the attached Exhibit A, for workplace solutions with Cintas, procured through Omnia Partners and piggybacking on Cintas contract number 001299 with the University of Nebraska.

**Section 2. Authorization.** The Mayor is authorized and directed to execute the agreement on behalf of the City in substantially the form attached as Exhibit “A”. The Mayor and City Administrator are each hereby authorized and directed to take such further action as may be appropriate in order to affect the purpose of this Resolution and the agreement authorized hereby.

**Section 3. Severability.** If any section, sentence, clause, or phrase of this Resolution should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause, or phrase of this Resolution.

**Section 4. Effective Date.** This Resolution shall become effective immediately upon its adoption.



ADOPTED this 20th day of February 2024.

---

Mayor, Terri Cooper

Attest:

Approved as to Form:

---

Koss Ronholt, City Clerk

---

City Attorney, Sean P. Boutz



HARD-WORKING STYLE & COMFORT

READY™



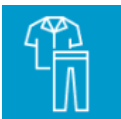
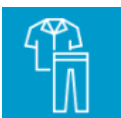
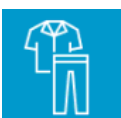


Proposal Date: 02/01/2024

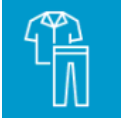

Expiration Date: 03/02/2024





Customer Name <b>Medical Lake Wastewater Plant</b>		Prepared For <b>Medical Lake Wastewater Plant</b>	
Delivery Address <b>207 E Ellen St</b>		Delivery Address 2 :	
City : <b>Medical Lake</b>	State / Province : <b>WA</b>	Zip / Postal Code : <b>99022</b>	Phone : <b>509-299-6860</b>

## Garment Group 1

Garment	Frequency	Inventory	Unit Price	Price
 X392 FRSHRTCRHRTT5.3INHRT	Weekly	11	\$ 0.749	\$ 8.239
 X73478 FRDUNGRE CRHRT INHRT	Weekly	11	\$ 0.806	\$ 8.866
 X387 FRCVRLCRHRTT5.3INHRT	Weekly	2	\$ 1.616	\$ 3.232
 X74634 FR FULL SWING JACKET	Weekly	2	\$ 2.860	\$ 5.720
 X59925 LAB COAT/POPLIN	Weekly	2	\$ 0.260	\$ 0.520
<b>5Employees / Price per employee per week: \$26.59</b>			<b>Weekly Total :</b>	<b>\$ 132.95</b>

## Garment Group 2

Garment	Frequency	Inventory	Unit Price	Price
 X67455 FR 40CAL VENT HOOD	Weekly	2	\$ 17.840	\$ 35.680
 X67456 FR 40CAL BIB OVERALL	Weekly	2	\$ 15.597	\$ 31.194





Garment	Frequency	Inventory	Unit Price	Price
 X86932 11IN CLASS 00 INSUL GLOVE Weekly 2 \$ 1.890 \$ 3.780				
 X75491 ARCGUARD FR KNIT GLOVES Weekly 2 \$ 0.756 \$ 1.512				
 X86938 FR GLV PROTECT 10IN Weekly 2 \$ 0.675 \$ 1.350				
 X60196 COTTON ARC GLOVE BAG Weekly 2 \$ 0.513 \$ 1.026				
<b>1 Employees / Price per employee per week: \$74.56</b>			<b>Weekly Total :</b>	<b>\$ 74.56</b>

## Programs





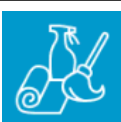




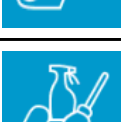
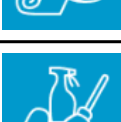
Charge Description	Unit Price
Uniform Advantage	\$ 0.80
Premium Uniform Advantage	\$ 22.72
Prep Advantage	\$ 7.60
Emblem Advantage	\$ 5.82
<b>Weekly Total :</b>	<b>\$ 36.94</b>

## Facility Services

### Non-Garment / Service Group 1

Non-Garments / Services	Frequency	Inventory	Unit Price	Price
 X7540 GREY MICROFIBER WIPE Weekly 100 \$ 0.293 \$ 29.300 <small>Auto LR: Yes Buy Back: No</small>				
 X10189 3X5 XTRAC MAT ONYX Weekly 4 \$ 7.128 \$ 28.512 <small>Auto LR: No Buy Back: No</small>				
 X2650 WET MOP LARGE Weekly 1 \$ 2.200 \$ 2.200 <small>Auto LR: No Buy Back: No</small>				
 X6923 FIBGLS WET MOP HANDL Weekly 1 \$ 0.000 \$ 0.000 <small>Auto LR: No Buy Back: No</small>				



Non-Garments / Services	Frequency	Inventory	Unit Price	Price
 X20023 SIG HRDWND WHT LRG	Every 4 Weeks	1	\$ 9.504	\$ 2.376
Auto LR: No Buy Back: No				
 X27083 SIG DUALTP RFL PAPER	Every 4 Weeks	1	\$ 18.000	\$ 4.500
Auto LR: No Buy Back: No				
 X27072 SIG DUALTP DSP DRK	Weekly	1	\$ 0.000	\$ 0.000
Auto LR: No Buy Back: No				
 X27076 SIG DUALTP CVR BLACK	Weekly	1	\$ 0.000	\$ 0.000
Auto LR: No Buy Back: No				
 X27069 SIG SOAP SVC	Weekly	1	\$ 2.804	\$ 2.804
Auto LR: No Buy Back: No				
 X27070 SIG SOAP RFL FOAM	Weekly	1	\$ 0.000	\$ 0.000
Auto LR: No Buy Back: No				
 X27059 SIG SOAP DSP DRK	Weekly	1	\$ 0.000	\$ 0.000
Auto LR: No Buy Back: No				
 X27063 SIG SOAP CVR BLACK	Weekly	1	\$ 0.000	\$ 0.000
Auto LR: No Buy Back: No				
 X1919 2X3 WELLNESS AF MAT ONYX	Weekly	3	\$ 2.470	\$ 7.410
Auto LR: No Buy Back: No				
 X10202 3X10 XTRAC MAT ONYX	Weekly	1	\$ 8.500	\$ 8.500
Auto LR: No Buy Back: No				
 X7540 Auto L/R	Weekly	4	\$ 3.000	\$ 12.000
Auto LR: Yes Buy Back: No				
<b>Weekly Total :</b>			\$	<b>97.62</b>

## Other Charge

Charge Description	Price Per Week
Service Charge	\$ 0.00

## Uniform Charges



Charge Description	One Time Charges
Name Emblem	\$ 1.95
Company Emblem	\$ 2.95
Custom Emblem 1	\$ 2.95
Preparation Charge	\$ 2.25

## Total

Charge Description	Sale Price
Weekly Delivery Total	\$ 335.09
Monthly Delivery Total	\$ 362.60
Average Weekly Total	\$ 341.97

#

Sales Partner  
 KLAUSERK@CINTAS.COM  
 UR v2

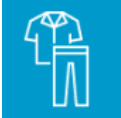

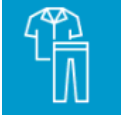
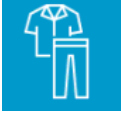
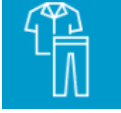


Proposal Date: 02/01/2024

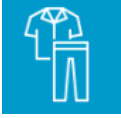
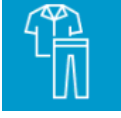

Expiration Date: 03/02/2024

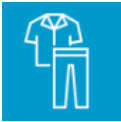
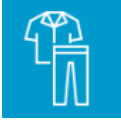
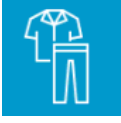
Customer Name <b>Medical Lake Wastewater Plant</b>		Prepared For <b>Medical Lake Wastewater Plant</b>	
Delivery Address <b>207 E Ellen St</b>		Delivery Address 2 :	
City : <b>Medical Lake</b>	State / Province : <b>WA</b>	Zip / Postal Code : <b>99022</b>	Phone : <b>509-299-6860</b>

## Garment Group 1

Garment	Frequency	Inventory	Unit Price	Price
 X392 FRSHRTCRHRTT5.3INHRT	Weekly	11	\$ 0.749	\$ 8.239
 X73478 FRDUNGRE CRHRT INHRT	Weekly	11	\$ 0.806	\$ 8.866
 X387 FRCVRLCRHRTT5.3INHRT	Weekly	2	\$ 1.616	\$ 3.232
 X74634 FR FULL SWING JACKET	Weekly	2	\$ 2.860	\$ 5.720
 X59925 LAB COAT/POPLIN	Weekly	2	\$ 0.260	\$ 0.520

## Garment Group 2

Garment	Frequency	Inventory	Unit Price	Price
 X67455 FR 40CAL VENT HOOD	Weekly	2	\$ 17.840	\$ 35.680
 X67456 FR 40CAL BIB OVERALL	Weekly	2	\$ 15.597	\$ 31.194
 X86932 11IN CLASS 00 INSUL GLOVE	Weekly	2	\$ 1.890	\$ 3.780

Garment	Frequency	Inventory	Unit Price	Price
 X75491 ARCGUARD FR KNIT GLOVES	Weekly	2	\$ 0.756	\$ 1.512
 X86938 FR GLV PROTECT 10IN	Weekly	2	\$ 0.675	\$ 1.350
 X60196 COTTON ARC GLOVE BAG	Weekly	2	\$ 0.513	\$ 1.026






## Programs

Charge Description	Unit Price
Uniform Advantage	\$ 0.08
Premium Uniform Advantage	\$ 0.16
Prep Advantage	\$ 0.05
Emblem Advantage	\$ 0.06

## Facility Services

### Non-Garment / Service Group 1

Non-Garments / Services	Frequency	Inventory	Unit Price	Price
 X7540 GREY MICROFIBER WIPE	Weekly	1	\$ 0.293	\$ 29.300
 X10189 3X5 XTRAC MAT ONYX	Weekly	1	\$ 7.128	\$ 28.520
 X2650 WET MOP LARGE	Weekly	1	\$ 2.200	\$ 2.200
 X6923 FIBGLS WET MOP HANDL	Weekly	1	\$ 0.000	\$ 0.000
 X20023 SIG HRDWND WHT LRG	Every 4 Weeks	1	\$ 9.504	\$ 9.510
 X27083 SIG DUALTP RFL PAPER	Every 4 Weeks	1	\$ 18.000	\$ 18.000

Non-Garments / Services	Frequency	Inventory	Unit Price	Price
 X27072 SIG DUALTP DSP DRK	Weekly	1	\$ 0.000	\$ 0.000
 X27076 SIG DUALTP CVR BLACK	Weekly	1	\$ 0.000	\$ 0.000
 X27069 SIG SOAP SVC	Weekly	1	\$ 2.804	\$ 2.810
 X27070 SIG SOAP RFL FOAM	Weekly	1	\$ 0.000	\$ 0.000
 X27059 SIG SOAP DSP DRK	Weekly	1	\$ 0.000	\$ 0.000
 X27063 SIG SOAP CVR BLACK	Weekly	1	\$ 0.000	\$ 0.000
 X1919 2X3 WELLNESS AF MAT ONYX	Weekly	1	\$ 2.470	\$ 7.410
 X10202 3X10 XTRAC MAT ONYX	Weekly	1	\$ 8.500	\$ 8.500
 X7540 Auto L/R	Weekly	4	\$ 3.000	\$ 12.000

Auto LR: Yes Buy Back: No

## Other Charge

Charge Description	Price Per Week
Service Charge	\$ 0.00

## Uniform Charges

Charge Description	One Time Charges
Name Emblem	\$ 1.95
Company Emblem	\$ 2.95
Custom Emblem 1	\$ 2.95
Preparation Charge	\$ 2.25



To: Mayor and City Council  
From: Glen Horton, Parks and Recreation Director  
**TOPIC: Van Purchase Budget Amendment**

**Requested Action:**

The Parks and Recreation Department would like to request permission to include in the quarter budget amendment the invoice of the Bus from NW Bus.

**Key Points:**

- Budgeted for the 2023 calendar year
- Bus and Invoice were received during the 2024 calendar year
- Parks and Recreation funds were placed back into the general fund at the end of the year.

**Background Discussion:**

City Council had approved the purchase of the bus during the Nov. 23, 2023 council meeting.

**Public Involvement:**

N/A

**Next Steps:**

Add the addition of funds to the quarterly budget amendment to include the transfer of funds from the general fund to the Parks & Recreation Fund in the amount of \$67,810.34.