

Regular Town Council Workshop

June 16, 2025

1:30-5:00pm

Town Council Chambers

Chair: Arne Jorgensen

NOTICE: THE VIDEO AND AUDIO FOR THIS MEETING ARE STREAMED TO THE PUBLIC VIA THE INTERNET AND MOBILE DEVICES WITH VIEWS THAT ENCOMPASS ALL AREAS, PARTICIPANTS AND AUDIENCE MEMBERS. PLEASE SILENCE ALL ELECTRONIC DEVICES DURING THE MEETING.

I. ZOOM LINK FOR PUBLIC PARTICIPATION

The Town reserves the right to close Public Comment via Zoom at any time. In-person comment will continue to be taken and written comments can always be submitted to Town Council by emailing electedofficials@jacksonwy.gov.

To join, click link or copy it to your browser: <https://us02web.zoom.us/j/85375804781?pwd=AHGNdh84zPmsz1AOmIKzxr97Pr4O8a.1>

Or join at zoom.com with Webinar ID: **853 7580 4781** and Password: **83001** or by phone: **+1 253 215 8782**

II. CALL TO ORDER AND ROLL CALL

III. WORKSHOP ITEMS

- A. Contract Award for Greenhouse Gas (GHG) Inventory (Tanya Anderson, 20 mins)
- B. Draft Strategic Stormwater Program Plan (Floren Poliseo, 60 mins)
- C. Revenue Alternatives Special Election November 4, 2025 (Tyler Sinclair, 60 mins)
- D. WY22 Comments to WYDOT (Charlotte Frei, 20 mins)

IV. MATTERS FROM MAYOR AND COUNCIL

- A. Board and Commission Reports

V. UPCOMING AGENDA UPDATE

- A. Council Priorities

VI. EXECUTIVE SESSION

Adjourn meeting to executive session to consider matters concerning litigation to which the governing body is a party or proposed litigation to which the governing body may be a party in accordance with Wyoming Statute 16-4-405(a)(iii).

Please note that at any point during the meeting, the Mayor may change the order of items listed on this agenda. In order to ensure that you are present at the time your item of interest is discussed, please join the meeting at the beginning to hear any changes to the schedule or agenda.

STAFF REPORT



Meeting Date:	June 16, 2025	Meeting Title:	Town Council Workshop
Submitting Department:	Administration	Presenter:	Tanya Anderson
Agenda Item:	Contract Award for Greenhouse Gas Inventory	Public Comment:	Yes

Purpose & Policy Considerations.

The purpose of this item is for Council to consider awarding a contract for a Community-wide and Local Government Operations (LGO) Greenhouse Gas (GHG) Inventory.

Requested Action.

The requested action for this item is for Council to consider the attached contract award for a Community-wide and LGO GHG Inventory.

Recommendations.

Staff recommends approving the contract award to Lotus Engineering & Sustainability for a Community-wide and LGO GHG Inventory.

Background.

Community-wide GHG inventories measure emissions from all energy and fuel consumed in a Town or County. They include vehicle emissions from residents, commuters, and visitors, air travel emissions, building emissions from electricity, natural gas, and propane consumption, emissions from waste and recycling processed at the Transfer Station and Recycling Center, and emissions from land use. Local Government Operations Inventories are specific to municipal operations, and include emissions from municipal buildings, municipal fleets, and workplace waste and recycling, as well as emissions from operations at the wastewater treatment plant and municipal drinking water wells. They break down the portion of the community-wide GHG emissions that can be attributed to municipal operations, and that the municipality has direct control over.

Community-wide GHG inventories were conducted in Teton County in 2008 and 2018 and included emissions in all of Teton County east of Teton Pass and south of Yellowstone National Park. Data is updated annually for the Teton County Indicator Dashboard using estimates to provide a big picture update of emissions in our community and how that is changing over time. It is best practice to conduct a full-scale GHG inventory more frequently than once every ten years. A full-scale GHG inventory dives deeper into primary data sources and updates emissions factors as energy mixes change and new data becomes available. The Town of Jackson Sustainability Plan, accepted by Council on July 1, 2024, includes a strategy to complete a professional GHG inventory within the first year of implementation, and every five years thereafter.

The Town of Jackson has measured its electricity, gas, propane, and fuel consumption since 2008. By fiscal year 2022, Town vehicles were 60% more efficient than they were in fiscal year 2008, and Town buildings were more than 40% more efficient, resulting in savings of more than \$3,000,000 that would have been spent on energy and fuel. The Town has reported out on these improvements in efficiency. However, the data has never been translated into emissions. Many of the Municipal goals and targets within the new Town of Jackson Sustainability Plan are measured through emissions reduction rather than improvements in efficiency. Conducting a Local Government Operations (LGO) inventory will help the Town convert the data we already have into a system that also tracks emissions so that we can monitor our progress towards our goals.

At the March 3, 2025, Regular Town Council meeting, Council approved release of a Request for Proposals (RFP) for an LGO and Community-wide GHG Inventory. Nine proposals were received and reviewed using the evaluation criteria provided in the RFP.

EVALUATION CRITERIA	POINT VALUE
Project Approach – What is the ability of the proposer to deliver a successful report within a designated timeline? Does the proposer understand the project goals? Does the proposer propose an innovative approach to the project? How timely will the project be completed?	30
Budget – Is the proposal cost-effective for the scope of work? Is the budget realistic? How will the budget be affected if some items are eliminated? The Town of Jackson may choose to eliminate or delay some items within the proposal.	20
Work-related Experience – Does the proposer have experience doing greenhouse gas inventories or similar work? What is the quality of the examples of previous work included in the application? Does previous experience include work with rural communities and communities with tourism-based economies?	15
Personnel Qualifications – How well does the team work together? Do the personnel have previous training and experience relate to the proposed scope of work? Experience may include educational background, training and certificates; relevant employment, military, and volunteer experience; traditional ecological knowledge; and other qualifications.	15
Quality of past project references – How strong and relevant are the references provided for similar work? Are the references for projects with a similar scope of work?	10
Sustainability – Does the proposer demonstrate commitment to sustainability through organizational practices? Does the proposal include actions to reduce emissions in the scope of work?	5
Overall Quality of application – Does the proposal follow directions in the Request for Proposal? What is the overall quality of the proposal?	5
TOTAL MAXIMUM SCORE	100

Analysis.

Lotus Engineering & Sustainability scored very highly in all of the categories. They had among the highest scores for project approach and scored higher than any other proposal for work-related experience and quality of references. Their work experience included a large number a GHG inventories for mountain towns with similar climates and tourism-based economies. References from clients in our peer communities were excellent. Lotus’s proposal also provided a high value product for the price. Finally, their proposal demonstrated a commitment to sustainability within their organization, earning them a full five points for that evaluation criterion.

Furthermore, the Town of Jackson is a member of the International Council for Local Environmental Initiatives, known as ICLEI– Local Governments for Sustainability. Through our membership, we receive consulting, have the opportunity to join learning cohorts, and receive free access to a GHG emissions reporting tool called Clearpath. The Town of Jackson intends to use Clearpath to share the results of our GHG inventories and join an international community of cities that report their emissions to the same database, using the same protocols. One of Lotus’s project leads used to work for ICLEI and is very familiar with the global protocols and Clearpath. They have developed an emissions inventory workbook that is streamlined to dovetail with Clearpath, and their business model includes supporting staff as we learn to use the system after the scope of work within the contract is complete. Their deep knowledge of Clearpath will simplify staff’s transition to using the Clearpath tool.

While all of the proposals received were from qualified firms, Lotus Engineering & Sustainability rose to the top due to their experience, the quality of their project approach, positive references from previous clients, extensive experience with Clearpath, and a proven track record of success working with mountain towns. Their methods and tools will

dovetail with those used by the County for the indicator dashboard and will be easy for staff to update year over year. Staff recommends moving forward with the proposed contract and scope of work with Lotus Sustainability.

Possible Alternatives.

- Council could accept the firm that staff selected and reject the contract presented in this staff report, and direct staff to return with different contract terms.
- Council could reject the firm that staff selected and direct staff to return with a contract with a different proposer
- Council could direct staff to abandon or pause the project

Comprehensive Plan & Priority Alignment.

Town of Jackson Sustainability Plan – Accountability Section - Strategies

- Complete a Local Government Operations (LGO) and Community-wide GHG inventories within one year of adoption
The most recent formal community-wide GHG inventory for Teton County was completed in 2017 and is becoming outdated. The Town of Jackson gathers data on municipal energy, fuel, and water consumption, but has never completed a formal LGO GHG inventory. We should complete an LGO and Community-wide GHG inventory within one year of adoption of the Town Sustainability Plan to provide the baseline data we need to measure success.
- Create or improve LGO and community-wide GHG emissions data collection
Using data from the LGO and Community-wide GHG inventories, we can create or improve systems for collecting and recording data to track our progress. Efficient systems will enable us to gather the information necessary to meet our reporting and communications targets.

Fiscal Impact.

The Contract with Lotus Engineering & Sustainability is for \$62,355. \$75,000 of the Ecosystem Stewardship budget for professional services in Fiscal Year 2025 was allocated for a GHG Inventory and is available for staff to start working with Lotus Engineering & Sustainability immediately. Most of that fund will not be spent this fiscal year. An additional \$60,000 for the GHG inventory is recommended for the Fiscal Year 2026 budget, which is currently being considered by Council.

Staff Impact.

It took Ecosystem Stewardship staff 9 hours to coordinate stakeholder meetings for the community-wide portion of this RFP, draft the RFP, and draft staff reports. It took Ecosystem Stewardship staff and the Town Clerk an estimated 20 hours to review proposals, contact references, conduct interviews, select a firm, and negotiate a contract. It required approximately 2 hours of the Legal Department's time to review the contract, and this staff report. It will take staff an estimated 20 - 40 hours to work with the selected firm as they complete the inventory.

Attachments or Links.

Lotus Engineering & Sustainability Professional Services Agreement
Lotus Engineering & Sustainability GHG Inventory Proposal

Suggested Motion.

I move to award the contract for a Community-wide and LGO GHG Inventory to Lotus Engineering & Sustainability, subject to minor changes by staff.

**Lotus Engineering & Sustainability
Professional Services Agreement**

This Professional Services Agreement (this "**Agreement**"), dated as of _____ (the "**Effective Date**"), is by and between Lotus Engineering and Sustainability, LLC, a Colorado limited liability company ("**Lotus**") and Town of Jackson, Wyoming ("**Customer**").

1. Services. Lotus shall provide to Customer the services ("**Services**") set forth in the Statement of Work attached as Exhibit A, and made a part hereof by this reference.

2. Customer's Obligations. Customer shall (a) provide Lotus with access to Customer's content and data as may reasonably be required by Lotus for the purposes of performing the Services; and (b) respond promptly to any Lotus request for information or approvals, subject to Customer's reasonable discretion, that Lotus requires to perform the Services.

3. Term and Termination.

3.1 Term; Renewal. This Agreement shall commence as of the Effective Date and shall continue thereafter until the completion of the Services or by December 31st, 2025, whichever come sooner, unless this contract is amended. ("**Term**"), unless sooner terminated pursuant to this Section 3.

3.2 Termination for Cause. Either party may terminate this Agreement, effective upon written notice to the other party ("**Defaulting Party**"), if the Defaulting Party materially breaches this Agreement, and such breach is unable to be cured, or with respect to a material breach capable of cure, the Defaulting Party does not cure such breach within fifteen (15) days after receipt of written notice of such breach.

3.3 Effects of Termination or Expiration. Upon expiration or termination of this Agreement for any reason, (a) Lotus shall: (i) deliver to Customer all documents, work product, and other materials, whether or not complete, prepared by or on behalf of Lotus in the course of performing the Services for which Customer has paid; (ii) return to Customer all Customer-owned property, equipment, or materials in its possession or control; and (b) each party shall return to the other party or destroy, at the other party's discretion, all documents and tangible materials (and any copies, physical or electronic) containing, reflecting, incorporating or based on the other party's Confidential Information and certify in writing that it has done so; provided, however, that Customer may retain copies of any Confidential Information of Lotus (i) required of Customer under the law, (ii) subject to Section 6, as incorporated in the Deliverables, or (iii) to the extent necessary to allow it to make full use of the Services and any Deliverables.

3.4 Survival. The rights and obligations of the parties set forth in this Section 3.4, Section 3.3, Section 4, Section 5, Section 6, Section 7.4, Section 8, Section 9, and Section 11 will survive any such termination or expiration of this Agreement.

4. Fees and Expenses; Payment Terms.

4.1 In General. In consideration of the provision of the Services by the Lotus and the rights granted to Customer under this Agreement, Customer shall pay the fees as set forth in the applicable Statement of Work and this Section 4.

4.2 Project Fees. For Services provided on a time and materials basis, Customer shall pay fees ("**Fees**") calculated in accordance with Lotus's hourly fee rates as set forth in Exhibit A. Lotus will submit an invoice with actual labor hours and other direct expenses on a monthly basis, unless otherwise agreed in the Statement of Work attached as Exhibit A. Each invoice shall be paid by Customer to Lotus within forty-five (45) days of the date of the invoice. If Customer fails to timely pay an invoice, Lotus may (a) charge interest on unpaid amounts at a rate of 8% per month or the maximum amount permitted by law, whichever is lower, from the date such payment was due until the date paid; and (b) suspend performance for all Services until payment has been made in full, except for any amount disputed in good faith.

4.3 Price. The Services are not-to-exceed contract with a maximum cost of **\$62,355.00**.

4.4 Taxes. Customer shall be responsible for all sales, use, and excise taxes, and any other similar taxes, duties, and charges of any kind imposed by any federal, state, or local governmental entity on any amounts payable by Customer hereunder. Any such taxes, duties, and charges currently assessed or which may be assessed in the future, that are applicable to the Services are for the Customer's account, and Customer hereby agrees to pay such taxes; provided, that, in no event shall Customer pay or be responsible for any taxes imposed on, or with respect to, Lotus's income, revenues, gross receipts, personnel, or real or personal property or other assets.

5. Intellectual Property.

5.1 Except as set forth in Section 5.2, all intellectual property rights, including copyrights, patents, patent disclosures and inventions (whether patentable or not), trademarks, service marks, trade secrets, know-how, and other confidential information, trade dress, trade names, logos, corporate names and domain names, together with all of the goodwill associated therewith, derivative works and all other rights (collectively, "**Intellectual Property Rights**") in and to all documents, work product and other materials that are delivered to Customer under this Agreement or prepared by or on behalf of Lotus in the course of performing the Services (collectively, the "**Deliverables**") shall be owned exclusively by Customer. Lotus agrees and will cause its Lotus personnel to agree, that with respect to any Deliverables that may qualify as "work made for hire" as defined in 17 U.S.C. §101, such Deliverables are hereby deemed a "work made for hire" for Customer. To the extent that any of the Deliverables do not constitute a "work made for hire," Lotus hereby irrevocably assigns and shall cause its personnel to irrevocably assign to Customer all Intellectual Property Rights worldwide in the Deliverables. Lotus shall cause its personnel to irrevocably waive, to the extent permitted by applicable law, any and all claims such Lotus personnel may now or hereafter have in any jurisdiction to so-called "moral rights" or rights of droit moral with respect to the Deliverables.

5.2 All Intellectual Property Rights in all documents, data, know-how, methodologies, software, and other materials provided by or used by Lotus in performing the Services and developed or acquired by the Lotus prior to or independently of this Agreement (collectively, "**Pre-Existing Materials**") shall be owned exclusively by Lotus and its licensors. Lotus hereby grants Customer a limited, revocable, perpetual, fully paid-up, royalty-free, non-transferable (except in accordance with Section 11.56), non-sublicensable, worldwide, non-exclusive license to use, display, reproduce, distribute, transmit, modify (including to create derivative works), import, make, have made, and otherwise exploit any Pre-Existing Materials to the extent incorporated in or otherwise necessary for

the use of the Deliverables. All other rights in and to the Pre-Existing Materials are expressly reserved by Lotus.

6. Confidential Information.

6.1 All non-public, confidential or proprietary information of either party ("**Confidential Information**"), including, but not limited to, information about such party's business affairs, products, services, methodologies, confidential intellectual property, trade secrets, third-party confidential information, and other sensitive or proprietary information, disclosed by one party ("**Disclosing Party**") to the other party ("**Receiving Party**"), whether disclosed orally or disclosed or accessed in written, electronic, or other form or media, or otherwise learned by the Receiving Party in connection with this Agreement, and whether or not marked, designated, or otherwise identified as "confidential," is confidential, solely for use in performing this Agreement and may not be disclosed or copied unless authorized by the Disclosing Party in writing. The Receiving Party shall protect and safeguard the confidentiality of the Disclosing Party's Confidential Information with at least the same degree of care as the Receiving Party would protect its own Confidential Information, but in no event with less than a commercially reasonable degree of care. Confidential Information does not include any information that: (a) is or becomes generally available to the public other than as a result of the Receiving Party's breach of this Agreement; (b) is obtained by the Receiving Party on a non-confidential basis from a third-party that was not legally or contractually restricted from disclosing such information; (c) the Receiving Party establishes by documentary evidence, was in its possession prior to the Disclosing Party's disclosure hereunder; (d) was or is independently developed by the Receiving Party without using any of the Disclosing Party's Confidential Information; or (e) is required to be disclosed under applicable federal, state or local law, regulation or a valid order issued by a court or governmental agency of competent jurisdiction.

6.2 The Receiving Party shall be responsible for any breach of this Section 6 caused by any of its employees, contractors, agents, or representatives. Each party's obligations under this Section 6 will survive termination or expiration of this Agreement.

6.3 Customer shall not transmit any personally identifiable information to Lotus. Customer acknowledges and agrees that Lotus is not responsible for the storage or loss of any data, including without limitation any personal information, Customer transmits to Lotus.

7. Representations and Warranties.

7.1 Mutual. Each party represents and warrants to the other party that: (a) it has the full right, power, and authority to enter into this Agreement, to grant the rights and licenses granted hereunder and to perform its obligations hereunder; and (b) when executed and delivered by such party, this Agreement will constitute the legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms.

7.2 Lotus. Lotus represents and warrants to Customer that: (a) it shall perform the Services in a professional and workmanlike manner in accordance with generally recognized and commercially reasonable industry standards for similar services and in compliance with all applicable laws, and shall devote adequate resources to meet its obligations under this Agreement; (b) the Services and Deliverables shall conform in all material respects with the specifications and will be performed to

Customer's reasonable satisfaction; and (c) to Lotus's knowledge, the Services and Deliverables, and Customer's use thereof, do not and will not infringe any Intellectual Property Right of any third party arising under the laws of the United States. Lotus's sole liability and Customer's sole and exclusive remedy for Lotus's breach of the foregoing Section 7.2(c) are Lotus's indemnification obligations under Section 8.2.

7.3 Customer. Customer represents and warrants to Lotus that: (a) it shall ensure that all facilities, equipment, and other materials Customer provides to Lotus are in good working order and suitable for the purposes for which it is used in relation to the Services; (b) all information it provides or has provided on its behalf to Lotus is timely and accurate and will use reasonable efforts to notify Lotus of errors in such information; and (c) it shall provide reasonable assistance to Lotus to Lotus in its performance of the Services.

7.4 EXCEPT FOR THE EXPRESS WARRANTIES IN THIS AGREEMENT, (a) EACH PARTY HEREBY DISCLAIMS ALL WARRANTIES, EITHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE UNDER THIS AGREEMENT, AND (b) LOTUS SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT.

8. Indemnification.

8.1 General. Lotus ("**Indemnifying Party**") shall indemnify, defend, and hold harmless the Customer and its officers, directors, employees, agents, affiliates, successors, and permitted assigns ("**Indemnified Party**") against any and all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs, or expenses of whatever kind, including reasonable attorneys' fees and costs, incurred by Indemnified Party (collectively, "**Losses**"), arising out of or resulting from any claim of a third party arising out of or occurring in connection with: (a) bodily injury, death of any person or damage to real or tangible, personal property resulting from Indemnifying Party's willful, fraudulent or grossly negligent acts or omissions; or (b) Indemnifying Party's negligence, willful misconduct, or material breach of this Agreement, including but not limited to material breach of any representation or warranty made by Indemnifying Party in this Agreement.

8.2 Intellectual Property Infringement. Lotus shall defend, indemnify, and hold harmless the Customer Indemnified Parties from and against all Losses awarded against a Customer Indemnified Party in a final judgment based on a claim that any of the Services or Deliverables or Customer's receipt or use thereof in the manner intended infringes any Intellectual Property Right of a third party; provided, however, that Lotus shall have no obligations under this Section 8.2 with respect to claims to the extent arising out of: (a) any instruction, information, designs, specifications, or other materials provided by Customer in writing to Lotus; (b) Customer's use of the Deliverables in combination with any materials or equipment not supplied to Customer or specified by Lotus in writing; or (c) any modifications or changes made to the Deliverables other than by Lotus.

8.3 Procedure. The obligations set forth in this Section 8 apply only if: (a) the Indemnified Party promptly notifies the Indemnifying Party in writing of any claim promptly upon learning or receiving of the same (provided, however that the failure to provide written notice of such claim within a reasonable period of time will not relieve the Indemnifying Party of any obligations hereunder, except to the extent that the Indemnifying Party is materially prejudiced by such failure); (b) the Indemnified Party grants the Indemnifying Party sole control of the defense and settlement of the claim provided,

however, that (i) the Indemnifying Party will not settle any claim that admits fault or liability of the Indemnified Party without the Indemnified Party's prior written consent (which shall not be unreasonably withheld, conditioned or delayed), and (ii) the Indemnified Party will have the right to participate in the matter at its own expense; and (c) the Indemnified Party provides the Indemnifying Party with all reasonable assistance, information and cooperation reasonably required for the defense and settlement of the claim.

9. LIMITATION OF LIABILITY. EXCEPT FOR OBLIGATIONS TO MAKE PAYMENT, INDEMNIFICATION OBLIGATIONS, LIABILITY FOR BREACH OF CONFIDENTIALITY, OR LIABILITY FOR INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS, IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR: (A) ANY LOSS OF USE, REVENUE, OR PROFIT OR LOSS OF DATA OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, OR PUNITIVE DAMAGES WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGE WAS FORESEEABLE AND WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; OR (B) DIRECT DAMAGES OF MORE THAN THE AGGREGATE AMOUNTS PAID OR PAYABLE TO LOTUS IN THE ONE YEAR PERIOD PRECEDING THE EVENT GIVING RISE TO THE CLAIM.

10. Insurance. Lotus shall, at its own expense, maintain and carry insurance in full force and effect with financially sound and reputable insurers, that includes, but is not limited to: (a) Commercial General Liability with limits no less than \$2,000,00 per occurrence and \$3,000,000 in the aggregate; (b) Worker's Compensation with limits no less than the minimum amount required by applicable law; (c) Errors and Omissions/Professional Liability with limits no less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate; and (d) Cyber Security Liability with limits no less than \$1,000,000 per occurrence and \$1,000,000 in the aggregate.

11. Miscellaneous.

11.1 Independent Contractors. The parties are independent contractors, and nothing contained in this Agreement shall be construed as creating any agency, partnership, joint venture or other form of joint enterprise, employment, or fiduciary relationship between them. Neither party shall be authorized to contract for or bind the other party in any manner whatsoever.

11.2 Force Majeure. No party shall be liable or responsible to the other party, nor be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term of this Agreement (except for any obligations to make payments to the other party hereunder), when and to the extent such failure or delay is caused by or results from events outside of the party's reasonable control ("**Force Majeure Events**"), including but not limited to: (a) acts of God; (b) flood, fire, earthquake, explosion, or pandemic; (c) war, invasion, hostilities (whether war is declared or not), terrorist threats or acts, riot, or other civil unrest; (d) force of law; (e) actions, embargoes, or blockades in effect on or after the date of this Agreement; (f) national or regional emergency; and (g) shortage of adequate power or transportation facilities. The affected party shall resume performance under this Agreement as soon as reasonably practicable after the Force Majeure Event has been resolved or terminated.

1. Notice. Any notice, request, demand, consent, approval, or other communication required or permitted under this Agreement shall be in writing and shall be deemed duly given (i) when delivered personally to the recipient, (ii) when sent by certified mail, return receipt requested,

to the address specified below, or (iii) when sent by email to the email address specified below, provided that the sender has not received a delivery failure notification. A notice sent by email shall be deemed received on the date and time the email is sent, provided that (a) the email is sent to the recipient's designated email address as set forth below, (b) the sender does not receive a bounce-back or delivery failure notification, and (c) if the notice is sent outside of normal business hours (9:00 AM to 6:00 PM on business days), the notice shall be deemed received at 9:00 AM on the following business day.

Lotus:

Lotus Engineering & Sustainability
ATTN: Hillary Dobos
1627 Vine St
Denver, CO 80206
Email: hello@lotussustainability.com

Town:

Town of Jackson
Attn: Town Clerk
P.O. Box 1687
Jackson, Wyoming 83001
Email: clerk@jacksonwy.com

Either party may change its address or email address for notice purposes by providing written notice to the other party in accordance with the terms of this provision.

11.3 Entire Agreement; Order of Precedence. This Agreement, together with all Exhibits and any other documents incorporated herein by reference, constitutes the sole and entire agreement of the parties to this Agreement and supersedes all prior and contemporaneous understandings and agreements. In the event of any conflict between the terms and provisions of this Agreement and those of any Exhibit, then the terms of this Agreement shall control unless expressly set forth otherwise in the applicable Exhibit. For the avoidance of doubt, purchase orders are solely for Customer's convenience in record keeping. No terms, provisions, or conditions contained in any purchase order will have any legal effect on the obligations of the parties hereunder or otherwise modify this Agreement regardless of when executed.

11.4 Subcontracting. It is contemplated that Lotus will, and Lotus shall have the right to, subcontract with third parties for the provision of goods or services in connection with the Services ("Subconsultants"). Unless otherwise directed by Customer in writing, Lotus shall enter into agreements with Subconsultants in its own capacity and not as agent for Customer. Lotus shall remain fully responsible for the performance of each Subconsultant and its employees and for their

compliance with all of the terms and conditions of this Agreement as if they were Lotus's own employees.

11.5 Assignment. Neither party may assign, transfer, or delegate any or all of its rights or obligations under this Agreement, provided, that, upon prior written notice to the other party, either party may assign the Agreement to an affiliate of such party or to a successor of all or substantially all of the assets of such party through merger, reorganization, consolidation, or acquisition. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns.

11.6 No Third-Party Beneficiaries. This Agreement is for the sole benefit of the parties hereto and their respective successors and permitted assigns and nothing herein, express or implied, is intended to or shall confer upon any other person any legal or equitable right, benefit, or remedy of any nature whatsoever, under or by reason of this Agreement.

11.7 Amendment and Modification; Waiver. This Agreement may be amended, modified, or supplemented only by an agreement in writing signed by each party hereto. Neither party will be treated as having waived any rights by not exercising (or delaying the exercise of) any rights under this Agreement.

11.8 Severability. If any term or provision of this Agreement is invalid, illegal, or unenforceable in any jurisdiction, such invalidity, illegality, or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Upon such determination that any term or other provision is invalid, illegal, or unenforceable, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

11.9 Governing Law: Submission to Jurisdiction. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Wyoming without giving effect to any choice or conflict of law provision or rule that would cause the application of laws of any other jurisdiction. Any legal suit, action, or proceeding arising out of or related to this Agreement or the Services provided hereunder shall be instituted exclusively in the state or federal courts in Jackson, Wyoming, and each party irrevocably: (a) submits to the exclusive jurisdiction of such courts; and (b) waives any objection to such courts based on venue or inconvenience; and (c) waives any right to trial by jury.

11.10 Counterparts; Electronic Signatures. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. The signature of any party to any counterpart shall be deemed a signature to, and may be appended to, any other counterpart. Counterparts may be delivered via electronic mail (including pdf or any electronic signature complying with the federal E-SIGN Act of 2000, e.g., www.docusign.com) or other transmission method, and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. At the request of either party, each party agrees to execute an original of this Agreement as well as any facsimile or other reproduction hereof.

11.11 Governmental Immunity. Notwithstanding anything contrary herein or that may be interpreted as such, the Town of Jackson does not waive its governmental immunity by entering into this Agreement, and fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this Agreement.

[SIGNATURE PAGE FOLLOWS]

The parties hereto have executed this Professional Services Agreement and the Statement of Work in one or more counterparts, each of which shall be deemed to be an original as of the last date written below.

Town of Jackson, Wyoming

Lotus Engineering and Sustainability, LLC

By _____

By _____

Name: Arne O. Jorgensen

Name: Hillary Dobos

Title: Mayor

Title: President

Email: hillary@lotussustainability.com

ATTEST:

Riley Hovorka, Town Clerk

EXHIBIT A

Services – Statement of Work

This Statement of Work is governed by the terms and conditions of the Lotus Engineering & Sustainability Professional Services Agreement, dated _____ (the “**Agreement**”) by and between Lotus Engineering and Sustainability, LLC, a Colorado limited liability company (“**Lotus**”) and Town of Jackson, Wyoming (“**Customer**”). Terms used and not otherwise defined in this Statement of Work have the meanings given them in the Agreement.

Invoices: Lotus will invoice Customer monthly for services rendered and expenses incurred during the previous month.

Lotus submits the following proposed approach for the scope of work to conduct a local government operations (LGO) and community-wide Greenhouse Gas (GHG) emissions inventory for the Town of Jackson.

Task 1: Project Management

We propose an approach that will seamlessly support Jackson staff, Town departments, and other stakeholders to complete LGO and community-wide GHG inventories that are actionable, specific to the region, and integrate other data collection and planning efforts. Lotus will:

- Review the scope of work and finalize a detailed timeline including key milestones, deliverables, and dates.
- Establish a process and communication channels for coordinating with Town staff.
- Determine frequency and content of regular check-in calls, progress reports, and emails and schedule accordingly.
- Review the monthly invoice reporting process.
- Ensure there is agreement on the project tasks, goals, expectations, process, data collection methods, scope, timeline, and outcomes of the subsequent work.

Expectations for Town staff: Attend the kick-off meeting; respond to emails in a timely manner; process invoices.

Deliverables: Project kick-off meeting and supporting materials; shared folders and/or project management tool; regular check-ins; monthly invoice reports.

Task 2: Local Government Operations GHG Inventory

Task 2 involves the development of an LGO GHG emissions inventory and a draft inventory report. At the project kickoff meeting, the project team will decide on the inventory year to be analyzed. Lotus will develop and complete the inventory in Lotus' Excel based GHG Inventory Tool.

Lotus will utilize the Local Government Operations Protocol to develop the Town's LGO inventory. Methods for collecting data for the sectors/sources to be included in the inventory are listed in the table below.

Sector	Data Collection Methodology	Actual or Estimated
Stationary Energy + Renewable Energy	Town energy tracking system or energy bills. This includes all Town-owned and leased buildings. Lotus and the Town will discuss which control approach to use and account for leased and owned assets accordingly. Emissions will be tracked by individual building and by category and/or Scope. Renewable Energy will be tracked separately and reported, as appropriate.	Actual
Vehicle fleet and equipment	Town owned fleet vehicles and equipment list, annual vehicle miles traveled per vehicle and total gallons consumed.	Either
Business travel	Spending data on business travel-related flights, reimbursed mileage, and other available categories of data.	Actual
Employee commuting	New or previously conducted employee commuting survey.	Actual

Waste + Recycling	Data from waste hauler, or quantity and size of dumpsters. Data from recycling and diversion for information only calculations.	Either
Refrigerant leakage	Town-owned square footage needed for default methods outlined in the IPCC 2019 Guidelines Chapter 7.	Estimated
Town-owned facilities such as wastewater treatment plants	Wastewater treatment plants: effluent data, data on the processes used.	Actual
Land-based emissions	Emissions attributed to land use on Town-owned properties using the LEARN tool, iTree, or other appropriate technology. Data on land-based emissions for information only calculations.	
Consumption-based Scope 3 sources	Paper purchases and use	Actual

All data sources and information are maintained and shared with Jackson to ensure transparency and replicability.

Expectations for Town staff: provide data contacts; if an employee commute survey is desired, we will ask staff to send out the survey link and encourage fellow employees to respond; one review meeting to go over results of the GHG inventory.

Specific activities include:

- Coordinate data collection from multiple Town departments and all other required sources to identify types of necessary data, collection procedures, and approaches to addressing data gaps.
- Conduct QA/QC reviews on collected data to ensure that it aligns with best practices and industry knowledge.
- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per employee, and energy use intensity by square foot.
- Create the GHG inventory, draft Inventory Report, and database for LGO operations inventory data.
 - Create a transparent GHG emission inventory tool for Jackson that is LGOP-compliant at the level desired by the Town. Key aspects of

this tool include summary of data sources; emission factors; emission calculations; emission summary; and a “ClearPath ready” input tab for later entry into ClearPath 2.0¹.

- Review all findings and results with Jackson in a virtual synthesis meeting which will inform the final inventory report in Task 5.
- Create appealing visuals and graphics to communicate inventory results.

Deliverables:

- Lotus-derived LGOP-compliant GHG inventory workbook.
- Draft LGO inventory report.
- All associated data documents in a zipped folder.

Task 3: Community-Wide GHG Inventory

Task 3 includes the creation of a GHG inventory for community-wide emissions and accompanying documentation **utilizing the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC)**. The community-wide inventory will follow the same scope as is found in Task 2 above and includes data input into Lotus’s inventory analysis spreadsheet. The baseline year will be decided with Town staff. Lotus understands that the community-wide boundary is defined as all of Teton County, excluding areas west of Teton Pass and within Yellowstone National Park.

As a part of the inventory, Lotus will also include annual carbon sequestration by trees. Lotus recommends utilizing the Land Emissions and Removals Navigator tool to understand at a high level what the potential carbon emissions removals are for the County boundary. Other tools may also be considered.

Below are the methods Lotus plans to use to collect data for the sectors and sources included in the community-wide inventory: Lotus will work with the

¹ ICLEI does not yet have LGO inventory module established in ClearPath 2.0. Lotus will make every effort to develop an output tab.

Town to identify applicable Scope 3 GHG inventory sources as advised by the GPC protocol.

Sector	Data Collection Methodology	Actual or Estimated
Stationary energy	Consumption data for electricity use, natural gas use, propane use, and diesel used in backup generators. Transmission and distribution loss rate from the utility OR US EIA. Emission factor for electricity consumption from the utility OR calculated from the utility's generation mix. Emissions factors from electricity will be calculated for Tier 1 and Tier 2 power purchased if data is available from the local utility. Emissions will be broken out by available subsector designations, e.g. residential and commercial.	Actual
Fugitive emissions	Localized natural gas loss rate, or can use the default from the GPC protocol.	Estimated
On-Road Transportation	Vehicle miles traveled from Town-approved transportation model, vehicle registration data (including electric vehicles)	Actual
Transit	Transit bus fuel use and miles traveled	Actual
Waterborne	Fuel sold at marinas in the County	Actual
Aviation	Lotus will use a methodology desired by the Town of Jackson	Actual
Off-road	Off-road fuel use at the airport, fuel use from local recreation outfitters, OR can use estimates from US National Emissions Inventory	Either
Waste	Tonnage data from haulers, local waste characterization. Recycling, composting, and other types of waste diversion will be added as "information only" as appropriate.	Actual
Wastewater Treatment	Effluent data, data on the processes used	Actual

Carbon Sequestration	Land Emissions and Removals Navigator tool, iTree, or other available appropriate tools.	Estimated
Consumption Based Emissions	Emissions estimates from food, commercial deliveries, and the reuse economy will be included based on available data.	Estimated

Expectations for Town staff: provide data contacts where needed; one review meeting for the results of the GHG inventory.

Specific subtasks include:

- Review BASIC and BASIC+ data requirements.
 - BASIC+ level requires communities to cover a broader range of emission sources in addition to the ones under the BASIC level. These emissions cover sources such as industrial processes; transmission and distribution losses for electricity; agriculture, forestry and land use; and transboundary transportation.
- Review all applicable emission sources and outline sources (e.g., direct or indirect) that may be considered *de minimis* by scope and sector. Review this list with the Town. Note this may eliminate various Scope 3 emissions categories.
- Review, cull, analyze, and leverage available data to save time and money.
- Confirm reporting protocols, emissions factors, activity data and analytical tools.
- Coordinate data collection from multiple departments and all other required sources, identify types of necessary data, collection procedures, and approach to addressing data gaps.
- Conduct quality assurance/quality control (QA/QC) review on collected data to ensure that it aligns with best practices and industry knowledge.
- Collect data to create the GPC-compliant GHG emissions inventory to be completed in ClearPath.
 - Create a transparent GHG emission inventory tool for Jackson that is GPC-compliant at the level desired by the Town. Key aspects of

this tool include summary of data sources; emission factors; emission calculations; emission summary; and a “ClearPath ready” input tab for later entry into ClearPath.

- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per capita, energy use intensity by building sector, residential electricity, and natural gas use per capita.
- Review all findings with the Town.

Deliverables: Lotus GHG Emissions Inventory Workbook (Excel Based), data entered into ClearPath, all accompanying data sources.

Task 4: Tourism and Construction Emissions Allocation

Lotus will meet with Town staff to determine the best attribution dataset for construction and tourism related emissions while creating the LGO and community inventories. It should be noted that the acquisition of atypical external data, such as cement data to inform construction activity within the Town or economic datasets to inform tourism impacts, may require additional costs that have NOT been factored into the project budget proposed herein. Once methodologies and datasets have been determined, Lotus will calculate the impact from the tourism and construction industries on local GHG emissions. This will be done within the inventory workbook for the Community inventory. Depending on Town staff input, Lotus can summarize and create visual charts and graphs to help depict tourism and construction activity impacts.

Expectations for Town Staff: Attend a virtual meeting with Lotus to determine datasets and methodologies; provide assistance with acquiring data as needed.

Deliverables: additional datasets, sources, methods, and assumptions compiled in a zipped folder.

Task 5: Inventory Results and Assessment

Lotus will summarize the results of the inventories in a final report or, if desired, separate reports for the LGO and the community-wide inventories. Inventory results will be used to update and revise (as needed) the Comprehensive Plan Indicator Dashboard. Where different methods are used, every effort will be made to revise previous data to align methodologies. The report(s) will be very visual, include graphics, and cover the following for both inventories:

- Brief overview of methods.
- Emissions by sector and source.
- Emissions over time.
- Normalized emissions.
- Summary of emissions that can be attributed to tourism and construction.

Lotus will create a draft report and provide it to the Town at least two weeks prior to the completion date. Lotus will then incorporate the Town's feedback to create a final inventory report.

Expectations for staff and stakeholders: Provide report edits in a timely manner; sign off on final report.

Deliverables: Draft inventory report in Word document; final inventory report formatted from the Word document (fees for graphic design of the report can be requested).

Task 6: Inventory Management Plans

Lotus will prepare inventory management plans for both inventories that explain how the inventories were created, any assumptions that were made, provide a guide or training manual for future data collection, and describe calculation methodologies. The inventory management plans will also include a detailed description of how to use the inventory tools, and, for the community

inventory, a description of a methodology for replication of Vehicle Miles Traveled (VMT) calculations in future inventories.

The inventory management plans will make recommendations on which data should be updated regularly (every inventory) and which data can be updated on a less regular basis. This data could be updated on a less regular basis as it most likely does not change much, is hard to collect, and has a small impact overall on the inventory. We will rank data by importance, time to collect, and data quality (low, medium, and high).

Expectations for Town staff: one review of draft inventory management plans.

Deliverables: Inventory management plans (LGO and Community).

D) Project Timeline

The Lotus team anticipates completing this work in six months from June 23, 2025 to the end of December 2025. However, this timeline assumes timely receipt of necessary data from the Town. Our schedule is based on our expertise and experience in this work.

Task	Timeline
Task 1: Project Management	June 23, 2025 - December 2025
Task 2: LGO Emissions Inventory	June 23, 2025- October 2025
Task 3: Community Emissions Inventory	June 23, 2025 - October 2025
Task 4: Tourism and Construction Emissions Allocation	June 23, 2025 - October 2025
Task 5: Inventory Results and Assessment	November - December 2025

Task 6: Inventory Management Plans	September – November 2025
TOTAL	6 months

E) Cost Proposal

The cost for this project using Lotus' inventory tool is \$62,355.

Task	Lotus Tool Cost
Task 1: Project Management	\$4,010
Task 2: LGO GHG Emissions Inventory	\$12,535
Task 3: Community-Wide GHG Inventory	\$16,025
Task 4: Tourism and Construction Emissions Allocation	\$5,545
Task 5: Inventory Results and Assessment	\$12,840
Task 6: Inventory Management Plans	\$11,400
TOTAL	\$62,355



Jackson, WY

Response to the CALL FOR Experienced
Greenhouse Gas Inventory Professionals

March 31, 2025

Prepared for

Town of Jackson, Wyoming
Response to the CALL FOR
Experienced Greenhouse Gas
Inventory Professionals

Prepared by

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LOTUS
Engineering & Sustainability



Contents

Cover Letter	1
Section 1	2
A) Statement of Approach	2
B) Statement of Qualifications	7
C) Unique Offering	7
D) Project Timeline	8
E) Cost Proposal	8
Section 2	9
A) Resumes and Staff Bios	9
B) Examples of Previous Work	10
C) References	12
Attachment A: Resumes	13

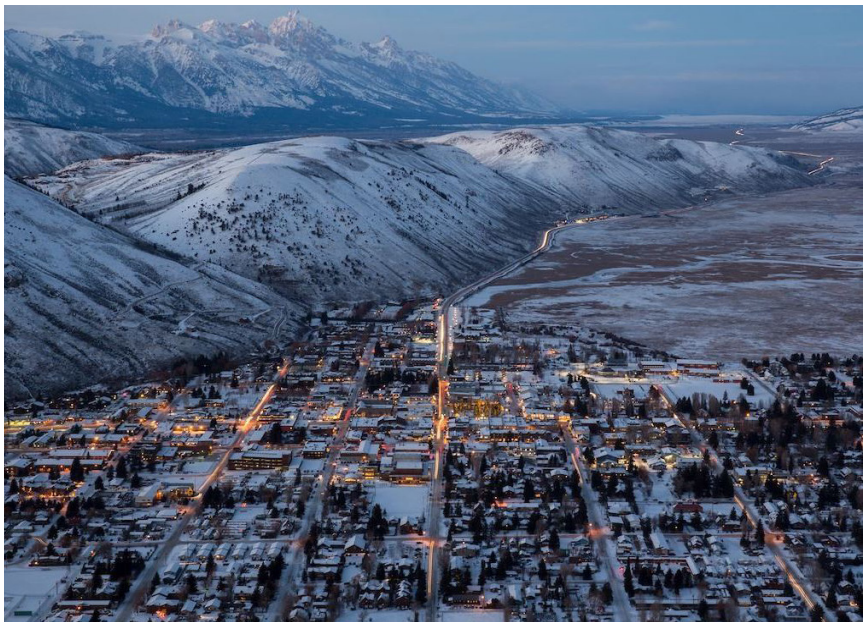


Cover Letter

Dear Riley Hovorka and the Town of Jackson,

[Lotus Engineering & Sustainability, LLC](#) (Lotus) is pleased to submit our response to complete a Local Government Operations (LGO) and Community-wide Greenhouse Gas Inventory for the Town of Jackson, Wyoming.

Lotus is a women-owned, data-driven, and client-centered climate and sustainability consulting firm located in Denver, Colorado. Our team of 18 employees has supported dozens of local governments with their sustainability and environmental initiatives. We help our clients develop tools that direct the community toward a more sustainable and vibrant future.



Through client work and organizational practices and policies, sustainability is at the core of [what we do](#) and [who we are](#). We are committed to helping our clients plan for the changing climate and take action based on data and the lived experiences of people. Internally, Lotus incorporates sustainable practices in our operational activities and company culture. Lotus conducts our own greenhouse gas inventory each year and reports on metrics. We have earned Silver Recognition from the Colorado Department of Public Health and Environment's Green Business Network.

We understand the Town of Jackson's goal is to conduct and assess a LGO, and community-wide greenhouse gas (GHG) emissions inventory for 2024 data in a timely and efficient manner. Our team will ensure that the inventory and other deliverables will meet the following goals:

- Develop and assess a LGO GHG inventory and inventory report.
- Develop and assess a community-wide GHG inventory and inventory report
- Complete a breakdown of GHG emissions from tourism and construction sectors.
- Generate a methodology and training materials for tracking and calculations of GHG inventories that can be updated in-house by Town staff in future years.

We will do this through consistent and replicable data management and reporting that will enable Town officials to understand the status of Jackson's GHG emissions for government operations and throughout the community. We are passionate about this work and would be honored to support the Town of Jackson in achieving their GHG and climate action goals.

Hillary Dobos, President and Owner

Lotus Engineering & Sustainability

1627 Vine St, Denver, CO 80206

hillary@lotussustainability.com

(303) 550-6498



Section 1

A) Statement of Approach

Lotus submits the following proposed approach for the scope of work to conduct a local government operations and community-wide GHG emissions inventory for the Town of Jackson’s consideration.

TASK 1: PROJECT MANAGEMENT

We propose an approach that will seamlessly support Jackson staff, Town departments, and other stakeholders to complete LGO and community-wide GHG inventories that are actionable, specific to the region, and integrate other data collection and planning efforts. Throughout the project, we propose using Google Drive to share files and ensure there is consistent and clear communication on project updates and tasks. We will provide regular project reports to Town staff throughout the project. At the project’s onset, we will host a virtual project kick-off meeting with Town staff where we will work with the Town to:

- Review the scope of work and finalize a detailed timeline including key milestones, deliverables, and dates.
- Establish a process and communication channels for coordinating with Town staff.
- Determine frequency and content of regular check-in calls, progress reports, and emails and schedule accordingly.
- Review the monthly invoice reporting process.
- Ensure there is agreement on the project tasks, goals, expectations, process, data collection methods, scope, timeline, and outcomes of the subsequent work.

Expectations for Town staff: Attend the kick-off meeting; respond to emails in a timely manner; process invoices.

Deliverables: Project kick-off meeting and supporting materials; shared folders and/or project management tool; regular check-ins; monthly invoice reports.

TASK 2: LOCAL GOVERNMENT OPERATIONS GHG INVENTORY

Task 2 involves the development of a LGO GHG emissions inventory and a draft inventory report. At the project kickoff meeting, the project team will decide on the inventory year to be analyzed. Lotus will enter the GHG inventory results and documentation of sources/methods into ICLEI’s ClearPath software for the Town of Jackson. Lotus understands that the Town already has an ICLEI membership and ClearPath accounts. Lotus also understands that ICLEI will be transitioning the ClearPath platform to Climate View and project timelines may be impacted by this transition.

Lotus will utilize the Local Government Operations Protocol to develop the Town’s LGO inventory. Methods for collecting data for the sectors/sources to be included in the inventory are listed in the table below.

Sector	Data Collection Methodology	Actual or Estimated
Stationary Energy + Renewable Energy	Town energy tracking system or energy bills. This includes all Town-owned and leased buildings.	Actual



Sector	Data Collection Methodology	Actual or Estimated
Vehicle fleet and equipment	Town owned fleet vehicles and equipment list, ideally annual vehicle miles traveled per vehicle. Can also estimate based on total gallons consumed.	Either
Business travel	Spending data on business travel-related flights, reimbursed mileage, and other available categories of data.	Actual
Employee commuting	New or previously conducted employee commuting survey.	Actual
Waste + Recycling	Data from waste hauler. Can also estimate based on size and quantities of dumpsters at Town facilities.	Either
Refrigerant leakage	Town-owned square footage needed for default methods outlined in the IPCC 2006 Guidelines Chapter 7.	Estimated
Town-owned facilities such as landfills, wastewater treatment plants, or airports	• Landfills: tonnage deposited, presence of a gas collection system • Wastewater treatment plants: effluent data, data on the processes used, population served • Airports: fuel sold, local and itinerant operations split	Actual
Consumption-based Scope 3 sources	Paper purchases and use	Actual

As an optional alternative to ClearPath, Lotus can complete the inventory utilizing an inventory analysis spreadsheet tool that Lotus developed and is compliant with the protocol. We make sure that the tool is easy to understand, includes many summary charts and data visualizations to help communicate the information, and can be updated in-house in future years to generate comparable emissions inventories. All data sources and information are maintained and shared with Jackson to ensure transparency and replicability.

Expectations for Town staff: provide data contacts; if an employee commute survey is desired, we will ask staff to send out the survey link and encourage fellow employees to respond; provide ICLEI ClearPath access via ICLEI's consultant access form; one review meeting to go over results of the GHG inventory.

Specific activities include:

- Coordinate data collection from multiple Town departments and all other required sources to identify types of necessary data, collection procedures, and approaches to addressing data gaps.
- Conduct QA/QC reviews on collected data to ensure that it aligns with best practices and industry knowledge.
- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per employee, and energy use intensity by square foot.
- Create the GHG inventory, draft Inventory Report, and database for LGO operations inventory data.
 - Calculate emissions by entering data into ClearPath.
 - OPTIONAL: Create a transparent GHG emission inventory tool for Jackson that is LGOP-



compliant at the level desired by the Town. Key aspects of this tool include summary of data sources; emission factors; emission calculations; emission summary; and a “ClearPath ready” input tab for later entry into ClearPath.

- Review all findings and results with Jackson in a virtual synthesis meeting which will inform the final inventory report in Task 5.
- Create appealing visuals and graphics to communicate inventory results.

Deliverables:

- OPTIONAL Lotus-derived LGOP-compliant GHG inventory workbook.
- Draft LGO inventory report.
- All associated data documents in a zipped folder.

TASK 3: COMMUNITY-WIDE GHG INVENTORY

Task 3 includes the creation of a GHG inventory for community-wide emissions and accompanying documentation **utilizing the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC)**. The community-wide inventory will follow the same scope as is found in Task 2 above and includes the alternative data input into Lotus’s inventory analysis spreadsheet. The baseline year will be decided with Town staff. Lotus understands that the community-wide boundary is defined as all of Teton County, excluding areas west of Teton Pass and within Yellowstone National Park.

As a part of the inventory, Lotus will also include annual carbon sequestration by trees. If available, Lotus recommends utilizing a tree inventory and the iTree tool to estimate annual carbon sequestration based on tree species and other attributes such as age and diameter at breast height. If this is unavailable, Lotus recommends utilizing the Land Emissions and Removals Navigator tool to understand at a high level what the potential carbon emissions removals are for the County boundary.

Below are the methods Lotus plans to use to collect data for the sectors and sources included in the community-wide inventory: Lotus will work with the Town to identify applicable Scope 3 GHG inventory sources as advised by the GPC protocol.

Sector	Data Collection Methodology	Actual or Estimated
Stationary energy	Consumption data for electricity use, natural gas use, propane use, and diesel used in backup generators. Transmission and distribution loss rate from the utility OR US EIA. Emission factor for electricity consumption from the utility OR calculated from the utility’s generation mix.	Actual
Fugitive emissions	Localized natural gas loss rate, or can use the default from the GPC protocol.	Estimated
On-Road Transportation	Vehicle miles traveled from Town-approved transportation model, vehicle registration data (including electric vehicles)	Actual
Transit	Transit bus fuel use and miles traveled	Actual
Waterborne	Fuel sold at marinas in the County	Actual



Sector	Data Collection Methodology	Actual or Estimated
Railways	Ton-miles traveled data from rail operators OR estimates from the US National Emissions Inventory	Either
Aviation	Fuel sold (jet-A and aviation gas) and local/itinerant operations split	Actual
Off-road	Off-road fuel use at the airport, fuel use from local recreation outfitters, OR can use estimates from US National Emissions Inventory	Either
Waste	Tonnage data from haulers, local waste characterization	Actual
Wastewater Treatment	Effluent data, data on the processes used, population served	Actual
Carbon Sequestration	Land Emissions and Removals Navigator tool OR iTree	Estimated

Expectations for Town staff: provide data contacts where needed; provide ICLEI ClearPath access via ICLEI's consultant access form; one review meeting for the results of the GHG inventory.

Specific subtasks include:

- Review BASIC and BASIC+ data requirements.
 - BASIC+ level requires communities to cover a broader range of emission sources in addition to the ones under the BASIC level. These emissions cover sources such as industrial processes; transmission and distribution losses for electricity; agriculture, forestry and land use; and transboundary transportation.
- Review all applicable emission sources and outline sources (e.g., direct or indirect) that may be considered *de minimis* by scope and sector. Review this list with the Town. Note this may eliminate various Scope 3 emissions categories.
- Review, cull, analyze, and leverage available data to save time and money.
- Confirm reporting protocols, emissions factors, activity data and analytical tools.
- Coordinate data collection from multiple departments and all other required sources, identify types of necessary data, collection procedures, and approach to addressing data gaps.
- Conduct quality assurance/quality control (QA/QC) review on collected data to ensure that it aligns with best practices and industry knowledge.
- Collect data to create the GPC-compliant GHG emissions inventory to be completed in ClearPath.
 - Enter inventory data into ClearPath software.
 - OPTIONAL: Create a transparent GHG emission inventory tool for Jackson that is GPC-compliant at the level desired by the Town. Key aspects of this tool include summary of data sources; emission factors; emission calculations; emission summary; and a "ClearPath ready" input tab for later entry into ClearPath.
- Calculate key metrics for future comparison including, but not limited to, emissions by sector, emissions by source, emissions per capita, energy use intensity by building sector, residential electricity, and natural gas use per capita.
- Review all findings with the Town.

Deliverables: OPTIONAL Lotus GHG Emissions Inventory Workbook (Excel Based), data entered into ClearPath, all accompanying data sources.



TASK 4: TOURISM AND CONSTRUCTION EMISSIONS ALLOCATION

Lotus will meet with Town staff to determine the best attribution dataset for construction and tourism related emissions while creating the LGO and community inventories. It should be noted that the acquisition of atypical external data, such as cement data to inform construction activity within the Town or economic datasets to inform tourism impacts, may require additional costs that have NOT been factored into the project budget proposed herein. Once methodologies and datasets have been determined, Lotus will calculate the impact from the tourism and construction industries on local GHG emissions. This will be done within the inventory workbook for the Community inventory. Depending on Town staff input, Lotus can summarize and create visual charts and graphs to help depict tourism and construction activity impacts.

Expectations for Town Staff: attend a virtual meeting with Lotus to determine datasets and methodologies; provide assistance with acquiring data as needed.

Deliverables: additional datasets, sources, methods, and assumptions compiled in a zipped folder.

TASK 5: INVENTORY RESULTS AND ASSESSMENT

Lotus will summarize the results of the inventories in a final report. The report will be very visual, include graphics, and cover the following for both inventories:

- Brief overview of methods.
- Emissions by sector and source.
- Emissions over time.
- Normalized emissions.
- Summary of emissions that can be attributed to tourism and construction.

Lotus will create a draft report and provide it to the Town at least two weeks prior to the completion date. Lotus will then incorporate the Town's feedback to create a final inventory report.

Expectations for staff and stakeholders: provide report edits in a timely manner; sign off on final report.

Deliverables: Draft inventory report in Word document; final inventory report formatted from the Word document (fees for graphic design of the report can be requested).

TASK 6: INVENTORY MANAGEMENT PLANS

Lotus will prepare inventory management plans for both inventories that explain how the inventories were created, any assumptions that were made, provide a guide or training manual for future data collection, and describe calculation methodologies. The inventory management plans will also include a detailed description of how to use the inventory tools, and, for the community inventory, a description of a methodology for replication of Vehicle Miles Traveled (VMT) calculations in future inventories.

The inventory management plans will make recommendations on which data should be updated regularly (every inventory) and which data can be updated on a less regular basis. This data could be updated on a less regular basis as it most likely does not change much, is hard to collect, and has a small impact overall on the inventory.

If an inventory is too time-consuming to update, we have found that many clients seek outside consultants to do the work since they do not have in-house capacity. To set reasonable expectations for future updates, we will rank data by importance, time to collect, and data quality (low, medium, and high).

Expectations for Town staff: one review of draft inventory management plans.

Deliverables: Inventory management plans (LGO and Community).



B) Statement of Qualifications

Lotus' expertise includes developing GHG inventories and communicating inventory and modeling results with successful and measurable outcomes. Our experience is diverse and well-rounded. We are confident that our experience and qualifications will allow us to successfully meet the terms of the RFP and complete the scope of work within an efficient timeline.

We understand the primary and secondary barriers and challenges to collecting accurate GHG accounting data, creating a meaningful GHG emissions inventory, and forecasting GHG emissions. We have worked with dozens of clients who are ICLEI members and utilize both our Excel based emissions inventory as well as ICLEI's ClearPath.

GHG INVENTORY QUALIFICATIONS

- **We are experienced.** Collectively, our team has completed or evaluated hundreds of GHG emissions inventories for public sector clients using a range of protocols and methodologies. We have completed business-as-usual forecasting for multiple clients and reviewed a variety of datasets, including GHG and source data, with a concentration on accuracy and transparency.
- We create a **customized, easy-to-use GHG emissions tracking tool** that most effectively supports your work into the future.
- We are diligent about collecting **accurate data**. We are well versed in data capture and tracking limitations and we understand the barriers to creating a single, unified approach to GHG accounting. Through our expertise, we can leverage creative, transparent approaches to collect accurate data. This will ensure that future GHG inventories will be able to be completed internally. In addition, when collecting data, **we are highly organized** and will have all questions for the entity prepared before outreach to ensure minimal repeated data requests.
- **We are resourceful with constraints.** Each community and GHG inventory is unique. Due to our experience working with multiple protocols and complex organizational boundaries, we can: 1) work around data constraints; 2) brainstorm replicable and transparent solutions; and 3) ensure that data is comparable between one data resource and others.
- We have worked with our clients to **uncover all potential emission sources** that are not typically included such as forestry, extractive industry, and oil and gas.
- **We are research and data-driven**, and our curiosity and passion for ensuring accurate inventories have led us to question standard assumptions and back-end errors in industry tools and calculators and suggest appropriate solutions for issues we have found.
- **We are technical.** Not all tools are a one-size-fits-all solution. We have created many calculation and inventory tools to support sustainability initiatives for a variety of projects and client needs.

C) Unique Offering

Our team is small, nimble, and flexible to adapt to your needs. We've done this work before and can use those experiences to help guide the process. You will always be clear on our team's work and progress. We are clear communicators and see ourselves as an extension of your team.

Our goal is to empower our clients to complete future projects in-house and use the data in their everyday work. Our inventories do not require subscriptions to maintain. We keep records of all emails, phone calls, and original datasets to leave a paper trail for the next iteration.

Lotus has an open-door policy if previous clients have questions after the contract has ended. We are happy to answer a reasonable amount of additional questions at no additional fee after the project's completion. If you require changes and/or enhancements to final work products, we will charge an hourly rate – no retainer needed.



D) Project Timeline

The Lotus team anticipates completing this work in six months from mid May 2025 to mid November 2025. However, this timeline assumes timely receipt of necessary data from the Town. Our schedule is based on our expertise and experience in this work.

Task	Timeline
Task 1: Project Management	May - November 2025
Task 2: LGO Emissions Inventory	May- September 2025
Task 3: Community Emissions Inventory	May - September 2025
Task 4: Tourism and Construction Emissions Allocation	May - September 2025
Task 5: Inventory Results and Assessment	October - November 2025
Task 6: Inventory Management Plans	July - October 2025
TOTAL	6 months

E) Cost Proposal

The cost for this project with **ClearPath entry ONLY** is **\$47,830**. Lotus prides ourselves on our flexibility in meeting client needs. While we have provided a scope of work that we hope best matches Jackson's request for proposal, we look forward to co-creating a work plan that best serves the needs of the Town. We provide monthly invoices for our work. We are able to work at an hourly rate for additional work that is not included in the scope above.

LONG TERM INVENTORY CONSIDERATION

Lotus understands that ICLEI will be transitioning the ClearPath software to ClimateView in the coming months. Past Lotus clients have benefitted from utilizing our Excel-based GHG Inventory Tool as it preserves the data even with the changing requirements of software based solutions.

Lotus' proposed scope of work adjustment includes the Lotus inventory tool with calculations and outputs that correspond with ClearPath. This streamlines input into ClearPath and futureproofs the data for coming software changes. The timeline for the project would remain the same, however, the budget difference is reflected below. **The cost for this project using Lotus' inventory tool is \$62,355.**

Task	ClearPath Cost	Lotus Tool Cost
Task 1: Project Management	\$4,010	\$4,010
Task 2: LGO GHG Emissions Inventory	\$6,310	\$12,535
Task 3: Community-Wide GHG Inventory	\$7,725	\$16,025
Task 4: Tourism and Construction Emissions Allocation	\$5,545	\$5,545
Task 5: Inventory Results and Assessment	\$12,840	\$12,840
Task 6: Inventory Management Plans	\$11,400	\$11,400
TOTAL	\$47,830	\$62,355



Section 2

A) Resumes and Staff Bios

The Lotus project team is available and eager to work on this project. We have confirmed the ability to integrate this contract into each team member's present and anticipated workload for the project's duration. We have years of experience balancing multiple projects and producing exceptional results. Our references can confirm this statement. See resumes in **Attachment A**.



Rachel Meier, Senior Associate II, and Team Lead on Public Sector GHG Inventories, **will be the project manager**. Rachel is Lotus's public sector GHG accounting expert and supports and leads tasks related to GIS and data visualization services. She also manages public sector climate action planning projects, such as the Denver Regional Council of Governments' (DRCOG) federally-funded Priority Climate Action Plan (PCAP) project. During her time with Lotus, Rachel has managed dozens of greenhouse gas emissions inventories, including inventories for the City and County of Denver (CO), Boulder County (CO), Larimer County (CO), and the City of Park City (UT). Before joining Lotus, Rachel supported sustainability and conservation efforts in the non-profit sector. Rachel earned a Masters of the Environment (MENV) in Sustainability Planning & Management from the University of Colorado-Boulder and a B.A. in Environmental Studies and Geography from Gustavus Adolphus College (MN).



Tom Herrod, Managing Director of the Greenhouse Gas Accounting, Modeling, and Visualization Team, **will provide high level support for the project and quality assurance** and brings 25 years of experience in federal, tribal, state, and local government environmental programs. Having worked in the public and non-profit sector for most of his career, Tom understands the needs of local governments in their pursuit of climate and sustainability action. Tom has also worked with multiple local governments across the US, including Summit County, UT and internationally in his role as a Senior Program Officer with ICLEI, USA – providing both direct support to local government staff and elected officials, as well as helping them navigate global convenings related to climate and biodiversity. Tom holds a Master's Degree in Environmental Policy and Management and has completed Doctoral Research in the field of Aquatic Resources.



Jenna Decker Sherry is a Data Associate II at Lotus, and **will support GHG research and data analysis**. Prior to joining Lotus, Jenna was a sustainability consultant where she gained expertise in climate action planning, greenhouse gas inventories, and emissions modeling. Jenna joins Lotus with a passion for collaborating with communities to create well-informed, strategic climate action plans and emissions reduction roadmaps to foster sustainable communities. She uses her expertise in greenhouse gas analysis and emissions forecast modeling to co-create unique plans that are solutions-focused to reduce emissions for a low-carbon future while enhancing equity and community resilience at every stage. Jenna earned her B.A. in Psychology from the University of Missouri Kansas City, and a M.S. in Climate Science and Solutions from Northern Arizona University.



Ashlee Patacsil-Hardin, Data Research Associate I at Lotus, **will support GHG research and analysis**. Ashlee brings her experience in greenhouse gas accounting, report writing, communication, data visualization, and conducting analyses on the energy sector. Prior to joining Lotus, Ashlee worked for the United States Department of Agriculture, Agricultural Research Service where she implemented measures to minimize environmental impact and maintain the integrity of rangeland ecosystems in Southern Wyoming and Eastern Colorado. Ashlee earned a B.S from Southern Utah University and holds a Professional Science Masters in Ecosystem Science and Sustainability with Focus in Carbon Management from Colorado State University.



B) Examples of Previous Work

We have deep experience working with mountain and tourism-based communities including Bozeman (MT), Blaine County (ID), McCall (ID), Summit County (CO), City of Aspen (CO), City of Park City (UT), Town of Mountain Village (CO), City of Steamboat Springs (CO), Chaffee County (CO), Pitkin County (CO), Gunnison County (CO), Routt County (CO), and Eagle County (CO). Lotus has also worked with Alterra Mountain Company to conduct GHG assessments across all their North American ski resorts and the YMCA of the Rockies to create the campus' first sustainability action plan. We understand the challenges that mountain communities face aiming to balance environmental sustainability with tourism and growth. We have also helped develop strategies that mountain communities have employed to ensure their visitors are part of the solution when it comes to sustainability and climate action. We believe that this expertise provides us a perspective that is essential for climate action in tourism-based economies.



BOZEMAN, MONTANA | GHG INVENTORY, INFOGRAPHIC, AND REPORT

Lotus developed Bozeman's 2020 community GHG inventory and developed an inventory management plan for the City's new Sustainability Associate. Lotus also presented the results of the inventory in person to the City's Sustainability Board and trained the Bozeman team on how to update the inventory workbook in future years. Additionally, Lotus created a final report that described the results of the inventory, trends between the baseline year (2008) and the 2020 inventory, and results from an analysis of the average annual carbon sequestration of the city's lands using the LEARN tool from ICLEI. Lotus also developed an [infographic](#) for the City to use when communicating the results of the inventory with residents and important stakeholders. [The report can be found here.](#)



SUMMIT COUNTY, COLORADO | GHG INVENTORIES, CLIMATE ACTION PLAN, AND CLIMATE EQUITY PLAN

The jurisdictions, municipalities, ski areas, and institutions in Summit County, convened by High Country Conservation Center (HC3), contracted with Lotus to create a [climate action plan](#) for the community. Lotus guided and supported the entire Climate Action Plan development process, including conducting Summit County's first GHG emissions inventory; facilitating and leading a series of stakeholder and community engagement workshops to identify and prioritize community values, goals, and strategies; modeling the impacts of stakeholder-selected strategies to determine emissions reductions, energy use, and other benefits; forecasting a business-as-usual case scenario; and providing the community with a final Climate Action Plan that defines aspirational targets for climate mitigation and resiliency and establishes a path towards achieving these goals.

The County has continued to work with Lotus to update their 2020 and 2023 GHG inventories, of which the results can be viewed in an engaging [Storymap](#).

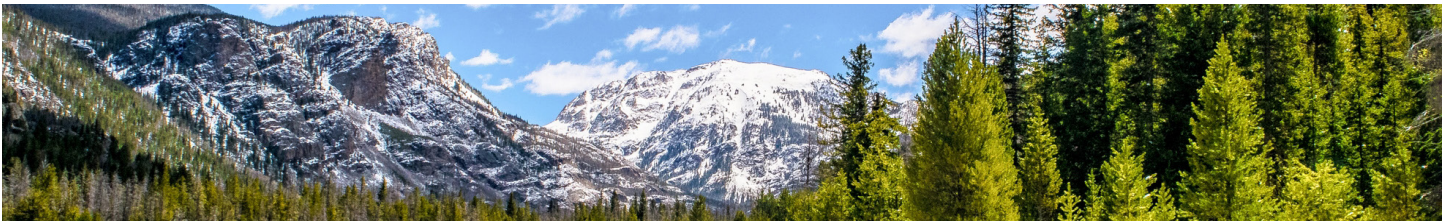


Lotus also worked with the HC3 to develop a [climate equity plan](#) that specifically details projects and programs to enhance equity in the community through the implementation of climate action work. Lotus facilitated an equity steering committee that included representatives from local community-based organizations, local governments, and agencies serving disproportionately impacted communities in Summit County. The Steering Committee advised on the development of a tri-lingual public survey, listening sessions, and informational interviews to guide the development of climate equity strategies that will supplement the existing climate action work. During the implementation of this work, HC3 will continue to work with Steering Committee members through the strong relationships that were built in this process to ensure that climate equity strategies meet their intended goals in supporting benefits for all Summit County residents.



BLAINE COUNTY, IDAHO | COUNTY-WIDE GHG INVENTORY

Lotus worked with Blaine County, Idaho to complete a 2023 county-wide greenhouse gas emissions inventory. The inventory includes breakout tabs for the following communities: Hailey, Ketchum, Sun Valley, and Bellevue. The project updated previous inventories for the multiple communities and aligned methods and data sources across each community. The workbook also included a tab with activity and emissions data to be imported into ArcGIS Online allowing for easy creation of a forthcoming interactive online dashboard to show the results of the inventory.



TOWN OF WINTER PARK, GHG INVENTORY WORK

Lotus is working with the Town of Winter Park to complete the Town's first ever greenhouse gas emissions inventories for the town government and the community. In addition to creating these inventories, Lotus developed a business-as-usual emissions model and is modeling several emissions reductions strategies to aid in the Town's development of its first Climate Action Plan. Due to the small size of the Town, many innovative methods were used to collect data to make it relevant to the Town, such as working closely with Winter Park Resort and utilizing Streetlight vehicle miles traveled data. The report will be complete in April 2025.

TESTIMONIALS

"We are so grateful to Lotus for creating a simple, easy to use, well-documented inventory spreadsheet. We wouldn't be able to do any of the work we do without it!" – Jenny Nitzky, Former Sustainability Coordinator, City of Grand Junction

"The Lotus Engineering & Sustainability team has been one of the most professional, most responsive, most flexible, and most positive consulting firms I have worked with. Sustainability and climate related projects are some of the most controversial and problematic to work on. Lotus was able to combine their proactive approach, really listening to me, the client, and the community partners, with technical expertise to make our project successful." – Heidi Pruess, Larimer County Climate Smart and Sustainability Program Manager



C) References

BLAINE COUNTY, IDAHO

Name and Title: Andrew Mentzer, Sustainability Manager

Address: Hailey, ID 83333

Phone and Email: (208) 277-7964; amentzer@co.blaine.id.us

Relationship: Project Manager (client)

TOWN OF WINTER PARK, COLORADO

Name and Title: Mia Dorris, Sustainable Community Coordinator

Address: 50 Vasquez Rd. | P.O. Box 3327, Winter Park, CO 80482

Phone and Email: (970) 281-7793; mdorris@wpgov.com

Relationship: Project Manager (client)

PITKIN COUNTY, COLORADO

Name and Title: Michael Port, Climate Action Analyst Manager's Office

Address: 530 E. Main Street, Aspen, CO, 81611

Phone and Email: (970) 379-2031; michael.port@pitkincounty.com

Relationship: Project Manager (client)

CITY OF BOZEMAN, MONTANA

Name and Title: Natalie Meyer, Sustainability Program Manager

Address: 121 N Rouse Ave. Bozeman, MT 59715

Phone and Email: (406) 582-2317; nmeyer@bozeman.net

Relationship: Project Manager (client)



Attachment A: Resumes





DATA VISUALIZER/ANALYST
RESILIENCE PLANNER
CARBON SEQUESTRATION
EXPERT
PROJECT MANAGER

Rachel is well-versed in calculating GHG emissions and working creatively with complicated datasets. She brings years of experience performing spatial analysis and data visualization to federal, state, and non-profit organizations. Rachel is known for her detail-oriented nature, passion for learning, and strong organization and project management skills.

EDUCATION

University of Colorado-Boulder
Masters of the Environment,
Sustainability Planning &
Management

Gustavus Adolphus College
B.A., Environmental Studies
and Geography

Rachel Meier



SENIOR ASSOCIATE II, TEAM LEAD | PUBLIC SECTOR
GREENHOUSE GAS EMISSIONS INVENTORIES

Experience

LOTUS ENGINEERING & SUSTAINABILITY, LLC, Denver, CO

Senior Associate II, 2022-Present

Associate, 2021-2022

Research Associate, 2019-2021

Manages greenhouse gas (GHG) emissions inventory projects for Lotus' public sector clients.

- Guides public sector entities in accounting for greenhouse gas emissions, setting reduction goals, and prioritizing mitigation strategies.
- Performs detailed analysis of carbon emissions, greenhouse gas inventories, and emissions modeling.
- Creates data visualizations and public-facing communications materials for clients.
- Authors and creates documents and other products to support Lotus business development efforts.

PROJECT MANAGEMENT HIGHLIGHTS

Grand Junction, Colorado

Lotus developed Grand Junction's 2018 and 2021 community GHG inventories with a business-as-usual forecast through 2040. To display the results of the emissions inventories, Lotus developed an online dashboard. All data was entered into ClearPath and CDP. The team also completed a carbon sequestration analysis of the City's urban forest and parkland and researched relevant resilience and climate adaptation metrics for the City to track.

Bozeman, Montana

Lotus developed Bozeman's 2020 community GHG inventory and an inventory management plan for the City's Sustainability Associate. Rachel presented the results of the inventory to the City's Sustainability Board and trained the Bozeman team to update the inventory workbook in future years. Finally, developed an infographic for the City to use to communicate the results of the inventory with residents and important stakeholders.

Boulder, Colorado | Open Space and Mountain Parks (OSMP) Department

Lotus worked with the OSMP department to create department-specific greenhouse gas emissions inventories, a business-as-usual GHG model, and a GHG reduction strategy model for emission reduction strategies. Lotus also created a dashboard and storymap in ArcGIS online to communicate the results of the data and highlight the department's sustainability work. Additionally, Lotus worked with the department to analyze the embodied carbon of frequently used materials and develop a matrix with metrics to help make well-informed decisions on material choices when doing maintenance and construction at trailheads. Lotus then analyzed strategies that are available to help reduce the emissions associated with visitor travel and waste production.

Rachel Meier



SENIOR ASSOCIATE II, TEAM LEAD
PUBLIC SECTOR GREENHOUSE GAS EMISSIONS INVENTORIES



SKILLS

Data analysis and visualization
Spatial analysis and cartography
Resilience planning
Carbon sequestration
Project management

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www.lotussustainability.com
rachel@lotussustainability.com

Previous Experience

THE NATURE CONSERVANCY, Santa Fe, NM

GIS Specialist, 2018-2019

Provided cartography and spatial analysis support for all chapter programs in the New Mexico chapter. Performed spatial analysis to support all programs including urban heat island analysis, electric vehicle charging station planning, and riparian habitat mapping. Developed a UAV program for monitoring conservation easements, preserves, and forest restoration efforts. Maintained and populated data and record databases, GIS library, and manual files.

THE NATURE CONSERVANCY (TNC), Boulder, CO

Intern, Climate Action through Conservation Project, 2016-2017

Led the spatial analysis team in developing a methodology for NGOs to use geospatial analysis and statistical data to model carbon stocks. Established an organizational system that helped maximize database management. Produced new maps, tables, and other graphical outputs in ArcMap and Microsoft Excel to generate focus areas for future carbon sequestration efforts by TNC. Collaborated with colleagues to create a report outlining policy suggestions for TNC staff supported by spatial analyses.

COLORADO ENERGY OFFICE, Denver, CO

Student Project, REV West Charging Station Analysis Project, 2017

Determined optimal locations for electric vehicle fast charging stations using QGIS, informing future construction of the REV charging corridor on Colorado's highways. Created maps and tables that will be used in the identification of funders for the fast charging stations throughout the corridor. Presented to the CEO project team on where to construct the stations, easing EV drivers' range anxiety, and increasing EV sales in CO and throughout the West.

Volunteer Work

- Conservation Data Lab, Advisor
- Denver County Elections
- REVERB: The Green Music Movement
- City of Westminster Open Space



**CLIMATE POLICY & CARBON
REPORTING EXPERT**
GHG DATA ANALYST
PROJECT MANAGER

Tom brings 25 years of Federal, Tribal, State, and Local Government environmental policy and program experience to Lotus. Tom's approach is to ensure actionable data informs and supports policy and program development through analysis and visualization. Tom's goal is to help clients develop internal capacity and understanding of how data informs sound policy and programs.

EDUCATION

Doctoral Research, Aquatic Resources, Texas State University

Master's in Environmental Policy & Management, University of Denver

B.S. Environmental Studies, Natural Resources, University of Nebraska

Tom Herrod



MANAGING DIRECTOR | GREENHOUSE GAS ACCOUNTING, MODELING, AND VISUALIZATION

Experience

LOTUS ENGINEERING & SUSTAINABILITY, LLC, Denver, CO

Managing Director, 2023-Present

Provides leadership and support to the Greenhouse Gas Accounting, Modeling, and Visualization Team

- Leads a highly skilled team of data analysts and researchers.
- Guides the team on aligning work with protocols, emerging technology, research, and reporting.
- Provides high-quality support for public- and private- sector entities in climate and sustainability.
- Analyzes carbon emissions, greenhouse gas inventories, and develops emissions modeling.
- Develops innovative approaches for continuous improvement in GHG accounting and modeling.
- Supports Lotus business development efforts.

PROJECT MANAGEMENT HIGHLIGHTS

Embodied Carbon, Life-Cycle Assessments, & Consumption Based Emissions

Lotus has worked with the communities of Larimer County (Consumption Based Emissions Inventory), Aspen (Embodied Carbon) and Boulder County (Life Cycle Assessments) to better understand the full picture of carbon emissions from product consumption and disposal. In each case, Tom provided decision-making tools that helped identify preferred purchases or policies to mitigate GHG emissions.

Healthcare Industry GHG Inventories and Planning

Lotus has worked with both JSI and the American Hospital Association to build out robust GHG inventories that capture not only direct corporate emissions, but also upstream and downstream emissions of events and activities. As one of the leading contributors to US and global GHG emissions, both companies sought to minimize their own footprint, while simultaneously using their respective platforms to inform broader audiences. Tom led the inventories for both projects.

City & County of Denver

Lotus has provided climate and sustainability support to the City and County of Denver since 2015. Over the last decade, Lotus completed GHG inventories, conducted community engagement, centered equity in policy, and developed robust modeling of policy impacts. Tom has served as the project manager for many of these projects.

Tom Herrod



MANAGING DIRECTOR
GREENHOUSE GAS ACCOUNTING, MODELING, AND VISUALIZATION



SKILLS

GHG emissions modeling
Climate policy impact analysis
Applying protocols and standards
Developing shared vision of success

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www.lotussustainability.com
tom@lotussustainability.com

Previous Experience

ICLEI, LOCAL GOVERNMENTS FOR SUSTAINABILITY, Denver, CO and USA

Senior Program Officer, 2019 - 2023

Developed process improvements and client management support to effectively and efficiently manage US member network. Provided direct technical support to members related to Emissions Reduction, Resilience, Circular Economy & Nature Based Solutions. Advised National and Global groups on setting standards and methods for GHG data analysis, including incorporating nature based accounting for GHG Inventories.

CITY & COUNTY OF DENVER, Denver, CO

Climate Program Analyst, 2009-2019

Collaborated and coordinated Denver's and multi-agency input into PUC proceedings, legislative hearings, and utility engagements. Led the transition of Denver's greenhouse gas inventory to be GPC compliant. As part of that process, Denver earned a "compliant" rating with the Global Covenant of Mayors as well as an "A-Leadership" ranking with CDP. Led multiple efforts to update Denver's Climate Action Plan, 80x50 Climate Action Plan, Climate Adaptation Plan, and City Energy Project application. Managed over \$8 million in Federal ARRA Grants resulting in the creation of Denver's first residential and commercial energy efficiency programs as well as efficiency financing mechanisms. Led a program evaluation of various environmental programs in Denver resulting in improved spill clean ups at City Fleet Maintenance shops as well as improved tracking of impacts from the Environmental Seed Capital program.

TEXAS STATE UNIVERSITY

Graduate Teaching Assistant, 2004-2009

Prepared and instructed undergraduate graduate laboratory courses. Topics included estimating rainfall runoff, infiltration, flood frequency, hydrologic models, and paired watershed studies. Conducted Doctoral research on paired watersheds analysis and modeling. Prepared impaired waters and equity analysis for State of Texas TNRC.

US ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF INSPECTOR GENERAL

Environmental Program Evaluator, 1999-2004

Recipient of bronze and gold medal, the agency's highest distinction, for contributions to improving state and federal cooperation in Louisiana's water enforcement division. Received the President's Council on Integrity and Efficiency Award for Excellence in Audit for contributions to improving Louisiana's environmental programs. Briefed Congressional staff regarding Superfund site boundaries and water infiltration issues.



DATA ANALYST
MITIGATION PLANNER
CLIMATE SCIENCE
COMMUNICATOR

Jenna has a passion for collaborating with communities to create well-informed, strategic climate action plans and emissions reduction roadmaps to foster sustainable communities. Her experience in sustainable planning, emissions accounting, emissions modeling, and waste diversion enables her to provide comprehensive planning and execution of programs on top of detailed analyzation of complex data. Jenna is known for being detail-oriented, solutions focused, and data-motivated.

EDUCATION

B.A. Psychology, University of Missouri Kansas City

M.S. Climate Science and Solutions, Northern Arizona University

Jenna Decker Sherry



ASSOCIATE II | GREENHOUSE GAS ACCOUNTING, MODELING, AND VISUALIZATION

Experience

LOTUS ENGINEERING & SUSTAINABILITY, LLC, Denver, CO

Associate II, 2025-Present

- Cleans, manipulates, and analyzes collected greenhouse gas data and transform datasets into emissions forecast models, dashboards, and reports.
- Creates policy, program, incentive impact, and decision making tools for solutions-oriented climate action.
- Develops relevant metrics for tracking strategy implementation including environmental metrics, economic metrics, and social impact metrics, including identification of defensible data sources and calculations.

PREVIOUS PROJECT WORK HIGHLIGHTS

Washington State Department of Commerce, 11-County Greenhouse Gas Inventory (WA), 2024-2025

Supported the statewide program to develop eleven standardized countywide greenhouse gas inventories in support of Washington's House Bill 1181. Inventories will be used to streamline integration of climate change mitigation into county Comprehensive Plan updates.

Los Alamos County (NM), Climate Action Plan, 2023

Served as the lead analyst to complete a 2022 community-wide and County operations greenhouse gas inventory, an emissions forecast model that detailed various scenarios including a business-as-usual, a strategy-level greenhouse gas impact analysis, and an action-level greenhouse gas impact analysis.

City of Lafayette (CO), Climate Action Plan 2022-2024

Served as the project manager to update the City's previous Sustainability Plan to a Climate Action Plan to provide a more comprehensive and holistic approach to climate planning. This included co-developing actionable goals, strategies, and actions to help the City reach its emissions reduction targets, supporting engagement efforts, and implementation planning.

Previous Experience

CASCADIA CONSULTING GROUP

Associate; GHG team lead, 2022-2025

Spearheaded high-quality deliverables on time and within budget as a project manager or technical lead on Climate Action Plans, Climate Elements, community-wide and municipal greenhouse gas inventories, emissions forecast models, and emissions reduction roadmaps for local government and higher education clients. Led presentations and workshops to inform and collaborate with the public, stakeholders, boards, commissions, and city and county councils throughout climate planning efforts, from vision development through action development and plan launch.

Jenna Decker Sherry



ASSOCIATE II

GREENHOUSE GAS ACCOUNTING, MODELING, AND VISUALIZATION



SKILLS

Data management

Emissions forecast modeling

Data visualization

Project management

CERTIFICATIONS

Greenhouse Gas Accounting,
Northern Arizona University

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jenna@lotussustainability.com

NORTHSTAR RECYCLING

Waste and Recycling Analyst, 2022-2022

Served as a consultant and project manager for food and beverage manufacturing clients to manage their post industrial waste streams. Analyzed clients' waste data, then identified, designed, and implemented diversion, efficiency, and savings projects ultimately leading one of my clients to achieving their zero-waste goal.

CITY OF FLAGSTAFF, ARIZONA

Intern, 2021-2021

Researched peer city climate equity policy, goals, and implementation to explore the most effective ways to communicate equitable solutions to local government officials and the community then presented my research to sustainability staff. Investigated Pay as You Throw (PAYT) implementation and conducted 5 case studies about cities that have implemented, or attempted to implement PAYT to help construct a marketing plan and outreach materials to advertise PAYT for a pilot neighborhood in Flagstaff, following the sustainability section's branding standards.



Prepared for

Town of Jackson, Wyoming
Response to the CALL FOR
Experienced Greenhouse Gas
Inventory Professionals

Prepared by

Hillary Dobos
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www.lotussustainability.com



LOTUS
Engineering & Sustainability

STAFF REPORT



Meeting Date:	16 June 2025	Meeting Title:	Town Council Workshop
Submitting Department:	Public Works	Presenter:	Floren Poliseo
Agenda Item:	Draft Strategic Stormwater Program Plan	Public Comment:	Yes

Purpose & Policy Considerations.

The purpose of this item is for staff to present a draft Strategic Stormwater Program Plan (SSPP, or plan) and receive direction on initial implementation items.

Requested Action.

Staff requests that Council ask questions, discuss, and provide direction on the Key Policy Questions below.

Recommendations.

Staff recommends that Council direct staff to:

1. Update the draft SSPP based on Council direction at this Workshop, and finalize the plan for adoption this fall; and
2. Include recommended priority actions in the Fiscal Year 2026 (FY26) staff work plans and budget.

Background.

Stormwater in this context refers to rainwater after it falls on surfaces and runs across land. Stormwater includes snow, as it falls and accumulates, then melts and runs across land.

Stormwater picks up and carries pollution as it flows. After rainfall, dirt is washed off cars, rooftops, and streets and exposed dirt can be washed away from flower beds or construction sites. Stormwater also washes off and carries other pollutants such as metals, chemicals, and pathogens. The Town needs a stormwater management program to mitigate and reduce its contributions of pollution to Flat Creek. In the mid-1990's, the Wyoming Department of Environmental Quality (DEQ) determined that Flat Creek is an impaired water body due to sediment from stormwater runoff, impacting its designated uses for aquatic life, as a cold-water fishery and for recreation. Most municipalities that contribute to surface water impairments are regulated by the State Department of Environmental Quality (DEQ) with mandates to implement programs to address related pollution. To date, the Town has not had to have a regulatory program because the Teton Conservation District maintains a Flat Creek Watershed Management Plan, which instead meets DEQ's requirements with identified projects and actions including some by the Town. However, the proposed Strategic Stormwater Program Plan (SSPP) will go above and beyond what is already in place to more thoroughly address the Town's contributions to pollution.

Work on this plan was conceived 6 years ago. At the February 19, 2019 Town Council Workshop the Public Works Director presented the status of stormwater plans in place at that time, and recommended creation of a new plan to consolidate and modernize the Town's stormwater management goals. Upon Council approval, a request for proposals resulted in a consultant team being hired to write a scope of work and create this plan. At the September 7, 2021 Regular Town Council meeting Council approved a contract award to Wood Environment & Engineering, which was later acquired by WSP USA Inc. (WSP), to develop the Town's Stormwater Management Program. Experts on the consultant project team have remained intact for the duration of this project. WSP staff are attending this meeting both in person and via zoom to assist in presenting and answering questions.

Staff provided a progress update at the October 16, 2023 Town Council Workshop. At that time, the project team had evaluated existing rules, data, and similar communities' stormwater programs to inform reasonable approaches to the Town's plan. Since then, the bulk of the project work has been done to develop and draft the Town's plan that is before you today.

The draft SSPP staff is presenting today achieves the following goals that were established early in the project:

- **Protect and improve** the water quality and wildlife habitat of the creeks in the Town.
- **Reduce or optimize** capital and operation & maintenance costs while meeting pollution prevention goals.
- **Remove** Flat Creek from the 303(d) list of impaired water bodies.
- **Establish** a timeline for implementing critical improvements.
- **Identify** potential funding sources to support a successful stormwater program.
- **Develop** a stormwater ordinance and recommend guidelines:
 - o To mitigate flooding hazards and increase compliance with potential stormwater quality
 - o To establish efficient and effective requirements in design plan submittals and reviews,
 - o To establish construction inspection processes, and potential long-term owner maintenance needs.

Analysis & Key Policy Questions.

Strategic Stormwater Program Plan

The Town's draft plan is modeled after the national standards for communities that are regulated by the Clean Water Act under permits for discharges from municipal stormwater systems and includes additional components. A basic description of the SSPP elements are as follows:

Community Education and Outreach: The SSPP provides a strategy and communications plan that identifies audiences to be reached and evolves as the Town moves forward with implementation of new rules and other more robust program components.

Mapping: Public Works' GIS data houses the Town's utilities systems. The stormwater conveyance GIS is incomplete, and this project filled enough gaps to build a model to inform other program efforts such as Illicit Discharge Detection and Elimination and the capital improvement plan. As with the Town's GIS-mapped water and sewer systems, it will be necessary to make updates in perpetuity as more information is obtained on the existing system and as planned capital improvement projects are completed.

Illicit Discharge Detection and Elimination: This will be a new program to prevent, find, and address non-stormwater discharges (illegal dumping) into the Town's system and local creeks. Such inputs include pollutants that contribute to creek impairment.

Stormwater Regulations: The Town currently regulates construction and post construction stormwater on development sites through Land Development Regulation (LDR) 5.7. The Town assembled a Steering Committee to develop and propose future revisions to LDRs and create a new Stormwater Design Manual to support new LDRs if and when they are adopted. The SSPP provides various future Level of Service (LOS) programs and resources to implement updated LDRs and the Stormwater Design Manual.

Model and Master Plan: The SSPP includes a Master Plan for stormwater system capital improvements with project prioritization and estimated costs. Projects were identified based on the system model that considered future development conditions and flooding issues.

Pollution Prevention/Good Housekeeping: This program involves preventing or reducing pollution from stormwater runoff through best practices in maintenance and operation of Town-owned public property.

Monitoring: The SSPP recommends additional monitoring locations and types of pollutants measured to identify target areas to optimize efforts to reduce the Town's pollution contributions.

Operations: The SSPP includes analysis of Level of Service (LOS) options that will enable the Town to determine its desired service commitment (basic, medium, or high) for each program/activity, and how it may change over time in key program areas. It also provides associated investment and staffing strategies to support these commitments over the long term.

Our consultant WSP has identified the following key considerations and take-aways for Council:

- Engagement with a community-based Steering Committee has been a valuable asset in the review and updates of current LDRs and creation of new stormwater manuals, ensuring community expectations are reflected in these updates. They have been part of the entire process and development of the SSPP in coordination with the Teton County Water Quality Management Program project team.
- The plan will not be effective without proper resource allocation. It will require more funding than the Town is currently budgeting for the associated operations and capital improvements. A five-year planning estimate of the resources necessary to initiate all elements of the SSPP is documented in Table 32 (page 83 of the plan; PDF page 87). How and when we raise or spend funds, change policies, and add staff will be a Town Council decision based on review of staff recommendations.
- The plan focuses on the current drainage system to optimize infrastructure performance today and incorporates strategic actions to do “no harm” in the future as development/redevelopment occurs. This maintenance strategy targets a level of service that moves the Town from a “reactive” maintenance program to a “proactive” program where problems are identified and resolved before a more costly failure occurs.

The plan provides LOS targets in six programmatic areas and recognizes their interdependency. During the analysis of each area, care was taken to identify the impacts on other program elements. The plan includes a 10-year planning period for recommended LOS provision in several focus areas, summarizes the current LOS, the plan’s aspirational LOS goals, and how we might get there. The pace at which the Town implements the plan can adapt to changes in priorities, revenues accrued, and resource allocation.

For more detail on how staff anticipates implementing the plan, refer to Table 21 (page 76 of the plan; PDF page 80) for a visual representation of the whole, followed by Tables 22 through 27 (pages 77-79 of the plan; PDF pages 81-83) identifying the evolution over time of each programmatic area.

➤ **Key policy question #1: Does Council have any amendments to the proposed Strategic Stormwater Program Plan?**

Year 1 – Fiscal Year 2026 Work Plan

The plan presents a holistic approach with progress in all programmatic areas, as this will be much more effective in meeting the Town’s goals than a piecemeal approach that focuses on only one or two areas. Based on the plan’s framework, Table 20 (pages 70-74 of the plan; PDF pages 74-78) summarizes the program focus areas, “year zero” as our status now, and feasible FY26 initiatives to help prepare us for beginning the 10-year plan implementation. It may take us longer than a decade to fully implement the plan and along the way Council may choose to pursue LOS changes.

The plan recommends a series of implementation steps for FY26 as shown in Table 20. Of those, staff recommends prioritizing the following actions from that list:

A.1. Master Plan and F.2. Financing Strategy – Create a stormwater utility including identifying policies, preparing an ordinance, and adopting a fee structure to begin earning revenue to fund the program. Staff recognizes the need to identify and secure new dedicated funding sources to maintain public services. A Stormwater Utility would function the same as our existing Water and Wastewater Utility funds. They earn revenue through user fees that serve as dedicated funds for long-term infrastructure operations and maintenance. Staff and the project team have already determined that a Utility is feasible, as several other Wyoming communities have recently established revenue-generating stormwater utility funds.

A.2. Stormwater Management Manual and A.4. Green Infrastructure – Select capital improvement projects to pilot the proposed new post-construction requirements and identify any needed amendments before adopting new rules applicable to private development projects. Staff will select projects that are already planned in the Public Works capital improvement program. This involves replacing status quo design elements with alternatives. For example, instead of

draining runoff from paved areas to the Town's storm sewer system we would attempt to include features that manage runoff on site.

B.2. Mapping – Incorporate mapping data gathered during this project into our stormwater GIS inventory. Public Works has a contract in place with funds allocated for a GIS service provider to assist with data input and management on an hourly fee basis.

D.5. Community Engagement – Begin work with External Affairs on a communication strategy for plan adoption and utility funding. The Town's External Affairs staff already assist Public Works with outreach and messaging. This effort is within the typical scope of coordination between Departments. If staff determines that additional resources are needed beyond External Affairs staff time and the project budget, staff will seek Council approval before proceeding.

D.6. Monitoring – Initiate outreach to Teton Conservation District to determine appropriate timing and resource needs for developing new monitoring protocols. This outreach will help determine how much funding may be required, how much staff time we may collectively need to contribute, and when we may be able to set new protocols. This will be similar to scoping reports that staff sometimes provide to Council before committing to a project.

➤ **Key policy question #2: Does Council agree with staff's recommended priority actions for FY26?**

Next steps

If Council agrees with staff recommendations above, the following items will be brought back for Council consideration at future Council meetings:

1. Final SSPP for adoption (fall 2025)
2. Draft ordinance and fee structure options to establish a stormwater utility fund (spring 2026)
3. Contracts or other items requiring policy decisions, approval, and/or budget amendments (if necessary)

Possible Alternatives.

Council may alternatively direct staff to:

- Pursue FY26 actions listed in the plan other than those staff recommend
- Provide a scoping report for other actions requiring more resources than are currently available
- Not pursue any action related to the SSPP
- Perform a different Council directive

Comprehensive Plan & Priority Alignment.

This project supports the Town Comprehensive Plan under **Common Value #1- Ecosystem Stewardship.**

- **Principle 1.1:** Maintain healthy populations of all native species
 - o Policy 1.1.a: Protect focal species habitat based on relative critical value
 - o Policy 1.1.e: Understand the impacts of development on wildlife and natural resources
 - o Policy 1.1.f: Require mitigation of unavoidable impacts to habitat
 - o Policy 1.1.g: Encourage restoration of degraded areas
- **Principle 1.2:** Preserve and Enhance Water and Air Quality
 - o Policy 1.2.a: Buffer waterbodies, wetlands, and riparian areas from development
 - o Policy 1.2.b: Require filtration of runoff
 - o Policy 1.2.c: Monitor and maintain water quality
- **Principle 1.4:** Protect and steward open space
 - o Policy 1.4.a: Encourage non-development conservation of wildlife habitat
 - o Policy 1.4.d: Establish a funding source for open space
 - o Policy 1.4.e: Conserve open space to promote responsible use of public lands
- **Strategy 1.2.S.2:** Evaluate and update surface water filtration standards, focusing on developed areas near important waterbodies.

This project supports the Town Comprehensive Plan under **Common Value #2- Growth Management.**

- Principle 3.1: Direct growth out of habitat, scenery and open space
- Principle 3.4: Limit development in naturally hazardous areas
 - o Policy 3.4.a: Protect development against flooding
- Principle 3.5: Manage local growth with a regional perspective
 - o Policy 3.5.b: Strive not to export impacts to other jurisdictions in the region
 - o Policy 3.5.c: Maintain control over our own community vision
- Principle 4.4: Enhance civic spaces, social functions, and environmental amenities to make Town a more desirable Complete Neighborhood
 - o Policy 4.4.d: Enhance natural features in the built environment

This project supports the Town Comprehensive Plan under **Common Value #3- Quality of Life.**

- Principle 6.1: Measure prosperity in natural and economic capital
 - o Policy 6.1.b: Promote eco-tourism
- Principle 8.1: Maintain current, coordinated service delivery
 - o Policy 8.1.a: Maintain current, coordinated plans for delivery of desired service levels
- Principle 8.2: Coordinate the provision of infrastructure and facilities needed for service delivery
 - o Policy 8.2.c: Require mitigation of the impacts of growth on service levels

Fiscal Impact.

This project and draft SSPP were funded through the Town's adopted budgets for Public Works Department capital improvement and administration planning projects. There are no anticipated additional costs (budget changes) for FY25 or FY26 associated with staff's recommended "year 1" activities.

The current WSP contract scope includes a feasibility analysis for forming a Stormwater Utility as discussed in this report. If Council agrees with the staff recommendation to establish a Stormwater Utility (A.1. & F.2.), staff requests that the remaining project funds for the feasibility analysis instead be used to provide a recommended utility structure, fee basis, and ordinances necessary to form the utility. If this work exceeds the current project budget, the remainder would be funded by the stormwater program line item included in the FY26 budget.

In the future, revenues earned through stormwater utility fees will fund the recommended implementation steps to progress to the dLOS over time. Staff will bring recommendations to Council for approval as we identify feasible implementation steps and associated increased staffing needs, primarily through the annual budgeting process.

Staff Impact.

The anticipated additional staff time associated with the recommended "year 1" (FY26) activities are as follows:

Establishing a Stormwater Utility (A.1. & F.2.)

Public Works Department – Approximately 100 hours of staff time is allocated to this project in the FY26 work plan.

Planning Department – Approximately 50-80 hours of staff time to weigh options for the fee structure, because these will likely be related to land use and/or lot size. The staff commitment is estimated as a range because it depends on how much review/input is needed and what portions of research are performed by the consultant team.

Legal Department – A minimum of 100 hours of staff time to assist with drafting an Ordinance, ensuring the proposed fee structure complies with state statutes and local codes, and (if necessary) reviewing contracts and/or policy questions.

Finance Department – Up to 10 hours to verify whether the proposed fee structure alternatives can feasibly be implemented using our current software platforms for utility billing and budget tracking. If budget amendments become necessary, the Finance Department already commits time to reviewing such requests from Public Works, and no additional time is anticipated for that effort.

Ecosystem Stewardship Administrator – Approximately 5 hours to review and provide input on the fee structure as it relates to potential pollution reduction from development activity, meeting other Sustainability Plan goals, and summarizing related benefits.

Selecting Pilots for Proposed Rules (A.2. & A.4.)

Public Works Department – 5 additional hours. The Engineering Division already commits hundreds of hours coordinating with contracted design/engineering service providers. This will be something slightly different from our typical design approach so it may add some time to ensure the scope of work is clear to the consultant and contractor.

Mapping (B.2.)

Public Works Department – Approximately 520 hours of Public Works staff time is already allocated to GIS system map updates annually. This will be a matter of what utility or assets are prioritized for updates in our ongoing efforts and to date some work has already been done for the stormwater management system.

Community Engagement (D.5.)

Total Town staff time – 15 additional hours. The Town's External Affairs staff already assists Public Works with outreach and messaging. This effort is within the typical scope of coordination between Departments but may require some extra time to ramp up knowledge of the SSPP elements, develop a communications plan, and create a structure, format, and process for community engagement and to inform the community about Stormwater Management fees. If staff determines that the hours needed to conduct outreach this year exceeds work plan allocations, some of the activity could be contracted using this project's funds in the FY26 budget.

Monitoring (D.6.)

Total Town staff time – The Public Works Director and Ecosystem Stewardship Administrator already dedicate time to coordinating with the Teton Conservation District on projects related to the Flat Creek Watershed Management Plan, surface water pollution monitoring, and other programs. Up to 2 hours of additional staff time may be needed to on-board the appropriate Conservation District staff and meet with them to discuss their estimated effort and timing.

While the first year's activities do not require increased staffing, full implementation of the plan will require additional staff. New staff positions, rules, programs, etc. will not be requested until the funds accrued in the utility are sufficient to support it.

Attachments or Links.

Draft SSPP attachment – the SSPP attached to this staff report is only the plan portion. For more detailed information presented in the appendices referenced in the plan, please use the link below.

Draft SSPP link: https://www.jacksonwy.gov/DocumentCenter/View/8778/ToJ_SSPP_2025-May_DRAFT – The Draft SSPP consists of the plan (the first 91 pages of the PDF) and several Appendices (approximately 500 more pages). This link includes the entire plan with appendices.

Suggested Motion.

1. I move to direct staff to finalize the Strategic Stormwater Program Plan as presented and discussed today and bring it back for adoption at a future meeting.
2. I move to direct staff to begin implementing the priority FY26 action items as presented and discussed today.



TOWN OF JACKSON STRATEGIC STORMWATER PROGRAM PLAN
DRAFT JUNE 2025

EXECUTIVE SUMMARY

INTRODUCTION	1
1.1 BACKGROUND DATA REVIEW	2
1.2 REVIEW OF SIMILAR COMMUNITIES.....	9
1.4 GEOGRAPHICAL INFORMATION ON EXISTING STORMWATER SYSTEM	15
1.5 TOWN ORGANIZATIONAL STRUCTURE.....	18
1.6 CURRENT STORMWATER SYSTEM PERFORMANCE	24
1.7 CHANGES IN RAINFALL PATTERNS.....	28
2.1 Public Education and Outreach Concepts	35
2.2 Mapping.....	36
2.3 Illicit Discharge Detection and Elimination (IDDE).....	37
2.4 Stormwater Model and Master Plan.....	49
2.5 Stormwater Advisory Group for Stormwater Regulatory and Manual Development	55
2.6 Pollution Prevention/Good Housekeeping	62
2.7 Monitoring	63
2.8 Operations Plan.....	68
Next Steps – Task 3.....	85
Table 1: Background Document Review Summary.....	3
Table 2: Resort Communities Evaluated.....	9
Table 3: Similar Resort Community Population, Budget, and Full Time Employees (FTEs)).....	10
Table 4: Resort Communities Construction and Post Construction Land Development Regulations.	12
Table 5: Future-to-Baseline Precipitation-Frequency Ratios for the Town of Jackson.....	17
Table 6: Climate Change Adjusted Precipitation-Frequency Depths for the Town of Jackson...	19
Table 7: Capital Improvement Program- Planned Stormwater Projects	24
Table 8: Future-to-Baseline Precipitation-Frequency Ratios for Flat Creek Watershed.....	30
Table 9: Climate Change Adjusted Precipitation-Frequency Depths for the Town of Jackson.....	30
Table 10: Future-to-Baseline Precipitation-Frequency Ratios for Flat Creek Watershed.....	31

Table 11: Climate Change Adjusted Precipitation-Frequency Depths for Flat Creek Watershed.	32
Table 12: Recommended Precipitation-Frequency Depths for Town of Jackson.....	33
Table 13: Recommended Precipitation-Frequency Depths for Watershed-Scale Planning and Design	34
Table 14: Stormwater Outfall Inspections.....	45
Table 15: Dry Weather Flow Tracking Results.....	46
Table 16: Non-Illicit Discharge Issues Observed.....	47
Table 17: Allowable Street Encroachments for Flooding	52
Table 18: Evaluation of Recommended Capital Improvement Projects.....	55
Table 19: Wyoming Surface Water Classes and Designated Uses.....	63
Table 20: Stormwater Program Level of Service – Year Zero and FY26 Initiatives.....	70
Table 21: Stormwater Program LOS Schedule for 10-Year Planning Period.....	76
Table 22: Stormwater Development, Planning and Engineering Services Schedule.....	77
Table 23: Asset Management – Mapping and Infrastructure Inspections.....	77
Table 24: Stormwater Infrastructure Operation and Maintenance.....	78
Table 25: Water Quality Management Program Implementation.....	78
Table 26: Stormwater Infrastructure Capital Program.....	79
Table 27: Administration and Finance.....	79
Table 28: Current Stormwater Program Expenditures.....	81
Table 29: Personnel Assessment by LOS Activity.....	81
Table 30: Personnel Additions Sequenced by Planning Period.....	82
Table 31: Recommendation on Additional Equipment and Contracted Services.....	83
Table 32: Projected Cost of Service for First Five-Year Planning Period.....	83
Figure 1. Hydrologic Unit Code 12 (HUC12) Snake River Watershed Boundaries	16
Figure 2. Drainage Basins Based on GIS Watershed Data.....	17
Figure 3. Existing Stormwater GIS Data for the Town of Jackson.....	18
Figure 4. Existing Town of Jackson Organization Structure.....	20
Figure 5. Stormwater Management Chart Utilizing Existing Positions.....	22
Figure 6. Identified Problem Areas <i>(letters correspond to entries that follow)</i>	25
Figure 7. Use Support Decision Fact.....	27
Figure 8. 1/16th-degree Grid Cell Selected for Town of Jackson	28
Figure 9. Nineteen 1/16th-degree Grid Cells Selected for Flat Creek Watershed	31
Figure 10. Outfall Locations and Initial IDDE Survey Results	40

Figure 11. Stormwater Model Study Area.....	49
Figure 12. Flooding Hazards Identified in Model, 5-Year Storm Event.....	53
Figure 13. Flooding Hazards Identified in Model, 100-Year Storm Event.....	54
Figure 14. Proposed Stormwater Project Locations.....	59
Figure 15. Major Stormwater Trunk Lines in Town of Jackson	66
Figure 16. Stormwater Management Organization for Jackson Wyoming.....	85

Appendices

Appendix A – Resort Community Questionnaire

Appendix B – Public Education and Outreach Strategy

Appendix C –IDDE Draft Ordinance and Outfall Inspection Forms

Appendix D – Stormwater Model and Master Plan Report – To be Provided in Final Report

Appendix E – Steering Committee Documentation

Appendix F – Level of Service (LOS) Detailed Plan

Appendix G – Drainage Utility Funding for Stormwater Services

EXECUTIVE SUMMARY (To be written)

1. INTRODUCTION

The Town of Jackson has engaged WSP USA Inc. (WSP), supported by Harmony Design & Engineering, Inc. (Harmony) to develop a Strategic Stormwater Program Plan (SSPP) due to growing concerns about the water quality of Flat Creek, Cache Creek, and Spring Creek, each of which run through the Town. All three creeks fall into Wyoming Department of Environmental Quality (WDEQ) surface water class 2AB with designated uses for drinking water, game fishing, non-game fishing, fish consumption, aquatic life, recreation, wildlife, agriculture, industry, and scenic view¹. The purpose of this summary report is to document and review existing conditions related to stormwater management, including:

- Local and state laws and ordinances,
- Current stormwater plans and recommendations,
- Requirements and approaches to stormwater management for similar communities,
- Existing geographical information on the stormwater system,
- Town organizational structure as it relates to stormwater management,
- Performance of the current system, and
- Changes in rainfall patterns.

The review of existing conditions serves as a baseline for creating a comprehensive and pragmatic SSPP to preserve and improve the water quality of the Flat Creek watershed and surrounding creeks and tributaries. Subsequent steps in the scope of work will focus on developing new, updated program elements to address the existing shortcomings. Implementation strategies will be proposed as the final step to put the plan into action and achieve intended results.

The WDEQ has listed Flat Creek as threatened due to sediment loading from urban stormwater runoff (non-point source pollution). Sediment pollution prevents proper fish spawning, can slow fish growth rates by clogging fish gills, and prevents natural vegetation from growing. These impacts violate the state's standards for creeks designated as beneficial use to aquatic life and cold-water fisheries². To comply with the Clean Water Act (CWA) regulations the Town supported a locally led watershed management plan to restore the creek's impairments. A primary part of this approach rests in reducing the amount of urban sediment runoff and protecting, restoring, and improving the riparian and aquatic habitats of Flat Creek.

¹ Wyoming Department of Environmental Quality. "Wyoming Surface Water Classification List" (2021). <https://drive.google.com/file/d/1nmOuMrhhAoEwNKv5wB5cj7TDdfmdrut6/view>

² Mid-American Regional Council. "What is Sediment Pollution?". *Brochure*. https://cfpub.epa.gov/npstbx/files/ksmo_sediment.pdf
According to United States census data, the town of Jackson saw an 11% growth in population from 2010 to 2020³. Although Spring Creek and Cache Creek have not been deemed impaired by the WDEQ and therefore do not have associated management plans in effect or Total Maximum Daily Loads (TMDLs) identified by the WDEQ, the Town of Jackson's rapid population growth poses a potential threat to these creeks. Water and habitat quality studies identified stormwater runoff,

decreased riparian habitat, and stream diversion due to urbanization as primary contributors to Flat Creek's deteriorating health⁴. As the Town of Jackson continues to grow, proper management of urban stormwater runoff will help prevent increased levels of sediment and turbidity in surrounding creeks and tributaries through improved infrastructure and community education. By identifying shortcomings in the Town's current stormwater management approach, revisions and additions can be put in place to support current plans, improve water quality, and prevent further pollution.

This report captures and documents key findings and references to additional summary documents and deliverables. It summarizes the outcomes of various SSPP tasks leading to Next Steps for implementation of the SSPP recommendations.

1.1 BACKGROUND DATA REVIEW

The first task in the Stormwater Management Program Development is to gather and review existing laws, ordinances, and previous plans. The document review included a comprehensive review of current Town ordinances, codes, operations, procedures, and existing plans and programs that will be relevant to the Stormwater Program Development. For Jackson, WSP reviewed thirteen (13) documents, ranging from the Town's Land Development Regulations (LDRs) to its Comprehensive Plan and Watershed Studies. As demonstrated in Table 1, areas of stormwater program integration, potential, and overlap were gathered and organized. For example, LDR 5.5 Landscape Specifications is an area that could be updated to include stormwater cross references and green infrastructure techniques to the objectives of that specific LDR. In addition, the Town's Comprehensive Plan can be used to underpin the promotion of Low Impact Development (LID) and green infrastructure techniques. Examples of opportunities and conflicts are provided in the "stormwater program potential" column. The complete list and summary review of documents is provided in Table 1.

³United States Census Bureau. "Quick Facts Jackson town, Wyoming". <https://www.census.gov/quickfacts/jacksontownwyoming>

⁴Intermountain Aquatics, Inc. "Flat Creek Watershed Management Plan" (2006).

**Table 1: Background Document Review
Summary**

Document	Summary	Stormwater Program Potential
WY State Water Quality Regulations State NPDES Permit State NPDES Fact Sheet-	WYPDES stormwater regulations are found in the Wyoming Water Quality Rules and Regulations, Chapter 2. There are no Phase I MS4s in WY and the Phase II MS4s include Cheyenne, Casper, and F.E.Warren AFB. The main requirement of an MS4 general permit is to develop and implement a stormwater management plan covering six minimum elements, or minimum control measures (MCMs).	-Cheyenne, WY: Construction and Post Construction Requirements and thresholds can be considered/reviewed -Casper, WY: Erosion and Sediment Control Manual is a good resource.
2013 Urban Best Management Practice Manual-WY DEQ Nonpoint Source Program	The purpose of the document is to provide information about best management practices that the Wyoming Nonpoint Source Program supports as eligible for Clean Water Act Section 319 funding. The document serves as a tool to direct users to detailed information about selected BMPs, and as an educational tool about urban BMPs and nonpoint source pollution from Urban Areas.	-Provides high level overview of post construction BMPs (e.g. permeable pavement, bioretention, swales) -Provides comprehensive resource list for Construction Site Manual -Provides Wyoming Native Plant Specific Reference Resource -Does not provide detailed design guidance, water quality sizing, or water quantity sizing information -Does not include policy, serves as more of an educational document

Document	Summary	Stormwater Program Potential
LDR- Division 5.7 Grading, Erosion Control, Stormwater Management	Purpose of this article is to preserve natural resources, protect water quality of the State of WY and the Town, and protect & promote the health, safety, and welfare of the people by minimizing pollution carried by runoff and geologic hazards that might be caused by improper grading practices.	- Applies to ALL land disturbing activities - Provides standards for - o grading - o erosion controls - o stormwater management - Statement level grading permit (small sites) - Plan level grading permit (PE or LA shall prepare) - Preserve natural or established vegetation - Section 5.7.4 Stormwater Management Plan - o Storage: post development runoff rate shall meet predevelopment runoff rate. 1 year through 100-year event shall be considered - o Rational method to calculate peak flow rates - o Modified rational method for 10ac or less - o Teton village area to 20% greater for IDF curves - o Pollution abatement-adequate provision shall be made for the storage, treatment, and removal of pollutants. - o Encourages low impact development techniques. Update to provide more clarification on land disturbance thresholds Update to provide clarification on water quality and quantity requirements Move standards outside of LDR and into the Stormwater Management Manual Update to provide clarification on construction termination and enforcement Create plan review checklists for construction and post construction requirements
LDR-Natural Hazard Protection Standards 5.4	Provides standards on protecting steep slopes, unstable soils, faults, floodplains, and Wildland urban interface areas.	- Cross reference this section in the new Stormwater Design Manual

Document	Summary	Stormwater Program Potential
LDR-Landscape Specifications 5.5	Purpose of this section is to assist in maintaining the character of the zones by providing minimum planting, buffering, and screening around and within physical development. Provides requirements for plant spacing, parking lots, right of ways, loading areas, required vegetation information (native plants, plant material, etc.), installation, and maintenance.	- Landscape surface area and/or plant units are required for both residential and non-residential use based on the zone the development is in - Landscape plans must be submitted for review - Landscape architect is required for submittal - Existing vegetation must be mapped - Must have a planting plan and a plant schedule - Requirements in place regarding irrigation practices, stabilization, and erosion control - Credit for preserving existing vegetation - Add stormwater management to Landscape Objectives - Substitutions for Standard Plan Units, could add bioretention islands and other LID/GI techniques - Consider creating incentives for native plants - Add stormwater management credit for open space standard requirements
LDR-Street Design Requirements 7.6.3	Standards for ROW and street design must be used in the design and construction of all new streets, and as guidance for street improvements.	- Provides standards for access, traffic efficiency and volumes, speed, and street space required. - Mentions stormwater facility easements and allowable use in ROWs - Standards for street layout, patterns, intersections, topography, pavement widths/thicknesses, easements, and ROWs - Consider adding permeable pavement as an allowable material
LDR-Parking and building setbacks 9.4.8	Provides descriptions of how to define setbacks based on location, including encroachment and exemption information	Consider allowing set back trade offs for use of GI/LID Consider allowing GI/LID in setback areas

Document	Summary	Stormwater Program Potential
LDR-Stream Buffer Requirements 5.1.1	Establishes the protection standards for waterbodies and wetlands. This section prohibits physical development and use on and within a certain distance of these resources.	Development prohibited, setbacks and buffers required due to risk of negative impacts on the community at large. Setback info: - Rivers 150ft - Streams (general) no less than 50 ft no more than 150ft - Specific streams - o Cache creek 20ft - o Flat creek – South of Hansen 25 ft. North of Hansen 50ft - Natural Lake/Pond no less than 50ft, no more than 150ft - Wetlands 30ft - Consider providing further GI/LID requirements in properties w/ stream buffers - Consider broader voluntary/incentive program as much of the riparian area in Jackson is on developed land.
Title 15, Chapter 30 – Flood Damage Prevention and current Effective FEMA Flood Insurance Rate Maps for the Town.	The purpose of the chapter is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas.	- Methods of reducing flood losses - Details duties and responsibilities of Town Administrator - Record obtainment - Alteration of watercourses - FEMA boundaries - Variances - Details provisions for flood hazard reduction - Standards for residential and non-residential construction - Floodways and uses - Cross reference new Stormwater Manual

Document	Summary	Stormwater Program Potential
2001 Surface Water Drainage Infrastructure Master Plan	The report sets forth a Town of Jackson Surface Water Drainage Infrastructure Master Plan. The plan includes specific implementation recommendations and identifies funding sources for the installation and effective long-term maintenance of public infrastructure that will collect, convey, and treat storm water runoff arising within the Town of Jackson in conformance with applicable federal and state law.	Provides narrative on how to comply with the 6 MCMs Funding needs (staffing and equipment) Recommendations for both public and private operations Private design storm requirements Public Collection/Prevention System Infrastructure Public treatment system infrastructure Public infrastructure maintenance regime Equipment Facilities Detailed Drainage Basin Analysis
2012 Jackson/Teton County Comprehensive Plan	The Plan focuses on three common values: 1. Ecosystem Stewardship, 2. Growth Management, and 3. Quality of Life. The plan focuses on private lands, which make up 3% of the land area in the County, or just over 76,000 acres. Vision: Preserve and protect the area's ecosystem to ensure a healthy environment, community and economy for current and future generations. <i>Our community will lead by example to show how local efforts can positively affect entire ecosystems. The community's stewardship of our surrounding ecosystem has been and will continue to be our legacy to future generations.</i>	There are many principle and related policies that the Stormwater Program Master Plan can help support. The below items are a few of the primary overlap areas: Principle 1.2-Preserve and enhance surface water and ground water quality Policy 1.2a: Buffer waterbodies, wetlands, and riparian areas from development Policy 1.2b: Require filtration of runoff Principle 2.5-Reduce greenhouse gas emissions through water management and water conservation Policy 2.5a: Encourage water conservation Principle 3.4-Limit development in naturally hazardous areas Policy 3.4a Protect development against flooding Policy 3.4b Protect development against avalanches and landslides Policy 3.4c Prohibit development on Steep Slopes

Document	Summary	Stormwater Program Potential
2018 Snake River Fund Flat Creek Blueways Project Report	The purpose of LegacyWorks Group (LWG)'s analysis was to identify and assess potential projects that could improve Flat Creek as it flows through the Town of Jackson. The report identifies avenues to achieve the following: improve instream and riparian habitat, incentivize low impact development and redevelopment along Flat Creek, improve community access to Flat Creek, make Flat Creek apart of the community, expand green infrastructure for stormwater quality.	-Adoption of the draft Flat Creek overlay or any other development measures that could provide development bonuses along the creek - There are two critical efforts identified: i) the Flat Creek overlay, designed to incentivize redevelopment that improves interaction with the creek, and ii) improved stormwater management, -These items should be integrated into the new Stormwater Manual and LDR update. -Consider areas for GI/LID pilot project opportunity.
2019 USGS Flat Creek Sediment Study	The purpose of the Flat Creek watershed planning process is to restore water- and habitat-quality in Flat Creek and its tributaries to meet the state's designated uses for the waterbody and to achieve the goals identified by the watershed stakeholders. There are five goals outlined in Study: Water Quality, Riparian Habitat, Aquatic Habitat, Human Use, and Winter Flooding.	- The management practices defined for Implementation include several cross over stormwater goals: -Structural Management Practices -Non-Structural Management Practices -Administration and Monitoring -When developing the Stormwater Manual, special requirements can be considered in the Flat Creek Watershed. -Consider areas for GI/LID pilot project opportunity.

1.2 REVIEW OF SIMILAR COMMUNITIES

The similar resort communities review was a research exercise using phone interviews, internet research, and/or questionnaires to document the stormwater management programs of other mountain resort communities. A Stormwater Program Questionnaire was developed by WSP to gauge the level of service, budget, and staffing requirements for a municipal stormwater program. The questions were divided into six program areas to serve as a guide for this report and to assist with both internal and external group discussions in the Town's stormwater program development. Fifteen (15) similar resort communities were identified, and interviews were completed during the spring and summer of 2022. The following tables summarize the information collected:

- Table 2 provides the resort communities reviewed and the review method(s) used.
- Table 3 provides the resort communities population, budget, funding source, and full-time employee(s) (FTEs).
- Table 4 provides a detailed summary of the resort communities' stormwater construction and post-construction land development regulations.

Appendix A provides the example questionnaire used for the Resort Communities interviews.

Table 2. Resort Communities Evaluated (in alphabetical order)*

Community Name	Review Method
Aspen, CO	Phone interview, Internet research
Bozeman, MT	Phone interview, questionnaire, internet research
Breckenridge, CO	Phone interview, questionnaire, internet research
Crested Butte, CO	Phone interview, questionnaire, internet research
Durango, CO	Internet research
Ketchum, ID	Phone interview, questionnaire
Park City, UT	Internet research
Sandpoint, ID	Internet research
Steamboat Springs, CO	Internet research
Taos, NM	Internet research
Telluride, CO	Phone interview, questionnaire, internet research
Truckee, CA	Phone interview, questionnaire, internet research
Vail, CO	Phone interview, internet research
Valdez, AL	Internet research
Whitefish, MT	Phone interview, internet research

****Table information was collected in spring and summer of 2022***

Table 3. Similar Resort Community Population, Budget, and Full Time Employees (FTEs)*

Community Name	Population	Operating Budget	Budget Source	Full Time Employees (FTEs)*	Relevant Notes
Aspen, CO	7,365	\$650,000/year	Property Tax	5.5	Many private post construction BMPs are not maintained and failing, if starting the program over again they would focus funding to regional facilities maintained by the public and have developers pay into that program.
Bozeman, MT	48,532	1.5 million/year. Deferred Maintenance: \$600,000/year Utility Operations: \$700,000/year System Enhancements: \$200,000/year	Stormwater Utility is based on flat rate of water meter and a variable rate for impervious surface.	5 direct on the SWMP Team. However, multiple departments help to implement the MS4 Permit.	Major issues are ownership identification of both public and private infrastructure.
Breckenridge, CO	5,020	Funds are allocated to CIPs on an as needed basis. Minor projects are budgeted in streets department, 2023 budget is \$200,000	General Fund (sales tax is the largest source)	3, engineer, construction inspector, and GIS analyst	Staffing, budgets, and a very compressed seasonal window to perform maintenance are major concerns.
Crested Butte, CO	1,681	As needed, as part of other CIPs.	General Fund	1, Town Engineer	Highly recommend using Watershed Protection District Ordinance to regulate stormwater management for specific issues.
Durango, CO	18,985	Information unable to be obtained.			
Ketchum, ID	2,827	Information unable to be obtained.			
Park City, UT	7,558	Information unable to be obtained.			
Sandpoint, ID	8,703	Information unable to be obtained.			

Community Name	Population	Operating Budget	Budget Source	Full Time Employees (FTEs)*	Relevant Notes
Steamboat Springs, CO	13,212	Information unable to be obtained.			
Taos, NM	5,971	Information unable to be obtained.			
Telluride, CO	2,484	\$80,000-\$100,000/year	General Fund and Capital Fund	1 direct SWMP staff, other department support the	New stormwater infrastructure is paid for by the developer/owner when new or significant remodels are proposed. The Town's Streetscape Manual provides guidance for private development for public rights of way.
Truckee, CA	16,561	Stormwater is included when doing other city CIP projects. They do not have funds dedicated to stormwater CIPs.	General Fund and have obtained many grants to help fund projects.	1 direct staff and supported by other departments.	Stormwater tasks are spread through many departments and many of the MS4 requirements have already been done in various departments.
Vail, CO	5,450	As needed, no direct stormwater budget line item	General Fund	1 direct staff	Developed Gore Creek Strategic Action Plan that outlines a 7.6 million 10-year program that will be implemented. This outlines their costs and funding.
Valdez, AL	3,834	Information unable to be obtained.			
Whitefish, MT	7,870	1 million for 2023	Stormwater Fund (\$77.53/parcel) and Stormwater Impact Fees	1 direct staff	Staffing and funding are still a concern for the Town.

***Table information was collected in spring and summer of 2022**

Table 4. Stormwater Management Regulations for Resort Communities*

Resort Community	Land Disturbance Threshold	Quantity and Quality	Design Calculation	Erosion & Sediment Control	Incentives for use of LID and GI
Valdez, AK Pop: 3,834 Salmonberry Contact: Sam Kito sam.kito@alaska.gov 907-269-7542	• Not a MS4. • Follows state Construction General Permit Authorization is required for disturbance of one acre or more, or for projects that are part of a combined development that will disturb one acre or more. https://dec.alaska.gov/water/wastewater/stormwater/construction	• Follows state anti-degradation policy for quality with an exception for important development. https://dec.alaska.gov/water/water-quality/standards/ • No mention of quantity or velocity restrictions.	• No standard method is required. • Design engineer determines approach.	• Follows state Construction General Permit requirements. • Stormwater control measures are required during construction activities.	None.
Truckee, CA Pop: 16,561 Squaw Valley Contact: Jessica Thompson jthompson@townoftruckee.com	• Regulated Phase 2 MS4. • Grading permit is required for land disturbance over 500 sq. ft or 20 CY.	All new development that adds impervious area shall retain/reuse the 85th percentile 24-hour storm on site through green infrastructure and LID techniques.	• Utilizes WQv methodology. Stormwater calculator on website to assist the development community. • BMPs/LID types used are more limited than lower elevation cities due to snow and freezing ground.	• All construction sites require erosion and sediment control. • Construction is not allowed between October 15th and May 1st.	LID is required.

Resort Community	Land Disturbance Threshold	Quantity and Quality	Design Calculation	Erosion & Sediment Control	Incentives for use of LID and GI
Aspen, CO Pop: 7,365 Aspen Snowmass Contact: April Long april.long@cityofaspen.co m	• Not a MS4. • An engineering review is initiated when land disturbance is over 200 sq. ft. • If the work is only landscape and grading, is under 1000 sq. ft, and doesn't change drainage patterns, there are no other requirements. • Above 1000 sq. ft of exterior work or 50% of interior work triggers stormwater management requirements.	• Water quality capture volume of the first ¼ inch of rain must be treated to remove 90% of particles 60 microns and greater. • Quantity: if the property can drain directly to the City's system, detention beyond the WQCV is not required. If they cannot, they are required to detain to discharge at the historic rate or manor. No mention of velocity requirement.	• NOAA Atlas IDF for rainfall frequencies. • Rational method for watersheds less than 90 acres. • Colorado Urban Hydrograph Procedure (CUHP) model for large watersheds. • SWMM for snowmelt and LID. Snowmelt runoff calcs required.	Must implement erosion and sediment control for all projects.	Not required, but difficult to achieve water quality requirements when LID or green infrastructure is not used (i.e. the WQCV is decreased as impervious area is decreased).
Breckenridge, CO Pop: 5,020 Breckenridge Ski Resort Contact: Shannon Smith shannons@townofbreckenridge.com 970-453-3196	Detention is required for all new development and redevelopment. Permanent Water quality is required for land disturbance over 1 acre or increase impervious area by 0.10 acres or an impactful land use	Detention is required to be full spectrum per the USDCM and should be designed. Shall be designed to release stored runoff volumes below peak rate for the 2-,5-,10-, 25-, 50- and 100-year storms. Water Quality: 80% TSS removal through the WQCV	NOAA Atlas 14 data. The Mile High Flood District (MHFD) and Volume 3 of the Urban Storm Drainage Criteria Manual Rational Method SCS Method	All sites are required to manage Erosion and Sediment. Follow the CDOT Erosion and Stormwater Quality Field Guide for compliance.	Ecological Channel Design option Try to promote LID and GI but do not have a formal incentive in place.
Crested Butte, CO Pop: 1,681 Crested Butte Contact: Mel Yemma melyemma@crestedbutte-co.gov	A state of Colorado stormwater permit is required for construction disturbances of one acre or more.	Planning to create a stormwater program soon.	None	All sites are required to manage Erosion and Sediment. Follow the CDOT Erosion and Stormwater Quality Field Guide for compliance.	None

Resort Community	Land Disturbance Threshold	Quantity and Quality	Design Calculation	Erosion & Sediment Control	Incentives for use of LID and GI
Telluride, CO Pop: 2,484 Telluride Mountain Resort Contact: Phil Taylor ptaylor@telluride-co.gov	- Follows state of Colorado requirements: 1 acre land disturbance - Stormwater and sediment must be managed at some level for every construction site no matter the size.	- There are no specific water quality and quantity requirements. - The Construction Mitigation Manual states that BMPs must "minimize" runoff and pollutants.	The rational method is used.	Public and private projects which disturb 500 square feet of property or greater or require demolition, improvement, or renovation (interior and/or exterior) of 400 square feet or greater within any twelve-month period.	Requirements: - Infiltrate using drywells, rain gardens, etc., no less than the 80th percentile storm, which is approximately 0.028 feet times the square footage of impervious surface. - Every development must provide an engineered drainage plan with their Building Permit Application.
Bozeman, MT Pop: 48,532 Big Sky Resort, Bridger Bowl Contact: Adam Oliver aoliver@bozeman.net P: 406-582-2916	Follows state of Montana requirements: 1 acre land disturbance - City Engineer can require more stringent or smaller thresholds. - Typically projects with a 4-plex or larger require WQ and Erosion control.	Follows state of Montana requirements: - Retention of first ½ inch of rainfall. - Additionally, retention or detention of 10-year, 2-hour event. Rainfall curves and design standards are currently being updated to address climate change.	- Rational method, for now. - Looking to require other methods for larger sites.	- State permit requires 1 acre and above. - Sites are regulated under 1 acre and have a simple methodology for these sites.	If sites capture more than the design storm, there is a stormwater utility fee reduction.

Resort Community	Land Disturbance Threshold	Quantity and Quality	Design Calculation	Erosion & Sediment Control	Incentives for use of LID and GI
Park City, UT Pop: 7,558 Park City Mountain, Deer Valley, Solitude, Brighton, Alta Contact: Alexandra Ananth alexandra.ananth@parkcity.org 435-615-5066	- Regulated MS4. Every project in Park City requires a Land Disturbance Permit to minimize any pollution of the existing streams. - A Notice Of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) are required for: - Projects disturbing more than one acre, or - Parcel under one that is part of common plan development (a subdivision).	- The Utah State Division of Water Quality (DWQ) sets the water quality and quantity requirements for streams classified as impaired waters. Park City streams are classified as "Impaired Waters of the State". - The DWQ has permanent water quality monitoring stations with TMDLs values, and Park City meets the minimum requirements. - Total Maximum Daily Loads (TMDL) are quality and quantity requirements.	Based on the "Civil Law Rule of Natural Drainage" require: 100-year 24-hour event <u>retention</u> and matching pre- and post-development conditions for discharging into a natural drainage system. - Requires a 100-year, 24-hour event <u>detention</u> for city-owned storm drainage facilities with a 0.10 cfs/ acre allowable release rate. - Farmer-Fletcher storm drain distribution curves are required due to high elevations. - The Intensity-Frequency-Distribution storm distribution combines a rain event and snowmelt runoff during the spring.	- Requires all the construction projects to submit an erosion and sedimentation as part of the Construction Mitigation Plan. - Erosion must be minimized and sedimentation cleaned up daily with a weekly inspection.	- Where the implementation of Low Impact Development best management practices is feasible, the storm drainage volume required for retention is reduced according to the hydrology calculations. - Unfeasible conditions are high groundwater table or within a geologic hazard zone.

***Table information was collected in spring and summer of 2022**

1.4 GEOGRAPHICAL INFORMATION - EXISTING STORMWATER SYSTEM

The Town of Jackson contains four hydrologic unit code (HUC12) sub watersheds to the Snake River watershed as shown in Figure 1. Two of these watersheds (watersheds 2 and 3) direct surface water runoff towards the town, whereas watersheds 1 and 4 direct surface water runoff away from town.

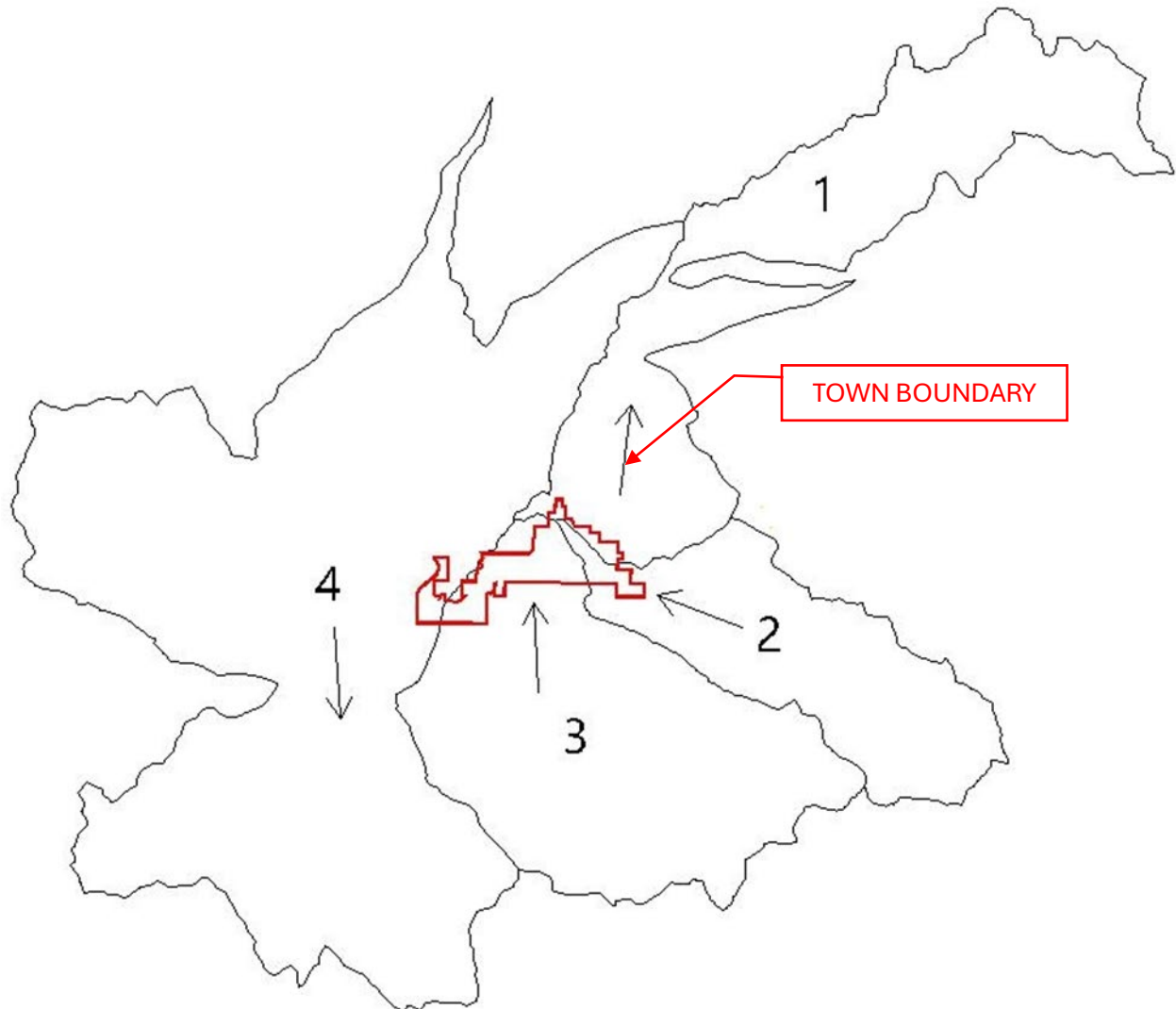


Figure 1. Hydrologic Unit Code 12 (HUC12) Snake River Watershed Boundaries

Using the boundaries for these four watersheds and the locations of Flat Creek, Spring Creek and Cache Creek, which further define the areas that contribute runoff, the Town of Jackson was divided into six drainage basins, each with tailored stormwater management plans. This allows for simplification of the overall program into sub-units that are based on the controlling physical factors. These drainage basins are shown in Figure 2. Stormwater runoff from outside of the Town limits is accounted for within the subwatersheds including drainage from Snow King Mountain, East Gros Ventre Butte, and other surrounding topography lying outside of the town boundaries. The arrows shown in Figure 2 represent the direction of surface water flow.

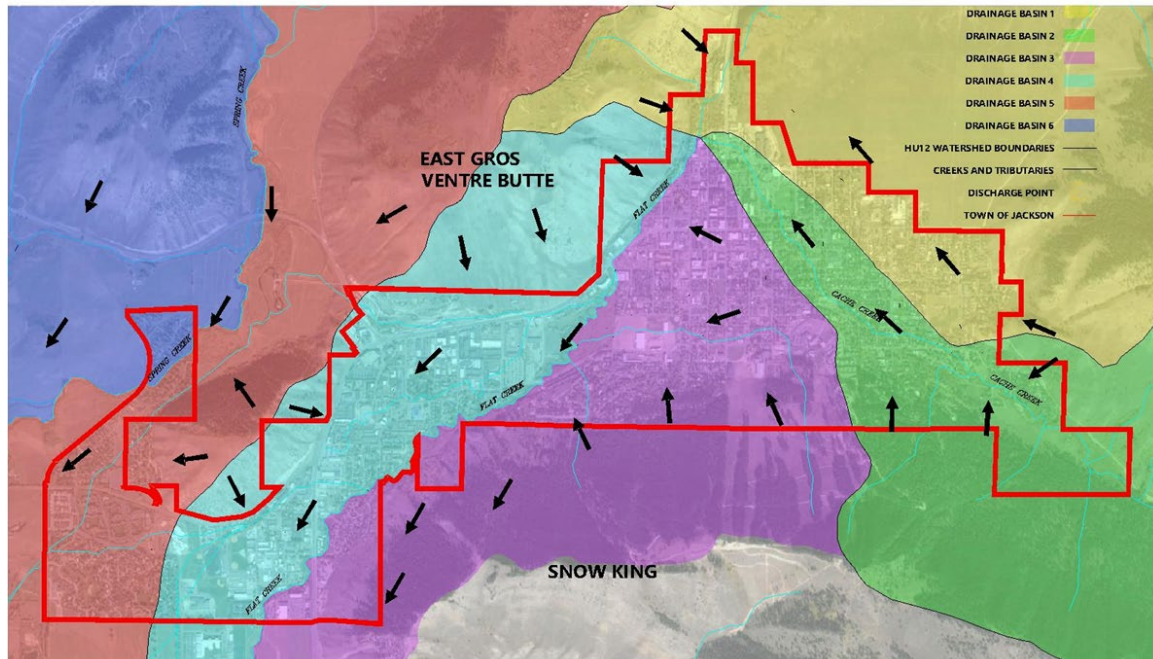


Figure 2. Drainage Basins Based on GIS Watershed Data

Drainage basins 2, 3, and 4 account for approximately 75% of the total area within the Town of Jackson and are where the majority of the existing stormwater management infrastructure is located. The Town has conducted surveys to inventory the location of existing stormwater management infrastructure. This information is summarized in Table 5 and Figure 3 below.

Table 5. Stormwater Infrastructure Data Provided by The Town of Jackson

STORMWATER FEATURE	QUANTITY
STORM SEWER PIPES (MILES)	15
CATCH BASINS	340
MANHOLES	297
OUTFALLS	19
LIFT STATIONS	0
DETENTION PONDS (ACRES)	2
IN-LINE TREATMENT UNITS	14

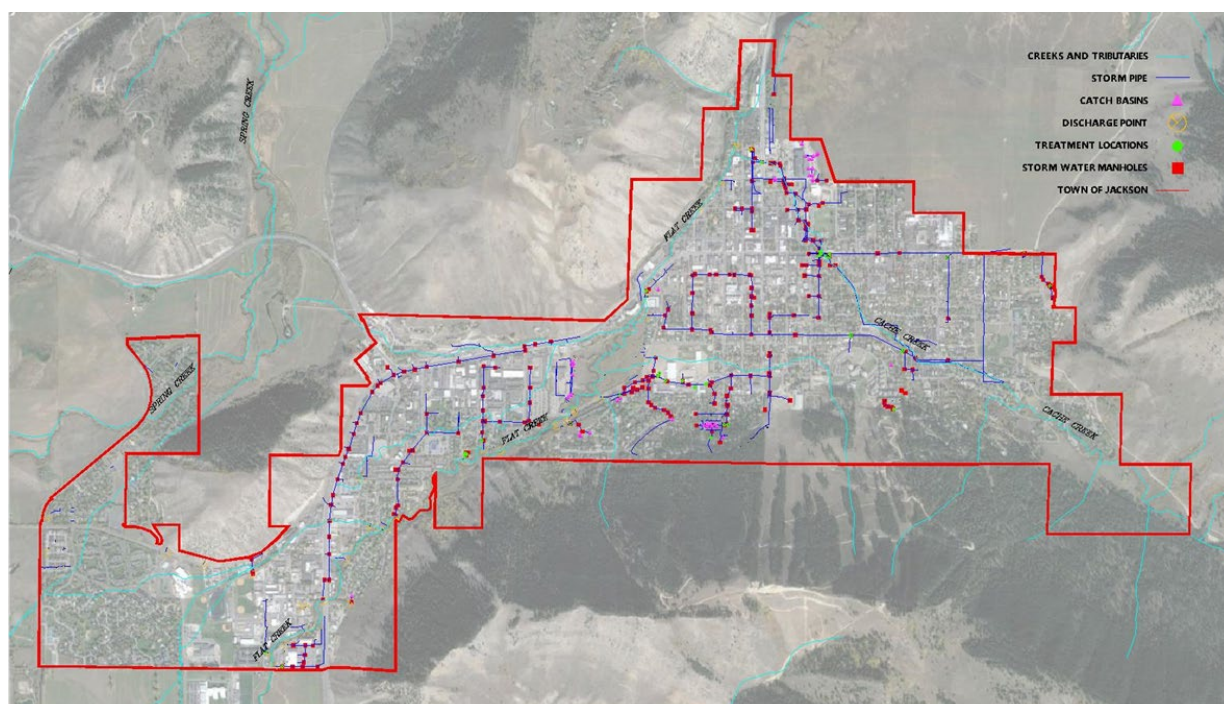


Figure 3. Existing Stormwater GIS Data for the Town of Jackson

There are several discrepancies between the GIS data represented in Figure 3 and the data shown in Table 5, provided by the Town of Jackson. This is an understandable artifact of the growth of Jackson over time and incremental improvements added to serve that growth. Older infrastructure may be misrepresented when records are lost or expanded with newer components. Additional information was gathered during the development of this Stormwater Management Plan to verify and better understand the current capacity of Jackson's stormwater management infrastructure. This infrastructure will be evaluated in a rainfall/runoff model to be developed as part of this project.

1.5 TOWN ORGANIZATIONAL STRUCTURE

The overall Town of Jackson Organization is shown in Figure 4. The Town Manager is the operational lead, reporting directly to Town Council. The Assistant Town Manager has direct oversight of seven departments, including Public Works. The Community Development Director oversees the Public Engagement Department, Strategic Planning & Development, and Planning and Building Departments. Although Public Works is the primary department responsible for Stormwater Management, several departments have at least a partial role in the effective management of stormwater. Departments that have a role in stormwater management are shaded in green in Figure 4 and summarized in Table 6 below.

Table 6. Town of Jackson Departments with Role in Stormwater Management

DEPARTMENT	STORMWATER ROLE
PUBLIC WORKS	Operation & maintenance of streets, stormwater system, and public facilities; Capital improvement program development and oversight; Engineering review of private development applications;
STRATEGIC PLANNING & DEVELOPMENT	Master planning of development, which impacts drainage systems and stream corridors;
COMMUNITY ENGAGEMENT	Public outreach for stormwater capital projects; Public education regarding stormwater practices and impacts to water quality
PLANNING & BUILDING	Private development review; LDR/Code compliance; Building permitting
PARKS AND RECREATION	Maintenance of parks and roadway landscaping, which may have stormwater management functions.
PATHWAY OPERATIONS	Maintenance of trail systems, which are often co-located with stormwater drainage systems and waterways.

TOWN OF JACKSON ORGANIZATION

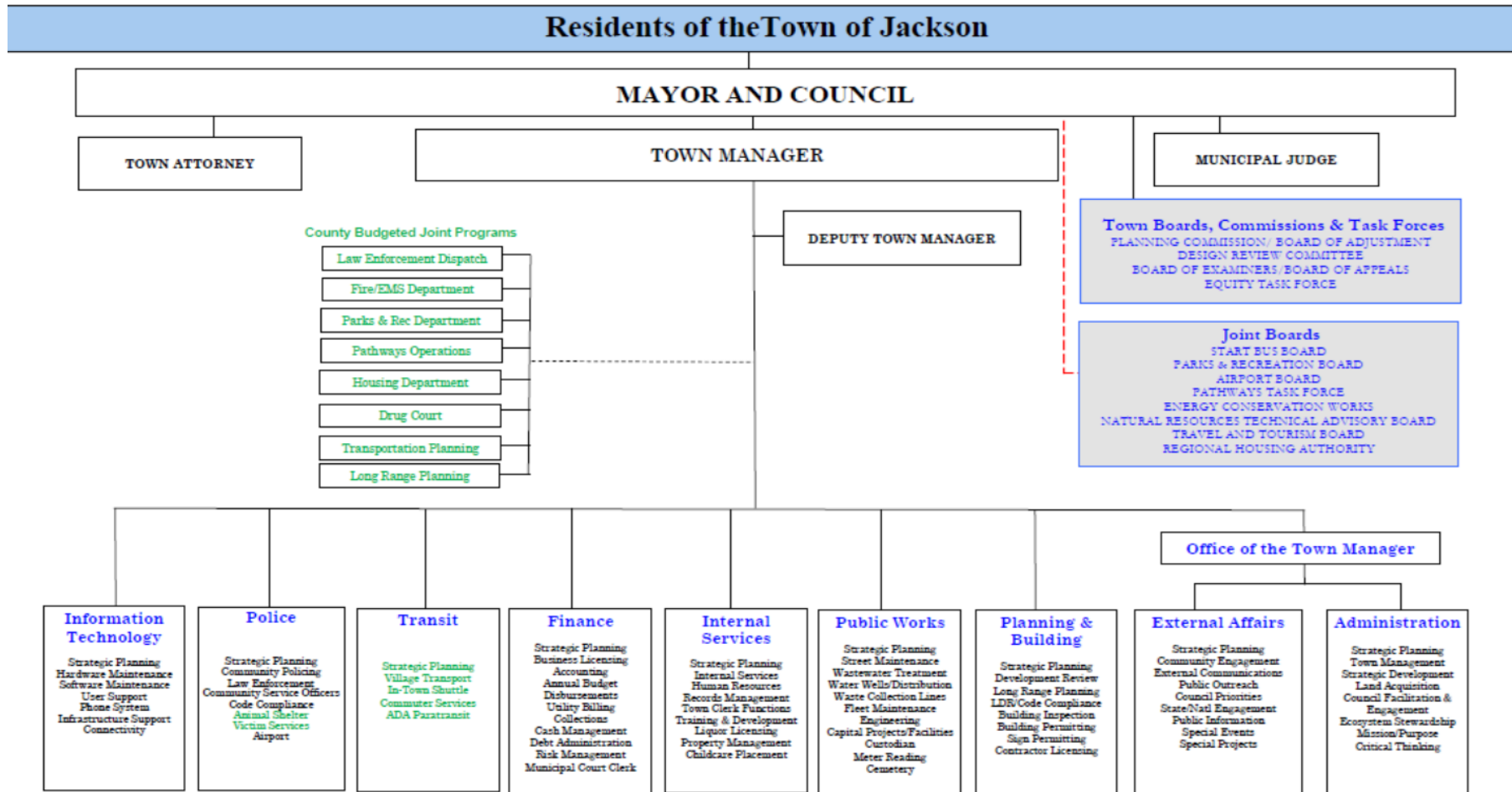


Figure 4. Existing Town of Jackson Organization Structure (FY25 Budget)

Public Works is administered by the Director of Public Works Floren Poliseo, Assistant Public Works Director Johnny Ziem, and Administrative Assistant Amy Renova. The overview of Public Works provided on the Town's website is: "The Town of Jackson Public Works Department handles the design, operation, and maintenance of: Town and County vehicles, START Buses, Police cars, Public infrastructure, Roads and sidewalks, Wastewater systems, Water systems, and Town owned facilities."

Within Public Works, there are six distinct divisions. Listed in the order shown on the Town website, the Divisions are:

- Engineering
- Streets
- Water
- Wastewater
- Fleet
- Facilities

The Engineering Division consists of Town Engineer, Brian Lenz, and three Associate Engineers: Matthew Doyle, Scott Mohror, and Jeff Sillman. The division's overview information on the website states: *"The Engineering Department supports the larger activities of the Public Works Department by determining the extent of construction, completing design plan, contracting work programs, and overseeing the completion of projects. The department develops and monitors a Capital Improvements Program (CIP), which focuses on major municipal projects necessary to maintain and/or expand Town infrastructure. Town engineers review plans in conjunction with the Planning Department to ensure compliance with the Town's Land Development Regulations."* The Streets Division is led by Streets Manager Sam Jewison, who oversees six Street Operators. The mission statement of the Streets Division, per the Town website, is: *"We exist to provide Exceptional Customer Service to residents and visiting public alike by maintaining safe and convenient public rights-of-way and facilities while supporting essential community functions. We also contribute to the financial security of the community and help create a clean and positive environment."*

Currently, the Public Works Department and its associated divisions do not explicitly list Stormwater, Drainage, Flooding, Sediment, Erosion, or Surface Water Quality as a responsibility. However, they are taking the lead in managing these important issues as a significant element of public infrastructure. The Engineering and Streets divisions align closely with the contributing sources, means of conveyance, and base of expertise to address the physical components of an effective stormwater management program. The Facilities Division plays a role in managing Town facilities that contribute runoff to the stormwater system. The Wastewater Division could potentially provide staff and equipment for maintaining stormwater infrastructure.

To ensure the SSPP has adequate staff capacity and clear assignment of responsibilities covering public engagement, discharge monitoring, and construction practices, various current positions could be designated as lead staff to execute these service roles. A potential alignment of responsibilities is captured in Figure 5. This structure is based on existing positions; however,

adequate availability of time is necessary to deliver the SSPP services. These positions are fully utilized today and have minimal or no capacity for assignment of stormwater management responsibilities beyond what is accommodated today. Adoption of the SSPP triggers an additional decision for successful implementation of the strategies. Additional financial resources to support new staff and contracted services are critical.

It is recognized that availability of staff resources limits the ability of the Town to address stormwater management strategies to meet flood mitigation and water quality improvements. Accountability for cross-agency coordination and SSPP implementation may be best accomplished by creation of a new position focused on coordinating and implementing the SSPP. Without the addition of new resources, staff assigned the role in the second row of the stormwater management chart report to the storm water program administrator, who is the Town Manager.

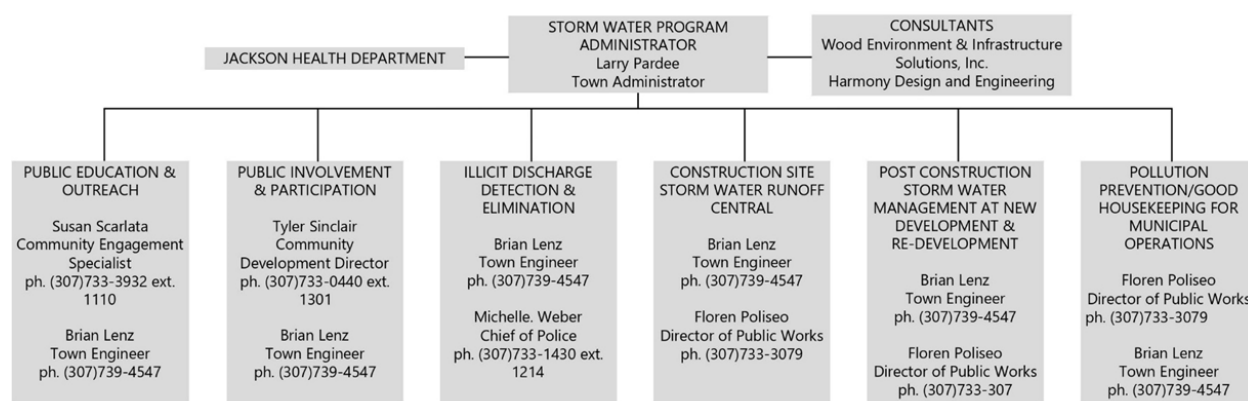


Figure 5. Stormwater Management Chart Utilizing Existing Positions

1.5.1 Expanded Organizational Structure:

Overall organization review identified weaknesses in the ability of the current resources to carry out the implementation of the SSPP. The following discussion documents strategies needed in support of the long-term goals of the SSPP.

The addition of a Stormwater Program Coordinator reporting to the Public Works Director addresses the challenge of accountability and program coordination. The Stormwater Program Coordinator is responsible for ensuring that the SSPP is implemented and that all staff effort is effectively coordinated to complete assigned tasks. All members of the SSPP implementation team will engage with Stormwater Program Coordinator to record progress and additional data as it is collected. The Coordinator will assist in workload balancing, advocating when appropriate for additional support and assisting in priority setting with their peers in other Public Works Divisions.

Creating a Public Partnership: Public education and outreach along with public involvement and participation are important SSPP strategies. Engagement by the Stormwater Coordinator with staff of Community Engagement and Community Development is a priority to raise awareness and promote action throughout the community. By informing the public about the current health of their local watershed and their ability to impact it, the SSPP strategy team will serve to improve the Town

of Jackson's water quality as well as preventing further pollution. The Stormwater Coordinator brings technical knowledge and expertise to the Team, with messaging development and delivery led by the Engagement and Development staff.

1.5.2 Managing the Infrastructure:

- The illicit discharge detection and elimination is focused on the removal of discharges to the stormwater system that constitute violations to the SSPP. Determination of cause and identification of responsible parties for the polluting discharge is a positive step as it both educates and removes pollutants. This element in stormwater infrastructure management requires an informed community to help report and stop pollutant entry at the source. Enforcement of ordinances requires appropriate action. Enforcement of ordinances engages the Stormwater Program Coordinator, the Public Works Director, and the Town Attorney. Field operations staff may be engaged to research the source of a pollutant discharge.
- The construction site storm water runoff will be responsibility of personnel assigned to inspect ongoing construction activities, using infield data collection tools to document potential violations of Town ordinances. These priorities include ensuring that construction sites are properly managing their supplies, land clearing, and soil grading so high concentrations of sediment are not entering the stormwater system. Locations on construction sites should be identified for holding materials throughout the duration of construction. Development of standard operating procedures for inspection and enforcement are important to establish and review to incorporate latest strategies.
- The post construction stormwater management for new development and re-development priorities are the responsibility of Public Works Engineering, Planning and Building, and Strategic Planning and Development. The Stormwater Post-Construction Team will ensure that development projects are being properly managed so that excavated and fill materials are contained on site. Violations may be identified through the site inspection process and coordinated by the Public Works Stormwater Program Coordinator.
- The pollution prevention and good housekeeping for municipal operations is the responsibility of the Public Works Department, Divisions of Facilities, Streets, and Stormwater Management. This Team identified strategies on an individual or smaller scale for improving water quality through prevention, site management and education of staff on materials management and storage.

The stormwater management organization chart should be promoted as part of the public education and outreach effort so that members of the community can be more actively involved in the health of their environment. Identification of leads for SSPP implementation, methods to contact key staff members, and methods for reporting concerns should be part of the communications strategy.

1.6 CURRENT STORMWATER SYSTEM PERFORMANCE

Understanding the performance of the current stormwater system is important to identify aspects that are underperforming and preventing the attainment of program goals. Improvements in the Town systems have occurred in recent years, notably sections of the Cache Creek Tube. Several sidewalk improvement plans (Redmond Avenue, Willow Street, Simpson Avenue) have integrated new curb and gutter with storm inlet and subsurface piped connections to existing drainage infrastructure. While the recent improvements are important steps to address stormwater management, there are many other less noticed, but equally critical parts of the stormwater system that need careful planning, budgeting, and tracking.

As urban development interrupts the natural hydrologic process of precipitation infiltrating into the ground or becoming runoff to surface waters, two primary impacts occur: quantity and quality. The impacts to groundwater and surface waters from each are important to consider, as are the consequences on the built environment. Quantity impacts are primarily expressed as flooding. Increased runoff from urban development can overwhelm downstream stormwater systems, resulting in flooding of private property and impact to safe travel in public roadways. More frequent and increased stormwater discharges can cause erosion in downstream receiving waters.

Quality is frequently concerned with impairments due to high transport of entrained sediments. When high loading of such particulates becomes concentrated in surface waters, they upset the plant and animal communities that depend on water clarity. Eventually, these particulates become sediment and cover the banks and beds of water bodies. This is known as siltation and has a range of ecological ill effects. Erosion and entrainment of soils in runoff is a natural process, but with development and mismanagement, it is a process that can take on unnatural and out-of-balance effects. Aside from sediments, other components can enter stormwater runoff and contribute to pollution of receiving waters. Excess nutrients from landscape fertilizers are increasingly drawing attention. Even pet excrement is now being linked to contamination in Flat Creek.

Quantity and quality are not independent, and a proper management approach must consider both. Town Public Works staff provided the following listing and schedule for current capital improvements dealing with stormwater management, that address both quantity and quality.

Table 7: Capital Improvement Program- Planned Stormwater Projects

Improvements	Timeline			
	FY25	FY26	FY27	FY28+
Thaw wells (1)	x			
Cache Creek Tube remaining phases (2)				xx
Treatment units (3)		x		xx

Town staff also provided a brief list of known stormwater issues. These issues are depicted in Figure 6 to illustrate their spatial relationships with letters assigned to match the description provided.

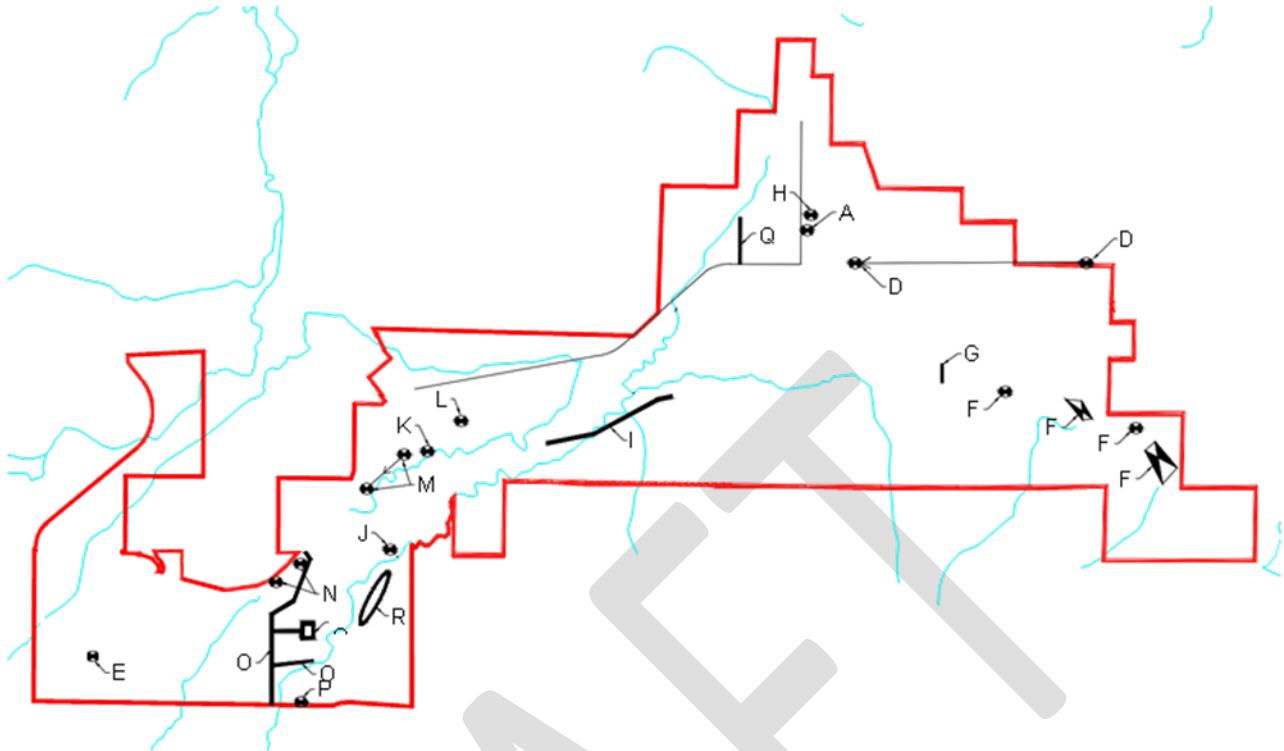


Figure 6. Identified Problem Areas (letters correspond to entries that follow)

Dry weather flows

- A. Merry Piglets (160 N Cache) possibly has a leak causing a sump pump to run 24/7. It runs so much that moss grows in the curb and gutter all the way around the corner to Center St.
- B. Overwatering lawns causes unnecessary runoff into the street.
- C. Older roofs around Town Square drain out to the curb.

Flooding/drainage issues

- D. Despite the upgrade to catchments at southeast corner of Broadway and Willow, could still use some more inlets on East Broadway somewhere east of that. A lot of drainage comes down the whole stretch from Elk Refuge at eastern edge of town, downhill to that catchment.
- E. Rangeview Drive, somewhere along the eastern portion of the loop, probably the western side of street (southbound by car) there may be ponding between the road and the grass/yards. There is no storm infrastructure here, so there could just be a low point between road and property(ies). Resident at 3019 Rangeview Dr informed us/commented about it years ago but it doesn't seem to be a persistent complaint, so maybe not an issue. It has not been investigated.
- F. Cache Creek Dr from Cedar Lane to the east. Spring Runoff Issues at 635, 822 – 840, and 990 - 1010 Cache Creek Drive. 635 also has French Drain Issues.
- G. Clark Street, Potential Storm Pipe Freezing.
- H. Home Ranch parking Lot does not have a good system on the North side. (Homemade)

- I. Snow King Ave, between Flat Creek Dr. and Virginian Ln. has three spots that discharge directly into Flat Creek.
- J. 215 Crabtree Ln. (near Shelby Ln.)
- K. 1115 Maple Way, Flat, Flat, Flat Curblin! No Grade!
- L. 200 Powderhorn Ln., SE or NE corner of Alpine Ln. Intersection could benefit from another storm inlet.
- M. Surface drainage in the Buffalo Way/Maple Way area collects and goes onto private property, Jackson Shopping Village (Target) Parking Lot, and ends up over in a settling pond over on Meadowlark Ln. on private property owned by Motel 6. Veronica Ln also contributes to ponding at the Motel 6 property. Not sure if there is an easement. Not on the map, but the whole Jackson Shopping Village Parking Lot drains into the Motel 6 owned settling pond as well.
- N. 1020 South Park Loop Rd., (by Matt Thompsons Building) Low Spot in Curb collects water. 1048 - 1050 South Park Loop Rd, Storm Pipe Freezing Issue. The system ends up draining into a basin on land owned by the Office of State Lands and Investments. Much of the issue on S Park Loop Rd is due to being flat.
- O. Gregory Ln., Martin Ln., Berger Ln., The whole thing!!
- P. Smiths grocery store Bus Stop on High School Rd. Goes through an Aqua Shield unit but does not have a lot of grade for good flow. When the creek freezes and rises in the winter, it tends to block the discharge which can lead to a frozen pipe.
- Q. N Jackson St from Deloney Ave to Gill Ave – particularly problematic in winter/spring. Not as bad when street crew is able to stay on top of snow buildup in the curb.
- R. Hidden Ranch Loop has been improved, but it is still not great.
- S. Frozen pipes and areas with poor grades create challenges, but if we are able to keep up with prevention can avoid much of that. Also, alleys that “sag” cause problems.

All but one of these documented stormwater concerns is related to poor drainage and quantity. The issues listed with item “I.” implies a potential quality threat to Flat Creek.

An excellent reference to understand the quality issues related to stormwater management in the Town comes from the 2006 and 2019 editions of the Flat Creek Watershed Plan. This effort by the Teton Conservation District (TCD) and their consultants provides a wealth of information about the history, effects, goals, and some potential solutions to sediment loading from Town runoff to Flat Creek. It highlights the pivotal role that Town stormwater management plays in the overall attainment of watershed health. It provides several illustrative data sets of quality parameters, obtained through what are effectively snapshots at various times using different methods, and it makes the point that as yet, there is no comprehensive routine approach to tracking the success of water quality efforts. While this Summary Report of existing conditions cannot include a detailed synopsis of the TCD work, its content will be carefully evaluated in formulating the Task 2 Program Development and Task 3 Implementation. The potential partnership that the TCD might provide in assisting with certain components of a Town Stormwater Management Plan should not be discounted.

The most recent assessment of stormwater management performance in Flat Creek is the WYDEQ’s 2020 Integrated 305(b) and 303(d) Report. The report relies on sampling data obtained in

2017, so it cannot truly be considered the most up-to-date. It explains that Flat Creek has now been designated as “Impaired” for primary contact recreation because of E.coli in the farthest downstream reach, while upstream reaches within Town boundaries were fully supported as attaining the standard for bacterial concentration. A copy of the Use Support Decision Fact Sheet is provided in Figure 7.

USE SUPPORT DECISION FACT SHEET

Waterbody Information						
AUID	WYSR170401030205_02			Water Type	STREAM	
Waterbody Name	Flat Creek			Use Class	2AB	
Size (Miles/Acres)	3.4 Miles			Basin	Snake	
Cycle Last Assessed	2020			IR Category	5	
Location	High School Road to the confluence with Cache Creek					
Beneficial Use Support Information						
Use Name	Use applicable?	Fully Supporting	Not Fully Supporting	Threatened	Insufficient Information	Not Assessed
Agriculture	Y					X
Cold water game fish	Y					X
Warm water game fish	N					
Nongame Fish	Y					X
Industry	Y					X
Drinking water	Y					X
Recreation	Y	X				
Scenic Value	Y					X
Aquatic life other than fish	Y		X			
Wildlife	Y					X
Fish consumption	Y					X
Impairment Information						
Parameter	Cycle First Listed	Associated Uses	TMDL Priority	TMDL Completed? (Date)		
PHYSICAL SUBSTRATE HABITAT ALTERATIONS	2002	Aquatic Life other than Fish				
E. coli	2020	Recreation				
Listing History						
This segment has been defined to represent the upper portion of the segment listed for Physical Substrate Habitat Alteration in 2002. WYSR170401030205_01 (the original segment) was split in 2020 to accommodate a new assessment for recreation.						
Listing Rationale						
In 1998, Teton Conservation District completed the Flat Creek Water Quality Assessment and Jackson, Wyoming Stormwater Discharge Characterization Section 319 Report to establish baseline conditions using physical, chemical, and biological data collected in 1996 and 1997. The report classified a segment of Flat Creek as being in poor biological condition due to sedimentation from the Town of Jackson’s municipal stormwater. WDEQ used this report to determine that the cold water fish and aquatic life other than fish designated uses were threatened in this segment. Link to full assessment record. Eight separate <i>E. coli</i> samples were collected by WDEQ from three sites on Flat Creek from May 9th – August 10th, 2017. Four separate geometric means at each site were calculated from the sample results. A single geometric mean exceeded the primary contact recreation criterion of 126 organisms/100 mL at the downstream-most sample site in Flat Creek (FLC-3). There were no exceedances of the criterion at the other two sample sites (FLC-1 and FLC-2). As a result, the designated Recreation use is supported at FLC-1 and FLC-2, but, is not supported at FLC-3. Link to full assessment record.						
Date Updated: 9/16/2019				By: R.F. Steg		

Figure 7. Use Support Decision Fact

1.7 CHANGES IN RAINFALL PATTERNS

Using custom in-house software (ClimateEVA – Extreme Value Analysis), WSP conducted a climate change analysis of extreme precipitation for the Town of Jackson and the Flat Creek Watershed. By leveraging results from enhanced climate model data, WSP estimated the degree to which current precipitation-frequency estimates may change for the Town over the next 75 years. The complete analysis can be found in Appendix X of this Report.

ClimateEVA is a web application developed by WSP to provide rapid future climate precipitation-frequency estimates. Analyses are based on the LOCA (Localized Constructed Analogs) downscaling – a dataset comprising results from 32 different global climate models which been statistically downscaled to a significantly enhanced spatial resolution. Raw global climate model results are often on the order of ~100-km; results at such a large scale are too generalized to reflect local-scale extreme precipitation events. The LOCA dataset, however, provides climate model results enhanced to ~6-km resolution – detailed enough to begin capturing local extremes, and precise enough to begin modeling future climate precipitation-frequency.

Using ClimateEVA, WSP analyzed the projected shift in precipitation-frequency across 32 different global climate models for the period 2025-2100 for both the Town of Jackson, and the entire Flat Creek Watershed.

1.7.1 Town of Jackson Projections

The LOCA downscaled climate model data is available on a consistent 1/16th-degree grid across the continental United States. A single 1/16th-degree grid cell was selected based on its approximate alignment with the center of the Town (43.46875, -110.78125).



Figure 8. 1/16th-degree Grid Cell Selected for Town of Jackson

For each of 32 separate climate models:

- A “baseline” precipitation frequency analysis was performed for the period 1950-2005. This establishes how each model characterizes the climate of latter 20th century. Precipitation depths

(24-hour duration) for the 2-, 5-, 10-, 25-, 50-, 100-, 200-, 500-, and 1,000-year return periods were calculated.

- A “future” precipitation frequency analysis was performed for the period 2025-2100. This establishes how each model characterizes the possible climate of the 21st century. Again, precipitation depths (24-hour duration) for the 2-, 5-, 10-, 25-, 50-, 100-, 200-, 500-, and 1000-year return periods were calculated.
- For each return period, the ratio of “baseline” to “future” precipitation depth is calculated (future precipitation depth divided by baseline precipitation depth). This establishes a relative “shift” from past to future for each model.

Two different future climate scenarios were investigated:

1. RCP-4.5: Considered to be an “intermediate” climate change scenario, global atmospheric CO₂ concentrations rise through the mid-21st century and then level off as the global society reduces its CO₂ emissions.
2. RCP-8.5: A “no-action” climate change scenario where global atmospheric CO₂ concentrations continue to rise through the end of the 21st century.

With future-to-baseline ratios established for each climate model, the average future-to-baseline ratio across all climate models can be calculated for each return period, for each scenario. Some models indicate future increases in precipitation depth for frequent storms (2-yr, 5-yr), some suggest decreases in depth for rarer storms (100-, 200-, 500-, and 1000-yr), still others suggest increases in depth for rarer storms. Taking the average of each return period’s ratios across all 32 models, the aggregate result is a small change from the baseline scenario.

Table 2 below lists the average shift in precipitation depth from the baseline period (1950-2005) to the future period (2100) for the “intermediate” (RCP-4.5) and “no action” (RCP-8.5) climate change scenarios. In both scenarios, resulting values are all very close to 1.0.

Table 8: Future-to-Baseline Precipitation-Frequency Ratios for the Town of Jackson

Return Period (years)	RCP-4.5	RCP-8.5
2	1.07	1.12
5	1.06	1.11
10	1.05	1.09
25	1.03	1.06
50	1.01	1.04
100	1.00	1.02
200	0.99	0.99
500	0.98	0.96
1000	0.97	0.94

By applying the above future-to-baseline ratios to current precipitation-frequency depths (from Probable Maximum Precipitation Study for Wyoming, December 2014), future precipitation-frequency depths adjusted for climate change can be calculated. Resulting future climate precipitation-frequency depths are listed in Table 3 below.

Table 9: Climate Change Adjusted Precipitation-Frequency Depths for the Town of Jackson

Return Period (years)	Current Precip-Freq (inches)		Future-to-baseline Ratio		Future Precip-Freq (RCP-4.5 / “intermediate”, inches)		Future Precip-Freq (RCP-8.5 / “no action”, inches)	
	24-hour	6-hour	RCP-4.5	RCP-8.5	24-hour	6-hour	24-hour	6-hour
2	1.60	0.70	1.07	1.12	1.72	0.75	1.79	0.78
100	2.75	1.75	1.00	1.02	2.75	1.75	2.79	1.78
1000	4.00	3.00	0.97	0.94	3.89	2.92	3.77	2.83

1.7.2 Flat Creek Watershed Projections

To produce an aggregated future climate precipitation-frequency projection for the entire Flat Creek Watershed, a set of 19 total 1/16th-degree grid cells intersecting the Flat Creek basin polygon were selected, as shown in Figure 9 below.

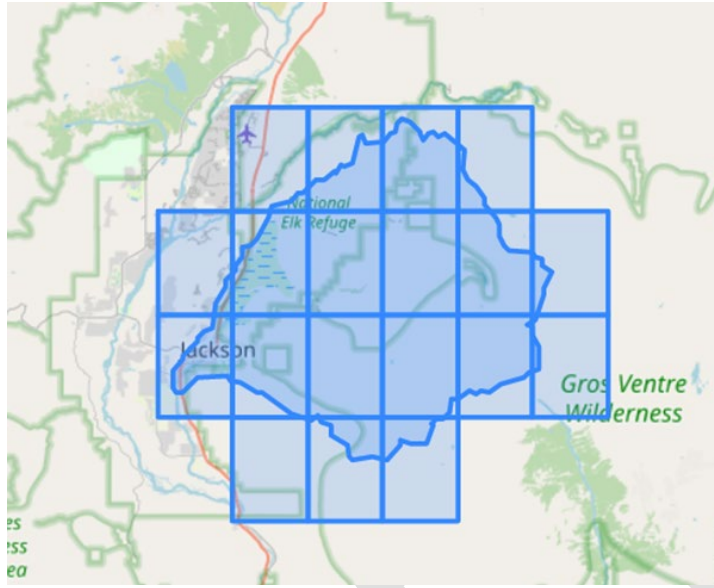


Figure 9. Nineteen 1/16th-degree Grid Cells Selected for Flat Creek Watershed

Using the same procedures described above for the Town of Jackson projection, the average future-to-baseline ratio across all climate models were calculated for each return period, for each scenario. While a small number of climate models / grid cells indicate a significant increase in the magnitude of rarer events (e.g. 100-, 200-, 500-, and 1000-year), a significant number trend downwards with an increasing return period. In both scenario RCP-4.5 and RCP-8.5, most models / grid cells point toward increased magnitude of more-frequent events (e.g. 2-yr, 5-yr). Table 4 below lists mean values for the future-to-baseline ratio across all 32 models and 19 grid cells.

Table 10: Future-to-Baseline Precipitation-Frequency Ratios for Flat Creek Watershed

Return Period (years)	RCP-4.5	RCP-8.5
2	1.06	1.09
5	1.05	1.08
10	1.04	1.07
25	1.03	1.06
50	1.03	1.05
100	1.02	1.04
200	1.02	1.04
500	1.02	1.03
1000	1.02	1.02

By applying the above future-to-baseline ratios to current precipitation-frequency depths (from Probable Maximum Precipitation Study for Wyoming, December 2014) we can arrive at future precipitation-frequency depths adjusted for climate change for the Flat Creek Watershed. Resulting future climate precipitation-frequency depths are listed in Table 11 below.

Table 11: Climate Change Adjusted Precipitation-Frequency Depths for Flat Creek Watershed

Return Period (years)	Current Precip-Freq (inches)		Future-to-baseline Ratio		Future Precip-Freq (RCP-4.5 / "intermediate", inches)		Future Precip-Freq (RCP-8.5 / "no action", inches)	
	24-hour	6-hour	RCP-4.5	RCP-8.5	24-hour	6-hour	24-hour	6-hour
2	1.76	0.91	1.06	1.09	1.86	0.96	1.92	0.99
100	3.06	2.19	1.02	1.04	3.13	2.23	3.20	2.28
1000	4.50	3.23	1.02	1.02	4.59	3.30	4.61	3.31

1.7.3 Recommended Precipitation Frequencies

For the Town of Jackson, the ClimateEVA tool projected a small increase in precipitation depths for most events (2-, 5-, 10-, 25-, 50-, and 100-year) and a small decrease in precipitation values for the most extreme events (200-, 500-, and 1000-year). Most stormwater infrastructure is designed based on the 100-year and more frequent (smaller) storm events. It is recommended that future planning/modeling for stormwater infrastructure in the Town of Jackson use the predicted RCP-8.5 ("no action") precipitation values for the 2-, 5-, 10-, 25-, 50-, and 100-year events, and continue to use the current precipitation values for any design/planning that considers the 200-, 500-, and 1000-year events.

Table 12: Recommended Precipitation-Frequency Depths for Town of Jackson

Return Period (years)	Recommended Precipitation Value (inches)	
	24- hour	6-hour
2	1.79	0.78
5	2.08	1.05
10	2.26	1.23
25	2.48	1.46
50	2.65	1.63
100	2.79	1.78
200	3.13	2.13
500	3.62	2.62
1000	4.00	3.00

For the Flat Creek Watershed, the ClimateEVA tool projected a small increase in precipitation depth for all storm events evaluated. It is recommended that watershed-scale planning and design efforts in the area use the predicted RCP-8.5 (“no action”) precipitation values for all storm events.

Table 13: Recommended Precipitation-Frequency Depths for Watershed-Scale Planning and Design

Return Period (years)	Recommended Precipitation Value (inches)	
	24-hour	6-hour
2	1.92	0.99
5	2.23	1.30
10	2.46	1.53
25	2.76	1.84
50	2.97	2.06
100	3.20	2.28
200	3.64	2.60
500	4.19	3.00
1000	4.61	3.31

2.1 PUBLIC EDUCATION AND OUTREACH CONCEPTS

Public understanding of the challenges facing the Town with regard to stormwater management is critical to the successful implementation of a stormwater management plan. The public outreach campaign for the Town will be unique to its particular needs, history, and institutions.

A key consideration in designing an outreach approach is the relatively short time frame involved in a specific targeted communication strategy driven by the study. As a result, where a long-term strategy builds up over time and is updated and sustained, Jackson's approach will need to focus on the study and outcomes to educate the public and specific stakeholders of issues and opportunities to protect the water resources of the Town.

The communications plan identifies the audiences to be reached. In addition to the Town Council (who is one part of the overall education plan), audiences include the public at-large and targeted individuals/organizations. Targeted individuals/organizations may be those with a large stake in the process outcome (large property owners, property owners) as well as the engineering and development community.

It is critical to understand the impact of other efforts in the region that have similar interests and focus. Parallel to this study was the Teton County Water Quality Master Plan development that included staff from the Town along with a broad range of stakeholders across Teton County. Multiple subgroups were created to participate in stakeholder discussions on drinking water, wastewater management, and stormwater/surface water as part of an overall strategy to preserve and protect the natural environment.

The communications plan to share the process, key factors, and output of the Stormwater Management Plan Study need a specific and targeted message to reduce the potential for confusion between County effort and the Town's. The development of a consistent message and "image" is key to gaining the public and stakeholder attention. Some ideas to keep in mind while developing the message are:



- There is drainage, water quality and other stormwater runoff needs in the Town that are currently impacting stormwater management (with specific examples that are readily identifiable).
- Water quality issues in the Town have a direct impact on the local streams and rivers. By being a good steward of the environment, Jackson can make a difference in these efforts.
- Stormwater management affects our quality of life. Flooding and drainage problems reduce property value and disrupt services.
- A plan to meet the water quality and drainage infrastructure needs that is thought out, effective and not extravagant is complete.
- The stormwater management strategy does cost more money, over time, than currently budgeted, but this additional investment is well worth it in terms of solving problems.
- The method to generate sufficient revenue is an element of the study.

An example of Public Education and Outreach Strategy is attached as Appendix B. It is an example communications plan and can serve as a starting point for further refinement as the Town moves forward with implementation of the new Stormwater Ordinance (e.g. updated LDR 5.7), new Stormwater Manuals, and evaluation of a funding strategy for long-term stormwater management resources.



As a public art and education initiative, the White River Alliance in central Indiana commissioned the painting of 15 canoes by various local artists with the goal of educating the public about the importance of water quality. This canoe was placed downtown Indianapolis at Cummins Headquarters. This program is an example of a public/private partnership and recognition program. The painted canoes were placed around the Upper White River Watershed to promote awareness and conversations about the important and limited water resources. The unveiling of the canoes also supports the White River Alliance's release of "The Collective Tap," a podcast about water and the many ways we interact with this critical resource every day.

2.2 MAPPING

Harmony Design & Engineering collected survey and GIS data to fill gaps in the Town's existing stormwater system mapping. Since the existing data gaps exceeded the available budget, the collection of stormwater manhole invert elevations on major trunk lines was prioritized since this data was determined to be the most helpful to stormwater modeling efforts completed in Task 2.4. The mapping information collected was incorporated into the PCSWMM model and will be provided in the form of updated GIS files provided to the Town with the final version of this report.

2.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

2.3.1 Purpose and Background

Protection of the natural environment and receiving stream health in an urbanized setting is a key role for the Town, specifically targeting Flat Creek which is listed as impaired for sediment from the Town stormwater system along with E.coli from unknown sources. Illicit discharges, defined as measurable flows during dry weather that contain pollutants and/or pathogens, can have a negative impact on the quality of receiving waters.

The purpose of an Illicit Discharge Detection and Elimination (IDDE) Program is to detect, address, and prevent non-stormwater discharges. For communities in WY that are regulated by the WDEQ under a Municipal Separate Storm Sewer System (MS4) Permit, the requirement for an IDDE program is mandatory. The Town has decided to develop an IDDE program as part of its multi-faceted effort to improve the water quality of local waterways.



The mode of entry for illicit discharges into the storm sewer system can either be direct or indirect (IDDE Guidance Manual, EPA, 2005). Direct entry means that the discharge is directly connected to the storm drainpipe through a sewage pipe, shop drain, or other kind of pipe. Direct entry usually produces discharges that are continuous or intermittent. Direct entry usually occurs when two different kinds of “plumbing” are improperly connected. Indirect entry means that flows generated outside the storm drain system enter through storm drain inlets or by infiltrating through the joints of the pipe. Generally, indirect modes of entry produce intermittent or transitory discharges, except for groundwater seepage, which can be continuous.

Dry-weather flows are usually non-storm water discharges. However, not all non-stormwater discharges are illicit discharges because some non-storm water discharges are considered allowable discharges by Wyoming Department of Environmental Quality (WYDEQ). Allowable non-storm water discharges include those from

firefighting activities, fire hydrant flushing, potable water sources including waterline flushing, irrigation drainage, lawn watering, routine external building wash down which does not use detergents, pavement wash waters where spills or leaks of toxic or hazardous materials are not present and where detergents are not used, air condition condensate, uncontaminated ground water, and foundation or footing drains where flows are not contaminated with process materials such as solvents.

2.3.2 IDDE Program Outline

The following section outlines the components of an IDDE Program. Section 2.9, D.1. provides additional details on levels of service appropriate for the Town to implement an effective IDDE program.

The EPA IDDE Guidance Manual lists eight components of an effective program:

1. Resource Auditing and Program Planning
2. Ordinance Creation, Assigning Authority, and Tracking System Development
3. Desktop Analysis and Field Mapping
4. Developing Program Goals and Field Monitoring Strategies
5. Field Analysis of Potential Issues
6. Isolating and Fixing Illicit Discharges
7. Education and Enforcement
8. Program Administration and Effectiveness Auditing

2.3.2.1 Resource Auditing and Program Planning

Initially an audit is performed to establish what local resources are available, needs of the community, and provide a foundation for the development of the program. The Level of Service analysis documents the current effort to remove discharges to the stormwater system that identifies a non-stormwater discharge. In November 2023, inspections of various outfalls were completed to identify locations that should be included in an initial IDDE program. Currently resources are not focused on discharge characterization. Implementation of an IDDE program starts with the development of a preliminary IDDE Plan that is refined over time. Current staff may create the initial plan, but additional staff or contracted services are required to implement an IDDE Plan.

Once in place, the IDDE Plan for inspections and discharge characterization may change over time as more knowledge is gained regarding pollutants and points of pollutant loading. An effective program includes community outreach and education to engage in reduction of water quality impacts.

The IDDE level of service analysis is found in LOS Section D.1.

2.3.2.2 Draft IDDE Ordinance

Responsibility for the IDDE program implementation will be bestowed upon the Town Public Works Department, with support from Community Engagement. An ordinance will delegate this authority to allow for enforcement actions and provisions to allow investigations to occur. Typically, this has been done by using one or more of the following: storm water ordinance that prohibits illicit discharges to the drainage system, plumbing code that prohibits illicit connections to the drainage system, or health code that regulates the discharges of harmful substances to the drainage system. A draft IDDE Ordinance, based on an EPA template, can be found in Appendix C.

The ordinance will define and prohibit illicit discharges, discuss investigating suspected illicit discharges, require and enforce elimination of illicit discharges, and address any unique conditions, requirements, and exemptions. There are several types of non-stormwater discharges that do not contain significant amounts of pollutants and are exempted from IDDE requirements/enforcement. It is critical to establish a right of entry for emergencies, suspected discharges, or routine inspections, as citizen cooperation is often a nonissue but is not guaranteed and should not impede program implementation.

Enforcing the IDDE program can range from formal warnings to criminal prosecution. This will vary with the severity of the violation to include the volume, whether it was intentional or negligent, the type of discharge, and its impact on water quality. A tracking system should be implemented to manage suspected discharges and document enforcement actions and repairs.

Town staff identified a priority need for education of Recreation Vehicle (RV) owners and enforcement of local codes on the proper management and disposal of RV wastewater. The Police Department is responsible for code enforcement; however, additional methods need to be considered. Education and outreach to visitors is a key action. Review of acceptable disposal practices and availability of disposal options should be incorporated into public education efforts.



2.3.2.3 Desktop Analysis and Field Mapping

To identify illicit discharges, a community must determine where the municipal storm sewer system discharges to receiving waters. Therefore, it is an important first step to create a map of known outfall locations and update this map as unmapped outfalls are discovered during field investigations. The known outfalls for the Town of Jackson are shown in Figure 10, based on existing GIS data and the initial IDDE field investigation conducted by WSP.

A desktop analysis of land uses, sub watersheds, and sewage infrastructure can be very helpful to identify potential problem areas, or to follow up on non-stormwater discharges discovered in the field to determine the source of the discharge.



Legend

Flow

No

Yes

Storm Pipes

N 05001,0002,0003,0004,000 Feet This map shown here has been created with all due and reasonable care and is strictly for use with WSP Project Number 3270SW0030. This map has not been certified by a licensed land surveyor and any third party use of this map without warranties of any kind as WSP assumes no liability, direct, or indirect, whatsoever for any third part or unintended use.	SCALE:Scale: 1:4,632		CLIENT Town of Jackson, WY		PROJECT Storm Water Management Program Phase 2	
	DATE:03/26/2025				WSP USA Inc. 920 East Sheridan, Ste A Laramie, WY 82070	
	PROJECT NO:3270SW0030					
	DATUM/PROJECTION WGS 1984 Web Mercator (auxiliary sphere)					
	DWN BY:ZR	CHK'D BY:AM	TITLE Initial IDDE Survey Results		Figure No. 10	

2.3.2.4 Developing Program Goals and Field Monitoring Strategies

The goals of an IDDE program are to find, eliminate, and prevent illicit discharges. Field monitoring strategies generally consist of the following three activities:

- Outfall reconnaissance inventory
- Indicator monitoring at stormwater outfalls and/or in-stream
- Tracking non-stormwater discharges to their source.

With these strategies in mind, the following field monitoring program is recommended for the Town:

1. Inspect all outfalls three times per year, during dry weather conditions to identify any non-stormwater flows.
2. If flow is detected, complete in-field screening to identify if pollutants are present and to identify potential sources.
3. Track flows upstream to detect the source. If flow is other than groundwater, determine if the source is a violation of local ordinance.
4. Take the necessary action to remove the illicit source.

2.3.2.5 Field Analysis of Potential Issues

When a non-stormwater discharge is observed, the following information, at a minimum, should be collected to help characterize the discharge and determine whether it represents an illicit discharge:

- approximate flow rate,
- whether flow is continuous or intermittent,
- presence of any odor,
- color,
- turbidity,
- presence of floatables,
- presence of stains,
- abnormal vegetation,
- indication of poor water quality in receiving pool, and
- presence of benthic growth on pipe.

If available, use a field meter to measure temperature, pH, and conductivity of the discharge.

Collect a grab sample of the discharge for analysis if subsequent tracking of the flow does not yield the source.

Next, track the discharge upstream through the stormwater system to try and determine the source. Potential types of discharge sources include:

- sewage and septage flows,
- washwater flows (laundry, car wash, floor/pavement washing),

- liquid wastes (oil, paint, process water) dumped into drains,
- tap water (leakage from drinking water system),
- landscape irrigation (over-watering), and
- groundwater.

Four different types of investigations can follow the discovery of an illicit discharge. Storm drain, or trunk investigations narrow the search to a single segment of storm drain. These can be visual inspections at manholes, damming, dye testing, smoke testing, or video testing.

Drainage area investigations are ideal for addressing large or complex drainage areas and usually start with a parcel-by-parcel desktop analysis of potential generating sites. They may involve aerial photography analysis, land use investigations, SIC code review, permit reviews, as-built reviews, and property ownership certification.

On-site investigations come after the illicit discharge has been narrowed down to a specific section of the storm drainage system. In instances of industrial land use or multiple generating sites, this may be the method of investigation to be pursued first. These usually involve dye testing the plumbing system of the targeted facilities.

Finally, septic system investigations are a method used to find illicit discharges that enter via septic field breakouts or bypassed septic systems. This may involve infrared aerial imagery analysis or on-site investigations.

If unable to determine the source by tracking the flow, then analysis of the non-stormwater may be necessary, either using field testing kits or sending the samples to an analytical laboratory. The following parameters can be used to “fingerprint” non-stormwater flows (IDDE Guidance Manual, EPA): hardness, ammonia, potassium, conductivity, fluoride, detergents, and chlorine.

2.3.2.6 Isolating and Fixing Illicit Discharge Sources

Once illicit discharges are discovered, there are several methods to fix them. The responsible party (who would be fiscally liable for the fix) may be a property owner, the Town, or a combination of the two. The sources are often an internal plumbing connection, a service lateral cross-connection, an infrastructure failure within the sanitary sewer, or an indirect transitory discharge from leaks, spills, or overflows.

Methods used to repair the issue can range from a simple cleaning to manhole repair or service disconnection/reconnection. Generally, internal plumbing issues can be fixed relatively easily and for a relatively low cost. These can increase for external repairs as it is recommended to use certified contractors with specialized equipment.

The timeframe allowed for repair depends on the severity and the risk to human health and safety. The Town guidance should be very clear about specific timeframes for fixing an issue. The discharge should be halted no more than 7 days after notification is received from the Town and the repairs should be completed within 30 days.

Checking the source and downstream of the source should be accomplished to ensure the problem is fixed. Dye-testing is recommended in sources that originate from internal plumbing and

damming is suggested in the first accessible storm drain manhole downstream to verify that this was the only discharge present.

2.3.2.7 Education and Enforcement

Educating the community about the importance of illicit discharge control is essential to an effective program. Getting the public to understand the negative effects of illicit discharge and the goals of the program can facilitate their compliance and even their assistance in identifying potential discharges. Three groups that should have considerable resources put toward educating on this effort are the public, elected officials, and local agencies.

Public education recommendations are discussed in Section 2.1 of this report and includes guidance preventing IDDE sources from typical residential and commercial activities, such as washing activities, waste disposal, and RV dumping. Internal training for Town staff should also include IDDE topics so that Town facilities and activities do not contribute to illicit discharges.

An IDDE hotline can be a great resource for the program if it is advertised well and followed up on within 24 hours by trained staff. The Town should determine the intent of the hotline and the extent of its reach. Reporting and response methods shall be created to track and rectify these hotline complaints. The hotline should be easily accessible and does not necessarily have to be a physical phone number, but could also be a smartphone app, a comment input section on a Town website, or a message to the Public Work Department Facebook page. There are no wrong mediums for the hotline as long as it is easily accessible and can be responded to in a timely manner. 24 hours is a good benchmark for the response time to discharge complaints. Reports should be compiled in a database, regardless of how they are received. Incidents should be tracked in the database to see if there are any recurrences or repeat offenders. This database can also be useful in tracking the program's success.

2.3.2.8 Program Administration and Effectiveness Auditing

The Town's IDDE program will be administered by the Public Works Department and will require additional staff to implement, as outlined in Section 2.8 of this report.

Program success can be measured in a number of ways:

- tracking the number of illicit discharges identified in each outfall inspection event,
- tracking the number of IDDE hotline reports (noting that a higher number of reports can be a sign of a successful program, as it may indicate increased public awareness),
- tracking the number of illicit discharges discovered and repaired, and
- improvements in receiving water quality, and/or storm sewer discharge water quality.

2.3.3 Initial Outfall Inventory and IDDE Survey

WSP and Harmony conducted an initial IDDE survey in the Town to inventory stormwater outfalls and search for potential illicit discharges. This section includes a summary of the field investigation work carried out.

During November 13-15, 2023, WSP and Harmony conducted a detailed investigation along Flat Creek and Spring Creek within the Town's boundary to locate and inspect each storm water discharge outfall and the tracking of any dry weather flows that were observed.

The field investigation work followed existing mapping of known stormwater outfalls, and noted any un-mapped outfalls observed. The illicit discharge field investigation was focused on Flat Creek and Spring Creek, since Cache Creek within the Town limits is primarily contained in a pipe. The discharge of Cache Creek was included in the survey as an outfall to Flat Creek. The field investigation consisted of an outfall inventory, dry-weather inspections of outfalls, and tracking of non-stormwater discharges observed. Origins of discharges which could not be traced were annotated via GPS and will require a more in-depth investigation.

2.3.3.1 Stormwater Outfall Inventory and Dry Weather Inspections

An outfall inventory was conducted to identify all storm water discharge outfalls to Flat Creek and Spring Creek within the Town of Jackson. WSP and Harmony field personnel walked the creek banks, photographing each outfall, recording locations with GPS, and noting the dimension, shape, and material of each outfall. Observations were recorded digitally on a mobile application platform. The outfall inspection forms are included in Appendix C of this plan.

WSP performed dry weather inspections at each outfall identified. Dry weather is defined by the EPA as a minimum of 72 hours without rainfall that exceeds 0.1 inch. Prior to the field investigation, WSP consulted the National Weather Service website and personal contacts in Jackson to ensure that at least 72 hours of dry weather preceded the evaluations. The recorded weather data for the week leading up to the inspection was dry, with zero inches of precipitation recorded. The weather during the field work was also dry, with no precipitation recorded.

Dry weather flows observed are identified in Table 14 and shown in Figure 10. The observations recorded included flow, odor, color, turbidity, and the presence of floatable matter at the outfall location, when these outfalls were accessible. Observations surrounding the outfalls provided evidence of recent or current non-storm water discharges and could be a primary indicator of the source of the discharge.

The completed inspection forms include the following categories of information for each outfall:

- Background data,
- Outfall description,
- Physical indicators for both flowing and non-flowing outfalls,
- Overall outfall characterization, and
- Non-illicit discharge concerns

Table 14: Stormwater Outfall Inspections

OUTFALL ID	DRY WEATHER FLOW?	SIGN OF PREVIOUS ILLICIT DISCHARGE?	POTENTIAL SOURCES
FC02	No	No	
FC04	Yes	No	groundwater, business
FC06	No	No	
FC07	No	No	
FC08	Yes	No	Lodge, drainage
FC12	No	No	
FC14	No	No	
FC16	Yes	No	Residential runoff
FC18	No	No	
FC20	Yes	No	Kelly Tube/Cache Creek
FC22	No	No	
FC24	No	No	
FC26	No	No	
FC27	No	No	
FC28	Yes	No	Unknown
FC29	No	No	
FC30	No	No	
FC31	Yes	No	Commercial/Municipal Discharge
FC32	No	No	
FC33	No	No	
FC35	No	No	
FC36	Yes	No	Unknown
FC37	No	No	
FC38	No	No	
FC39	No	No	
FC40	No	No	
FC41	No	No	
FC42	No	No	
FC43	No	No	
FC44	No	No	
FC46	No	No	
FC48	No	No	

2.3.3.2 Field Screening and Tracking of Dry-Weather Flows

When a non-storm water discharge was identified, WSP utilized these procedures to determine the source of the discharge:

1. Document non-storm water discharge (inspection form, photos, GPS location)

2. Track the non-storm water discharge back through the storm sewer system by visually inspecting inlets, manholes, open channels, and other structures using the available storm water mapping system.
3. If visual tracking does not determine the source, annotate discharge and recommend field testing/sampling.
4. Document source, if identified (inspection form, photos, GPS location)
5. If non-storm water discharge is determined to be an illicit discharge, then develop plan/procedure/out-reach to remove the source of illicit discharge.

Table 15 lists the non-storm water discharges identified by WSP and the results of tracking the discharge to determine their sources. WSP utilized available storm water system mapping to assist in tracing sources of non-storm water discharge identified in the field, in conjunction with visual observations and plan reviews. Field or laboratory testing is recommended for non-storm water discharges where sources could not be identified.

Table 15: Dry Weather Flow Tracking Results

OUTFALL ID	RESULTS OF EVALUATION
FC04	Trickle coming from unknown source. More testing/investigating needed.
FC08	Moderate stream coming from Rustic Inn area. More testing/investigating needed to determine source.
FC16	Likely unmapped storm water system outfall. Dry weather discharge needs more investigation/testing to determine source.
FC20	Convergence of Kelly Tube (Cache Creek) and Flat Creek. <u>This dry weather flow is not considered an illicit discharge.</u>
FC28	Possible tie in of tributary. More investigation required.
FC31	Trickle coming from pipe leading out of municipal facility southeast of 55 Karns Meadow Drive.
FC36	Possible tie in of tributary. More investigation required.

Visual observations were used to track non-storm water discharges identified during field investigation work. WSP field staff walked storm conveyances and accessed storm structures to visually track non-storm water discharges. WSP followed the visual observations as far as possible. When the source of flow was not evident, a desktop analysis was performed and/or field sampling was recommended.

Some of these dry weather, non-storm water discharges are easily explained by the hydrology of the area. FC20 is the convergence of Cache Creek and Flat Creek via Kelly Tube. Kelly Tube is a reinforced concrete pipe that guides Cache Creek through the Town of Jackson. It is suspected that FC28 and FC36 are also products of the hydrology of the area, due to their wide outfalls and the

lack of man-made structures nearby. This theory was unverifiable at the time due to the water levels and dense vegetation.

FC31 flows from a gated structure east of Karns Meadow Drive. There is a pipe exiting the facility going directly into the ground. Approximately ten feet from that pipe entering the ground a pipe of similar size terminates with an outfall discharging into Flat Creek. This facility was unable to be accessed at the time of this investigation.

FC04, FC08, and FC16 have been identified as non-storm water discharges at the time of the inspection. Due to the lack of information gained during the investigation, more detail should be gained via field testing or sampling and laboratory analysis.

2.3.3.3 Non-Illicit Discharge Concerns

Excessive vegetative growth, structural damage to the outfall, erosion and/or sedimentation, and debris issues were four common issues observed during the outfall inventory. While these issues are not directly related to IDDE, they could impact the performance of the storm sewer system and should be corrected. These conditions are included in the GIS information for each outfall or observation point in Appendix C, and are summarized in Table 16 below.

Table 16: Non-Illicit Discharge Issues Observed

OUTFALL ID	ISSUE OBSERVED
FC04	Pipe is collapsed, exhibiting corrosion, and almost completely blocked.
FC06	Vegetative debris.
FC14	Pipe potentially collapsed, debris.
FC18	Overgrown vegetation.
FC30	Overgrown.
FC32	Partially collapsed, blocked.

2.3.3.4 References

- Brown, E., Caraco, D. Pitt, R. (2004, October). *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*. Retrieved January 22, 2025, from United States Environmental Protection Agency (US EPA): https://www3.epa.gov/npdes/pubs/idde_manualwithappendices.pdf
- Department of Environmental Protection Municipal Stormwater Regulation Team (2004, August). *Public Complex Stormwater Guidance Document*. Retrieved March 27, 2025, from New Jersey Department of Environmental Protection: <https://dep.nj.gov/wp-content/uploads/njpdessstormwater/public-complex-guidance.pdf>
- United States Environmental Protection Agency (US EPA) (2024, November 26) *Urban Runoff: Model Ordinances for Illicit Discharges*. Retrieved April 1, 2025, from US EPA: Polluted Runoff: Nonpoint Source (NPS) Pollution: <https://www.epa.gov/nps/urban-runoff-model-ordinances-illicit-discharges>

2.4 STORMWATER MODEL AND MASTER PLAN

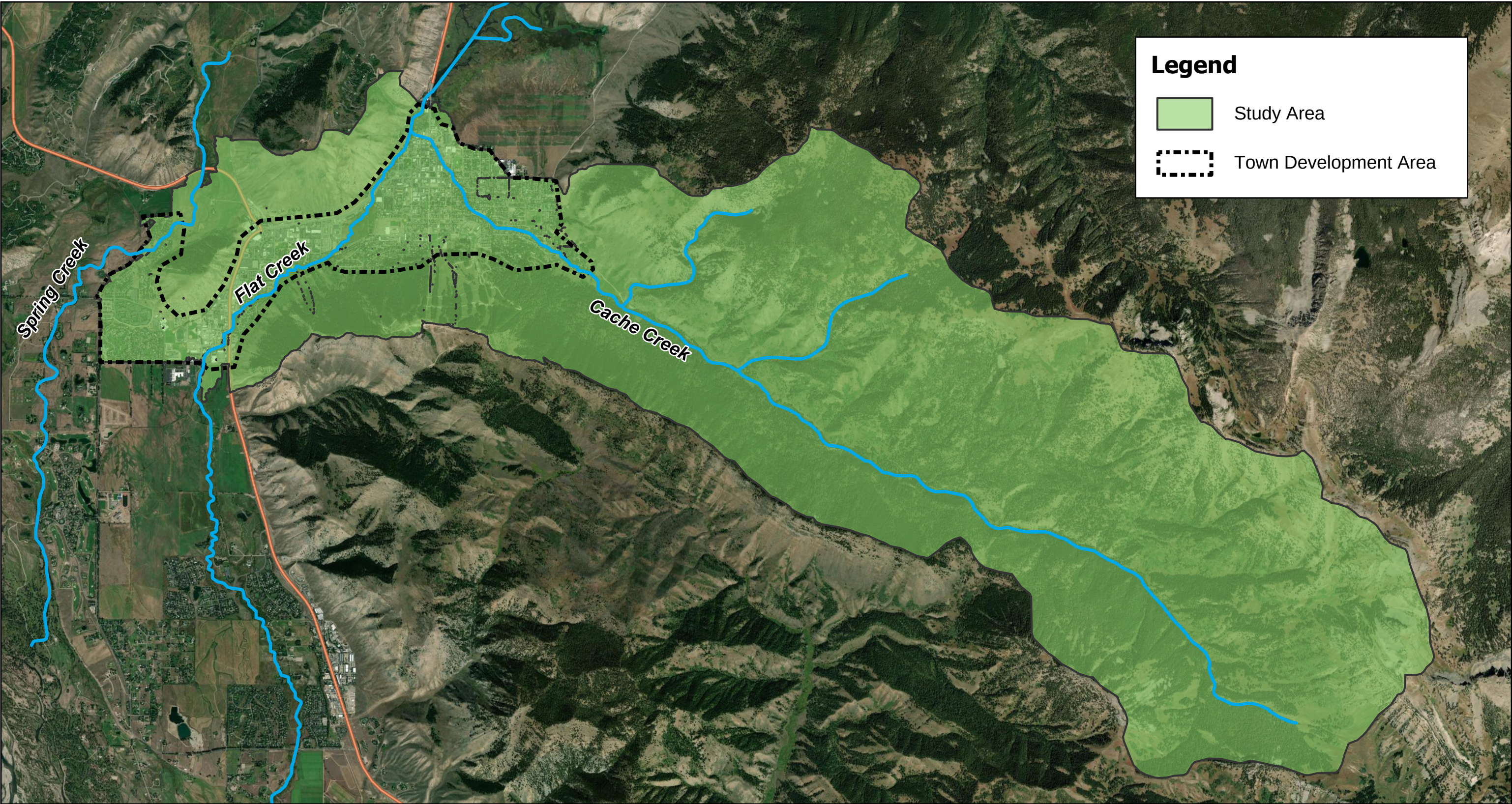
An executive summary of the Stormwater Model and Master Plan is provided in this section. The full report will be provided in the final report as Appendix D.

WSP used PCSWMM to develop a detailed rainfall runoff model for the Town. Using the topographic mapping provided by the Town, WSP delineated drainage basins for each outfall. Future development conditions were modeled by assuming future imperviousness based on zoning types. Storm sewer capacities were then calculated using a dual-drainage approach that linked both the minor system (storm sewers) and the major system (overlying roadways). Based on the results of the model, improvements were developed to identify and address flooding issues in future development conditions. The model is compatible with EPA SWMM, a publicly sourced model.

Using the improvement projects identified using the model and Town input, WSP developed conceptual construction cost estimates for each project and created a Capital Improvement Project Prioritization Tool to rank them. Wood developed alternative flooding improvement solutions based on Town feedback.

2.4.1 Model Development

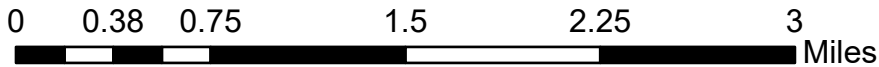
The Study Area, shown in Figure 11, encompasses 13,759 acres in Teton County, Wyoming. Flat Creek flows through the Study Area, generally from northeast to southwest. The Cache Creek watershed is included in the Study Area and flows into the Town from the east side and is conveyed through Town primarily in a piped system, before discharging to Flat Creek. Spring Creek flows through a portion of the Town on the west side of the Study Area. There are 48 storm sewer outfalls to Flat Creek.



Legend

Study Area

Town Development Area



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SCALE:		1 inch = 3,900 Feet
DATE:		05/22/2025
PROJECT NO:		US-EI-3270SW0030
DATUM/PROJECTION		NAD83 - Wyoming (US-FT)
DWN BY:	CHK'D BY:	
MR	AM	

CLIENT

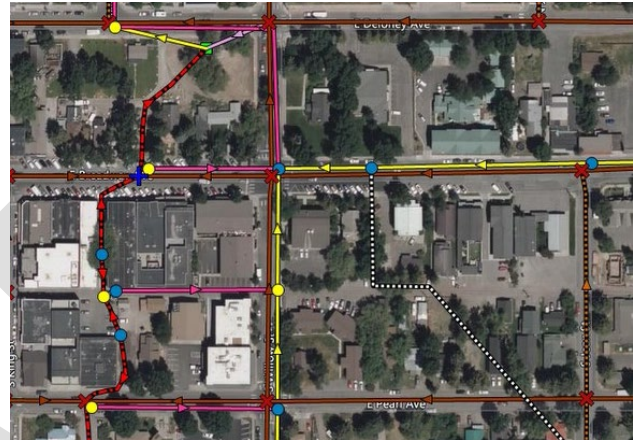
Town of Jackson, Wyoming

WSP USA, Inc.
920 East Sheridan, Ste A
Laramie, WY 82070

PROJECT		Town of Jackson Stormwater Master Plan
TITLE	Study Area	Figure No. 11

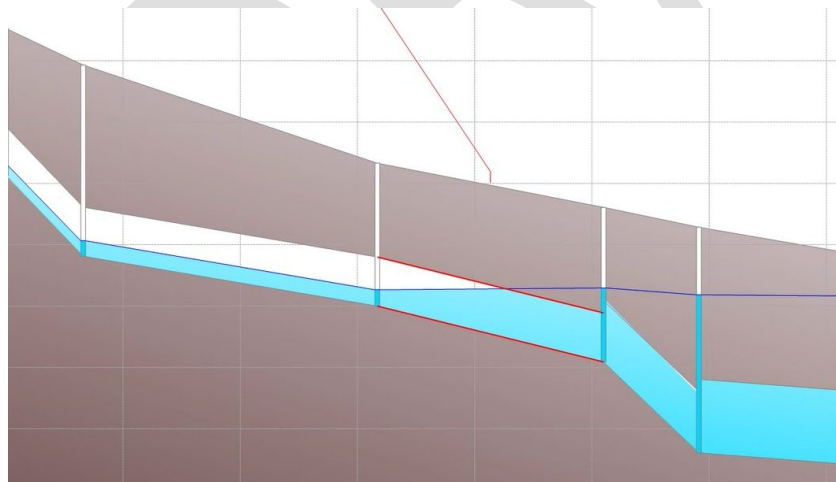
PCSWMM, a proprietary stormwater modeling software program for simulating rainfall and runoff events, was used to develop a rainfall-runoff model for the Study Area. PCSWMM uses the United States Environmental Protection Agency's (EPA) SWMM engine, an open-source program. Major drainage basins were identified and divided into sub-basins. Peak flows were estimated from rainfall and the physical attributes of the sub-basins in the Study Area. The following physical characteristics were determined for each sub-basin and used in the PCSWMM analysis:

- Basin contributing drainage area,
- Width of sub-basin,
- Length of longest flow path of the sub-basin,
- Sub-basin slope,
- Impervious area,
- Depression storage, and
- Soil infiltration rates.



Screenshot from storm water model storm sewer (yellow) and street conveyance (red) elements

PCSWMM was used to route the hydrographs developed for each sub-basin through surface water features such as detention storage, storm sewer pipes, streets, and open channels. The routing elements are categorized in the model as conveyance elements (pipes, streets, or open channels), storage elements (detention ponds or informal storage areas), design nodes (points where multiple conveyances converge), and outfalls (the end of a model network, typically the discharge point to Flat Creek).

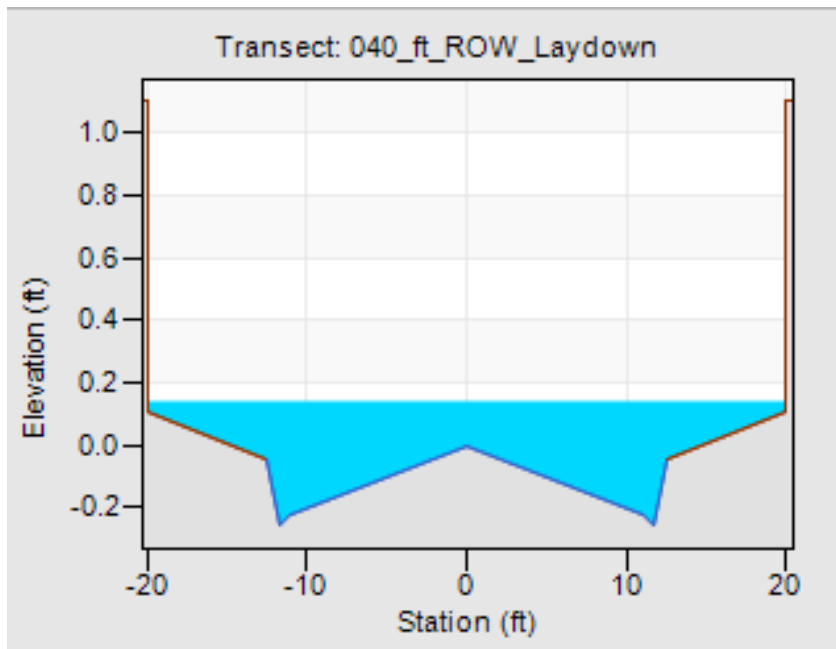


Screenshot from storm water model of storm sewer profile.

2.4.2 Flooding Hazards

Flood hazards were identified for future development conditions, using the model. For the purposes of this study, flooding was defined using the following conditions:

- Stormwater runoff that leaves the public right-of-way and is conveyed through private property (unless designed to safely carry this flow),
- Stormwater runoff depths in public streets that exceed allowable flow depths typical for municipalities, based on the type of street, as shown in Table 17 below.



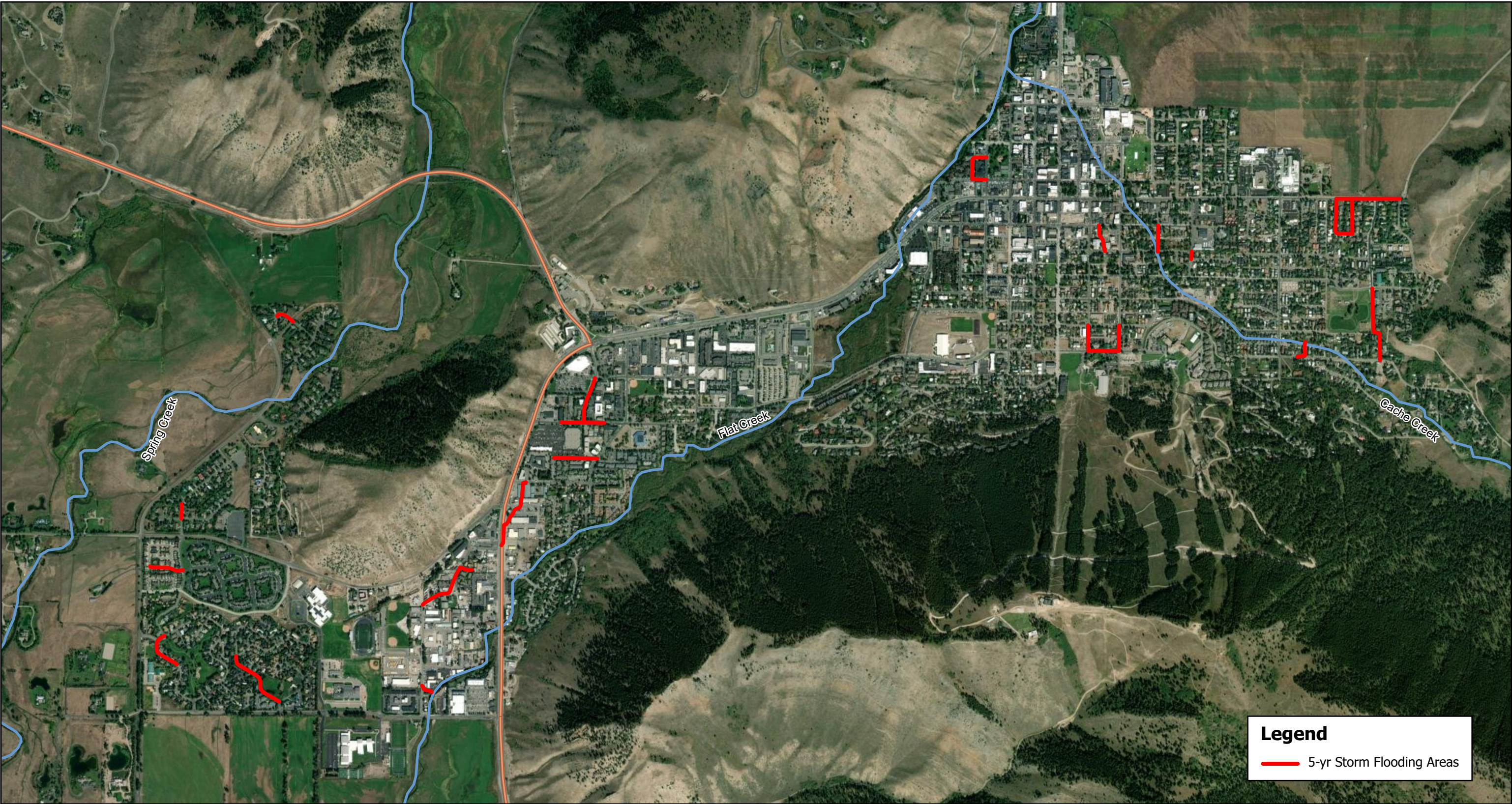
Cross-section from storm water model of street conveyance with flooding.

Table 17: Allowable Street Encroachments for Flooding

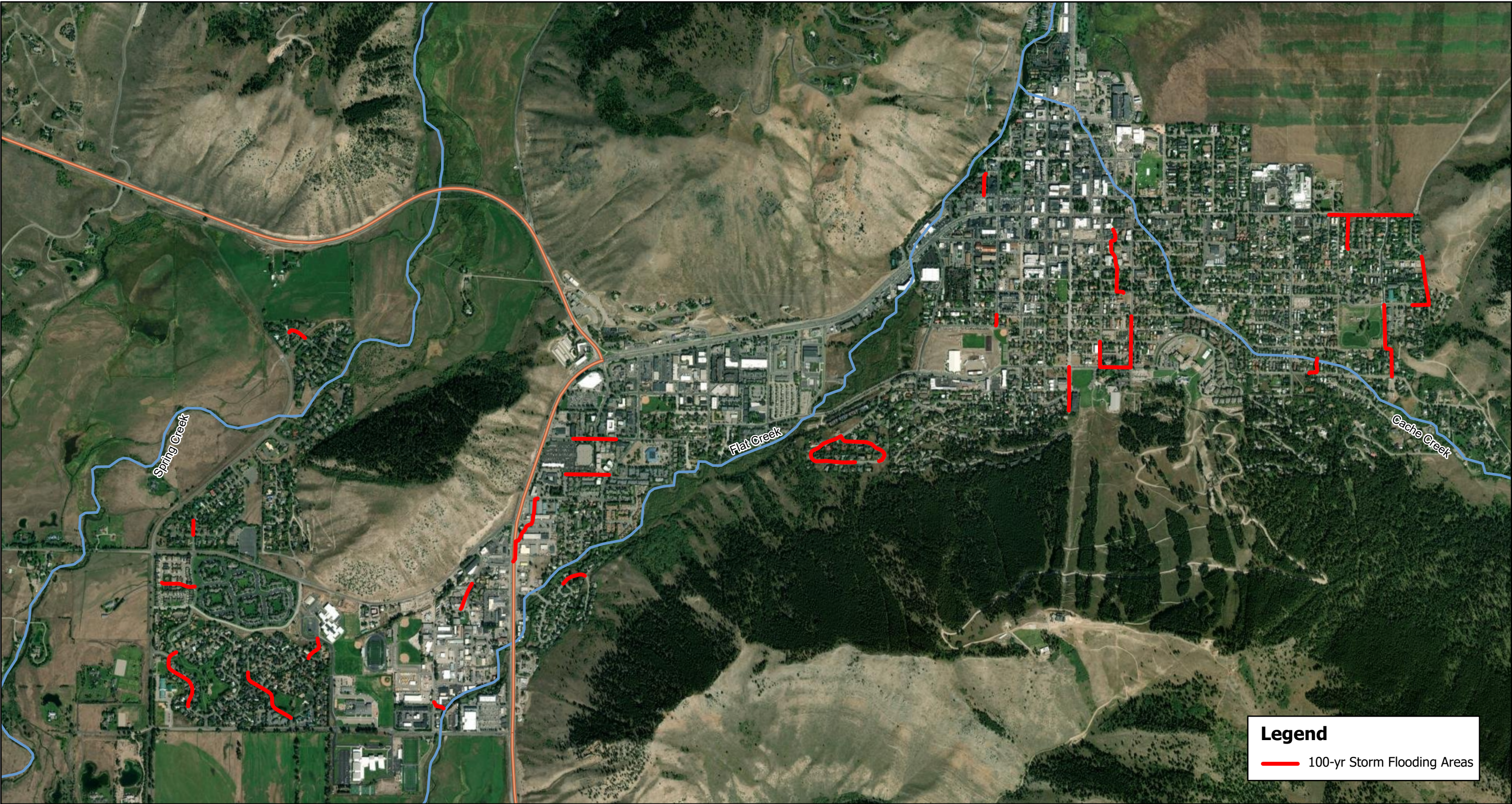
TYPE OF STREET	FLOODING CONSTRAINTS - MINOR STORM (5-YEAR)	FLOODING CONSTRAINTS - MAJOR STORM (100-YEAR)
Local	1. No overtopping of curb. Where no curb exists, flow shall not extend beyond property lines. 2. Flow may spread to crown of street.	1. Flow shall not extend beyond property lines. 2. Depth of water over crown shall not exceed six inches.
Collector	1. No overtopping of curb. Where no curb exists, flow shall not extend beyond property lines. 2. Flow spread must leave at least one lane width free of water.	
Arterial	1. No overtopping of curb. Where no curb exists, flow shall not extend beyond property lines. 2. Flow spread must leave at least one-half of roadway width free of water in each direction.	1. Flow shall not extend beyond property lines. 2. Depth of water over crown shall not exceed six inches. 3. Depth of water over gutter flowline shall not exceed 18 inches.

Note: Most restrictive criteria in each box shall govern.

Flooding hazards identified in the model are shown on Figures 12 and 13 for future development conditions during the 5- and 100-year storm events.



N 0 1,500 3,000 6,000 Feet This map shown here has been created with all due and reasonable care and is strictly for use with WSP Project Number US-EI-3270SW0030. This map has not been certified by a liscenced land surveyor and any third party use of this map without waranties of any kind as WSP assumes no liability, direct, or indirect, whatsoever for any third part or unintended use. <tr><td colspan="2">SCALE:</td><td colspan="2">1 inch = 1375 Feet</td><td colspan="2" rowspan="2">CLIENT</td><td colspan="2" rowspan="2">PROJECT</td></tr> <tr><td colspan="2">DATE:</td><td colspan="2">05/22/2025</td></tr> <tr><td colspan="2">PROJECT NO:</td><td colspan="2">US-EI-3270SW0030</td><td colspan="2" rowspan="3"> WSP WSP USA, Inc. 920 East Sheridan, Ste A Laramie, WY 82070 </td><td colspan="2">Town of Jackson Stormwater Master Plan</td></tr> <tr><td colspan="2">DATUM/PROJECTION</td><td colspan="2">NAD83 - Wyoming (US FT)</td><td rowspan="2">TITLE</td><td rowspan="2">Figure No.</td></tr> <tr><td colspan="1">DWN BY:</td><td colspan="1">MR</td><td colspan="1">CHK'D BY:</td><td colspan="1">AM</td><td rowspan="2">5-yr Storm Flooding Areas</td><td rowspan="2">12</td></tr>	SCALE:		1 inch = 1375 Feet		CLIENT		PROJECT		DATE:		05/22/2025		PROJECT NO:		US-EI-3270SW0030		WSP WSP USA, Inc. 920 East Sheridan, Ste A Laramie, WY 82070		Town of Jackson Stormwater Master Plan		DATUM/PROJECTION		NAD83 - Wyoming (US FT)		TITLE	Figure No.	DWN BY:	MR	CHK'D BY:	AM	5-yr Storm Flooding Areas	12
	SCALE:		1 inch = 1375 Feet						CLIENT		PROJECT																					
	DATE:		05/22/2025																													
	PROJECT NO:		US-EI-3270SW0030		WSP WSP USA, Inc. 920 East Sheridan, Ste A Laramie, WY 82070		Town of Jackson Stormwater Master Plan																									
	DATUM/PROJECTION		NAD83 - Wyoming (US FT)				TITLE	Figure No.																								
	DWN BY:	MR	CHK'D BY:	AM					5-yr Storm Flooding Areas	12																						



0 190 380 760 1,140 1,520 Feet

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DWN BY:	CHK'D BY:	
MR	AM	

CLIENT
Town of Jackson, Wyoming



WSP USA, Inc.
920 East Sheridan, Ste A
Laramie, WY 82070

PROJECT
Town of Jackson Stormwater Masterplan

TITLE
100-yr Storm Flooding Areas

Figure No.
13

2.4.4 Recommendation of Improvements

The following types of improvements were evaluated: conveyance structure improvements, new detention ponds, and expanding/modifying existing detention ponds.

Potential improvements were screened to determine which alternatives would be looked at in greater detail. The screening process included modeling the improvement to determine feasibility of construction and evaluate its usefulness in mitigating identified flooding hazards. Improvements that did not significantly reduce flooding hazards or that required infrastructure improvements that would not be feasible to construct were removed from further consideration. Promising alternatives were examined further to identify the benefits, estimate construction and operation and maintenance costs, and right-of-way (ROW) and easement requirements. Improvements were modeled to safely pass runoff from the 100-year event.

This stormwater modeling effort has identified several capital improvement projects to achieve the project goals. Those alternatives are summarized in Table 18 below, and project locations are shown in Figure 14.

Table 18: Evaluation of Recommended Capital Improvement Projects

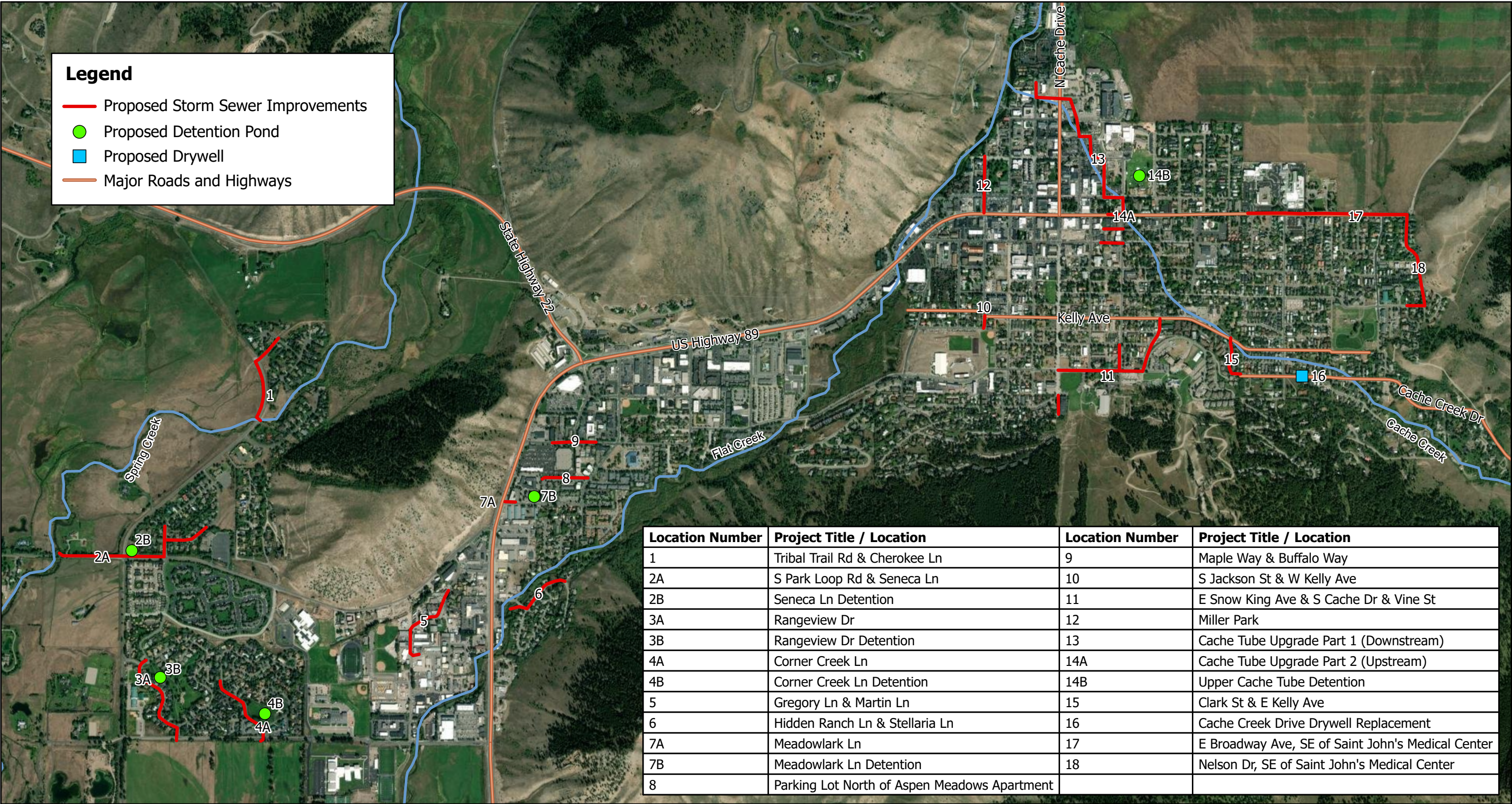
Location Number	Project Title / Location	Project Description	Capital Cost
1	Tribal Trail Rd & Cherokee Ln	On Cherokee Lane: Install a 2' diameter pipe for an approximate length of 483' and 4 double inlets. On Tribal Trail Road: Install a 2' diameter pipe for an approximate length of 923' and 12 double inlets.	\$1,274,148
2A	S Park Loop Road & Seneca Ln	On Boyles Hill Rd: Install a 2.5' diameter pipe for an approximate length of 944' and 8 double inlets. On S Park Loop Rd: Install a 2.5' diameter pipe for an approximate length of 593' and 8 double inlets. On Whitehouse Dr: Install a 2.5' diameter pipe for an approximate length of 244' and 4 double inlets from S Park Loop Rd to Seneca Ln. Install a 1.5' diameter pipe for an approximate length of 202' and 4 double inlets starting from Seneca Ln. On Seneca Ln: Install a 1.5' diameter pipe for an approximate length of 671' and 8 double inlets.	\$2,438,224
2B	Seneca Ln Detention	On Whitehouse Drive: Install 1.5' diameter pipe for an approximate length of 202' and 4 double inlets. On Seneca Lane: Install 1.5' diameter pipe for an approximate length of 671' and 12 double inlets. Install a 2.5' diameter pipe for an approximate length of 292' and 4 double inlets. From Seneca Lane cul-de-sac: Install a 2.5' diameter pipe for an approximate length of 281' to the detention pond.	\$1,311,413
3A	Rangeview Dr	On South Park Loop Road: Install a 2' diameter pipe for an approximate length of 1548' and 28 double inlets.	\$584,224

Location Number	Project Title / Location	Project Description	Capital Cost
3B	Rangeview Dr Detention	On Rangeview Drive: Install 2' diameter pipe for an approximate length of 371' and 8 double inlets. From Rangeview Drive to the detention pond: Install 2' diameter pipe for an approximate length of 341'. Install a ~0.34 ac-ft detention pond.	\$584,224
4A	Corner Creek Lane	On Corner Creek Lane to the west: Install a 1.5' diameter pipe for an approximate length of 1,207' and 16 double inlets.	\$1,064,657
4B	Corner Creek Ln Detention	On the western side of Corner Creek Lane: Install 1.5' pipe for an approximate length of 867' and 12 double inlets.	\$837,522
5	Gregory Ln & Martin Ln	Install a 2' diameter pipe for an approximate length of 1,158' and 24 double inlets. Install a 1.5' diameter pipe for an approximate length of 92' on Martin Lane.	\$1,358,401
6	Hidden Ranch Ln & Stellaria Ln	Install a 1.5' diameter pipe for an approximate length of 992' and 16 double inlets, outfall to Flat Creek.	\$926,647
7A	Meadow Lark Ln & US Highway 89	Upgrade existing 2' diameter pipe to a 3' diameter pipe and 8 double inlets.	\$279,982
7B	Meadowlark Lane Detention	Install a 2' diameter pipe for an approximate length of 319' and 4 double inlets from the pond in the vegetated area south of The Jackson South Town Motel to along Meadowlark Lane to the existing pipe.	\$360,552
8	Parking Lot North of Aspen Meadows Apartment	Install a 2' diameter pipe for an approximate length of 673' and 12 double inlets.	\$689,469
9	Maple Way & Buffalo Way	On Maple Way: Install a 3' diameter pipe for an approximate length of 318' between in front of Flores Beauty Shop and Veronica Lane and 8 inlets and then transition the pipe to 2' diameter for an approximate length of 320' from Buffalo Way to Veronica Lane and install 4 double inlets.	\$705,527
10	S Jackson St & W Kelly Ave	On South Jackson Street: Install a 1.5' diameter pipe for an approximate length of 188' and 8 double inlets.	\$266,803
11	E Snow King Ave & S Cache Dr & Vine St	On East Snow King Avenue: Install a 2' diameter pipe for an approximate length of 894' and 12 double inlets from South Cache Drive to South Willow Street. Install a 1.5' diameter pipe for an approximate length of 339' and 4 double inlets from South Willow Street to Vine Street. On South Willow Street: Install a 1.5' diameter pipe for an approximate length of 380' and 4 double inlets. On South Cache Drive: Install a 2' diameter pipe for an approximate length of 278' and 8 double inlets.	\$2,456,775
12	Miller Park	On North Jackson Street: Install a 2.5' diameter pipe for an approximate length of 825' and 12 double inlets.	\$1,150,416

Location Number	Project Title / Location	Project Description	Capital Cost
13	Cache Tube Upgrade Part 1 (Downstream)	Upgrade existing 5' diameter pipe to an 8'x6' box culvert for an approximate length of from the outfall at Flat Creek to the intersection of East Deloney Avenue and North Willow Street and 40 double inlets.	\$11,933,670
14A	Cache Tube Upgrade Part 2 (Upstream)	Upgrade existing 5' diameter pipe to an 8'x6' box culvert for an approximate length of 218' and 12 double inlets. On East Broadway Avenue: Upgrade existing 2' diameter pipe to a 3' diameter pipe and install 8 double inlets. Alley: Upgrade existing 1' diameter pipe to a 2' diameter pipe and install 8 double inlets. On East Pearl Avenue: Upgrade existing 1.5' diameter pipe to 2' diameter pipe and install 8 double inlets.	\$2,258,399
14B	Upper Cache Tube Detention	On East Broadway Avenue: Install 2' diameter pipe for an approximate length of 240' and 8 double inlets. Alley between East Broadway Avenue and East Pearl Avenue: Upgrade a 1' diameter pipe to a 2' diameter pipe for an approximate length of 285'. On East Pearl Avenue: Upgrade a 1.5' diameter pipe to a 2' diameter pipe. Install a 3.5' diameter pipe for an approximate length of 354' and 4 double inlets from the detention pond to the existing pipe at the intersection of East Gill Avenue and North Willow Street. On North Willow Street: Upgrade 5' existing pipe to an 8'x6' box culvert for an approximate length of 246' and 8 double inlets. Install an 8'x6' box culvert for an approximate length of 394' from the intersection of East Deloney Avenue and North Willow Street to the detention pond. Install a ~24 ac-ft detention pond. Install a 3.5' diameter pipe for an approximate length of 354' from the detention pond to the intersection of East Gill Avenue and North Willow Street and 4 double inlets.	\$8,054,827
15	Clark St & E Kelly Ave	Upgrade existing 1.5' diameter pipe to a 2.5' diameter pipe for an approximate length of 665' and 12 double inlets.	\$726,004
16	Cache Creek Drive Drywell Replacement	Upgrade existing drywell (assumed volume of ~1,700 ft ³) to a volume of ~3,475ft ³ . This is 0.0798 ac-ft.	\$207,090
17	E Broadway Ave, SE of Saint John's Medical Center	On East Broadway Avenue: Upgrade 2.5' diameter pipe to 4' diameter pipe for an approximate length of 1951' and 32 double inlets from No Name Street to Rancher Street. Upgrade 1.3' diameter pipe to 3' diameter pipe for an approximate length of 362' and 4 double inlets.	\$2,706,067

Location Number	Project Title / Location	Project Description	Capital Cost
18	Nelson Dr, SE of Saint John's Medical Center	On Nelson Drive: Upgrade 1.3' diameter pipe to a 3' diameter pipe for an approximate length of XX and 20 double inlets from East Broadway Avenue to Wheatleigh Way. Install a 2.5' diameter pipe for an approximate length of 346' and 4 double inlets from Nelson Drive and East Hansen Avenue. On East Hansen Road: Install a 2' diameter pipe for an approximate length of 258' and 4 double inlets from Henley Road to Nelson Drive. On Rancher Street: Install a 1.25' diameter pipe for an approximate length of 434' and 8 double inlets from East Hansen Avenue to East Simpson Avenue.	\$2,281,406

DRAFT



Location Number	Project Title / Location	Location Number	Project Title / Location
1	Tribal Trail Rd & Cherokee Ln	9	Maple Way & Buffalo Way
2A	S Park Loop Rd & Seneca Ln	10	S Jackson St & W Kelly Ave
2B	Seneca Ln Detention	11	E Snow King Ave & S Cache Dr & Vine St
3A	Rangeview Dr	12	Miller Park
3B	Rangeview Dr Detention	13	Cache Tube Upgrade Part 1 (Downstream)
4A	Corner Creek Ln	14A	Cache Tube Upgrade Part 2 (Upstream)
4B	Corner Creek Ln Detention	14B	Upper Cache Tube Detention
5	Gregory Ln & Martin Ln	15	Clark St & E Kelly Ave
6	Hidden Ranch Ln & Stellaria Ln	16	Cache Creek Drive Drywell Replacement
7A	Meadowlark Ln	17	E Broadway Ave, SE of Saint John's Medical Center
7B	Meadowlark Ln Detention	18	Nelson Dr, SE of Saint John's Medical Center
8	Parking Lot North of Aspen Meadows Apartment		



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DATUM/PROJECTION NAD83 - Wyoming (US FT)	
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CLIENT

Town of Jackson, Wyoming



WSP USA Inc.
920 East Sheridan, Ste A
Laramie, WY 82070

PROJECT	
Town of Jackson Stormwater Master Plan	
TITLE	Figure No.
Proposed Stormwater Improvements	14

2.4.5 Capital Improvement Project Tool

Under Task 3.3, delivered under separate cover (see Section 3.0 NEXT STEPS), recommended capital improvement projects will be compiled into a spreadsheet that ranks projects based on various potential benefits for each project.

2.4.6 Water Quality Recommendations

In addition to the improvements described above, which are intended to mitigate flooding issues, WSP recommends the following approach to improving the quality of stormwater discharges from the Town's municipal storm sewer system:

1. *Incorporate Water Quality Treatment into Capital Projects*, where applicable. It is recommended that the capital projects in this master plan include water quality features for removal of sediment and other pollutants.
 - a. Include water quality capture volume in new detention ponds. The estimated conceptual construction costs for all detention ponds include excavation of an additional 10% that would be used as a water quality capture volume. This volume would be retained during a storm event and slowly released over 40 hours, requiring a small modification to traditional pond outlet structures.
 - b. Each project to add or upgrade storm sewers includes the installation of inlets to maximize the use of the underground system before runoff is carried in the streets. It is recommended that all new inlets incorporate sediment capture filter bags (the Town currently has a small number of these inlets installed). This will require an additional maintenance commitment to periodically remove and empty/replace the filter bags.
2. *Incorporate Green Infrastructure (GI) Practices into Public Project*, where feasible. The installation of GI practices in public projects to infiltrate initial rainfall amounts would improve the quality of storm runoff and provide examples for private development to follow. Examples could include the installation of bioretention areas at "bump outs" in street reconstruction projects, or raingardens to capture roof or parking lot runoff from Town facilities.
3. *Encourage or Require Green Infrastructure Practices for New Development*. As discussed elsewhere in this report, WSP recommends that the City develop stormwater quality standards that encourage or require the use of LID practices (also called green infrastructure) on new or redeveloped properties. Since space is not readily available for large public stormwater treatment areas (beyond the existing Karns Wetland Treatment System), much of the water quality improvement in the Town will likely require improvements on private development.

2.5 STEERING COMMITTEE FOR STORMWATER REGULATORY AND MANUAL DEVELOPMENT

During the spring of 2024, the Town established a Steering Committee composed of external representatives of business, non-profits, developers, and other government agencies to provide input and review of the stormwater management strategies under consideration. Twenty-eight representatives were invited to participate, though not all were able to attend each meeting.

Two meetings were held in 2024 that focused on changes in the land development regulations along with details on stormwater management strategies focused on improvements in overall water quality and flood mitigation. The overall purpose of the group discussions was to allow an informed, engaged stakeholder group to provide input and feedback on future water quality and quantity stormwater management regulations and incentives. The membership, meeting presentations, and summary meeting notes are attached as Appendix E.

Discussion topics for meetings with the Committee included:

- background on the stormwater program development project
- basic land development stormwater education
- insights on development needs & challenges
- thresholds for grading permits
- post-construction requirements
- post-construction stormwater maintenance
- stormwater quantity requirements (flood management)
- stormwater design standards
- off-site mitigation (fee-in-lieu)
- dedicated revenue sources



Steering Committee meetings were completed by the project team to help develop the SWMP and provide direction for content of the LDRs and Stormwater Management Manual. The meetings were designed to be interactive, and collect real time feedback on topics

Mentimeter

When you hear the word Stormwater what comes to your mind?

30 responses

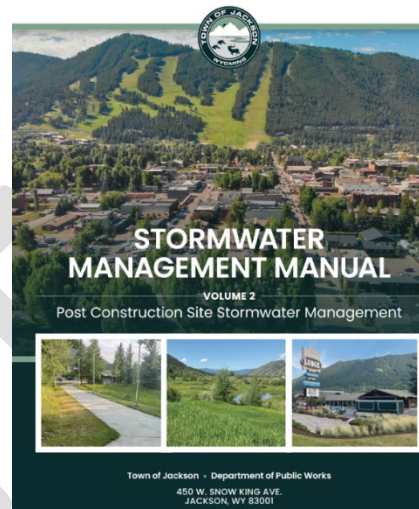


Understanding community expectations for management of stormwater runoff and environmental stewardship is important to ensure future regulations and services address Town goals. Additional meetings of the Steering Committee are anticipated during the completion of Project Task 3.

During the evaluation of existing regulations and standards, WSP looked for potential opportunities and conflicts with other land development codes, zoning codes, street and parking design codes and County requirements (see **Table 1 Background Summary review**). Final recommendations incorporated in new regulations or ordinance structure consider those potential opportunities and conflicts. Solutions are developed and incorporated in the draft ordinance and manuals.

Recommendations from the Advisory Committee will be addressed in Task 3 for final versions of ordinance and manual content with an evaluation of the perceived difficulty for change, priority ranking of the recommendations, and identification of external input.

Outlines and annotated table of contents were prepared for the Construction Site Management Manual and the Stormwater Post-Construction Design Manual. These will be finalized in Task 3.



The Steering Committee helped guide the overall policy direction and content for the updated LDRs and new Stormwater Management Manual.

2.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING

The maintenance and operation of Town-owned public property in a manner to minimize negative impacts to the environment is a key responsibility as steward for water quality protection in the Town. The Town can set an example for private businesses and homeowners by demonstrating best management practices for minimizing the negative impact of stormwater runoff. The ultimate goal is preventing or reducing pollutant runoff from municipal operations into the stormwater system and receiving streams. Elements of pollution prevention include employee training to understand how daily activities in all service areas may negatively impact stormwater runoff, and identifying and implementing best practices on Town property/operations is important.

Currently, Town properties are maintained independently by facility managers, without a specific focus on stormwater impacts. The first step in implementing a Pollution Prevention/Good Housekeeping program is to develop Standard Operating Procedures specific to each facility with BMPs for chemical storage, disposal of liquids, material storage, equipment repair, fueling, parking, spills, and other activities. Checklists should be developed for inspection of Town properties, with training provided annually to Town staff.

Initially, facility managers could perform self-inspections using the checklists, and provide results to Public Works. Deficiencies identified in the inspections would be followed up on by Public Works staff, with corrective actions completed as budget constraints allow. Eventually, with future staff hires, Public Works could perform all annual inspections of Town properties.

Based on a list of Town-owned facilities provided by the Town and interviews with Town staff, the following facilities/operations will be evaluated as part of this plan:

- Wastewater Treatment Plant, 5450 S. Ricks Road
- Public Works, 400 Snow King Avenue
- Parks Maintenance Building, 400 Snow King Avenue
- Start Bus Barn, 55 Karns Meadow Drive
- Snow Storage Operations, Fairgrounds

The results of the initial inspections will be provided in the final version of this report, including recommendations for improvements to prevent or minimize stormwater pollution, including budgetary costs.

2.7 MONITORING

2.7.1 Introduction

The Town of Jackson is in Teton County, Wyoming, within the Snake River Basin. The Town population is small enough that it currently does not require coverage under a Municipal Separate Storm Sewer (MS4) NPDES permit. However, the Town has a vested interest in keeping the surface waters in the area clean and useable for human and animal consumption and recreation. Currently, Flat creek is listed as impaired, due to physical substrate habitat alterations (sedimentation) and *E. Coli* (Wyoming's 2022/2024 Integrated 305(b) and 303(d) Report, WDEQ, 2025). Flat creek is considered a class 2AB water for the State of Wyoming, with strict water quality standards as it has the potential to fulfill all designated uses (Table 19).

Table 19. Wyoming Surface Water Classes and Designated Uses

SURFACE WATER CLASSES AND USE DESIGNATIONS

	Drinking Water	Game Fish	Non-Game Fish	Fish Consumption	Other Aquatic Life	Recreation	Wildlife	Agriculture	Industry	Scenic Value
1*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2AB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2A	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
2B	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2C	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D	No	When Present	When Present	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3A	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3B	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3C	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3D	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4A	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4B	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4C	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

To achieve compliance with the Clean Water Act, the WDEQ requires either a local watershed management plan or the establishment of a Total Maximum Daily Load (TMDL), in which the WDEQ would calculate and enforce pollutant discharge limits to Flat Creek. Flat Creek watershed stakeholders opted for the local watershed planning process, which led to the drafting of the Flat Creek Watershed Management Plan (Girard, et. al., 2019). The Plan recommends the most likely solutions to reducing pollutant loading and identifies stakeholders and potential revenue sources for implementation. The Plan also includes a monitoring program to measure progress towards its overall goals of restoring water quality and riparian habitat in Flat Creek.

The Town's long-term goals align with the Flat Creek Watershed Management Plan, and additional testing and monitoring should be considered to help focus resources to achieve common goals. The Plan identifies water resource issues, which includes sediment loading from stormwater runoff to Cache Creek and Flat Creek as the top priority. The WSP Team conducted a review of the overall monitoring approach to determine whether additional monitoring by the Town could be beneficial. Flat Creek's sedimentation impairment has been a concern for a couple of decades, prompting several local groups including Teton Conservation District (TCD), Flat Creek Watershed Improvement District, Jackson Hole Clean Water Coalition, The Snake River Fund, local student researchers, and others to provide management plans, studies on impacts and other probable pollutants, septic system monitoring, and other water improvement projects. There is momentum and invested interest in improving water quality in Flat Creek and all surface waters in the Jackson area. A coordinated monitoring program by the Town could help bolster the efforts of other local entities and provide a solid baseline of water quality data to best allocate funds to projects with the greatest impact.

2.7.2 Current Monitoring Programs

Several water quality studies have been published for the Jackson area, including Flat Creek. Flat Creek was first monitored for flow rate by the USGS in 1917 and has been monitored continuously since 1989 (flow rate in Cache Creek has been monitored since 1945). The USGS has three active gauges in Flat creek:

1. Flat Creek below Cache Creek, near Jackson, WY 13018350
2. Flat Creek above Cache Creek, at Jackson, WY 13018250, and
3. Cache Creek near Jackson, WY 13018300.

The Flat Creek Watershed Management Plan (Girard et al., 2019) cites several studies and analysis on Flat Creek and noted stormwater to carry several pollutants including:

- Total Dissolved Solids (TDS);
- Total Suspended Solids (TSS);
- Petroleum Hydrocarbons;
- Sodium and Chloride;
- Heavy Metals;
- Turbidity; and,
- Toxicity to minnows.

After targeted stormwater sampling in the area showed a marked increase (108%) of TSS concentration from the town of Jackson, a collaborative project was installed to create the Karns Meadow Stormwater Wetland Facility. This had a significant improvement in water quality when stormwater was again tested in 2012 and 2013 (Girard et al., 2019). In 2003, samples were tested for *E. Coli* markers and showed the level attributable to human activity is relatively low (TCD, 2003).

Currently, TCD and United States Geological Survey (USGS) are partnered to monitor the surface water in the region, including three locations on Flat Creek. These locations assess sedimentation, temperature, invertebrate levels, and some water chemistry. The Flat Creek monitoring locations include: North Town Edge, High School Road, and South Park. The focus is to better understand and characterize sediment and turbidity in impaired areas of Flat Creek. Real-time turbidity stations are located around the Town in partnership with the USGS.

2.7.3 Recommendations for Additional Monitoring

Current monitoring efforts are focused on in-stream water quality, which is important in tracking the improvements resulting from efforts in the watershed. While a comparison of samples collected in Flat Creek upstream from the Town with downstream samples demonstrate the impact of runoff from the Town, it does not provide any information on specific pollutant sources/locations. The Town could supplement current monitoring efforts by sampling specific stormwater discharges to Flat Creek, which would improve the understanding of the Town's overall contribution to pollution in the creek. This approach would also help determine if specific outfalls/areas of Town contribute more pollutants than other areas, so that water quality improvement projects could be focused on those areas.

2.7.3.1 Locations

There are approximately seven large stormwater trunk lines within the Town that discharge stormwater to Flat Creek (see Figure 15 below). Sampling at the downstream point of each of these systems could determine if there are parts of Town which are not significantly contributing to pollution and allow the Town to focus its efforts and resources towards area which are contributing to the impairment.

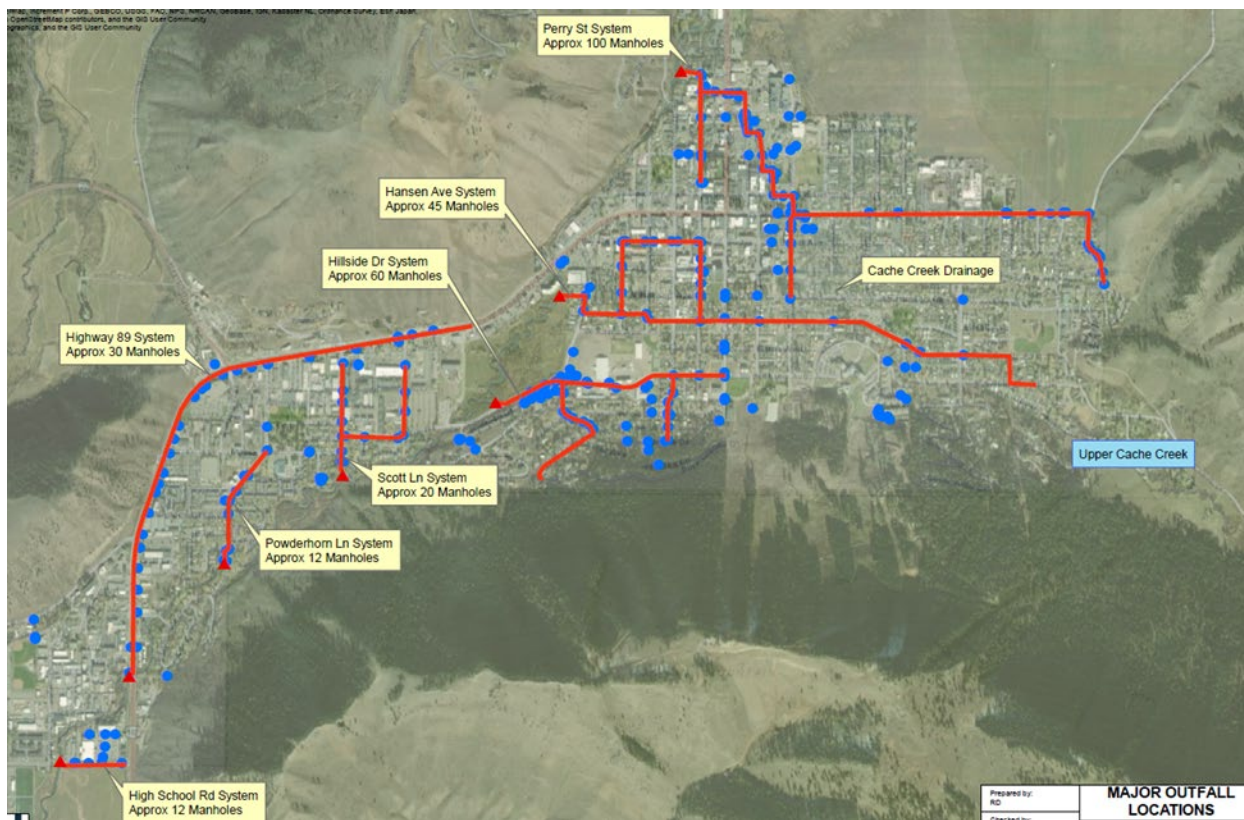


Figure 15. Major Stormwater Trunk Lines in Town of Jackson

2.7.3.2 Analytes

WSP recommends including the following analytes in the Town's monitoring program:

- Total Suspended Solids (TSS) -- Since sedimentation has been documented as the primary pollutant of concern in Flat Creek, TSS should be included in all monitoring efforts by the Town. Monitoring for TSS can help pinpoint locations with higher pollutant loading which can more effectively distribute funding for needed control measures to reduce the pollutant in stormwater. TSS monitoring has not been conducted within the Town's stormwater system or at the point of ingress and egress of Cache Creek.
- E. Coli -- *E. coli* is an analyte worth monitoring specifically because of how prolific it is in stormwater pollution across the country and its relatively low cost of analysis. While the 2003 study on *E. coli* seemed to indicate agriculture/wildlife (particularly elk refuge and ranching operations) was the main contributing source of *E. coli*, many locations across the country with seasonal crowds and outdoor attractions have seasonal spikes in *E. coli* contamination.
- Heavy metals and petroleum hydrocarbons -- Heavy metals and petroleum hydrocarbons should be incorporated in the Town's monitoring program, as current data for these analytes is limited. Common sources of heavy metals and hydrocarbons are vehicle traffic, automotive shops, and industrial facilities. Heavy metals and hydrocarbons can be difficult to remove from water bodies, so identifying and eliminating a source early could have large long-term benefits.

- Nutrients -- Nutrients are also identified as a gap in data from TCD and USGS and has been noted as a concern around research into invertebrate and other biomarkers in the area. The State of Wyoming also has particular concern around Harmful Cyanobacterial Blooms (HCB) which have not currently been found in the area but are growing more common in the state. Algae blooms and dead zones are common problems in areas with drainage from agricultural lands, and nutrient loading in surface water can be incredibly detrimental to local flora and fauna. Nitrogen and phosphorous are common markers of elevated levels of nutrients.

2.7.3.3 Sample Collection

Stormwater sampling can be more difficult than other types of water sampling, as it can only occur when it is raining, which makes it impossible to schedule. Sampling staff must be ready to mobilize on short notice. Stormwater sampling is most informative during the “first flush” of a storm, typically considered as the first 30 minutes, since this initial runoff tends to carry pollutants that have accumulated in the watershed since the last rain event. Sampling staff will need to be able to quickly deploy to a sampling station, have the equipment necessary, and be physically able to reach the location (or more than one) within 30 minutes of the start of a rain event. As rain can be unpredictable, staff may need to be “on-call” or receive overtime if a sampling event lasts longer than anticipated or occurs after business hours. A Sampling and Analysis Plan (SAP) will need to be developed to outline the parameters of when and where sampling will take place, where samples will be received and analyzed, and how sampling should be properly performed. Sample collection could be performed by Town staff or by contracted consultants.

Autosamplers are devices that can be placed at the desired location and programmed to be triggered by a rain event so that when flow reaches a sensor, they begin sampling to capture the first flush. Autosamplers can be configured to capture flow in different ways including discrete grab samples or composite samples collected over a set period of time. Autosamplers can be connected to a modem to send alerts to cellphones or computers that flow has been detected, samples have been taken, or that samples are finished. Once the autosampler is completed, sampling staff collect the sample, brings it to a lab for processing, and resets the autosampler. While convenient, a drawback of autosamplers is the cost, which can run up to \$10,000 - \$15,000 per autosampler.

2.7.3.4 Recommended Monitoring Program

WSP recommends that the Town implement a phased monitoring program as outlined below, starting by establishing standard sampling procedures, identifying locations and a preliminary list of parameters for analysis. Over time, as water quality data is evaluated, procedures are standardized, partnership with the Conservation District evolves, the program will include installing and maintaining permanent sampling sites employing automated samplers.

1. Years 1 to 3 – Establish a SAP to document standard sampling procedures, establish locations (seven sites are included in the Level of Service (LOS) analysis in Section 2.8), and confirm analytes. For the initial phase, collect grab samples at seven (7) stormwater outfalls during five (5) rain events plus three (3) grab samples collected during snowmelt runoff conditions. Samples to be evaluated for Total Suspended Solids (TSS). Continue to adjust and improve program each year.

2. Years 4 to 5 -- In the fourth year of the program, increase the sampling analysis to include *E. Coli*, heavy metals, petroleum hydrocarbons, and nutrients (nitrogen and phosphorous). The data obtained and analyzed during rain events will be incorporated into a database that includes similar information obtained during the outfall monitoring of flows identified in dry period, following the IDDE program (see Section 2.3 above). The compilation of water quality data will guide further water quality subbasin studies to identify contributing factors to pollutants found in the receiving streams. All other program elements remain the same. Continue to adjust and improve program each year.
3. Years 6 and beyond – In the sixth year of the program, purchase and install autosampler devices, triggered by storm events to collect grab or composite samples. Retrieve samples after each event and reset samplers. Continue to adjust and improve program each year.

Stormwater Monitoring is discussed further in Section 2.8, Level of Service Analysis, Section D.6.

2.8 OPERATIONS PLAN

A review and evaluation of current operations to address overall stormwater management operations provided the basis for options analysis in development of a strategy to meet Town goals to improve and protect natural resources and improve environmental conditions throughout the community. The SSPP provides a path forward, with flexibility to update and adjust program elements as options are tested and improved over time. The Operations Plan is a guide and year-by-year the Town Council and staff leadership will evaluate progress made, amending the various strategies as program elements mature.

The first step in developing the SSPP, as discussed above, was identifying current conditions and services. This assessment is the Zero Year of the SSPP. Each major program area described in Section 2.8.1 below starts at the Zero Year with immediate actions summarized for initial change in service activities for Year 1 of the SSPP.

2.8.1 Stormwater Program Level of Service (LOS) Options Analysis

Task 1 gathered information on current efforts in Public Works and Planning involved in stormwater management services. Staff interviews conducted in 2023, along with detailed Work Plans reflecting Public Works alignment to mission, provide insight into the current level of effort on stormwater management services.

The Level of Service (LOS) analysis provides a detailed strategy for meeting long-term goals. It documents current status, additional goals, key findings and assumptions, and three levels of effort to meet objectives for stormwater management. The primary stormwater program structure addresses:

- Stormwater development, planning and engineering services
- Asset management – mapping and infrastructure inspections
- Stormwater infrastructure – operations and maintenance
- Water quality management program implementation
- Stormwater infrastructure – capital investments
- Administration and finance

Each focus area was evaluated to meet long-term objectives at a Basic, Medium, or High level of service. The interdependence between various objectives is considered in defining outcomes and financial impacts of a specific level of activity.

This approach provides flexibility in long-range planning to focus resources by varying emphasis on the LOS strategies. The detailed analysis and documentation are found in Appendix F. Investment in stormwater operations by program structure is a policy decision for the Town. The strategy for land development regulation and adoption of standards drives the oversight of private onsite controls for stormwater management during construction and post-construction. Impacts of policies are taken into consideration for staffing Public Works to carry out engineering reviews and site inspections. Evaluation of various scenarios for improvements in stormwater management leads to an overall investment strategy.

Each program area includes Associated Objectives and Assumptions and Notes to provide further insight into LOS discussion points. This analysis includes financial impacts for overall funding of the Stormwater Management Program, by LOS option. A list of potential staff additions, or increased effort by current staff, as well as investment alternatives for capital projects and capital purchases is summarized at the end of this Section. Cost estimates are stated in 2026 dollars.

2.8.2 Current Year Level of Service Status

An initial step in the process of long-range planning to achieve various goals in stormwater infrastructure and water quality management is to document the status of the current year services (called the Zero Year) and to identify immediate next steps for the coming Fiscal Year (FY) 2026, beginning in July 2025. The focus areas are discussed in more detail in Appendix F.

2.8.3 Prioritization of LOS

Using three levels of program area growth, Basic, Medium and High, the proposed LOS options were sequenced, taking into consideration the interdependency of the major activity or procedural elements.

The “zero” year is the current level of service. For some program areas, no current or adopted strategy is carried out. For example, the starting point (or current LOS) for F-2, *Stormwater Financing Strategy*, is “no dedicated stormwater financial plan or revenue exists today.” Its Basic LOS recognizes the need for a financial plan to support all program activities. The first step is to develop and adopt a stormwater service fee to fund all stormwater management programs. With dedicated revenue, stormwater objectives can be achieved over time.

The analysis of the LOS was completed in various steps. The first step addressed the current level of effort for each specific element of the LOS (Year Zero) and the actions that can be initiated in Fiscal Year 26 based on the proposed budget for the Public Works Department. A brief synopsis of Zero Year and FY26 Initiatives is provided in the following Table 20.

Table 20 – Stormwater Program Level of Service – Year Zero and FY26 Initiatives

Stormwater Level of Service	Year Zero	FY26 Initiatives
A. STORMWATER DEVELOPMENT, PLANNING AND ENGINEERING SERVICES		
A. 1 - Implement Master Plan	Plan under development - contract in place. Completion in FY 26 for final adoption. .	Linked to F.2. for adoption of Stormwater User Fees to set up Capital Reserve Fund in FY26. Funding will provide flexibility in Master Plan priority project implementation.
A. 2 - Implement Revised LDR 5.7 and New Stormwater Management Manual	Under development - drafts completed under current contract. Construction Site Stormwater Management Plan and Post Construction Site Stormwater Management Plan requirements to be created. Current LDR there are not specific plan review checklists or plan requirements.	Implement Construction Site Stormwater Management Plan Requirements on private and public projects. Pilot changes for post construction requirements on public project(s); review amendments and update based on pilot outcomes; initiate additions to personnel; train local development community.
A. 3 - Development Reviews	Engineering/Planning implements existing LDR with limited capacity to add revised LDR.	Recruit new engineering tech and part-time inspector (or outsource); supports LDR and Manual finalization; supports pilot project evaluation and final LDR amendment adoption.
A. 4 - Green Infrastructure Role in SW Management	No formal program. Under current contract to create planning level green infrastructure pilot projects and outline process of evaluation for public projects.	Pilot projects to test LDR amendments; protocols for review and inspections
B. ASSET MANAGEMENT - MAPPING AND INFRASTRUCTURE INSPECTIONS		
B. 1 - Public Infrastructure Inspections	Responds to reported issues/ inspection when triggered by event or reported problem.	Maintain current process until new crew is added under C.1.

Stormwater Level of Service	Year Zero	FY26 Initiatives
B. 2 - Mapping	Drainage system maps are updated when data are identified. Public Works staff are aware that inventory is incomplete.	Complete inventory by contracted service and add mapping data gathered during Stormwater Master Plan modeling.
B. 3 - Post Construction BMP Inspections	None unless issues identified	Pilot projects will test inspection protocols and GI design options; supports A.2 and A.4.
C. STORMWATER INFRASTRUCTURE OPERATION AND MAINTENANCE		
C.1 - Effective Stormwater System Maintenance Strategy	SW Maintenance occurs primarily in conjunction with streets operations. Public Works prioritizes work assignments and will respond when there is a critical failure of a drainage component. Other maintenance occurs as a component of a street repair/improvement.	Begin the hiring process to add 3-person crew whose mission will target all elements of drainage maintenance, including infrastructure maintenance.
C. 2 - Annual System Maintenance Investment	Resources tied to Streets budget for materials/supplies. Need for additional staff resources in conjunction with additional materials and supplies was identified to target routine maintenance of the drainage infrastructure.	Increase materials and supply request in following budget year request to support the new 3-person crew identified in C.1.
C. 3 - Street Sweeping	Primary focus is coordination with Winter Maintenance program; sweeping initiated in spring.	Maintain current procedures and when replacement is budgeted for existing equipment, retain the retired sweeper providing backup to sweeping operations.
C. 4 - Green Infrastructure Treatment Systems Maintenance	Street/Sewer crews maintain public facilities. The Town currently has few green infrastructure treatment systems (e.g. constructed wetland).	Based on adopted amendments and SW Manuals, train new crew and current crews, Planning and PW Engineering will train development community prior to changes

Stormwater Level of Service	Year Zero	FY26 Initiatives
C. 5 - Winter Maintenance	Current efforts are funded in all areas of Public Works, using General Fund, and Enterprise funds for Water and Wastewater. Program focused on safe transport of people and goods. Impacts spring cleanup – removal of about 75% of applied sand through street sweeping. Parks address sidewalks.	Maintain current protocols and budgeted support for all areas of Public Works and Parks, addressing safe movement on streets and sidewalks.
D. WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION		
D. 1 - Illicit Discharge Program	None	See D.6 Stormwater Monitoring Program for FY26 initiatives.
D. 2 - Construction Site Controls and Inspections	No follow up during construction - no site visits unless complaints are received. No formal construction close out process or enforcement.	Use pilot project(s) under A.2 and A.4 to set up protocols/test SOP
D. 3 - Post Construction BMP Inspection and Maintenance	Once installed, only inspect if problems/complaints are identified.	Use pilot project(s) under A.2 and A.4 to set up protocols/50% of sites included in initial inspections; training for maintenance initiated for PW field crews
D. 4 - Pollution Prevention and Good Housekeeping	PW-Facilities maintain sites and will address issues when concerns are identified. The current efforts are not proactive, and changes require education of site managers.	Develop SOP for each Town facility (PW-Facilities) by contracted services to test procedures, inspection frequency and data management. Following up on identified hazards to water quality will lead by PW-Facilities with support from PW-Engineering. Corrective actions will be addressed within budget constraints.
D. 5 - Public Education and Community Engagement	Activities are promoted in coordination with the Town Community Engagement initiatives. A specific outreach plan on stormwater management initiatives and protection of water quality has not been	Develop initial communication strategy to address the adoption of the Stormwater Management Plan and initiatives in regulatory changes as well as stormwater funding through user fees. Identify a Public Works staff

Stormwater Level of Service	Year Zero	FY26 Initiatives
	developed. Town does focus on topics when appropriate such as education of Recreation Vehicle owners for disposal of waste and wastewater.	member to coordinate on messages, schedule, and community feedback.
D. 6 - Stormwater Monitoring Program	No program is in operation today. Teton Conservation District carries out sampling within the region. The Town is aware of this activity by the TCD.	Prepare protocol for Monitoring in concert with the Conservation District and identify test pilot sites and procedures. Integrate Illicit Discharge Program into overall monitoring protocol. Contract for pilot program test and analysis, setting the budget at \$35K in FY26.
E. STORMWATER INFRASTRUCTURE CAPITAL PROGRAM		
E. 1 - Annual Stormwater Capital Investment	Current CIP includes stormwater projects funded by the Special Purpose Excise Tax (SPET – 5 th Penny).	Upon adoption of the Stormwater Management Plan, create new CIP for Stormwater. With implementation of an Enterprise, set up Reserve Fund for priority SW projects.
E. 2 - Stormwater Capital Program Coordination	Current staff coordinate capital projects when funding is provided through annual budget.	Use internal team in coordination with Stormwater Master Plan contractor to prioritize capital project schedule; identify lead in Public Works to initiate CIP projects, until hiring of a Stormwater Program Coordinator has occurred (F.1).
F. ADMINISTRATION AND FINANCE		
F. 1 - Stormwater Financial Administration	Current staff manage the budget and prioritize services based on available funding. There is not a designated Stormwater Coordinator or Financial Manager. Leadership is provided by Public Works Director and support staff.	Based on the outcome of the Stormwater User Fee Feasibility study, action to incorporate user-fee financial planning and internal policies may require amending current billing software and financial planning procedures to incorporate SW Fund. Based on decision to adopt user-fees, initiate hiring of Stormwater Program Coordinator

Stormwater Level of Service	Year Zero	FY26 Initiatives
F. 2 - Stormwater Financing Strategy	No dedicated revenue or separate budget within the Public Works Department. Annual funding is part of the current General Fund allocation for Public Works operations in Administration, and Streets, and Wastewater funding.	Completion of a User Fee Feasibility Study is part of the Stormwater Management Program scope of work and will be completed in FY26. Adoption of a Stormwater User Fee, set up processes for annual billing, identify policies, prepare an ordinance. Upon adoption, new revenue will begin in FY27. Initial steps of the Feasibility analysis are supported by the analysis in the draft Stormwater Management Plan.

In the following Table 21, the LOS priorities are defined. The Stormwater Program elements were evaluated with a baseline for “Zero Year” using this Code.

Code:	
No Current Activity	
In Progress	
Basic	
Medium	
High	

“No Current Activity” indicates that no program elements are active in the Town’s stormwater services for FY25. “In Progress” indicates that there are activities in the current year however, the effort does not fully meet objectives for the comprehensive program.

Basic, Medium, and High are defined as steps or evolution of program maturity, and they do not imply a value judgment such as adequate, better, or best. Basic, for example, is the starting point for achieving long-range goals. In the IDDE program (element D-1) a Basic LOS is forecast throughout the 10-year analysis period. The Town will establish and maintain a program over time. There is either a program or there is not a program. The initial action defines and establishes the strategy and operating procedures. Those may mature over a period of year but the detection of illicit connections or discharges to the Jackson stormwater drainage system is sustained over time.

Alignment of program development and implementation of key initiatives over a 10-year period provides a forecast for initiation of new activities and/or expansion of services from year to year. This forecast provides the data for the evaluation of overall operational costs as well as effective staffing.

In the following section, each program is presented along with details on the flow of the LOS from Basic to Medium to High. This analysis represents a point in time based on current knowledge and understanding of priorities and benefits achieved to achieve long-term goals.

This graphic provides a summary of the changes between levels of service for the programs analyzed. Each section is discussed in greater detail following the summary.

Table 21: Stormwater Program LOS Schedule for 10-Year Planning Period

Stormwater Level of Service Documentation	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A. STORMWATER DEVELOPMENT, PLANNING AND ENGINEERING SERVICES											
A. 1 - Implement Master Plan											
A. 2 - Implement Revised LDR 5.7 and New Stormwater Management Manual											
A. 3 - Development Reviews											
A. 4 - Green Infrastructure Role in SW Mgmt											
B. ASSET MANAGEMENT - MAPPING AND INFRASTRUCTURE INSPECTIONS											
B. 1 - Public Infrastructure Inspections											
B. 2 - Mapping											
B. 3 - Post Construction BMP Inspections											
C. STORMWATER INFRASTRUCTURE OPERATION AND MAINTENANCE											
C.1 - Effective Stormwater System Maintenance Strategy											
C. 2 - Annual System Maintenance Investment											
C. 3 - Street Sweeping											
C. 4 - Green Infrastructure Treatment Systems Maintenance											
C. 5 - Winter Maintenance											
D. WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION											
D. 1 - Illicit Discharge Program											
D. 2 - Construction Site Controls and Inspections											
D. 3 - Post Construction BMP Inspection and Maintenance											
D. 4 - Pollution Prevention and Good Housekeeping											
D. 5 - Public Education and Community Engagement											
D. 6 - Stormwater Monitoring Program											
E. STORMWATER INFRASTRUCTURE CAPITAL PROGRAM											
E. 1 - Annual Stormwater Capital Investment											
E. 2 - Stormwater Capital Program Coordination											
F. ADMINISTRATION AND FINANCE											
F. 1 - Stormwater Financial Administration											
F. 2 - Stormwater Financing Strategy											

Table 22: Stormwater Development, Planning and Engineering Services Schedule

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
A. STORMWATER DEVELOPMENT, PLANNING AND ENGINEERING SERVICES											
A. 1 - Implement Master Plan											
A. 2 - Implement Revised LDR 5.7 and New Stormwater Management Manual											
A. 3 - Development Reviews											
A. 4 - Green Infrastructure Role in SW Mgmt											

A-1: Creation of user fee drives the investment strategy for capital. Progression over time, from Basic to High, represents the objective to provide financial resources for all capital for stormwater infrastructure. Section E.1 addresses the rate of spending for capital.

A-2: Progression from Basic to High recognizes the timing for adoption of the LDR amendments and SW Manuals. This schedule assumes full implementation including staff augmentation by year 5.

A-3: Progression from Basic to High assumes additional staff in place by Year 4 to review, approve, oversee and inspect compliance with Stormwater Manual/LDR amendments.

A-4: Progression from Basic to High recognizes the role of pilot testing standards to ensure performance in the field is meeting LDR and Manual criteria. High is a fully mature program including training.

Table 23: Asset Management – Mapping and Infrastructure Inspections

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
B. ASSET MANAGEMENT - MAPPING AND INFRASTRUCTURE INSPECTIONS											
B. 1 - Public Infrastructure Inspections											
B. 2 - Mapping											
B. 3 - Post Construction BMP Inspections											

B-1. Initial inspection program is set up in Year 1, expanded in Year 2 to refine process. By Year 5 a fully developed program is in place with staff trained. Improvements based on findings of initial inspection procedures.

B-2. Mapping starts by completing full inventory. In Year 2 data is expanded to include all private systems, including verification of construction based on development approvals. High = Medium.

B-3. Inspection of BMPs starts with publicly owned; in Year 3 the frequency of inspection increases (once every two years) and in Year 8, as BMPs age, frequency increases to yearly.

Table 24: Stormwater Infrastructure Operation and Maintenance

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
C. STORMWATER INFRASTRUCTURE OPERATION AND MAINTENANCE											
C.1 - Effective Stormwater System Maintenance Strategy											
C. 2 - Annual System Maintenance Investment											
C. 3 - Street Sweeping											
C. 4 - Green Infrastructure Treatment Systems Maintenance											
C. 5 - Winter Maintenance											
C-1. An additional crew is added to Field Services dedicated to stormwater and workplan developed Years 1-3; Year 4 expands capacity in maintenance of BMPs and work orders driven by inspection program.											
C-2. Growth in direct expense support for maintenance and operations grows over time with the Basic supporting the new crew added in C.1. In Year 6, the activity level will increase more staff are added.											
C-3. Street sweeping current level of service is at the Basic level through Year 7. Dedicate a sweeper Operator in Year 8 and add one Operator and sweeper. Sustain through Year 10.											
C-4. GI starts with only publicly owned systems. In Year 3 a pilot test will occur for single lot residential GSI maintenance. High level includes all residential GSI but will not occur until after year 10.											
C-5. Winter maintenance -at Basic, stays in General Fund. In Year 4, a shift of 40% of costs to user fees occurs; in Year 8 the stormwater fund pays for 70% of winter maintenance.											

Table 25 – Water Quality Management Program Implementation

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
D. WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION											
D. 1 - Illicit Discharge Program											
D. 2 - Construction Site Controls and Inspections											
D. 3 - Post Construction BMP Inspection and Maintenance											
D. 4 - Pollution Prevention and Good Housekeeping											
D. 5 - Public Education and Community Engagement											
D. 6 - Stormwater Monitoring Program											
D-1. Illicit discharge program initiated in Year 1 and maintained throughout the program. As the program matures, different sites may be chosen but the overall program is consistent across the 10-year period.											
D-2. At Basic, the program is developed and only high priority sites and those receiving public complaints are inspected. In year 2, all construction sites are now inspected - continue through the 10 years.											
D-3. Initiate SOP for inspections - start at a Medium LOS, inspecting 50% of all BMPs each year (each once every two years) and sustain across the 10-year period. Specific sites may have a more frequent schedule.											
D-4. First four years, the Town facility managers work with PW to prepare the SOP for maintenance standards addressing stormwater. In year 5, the Public Works Dept takes on all site inspections.											
D-5. In 1st year a plan is prepared, with Year 2 engagement driven by new Stormwater Program Coordinator. In year 4, a new Community Outreach staff is added in Public Works addressing all PW services.											
D-6. Year 1, a pilot program is put in place and adjusted/improved through Year 3. In Year 4 additional analysis occurs (more parameters) and in Year 6, automation is added for efficiency.											

Table 26: Stormwater Infrastructure Capital Program

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
E. STORMWATER INFRASTRUCTURE CAPITAL PROGRAM											
E. 1 - Annual Stormwater Capital Investment											
E. 2 - Stormwater Capital Program Coordination											
E-1. Capital projects are driven by goals to achieve priority project implementation. The first four years are supported by new engineering staff and consultant designers. Year 5, project work expands.											
E-2. Maintain current approach with the assignment of a PT staff lead for integrating the capital projects with other engineering initiatives. In Year 5 a full-time Project Coordinator is hired - expand CIP.											

Table 27: Administration and Finance

Stormwater Level of Service Prioritization	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
F. ADMINISTRATION AND FINANCE											
F. 1 - Stormwater Financial Administration											
F. 2 - Stormwater Financing Strategy											
F-1. Year 1 establishes accounting of stormwater expenditures as User Fee put in place. Year 2 new revenue in place with PT Financial Mgr. for SW; Year 6, an FT financial administrator hired.											
F-2. Year 1 implement a user-fee for stormwater and set up all policies. Year 2 - hire new Stormwater Program Coordinator and PT Admin Asst for support. Year 4, program coordination and policies complete.											

2.8.4 Financial Analysis – Current Services and LOS Options Assessment

Evaluation of hours of effort, by position, was based on input from staff interviews and workload impacts anticipated by a change in level of service for each identified program area. As indicated in Section 1, current staff resources are fully engaged in delivering stormwater management services.

Long-term goals to sustain the investment in stormwater infrastructure, reduce negative impacts on water quality, mitigate local flooding, and improve overall ecological health of the natural environment requires increasing the financial investment for stormwater management. This includes changes in the development requirements for onsite controls during and after construction, creating a strong partnership between the development community and the Town to meet these goals. Each LOS service level is independent of the others. The following table represents how a LOS ultimate recommendation is represented after review and adoption. The financial impacts of LOS recommendations can be completed when the Stormwater Management Program is finalized. Various scenarios will be considered before financial projections are complete. How funding is provided to address the resource need is an important step in the process of LOS finalization.

Creation of new financial resources through the implementation of a stormwater user-fee per parcel may be the first step to empowering the Town to act. LOS Section F.2 *Stormwater Financing Strategy* focuses on the evaluation and implementation of a stormwater user fee. Communities throughout Wyoming have taken such action to improve their ability to fund capital investments and ongoing operations related to stormwater services. The following communities implemented stormwater management fees in the last several years:

- Cheyenne
- Laramie
- Cody
- Green River
- Evanston

2.8.4.1 Current FY25 Public Works Stormwater Program Costs - Estimated

Based on the Work Plan effort analysis by position and Division, a percentage of effort was calculated for personnel hours identified as stormwater related. A total personnel effort per Division was calculated and applied to the Direct Costs, creating a relationship between the hours focused on stormwater and the total expended direct costs. A similar relationship of cost was calculated for the personnel costs. Personnel costs include benefits using a factor of 40% of salary.

The total Public Works Budget in FY25 for all operations is \$6,118,163 and stormwater services are estimated to be \$337,720 without cost of winter maintenance operations.

Public Works Current Stormwater	FY25
Expenditures	
Salaries	\$ 80,357
Benefits	\$ 32,143
Total Current Staff	\$ 112,500
Direct Expenses	\$ 225,220
Capital Projects	\$ -
TOTAL Current Public Works Stormwater	\$ 337,720

Table 28: Current Stormwater Program Expenditures

Public Works Current Stormwater Expenditures	FY25
Salaries	\$ 80,357
Benefits	\$ 32,143
Total Current Staff	\$ 112,500
Direct Expenses	\$ 225,220
Capital Projects	\$ -
TOTAL Current Public Works Stormwater	\$ 337,720

2.8.4.2 LOS Analysis – Additional Positions by Options

The table below provides a summary of additional personnel options that should be considered in building the recommendations for increasing both development controls/regulations and improving the overall maintenance and operation of infrastructure services. The table provides a reference to each area of the LOS.

Table 29: Personnel Assessment by LOS Activity

Reference Activity	Basic	Medium	High
A3	Engr Tech FT Inspector PT	Engr Tech FT Engineer FT Inspector FT	2 Engr Tech FT 2 Engineer FT Inspector FT
C1	One Supervisor FT 2 Equip. Operators FT	One Supervisor FT 4 Equip Operators FT	One Supervisor FT 4 Equip Operators FT
C3		1 EO/ Sweeping FT	2 EO/ Sweeping FT
D5			Community Outreach Coordinator FT
E2		SW Capital Coordinator PT	SW Capital Coordinator FT
F1		Adm-Finance PT Adm Asst PT	Adm Finance FT Adm Asst PT
F2		Stormwater Mgmt. Program Coordinator FT	Stormwater Mgmt. Program Coordinator FT

The scenario described in Section 2.8.3 sequences the additional positions in the following manner.

Table 30: Personnel Additions Sequenced by Planning Period

Staff Positions - Title	Number of Positions	FT, PT, Seasonal	Mid-Range Salary	New Position - Year to be Added
Engineering Tech/EIT	1	F	\$ 75,000	2026
Supervisor- Maintenance	1	F	\$ 80,000	2026
Equipment Operator	2	F	\$ 68,000	2026
Associate Engineer/Inspector (Part Time)	1	P	\$ 95,000	2026
SW Capital Project Coordinator - Sen Engr	1	F	\$ 110,000	2026
Associate Engineer (Promoted from PT to FT)	1	F	\$ 95,000	2027
Senior Engineer	1	F	\$ 110,000	2027
Adm Assistant	1	P	\$ 68,000	2027
Stormwater Program Manager	1	F	\$ 115,000	2027
Equipment Operator	2	F	\$ 68,000	2028
Equipment Operator - Sweeping Program	1	F	\$ 68,000	2028
Admin Finance	1	P	\$ 68,000	2028
Community Outreach Coordinator	1	F	\$ 100,000	2029
GIS Specialist/Technician	1	F	\$ 75,000	2030
Senior Engineer	1	F	\$ 110,000	2030
Admin Finance	1	F	\$ 68,000	2031
Equipment Operator - Sweeping Program	1	F	\$ 68,000	

Over the next 10 year, the analysis projects an increase of 16 Full-time Equivalents (FTE) for all areas of the Stormwater Management Program (Administration, Engineering, Streets Divisions). The Town may contract for services as appropriate without adding full-time staff for some elements of engineering services. Decisions on staff resources occur on an annual basis. This analysis captures the effort needed to accomplish the long-term goals. It is understood that this projection of additional personnel represents the workload encompassed with the tasks identified in the LOS.

2.8.4.4 LOS Analysis – Equipment and Contracted Services

The LOS does not document all potential expenditures to support new programs and staff. For example, computers, desks, consumable supplies, and other routine costs were not estimated. Should the Town choose to complete the analysis for implementation of a user-fee to support stormwater, a detailed cost of service and rate model would be prepared. More significant purchases are identified in the LOS and summarized in the following table.

Table 31: Recommendation on Additional Equipment and Contracted Services

Reference Activity	Basic	Medium	High
C1	Vac-Con @ \$750,000	Vac-Con @ \$750,000	Vac-Con @ \$750,000
C2	Increase in materials @ \$25000	Increase in total materials 10% annually	Increase in total materials 10% annually
C3			New sweeper @ \$375,000
D1	Contracted water sampling @ \$10,000	Contracted water sampling @ \$10,000	Contracted water sampling @ \$10,000
E1	CIP - \$1,000,000	CIP - \$4,000,000	CIP - \$6,000,000
F1	Software/Training \$15,000	Software/training \$15,000	Software/training \$15,000
F2	User-fee development contract \$150,000-\$200,000	User-fee development contract \$150,000-\$200,000	User-fee development contract \$150,000-\$200,000

2.8.4.5 Projected Cost of Service for LOS Implementation

A financial analysis of the Stormwater Management Program based on the sequencing in Section 2.8.3 was completed. The analysis captured current effort in Public Works based on the Town Public Works Department workload analysis to identify the current year budget and effort for management of the drainage network and engineering support for development oversight and compliance. The first five years of an expanded LOS, based on the personnel and direct expenses, along with a fixed investment for capital improvements is documented in the following Table. It was assumed that additional positions, contracts, and other direct expenses including the establishment of a Capital Reserve are funded by the implementation of a Stormwater Enterprise funded by user fees. This analysis is to be refined during the Stormwater Enterprise analysis and rate study. Appendix G provides background on the review, policy development, and public engagement process to be considered in evaluating a new user fee and enterprise for stormwater operations.

Table 32: Projected Cost of Service for First Five-Year Planning Period

Expense Category	FY26	FY27	FY28	FY29	FY30
Operating Costs					
<i>Personnel</i>	\$ 740,400	\$ 1,253,832	\$ 1,580,279	\$ 1,725,262	\$ 2,102,504
<i>Direct Expenses</i>	\$ 323,269	\$ 339,632	\$ 363,343	\$ 383,365	\$ 405,666
Capital	\$ -	\$ 1,000,000	\$ 1,000,000	\$ 1,750,000	\$ 4,000,000
Total	\$ 1,063,669	\$ 2,593,463	\$ 2,943,623	\$ 3,858,628	\$ 6,508,170

2.8.4.6 LOS Analysis – Stormwater Management Program Organization

Leadership is provided by the Mayor and Council who, as elected representatives, set the culture and define the goals for the Town to provide sustainable infrastructure and policies for development and water quality protection.

The Stormwater Management Program is primarily administered by the Public Works Department in coordination with the Planning and Building Department and Joint Programs such as Parks and Recreation Department with the County. Each organizational unit carries out key roles and responsibilities, such as those in External Affairs who provide support in public communications and community engagement. The Finance Department plays a key role in budget development and revenue management.

Regional interaction with other governmental agencies is part of the overall planning and policy foundation for environmental stewardship and shared responsibility for improvements in water quantity and water quality stormwater initiatives.

The organizational chart that follows captures the primary units within the Town structure who deliver direct services to residents and businesses. Initiatives within the LOS expand roles as well as initiate new activities such as coordination of and implementation of design standards for construction management and post-construction onsite stormwater controls.

The four of the five Divisions within Public Works (Engineering, Streets, Water Operations, and Wastewater Operations) are impacted by adoption of standards for construction site management as well as post-construction operation and compliance with performance standards for stormwater onsite controls. As identified throughout this SSPP, current staff capacity is fully utilized to accomplish their mission and require augmentation to take on the responsibilities to carryout changes in land development regulations as well as improvements in infrastructure maintenance and operation.

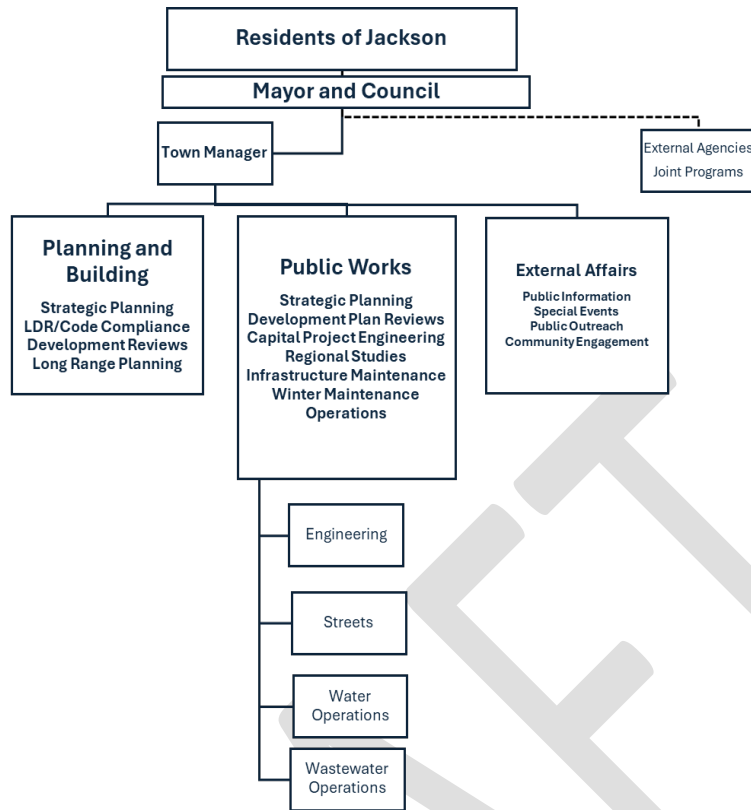


Figure 16. Stormwater Management Organization for Jackson Wyoming

The overall Township structure as shown in **Figure 16** does not change for assigned primary roles and responsibilities. The impacts of stormwater through updates to the LDR, design standards, and development oversight as discussed in the LOS occur within the Public Works Department. Impacts include increased responsibilities in LDR implementation for construction site controls and oversight/enforcement of post-construction onsite stormwater controls. For maintenance and operation of the stormwater infrastructure, the LOS increase responsibilities in street sweeping, repair and rehabilitation of existing stormwater infrastructure, implementation of stormwater capital projects, and implementation of specific water quality protection services such as illicit connection detection and removal, water quality testing at outfalls, and improvement in good housekeeping practices on public property.

NEXT STEPS – Task 3

The long-range outcome of this overall program evaluation and analysis is the adoption of updated regulations and standards, documented in ordinance language and stormwater management manuals. Task 3 is focused on implementing the strategies found in the LDR amendments and new regulations on construction site management and post-construction design standards, facility inspections, and overall enforcement. The specific tasks are summarized as Next Steps to

complete the overall analysis and study. It is anticipated that Task 3 components will be completed in 2025.

Task 3.1 - Draft LDR/Town Ordinance Updates

Incorporation of recommendations of Town leadership, Steering Committee feedback and staff results in refinement of construction and post construction stormwater management requirements for new developments and redevelopments. The primary objectives of the policy revisions and ordinance are to:

- Codify requirements for construction site management
- Address stormwater quantity and quality management on new development and redevelopment
- Codify requirements for stormwater quantity, quality, and system drainage design
- Codify authority and requirements for stormwater system protection, inspection, and maintenance post construction.

Task 3.2 - Evaluate Cost/Benefit of Joining NFIP Community Rating System

An evaluation of the current floodplain management program to identify existing activities that may qualify for the Community Rating System. Benefits of participation and cost impact analysis will be addressed. The process of joining the Community Rating System Program along with preparation of the necessary documentation to join will be included in this Task.

Task 3.3 - Compile and Prioritize Projects from Existing Plans

A key outcome of the overall Stormwater Management Master Plan is the compilation and prioritization of capital projects identified in Task 1. The capital improvement plan will be updated with conceptual-level construction cost estimates for existing and new priorities. A prioritization tool will be developed with a scoring system that evaluates various attributes and outcomes of each potential project.

Task 3.4 - GI/LID Pilot Projects

An inventory, selection, and prioritization of potential pilot projects for Green Infrastructure and Low Impact Development will be completed. Specific details on each project including feasibility factors and other Town planning efforts will be considered in the recommendation of pilot projects. Two projects will be selected for further consideration including preparation of conceptual design.

Task 3.5 - Prepare Stormwater Manual(s)

Based on analysis completed in Task 1 and Task 2, a comprehensive Stormwater Management Manual will be prepared that addresses the following key components:

- Erosion and sediment control policies and guidelines
- Stormwater quality policy and design criteria
- Stormwater quantity management policy and design criteria
- LID-GI incentives and guidance
- BMP maintenance policies and guidance

In this task, the Town's existing Comprehensive Plan and Engineering Design Guidelines will be reviewed and considered in the development of the manual.

Task 3.6 – Funding Assessment and Implementation Strategy

Funding for the additional workplan assignments, including staff, direct expenses, and capital projects will be evaluated, including the role of federal and state grants. An inventory of funding alternatives will consider changes to current funding options such as local sales tax and options for special tax authority for capital projects.

The outcome of this effort will be a recommended strategy for funding stormwater management services over the next decade including the feasibility of user-fees as the primary financial resource. It is anticipated that two workshops will be held during this phase of Task 3, focused on the overall program and funding methodology.

DRAFT

STAFF REPORT



Meeting Date:	June 16, 2025	Meeting Title:	Town Council Workshop
Submitting Department:	Administration	Presenter:	Tyler Sinclair
Agenda Item:	Revenue Alternatives Special Election November 4, 2025	Public Comment:	Yes

Purpose & Policy Considerations.

The purpose of this item is for the Council to consider potential revenue alternatives for placement on a November 4, 2025, Special Election.

Requested Action.

Council direction on whether they would like to notify the County Clerk of a Special Election on November 4, 2025 for the purpose of asking the voters to consider local funding alternatives.

Recommendations.

This is a policy matter reserved for Council direction.

Background.

During the 2025 Town Council retreat, Council requested staff identify all available revenue alternatives for discussion and consideration during budgeting this year. The goal of this effort was to have available revenue alternatives as part of the overall budget discussion, including but not limited to increases/decreases in expenditures, use of the general fund to balance the budget, setting the general fund reserve, increases/decreases in staffing, and/or increases/decreases in departmental levels of service.

In addition, the Council discussed at its annual retreat, and ultimately directed staff to present, some aspirational revenue and expenditure options as part of the FY26 Budget process. Building on this at the March 17 Town Council Workshop, the Council discussed and directed staff to explore the following alternative revenue sources as part of development of the draft FY2026 Budget:

- Lodging Tax – Town only or Town/County
- Sales Tax – Town Only
- SPET – Town Only

During the Fiscal Year 2026 Budget review, the Council was presented and discussed all additional authorized sources of revenue available to the Town. The Council did not identify any additional revenue sources for inclusion in the FY26 Budget but agreed to discuss available revenue alternatives further.

The first available opportunity to hold an election to consider adding additional revenue to the Town Budget would be a Special Election on November 4, 2025. The term "special election" means a municipal election on any question which may legally be submitted to the voters of a municipality other than at a regular municipal primary or general election or an election on the question of whether to incorporate. In order to have such an election on November 4, 2025, the Town is required to notify the Teton County Clerk by July 17, 2025. Additionally, staff provided a chart below that sets out additional future election dates and the latest date County Clerk notification would need to be provided.

Upcoming Revenue Generating Election Dates and Ballot Resolution Deadlines		
Election Date	Election Type	110 Day Deadline to Provide Ballot Resolution to County Clerk
Tuesday, August 19, 2025	Special	Thursday, May 1, 2025
Tuesday, November 4, 2025	Special	Thursday, July 17, 2025
Tuesday, May 5, 2026	Special	Thursday, January 15, 2026
Tuesday, August 18, 2026	Primary	Thursday, April 30, 2026
Tuesday, November 3, 2026	General	Thursday, July 16, 2026
Tuesday, May 4, 2027	Special	Thursday, January 14, 2027
Tuesday, August 17, 2027	Special	Thursday, April 29, 2027
Tuesday, November 2, 2027	Special	Thursday, July 15, 2027

It should be noted that under the law the County Clerk may say “no” to a Town request for a Special Election. The County Clerk indicated that it is not likely; however, the cost of the County Clerk putting on a Special Election would be approximately \$75,000-\$100,000, which would be paid for by the Town if the election was for Town-only items. Currently, there is no election scheduled for November 4, 2025, and staff expect this cost would have to be paid for by the Town. Should the County Clerk say “no” to the Town’s request, the Town (Town Clerk) could hold the election. Although this is allowable under State Statutes, staff do not find this an achievable option given the short period of time until November 4, 2025. If the County agreed to place a joint ballot question to the voters, it is assumed the cost of the Special Election would be shared between the Town and County.

Analysis

Staff have identified below the potential revenue alternatives that Council, and/or the Town and County together, could present on a November 4, 2025 Special Election.

Lodging Tax

Ability to Impose:

- 5 cents split between state and local government.
 - 3 pennies to the State (80% to State Office of Tourism and 20% to Reserve)
 - 2 pennies to Travel & Tourism /County/Town. 60% to TTB. 40% split County/Town based on point of sale.
- 2 cents locally in 1 cent increments.
 - 2 additional pennies could be added via community vote
 - Can be joint Town/County ballot or separate only in the Town
- Must be voter approved
- Town and County can share in lodging tax assessment or act independently.
- Total local option for lodging tax cannot exceed 2 pennies. Combined with State 5-penny assessment, the max allowed by statute is 7 pennies.

1 cent of additional Lodging Tax, based upon the FY2026 Budget, would generate approximately \$950,000 for the Town. Specifically, that revenue would be spent as follows: 30% for visitor impact, 10% to the Town general fund. The remaining 60% is provided directly to the TTB for promotion and not included here.

Should the Town want to discuss the placement a Count wide Lodging Tax on a November 4, 2025, Special Election, the Town could request to place discussion and action of the request on the Joint Meeting on July 7, 2025.

Key Question 1: Does the Town want to ask Teton County to hold a November 4, 2025, Special Election for the purpose of adding a County Wide Lodging Tax? If yes, in what amount?

Key Question 2: Does the Town want to ask the Teton County Clerk to hold a November 4, 2025, Special Election for the purpose of adding a Town only Lodging Tax? If yes, in what amount?

Sales and Use Tax - General

For sales and use tax, the state imposes 4 pennies. The state retains 69% of the revenues generated by those 4 pennies and the remaining 31% of revenue is split between the county and town based on population.

It is important to remember that we often use the broad term "sales tax," when we are actually referring to both the "sales tax" and the "use tax." Use tax is when the item may have been purchased out of state, but its use is in the State of Wyoming. Staff notes to be aware that for every sales tax statute, there is an identical corresponding use tax statute. Use tax also includes sales from remote sellers that sold more than \$100,000 of gross sales in Wyoming or had more than 200 separate transactions in Wyoming. W.S. §39-15-501.

An important note is that when you add up the taxes for General Revenue, SPET, and Economic Development, the county cannot exceed 3 pennies. Thus, with SPET at 2 pennies, and General Revenue at 1 penny the County is at their maximum amount allowed at this time. The Town can assess an additional 1 penny in 0.25 increments for General or SPET.

Town only General Or Specific Purpose Excise Tax (SPET)

- 1 penny maximum
- 0.25 increments
- This only applies within the Town.
- May be a) all General, b) all SPET, or c) split between General and SPET if the purposes are voted on separately
- This is an addition to any County taxes, not in lieu of.
- Must be voter approved

The Department of Revenue does not track collections by jurisdiction. Staff have provided below a County-wide estimate of the increased revenue that would be generated by an increase in Sales and Use Tax collections by 0.25 increments for consideration based upon the FY26 Budget projections. In addition, the table includes an estimated range for Town-only tax if the Town only portion were to generate 30% - 60% of total County wide tax collections.

Increments of Assessment	County-wide Tax Collected	Town Estimated Range at 30% - 60%
0.25	\$ 6,206,500	\$1.8M - \$3.7M
0.50	\$ 12,413,000	\$3.7M - \$7.4M
0.75	\$ 18,619,500	\$5.6M - \$11.2M
1.00	\$ 24,826,000	\$7.4M - \$14.9M

In addition, in the past Council has requested information regarding the impact on households making less than 120% of annual median Income (AMI) from an increase in Sales and Use Tax. According to the State Department of Economic Analysis Division, households typically spend 30% of their income on taxable goods, which excludes groceries, health care, etc. Based upon this for a 3-person household earning \$143,748 annually, a 1 cent increase in Sales and Use Tax would cost approximately \$430 annually.

What percent of sales tax is paid by visitors? Where did the 60% come from and is it accurate?

- Staff finds that there is no definitive source or audited reports to confirm the answer to this question. Per a Wyoming Office of Tourism report prepared by Dean Runyan Associates, approximately 52% of Teton County local sales tax in calendar 2023 is from visitor spending. In addition, the State Economic Analysis Division estimates that 55% of sales tax in Teton County is paid for by visitors.

Key Question 3: Does the Town want to ask the Teton County Clerk to hold a November 4, 2025, Special Election for the purpose of adding a Town only Sales Tax? If yes, in what amount?

Key Question 4: Does the Town want to ask the Teton County Clerk to hold a November 4, 2025, Special Election for the purpose of adding a Town only Specific Purpose Excise Tax (SPET)? If yes, in what amount and for what projects?

Please see attached additional information regarding the alternative revenue options available for a November 4, 2025, Special Election.

Possible Alternatives.

- Council could consider additional dates for holding an election for consideration of alternative revenue with or without the County
- Council could choose to discuss alternative revenues further as part of the Strategic Budget item beginning in August
- Other

Comprehensive Plan & Priority Alignment.

To successfully implement the Comprehensive Plan, Council must set priorities, be strategic, and be disciplined. A critical component is prioritizing and identifying the necessary level of funding to address desired goals, policies, and strategies, which is critical to the successful implementation of Town Priorities and the Comprehensive Plan. In addition, many of the programs and strategies called for in the Comprehensive Plan come at an additional cost to the community, that current funding levels cannot accommodate. Chapter 8 - Quality Community Service Provision calls for *"Timely, efficient and safe delivery of quality services and facilities in a fiscally responsible and coordinated manner."*

Fiscal Impact.

Revenue: Estimates for each revenue option are provided above in the Analysis section.

Expense: The cost estimate if the Town is required to pay for a special election in November is also provided above in the Background section.

Staff Impact.

The staff impact of preparing this information is estimated at approximately 12 hours.

Attachments or Links.

Alternative Revenue Options

Suggested Motions.

While staff provides no recommendations for this item, potential motions, should the Council be inclined to make any, include:

Option 1: To request a Town-only special election in November

I move to direct staff to prepare language for a Town-only _____ ballot [*insert type of revenue*] for _____ pennies [*insert number of pennies*] and coordinate with the County Clerk, and any other County elected offices as appropriate, to effectuate a special election therefore on November 4th 2025.

Option 2: To request a discussion of a special election in November with Teton County

I move to direct staff to request the Teton County Board of County Commissioners agree to place an agenda item to consider a special election in November of 2025 for County Wide Lodging Tax ballot at the July 7th Joint Meeting.

Option 3: Other Motions are Identified by Council

Alternative Revenue Sources

Lodging Tax

Ability to Impose:

- The 5 cents currently assessed by the State is split between state and local government
 - 3 pennies to the State (80% to State Office of Tourism, and 20% to Reserve)
 - 2 pennies to local bodies: Travel & Tourism (TTB), Teton County, and the Town and split as follows:
 - 60% of this revenue goes to the TTB.
 - The remaining 40% of the revenue is split between the County/Town based on point of sale.
- 2 cents locally in 1 cent increments, none is currently assessed.
 - 2 additional cents could be added via community vote
 - Can be joint Town/County ballot or separate – i.e., only in the Town or only in the County
- Must be voter approved
- This funding is separate and distinct from Sales Tax 7 penny limit

Meeting Questions

1. Can the BCC veto a Town request for voter approval?
 - No. The state statute does not create interaction between the BCC and the Town when the lodging tax *is being imposed in the Town only by the Town*.
 - Conversely, when this tax is initiated by a tax proposition on the ballot by other acceptable means, which is either **a)** a petition by at least 5% of Teton County voters (i.e., Town residents as well) or **b)** a resolution from the county + 50%+1 of cities, the statute says the “election shall be at the direction and under the supervision of the board of county commissioners.”
2. What is the schedule for notifying County Clerk of desire to place a ballot question?
 - In terms of getting a proposition on a ballot, Wyo. Stat. § 39-15-203(a)(ii) dictates use of the bond election statute, which says “[n]ot less than one hundred ten (110) days before a bond election, the political subdivision shall provide written notification to the county clerk specifying the date of the election and the bond question.” (Wyo. Stat. § 22-21-103).
3. When is the next available election date?
 - As noted, Wyo. Stat. § 39-15-203(a)(ii) dictates use of the bond election statute, which directs, in summary and relevant part, that:
 - The election shall be held on the same day as a primary election or a general election, or on the Tuesday next following the first Monday in May or November, or on the Tuesday next following the third Monday in August.
 - The Town must notify the county clerk in of the election date no less than 110 days before the election.
 - The question must be crafted to meet statutory requirements for the ballot.
4. Who pays for a special election?
 - It depends.
 - If the ballot proposition is initiated by either **a)** a petition by at least 5% of Teton County voters or **b)** a resolution from the County + 50%+1 of cities, it is paid for by the County.
 - This statute is silent as to financial support when cities elect to put a city-only lodging tax proposition on the ballot, however, the election statute cities are directed to follow indicate that the political subdivision holding the election pays the actual costs or an equitably proportioned share of a concurrent election, as determined by the county clerk.

- Staff discussed this issue with Clerk Murphy who confirmed there is no cost to add a ballot question on a regular election schedule (v. a special election).
- 5. Would the funding formula be 60/30/10 or 90/10?
 - The statute dictates that the 60%/30%/10% split of lodging tax revenue *only applies* if the Town collects revenue equal to or greater than \$2.78m, from *all three* pennies – 2% from the state lodging tax & 1% from the local lodging tax).
 - Recall the Town has never implemented a Town-only lodging tax. Staff discussed details of the statute – how revenue will be determined exactly in terms of collection periods, cost of living being factored in, how vendors will be taxed for point-of-sale between the Town and County, and various other technical matters – as well as historic collections in Teton County and, to the maximum extent possible, are confident the 1% would generate enough revenue to meet the minimum threshold for the 60%/30%/10% split.
- 6. What is the length of time for which the tax can be implemented?
 - Wyo. Stat. § 39-15-203(a)(ii) dictates that if the proposition is approved, the same ballot language must be proposed at “the second general election following the election at which the proposition was initially approved and at the general election held every four (4) years thereafter.”
 - Notably, the percentage can increase (from 1% to 2%) if desired at one of those subsequent elections.

Estimated Budget Impact of a 1% Lodging Tax:

1 cent of additional Lodging Tax, based upon the FY2026 Budget, would generate approximately \$950,000 for the Town. Specifically that revenue would be spent as follows: 30% for visitor impact, 10% to the Town general fund. The remaining 60% is provided directly to the TTB for promotion and not included here.

Sales Tax – Town only

Pursuant to Wyoming Statutes Title 39, Chapter 15, Article 2 Local Sales Tax (AKA “Local Option Tax”), the Wyoming Legislature has provided that local governments may impose certain local sales taxes as explained below:

Municipal (City/Town) Option: General Purpose Sales Tax and/or Special Purpose Excise Tax (SPET)

- 1 penny maximum combined
- 0.25 increments
- This only applies within the Town.
- May be a) all General, b) all SPET, or c) split between General and SPET if the purposes are voted on separately.
- This is in addition to any County taxes, not in lieu of.
- Must be voter approved
- Currently, this is not imposed.

The County Treasurer reports that each penny of Sales Tax (whether it is “state” or “local” taxes) generates, approximately, \$24M. The Department of Revenue only tracks collections by county, thus we are not able to separate out the Town. Below staff have provided an estimate of the increased revenue that would be generated *in the County in total* by an increase in Sales Tax collections by 0.25 increments for consideration. Staff estimate that the Town portion of the County wide collections could be approximately 40%-60%.

<u>Increments of Assessments</u>	<u>County Wide Tax Collected</u>	<u>Estimated Town only Collections 40%-60%</u>
0.25	\$6,000,000	\$2,400,000 - 3,600,000
0.50	\$12,000,000	\$4,800,000 - 7,200,000
0.75	\$18,000,000	\$7,200,000 - 10,800,000
1.00	\$24,000,000	\$9,600,000 - 14,400,000

April 21, 2025 Meeting Questions

1. Can the BCC veto Town request for voter approval?
 - The BCC cannot “veto” the Town’s request under the current taxing structure.
 - The statute provides two ways to get initiate a proposition to voters.
 - **First**, “if a county has imposed at least . . . 1% of the [general penny sales tax] and has voted to *initially approve or continue* a [County-wide SPET] . . . a city or town within the county . . . may propose [municipal tax] . . .” This sets out a structure wherein the Town can act: If A or B, then the *city may propose*.
 - Second, however, is the situation when a county does not both of those taxes in place, under which circumstance the law tells us the BCC “*may* adopt a resolution” authorizing cities to propose a municipal tax. This sets out a structure where a county could choose not to put the authorizing resolution in place.
 - Ultimately, at this time, this discretion is inapplicable to the Town because currently both the taxes cited above are in place in Teton County in accordance with the statute.
2. What is schedule for notifying County Clerk of desire to place a ballot question?
 - In terms of getting a proposition on a ballot, Wyo. Stat. § 39-15-203(a)(vi) dictates use of the bond election statute, which says “[n]ot less than one hundred ten (110) days before a bond election, the political subdivision shall provide written notification to the county clerk specifying the date of the election and the bond question.” (Wyo. Stat. § 22-21-103).
3. When is the next available election date?
 - As noted, Wyo. Stat. § 39-15-203(a)(vi) dictates use of the bond election statute, which directs, in summary and relevant part, that:
 - The election shall be held on the same day as a primary election or a general election, or on the Tuesday next following the first Monday in May or November, or on the Tuesday next following the third Monday in August.
 - The Town must notify the county clerk in of the election date no less than 110 days before the election.
 - The question must be crafted to meet statutory requirements for the ballot.
4. Who pays for a special election?
 - The election statute cities are directed to follow indicate that the political subdivision holding the election pays the actual costs or an equitably proportioned share of a concurrent election, as determined by the county clerk.
 - Staff discussed this issue with Clerk Murphy who confirmed there is no cost to add a ballot question on a regular election schedule (v. a special election).
5. Is there a correlation to the County SPET on how long the Town can impose a General or SPET in the Town.
 - It depends.
 - **Option 1:** Town seeks to impose the municipal tax for general purposes.

- When there is both a general penny in place and a county-wide SPET – i.e., the current tax landscape in Teton County – the statute dictates that the municipal tax cannot be *proposed* until at least 90 days after a county-wide SPET has been approved or continued and must *terminate* no more than 90 days following the end of the SPET.
 - Notably, the statute is not clear on the circumstance – which Teton County has where two SPET pennies are authorized and expire at different times. However, the statutory language favors it expiring with the *latter* expiring SPET (in our case the 2022 SPET, not the 2024 SPET) because the statute requires a minimum of one penny in effect to sustain the municipal tax.
- Moreover, the amount of the municipal tax cannot exceed the amount of tax that the Town collects from the SPET during the same period. In speaking with the Department of Revenue, staff learned that the Department expects the interaction of taxes in a city only to be an ongoing and fluid conversation with our Finance Director, the County Clerk, and the Department and staff is comfortable working through this process to monitor collections if a tax is implemented by the voters.
- **Option 2:** Town seeks to impose the municipal tax for municipal SPET.
 - In this case, like county-wide SPET taxes, the tax terminates when the amount specified in the proposition approved by the electors is collected (or the Town may agree to terminate the tax if the tax collected reaches the actual cost of the completed projects).
- **Option 3:** Town seeks to impose the municipal tax for separate purposes – SPET and general.
 - In this case, there would be two deadlines in accordance with the above two bullets.
- **Option 4:** Town seeks to impose the municipal tax via a BCC resolution.
 - In this case, the resolution must specify that the municipal tax terminates after 2 years.

6. Does a new Tax need to be voted on every 4 years? Can it be made permanent?
- The answers to these questions are embedded in the response to Question 5 above.

What percent of sales tax is paid by visitors? Where did the 60% estimate come from and is it accurate?

- Staff finds that there is no definitive source or audited reports to confirm the answer to this question. Per a Wyoming Office of Tourism report prepared by Dean Runyan Associates, approximately 52% of Teton County local sales taxes in calendar year 2023 came from visitor spending. In addition, the State Economic Analysis Division estimates that 55% of sales tax in Teton County is paid for by visitors.

STAFF REPORT



Meeting Date:	June 16, 2025	Meeting Title:	Regular Workshop
Submitting Department:	Joint Transportation Division	Presenter:	Charlotte Frei
Agenda Item:	WY22 Comments to WYDOT	Public Comment:	Yes

Purpose & Policy Considerations.

The purpose of this item is for Council to comment on a letter for staff to transmit to WYDOT, on behalf of Council, with formal comments on the WY22 preliminary NEPA screening process.

Requested Action.

Staff requests Council provide verbal feedback on contents of the letter. Staff will revise the letter and transmit it without bringing it before the Council.

Recommendations.

Staff recommends Council discuss the letter, provide feedback, and direct staff to send the letter without bringing it to another Council meeting.

Background.

Staff presented a memorandum from the Transportation Advisory Committee during the June 2, 2025 Joint Meeting. The Commission and Council discussed the letter. Councilmembers were invited to attend the WY-22 Open House on June 4, 2025. Based on the June 2 JM and June 4 Open House, staff is requesting direction to submit formal comment on Council's behalf.

The Teton County Commission will submit a separate letter with issues specific to Teton County, such as Walton Ranch. The original Transportation Advisory Committee (TAC) memorandum is attached for reference, however the letter from council was written as a stand-alone comment letter from the Town Council. The letter from Town Council references the staff memorandum, but it need not be considered a 'cover letter'. WYDOT has extended the deadline for public comment to July 8 to accommodate a letter from the July 7 Joint Meeting, however since the Town and County are writing separate letters, this topic will not be on the July 7 JM. Staff will take direction during the workshop on June 16. Staff will revise the letter based on the discussion, then finalize and send the letter. The letter will not come back before council after June 16, 2025. Note that staff is requesting an opportunity to formally comment on the resulting alternative that the WYDOT team generates based on the public comment from the June 4 in-person/virtual open house through the end of the comment period (July 8). In other words, we are requesting WYDOT review the attached letter, consider its contents, and then present back to the community the best alternative they anticipate carrying into NEPA.

Analysis & Key Policy Questions.

N/A

Possible Alternatives.

Council could choose not to send a letter. Alternatively, Council members can send their own letters.

Comprehensive Plan & Priority Alignment.

Principle 7.3: Coordinate transportation planning regionally.

Fiscal Impact.

N/A

Staff Impact.

Staff will revise the letter based on discussion today and transmit the letter via e-mail.

Attachments or Links.

Draft Letter on Town Council Letterhead dated June 16, 2025

Staff memorandum to WYDOT dated May 16, 2024

Suggested Motion.

I move to direct staff to revise the letter based on today's discussion and transmit it to WYDOT.



Town Council
Arne Jorgensen, Mayor
Jonathan Schechter, Vice Mayor
Kevin Regan
Alyson Sperry
Devon Viehman

June 16, 2025

Ms. Kelly Cope
WYDOT NEPA Supervisor
5300 Bishop Blvd.
Cheyenne, WY 82009

Re: Comments on Wyoming-22 Level 1 and Level 2 pre-NEPA Screening

Dear Ms. Cope,

Thank you for hosting a robust and well-resourced open house on June 4, 2025. Several Town Councilmembers attended, and we appreciate the additional time your project team dedicated to engaging with the public and responding to questions.

We appreciate the thoughtful work our transportation staff have contributed to the WY22 process and the opportunity to remain engaged as this effort advances. As the duly elected representatives of the Town of Jackson, we are writing to broaden the lens and reinforce our community's values and long-term goals. We support our staff's comments regarding the importance of a safe and functional roadway aligned with community character. Furthermore, we want to underscore several key elements, particularly our community's commitment to environmental stewardship and quality of life, as adopted in our Comprehensive Plan.

Some of these priorities are reflected in the staff memorandum dated May 16, 2025. We write today to ensure the following items are elevated and fully considered as you move into the next stage of screening and analysis.

1. We wish to emphasize the July 2023 (dated July 12, 2022) scoping letter from our boards to WYDOT, and particularly paragraphs 10 and 11 regarding pathway connectivity, quality, and potential 4(f) facility determination.
2. Our constituents frequently express concerns over high speeds, which increase crash risk and crash severity. Constituents also express concerns over traffic flow breakdown and the unpredictability that arises from gridlock. Staff has advised that lower speeds (less than 50-55 mph) 1) could enable functional flows while reducing crash potential and severity, and 2) can only be achieved by designing the roadway cross-section to naturally operate at a low speed. We would like to emphasize the need for a safe, functional corridor that matches our community's desired character. A solution that minimizes gridlock while enabling safe,



steady flow could balance safety and mobility, per the project Purpose & Need. As staff noted in their memorandum, please consider narrower (e.g., 11-foot) lane widths to facilitate traffic calming.

3. Several of the proposed concepts for the 'Y' intersection include extensive hardscaping that appears inconsistent with the community's character and vision for the Town. We encourage the design team to explore design and operational strategies that enhance person throughput while minimizing the overall footprint and visual impact of the intersection.
4. The NEPA evaluation should include a rigorous evaluation of impacts on jurisdictional wetlands and conservation easements.
5. The last opportunity these elected bodies had to provide formal direction was through the adoption of the Integrated Transportation Plan (ITP), originally in 2015 and updated in 2020. Since that time, our official input has been limited to the July 2023 comment letter and participation in public engagement opportunities. We respectfully request the opportunity to provide official comment on the recommended alternative emerging from the current screening process, prior to the initiation of the NEPA phase.
6. The proposed Tribal Trail Connector (TTC) is being evaluated as part of the pre-NEPA and NEPA process, which will include a no-build alternative. We would like to reiterate that a potential TTC would be intended to improve neighborhood connectivity, utilizing a low-speed cross-section that discourages cut-through traffic. The Connector would benefit both Town neighborhoods and neighborhoods west of Town by providing a route that does not pass through the "Y." Such a connection could be used for school trips, commute trips, and other household travel with appropriate origins and destinations. Traffic calming measures should be used to further discourage cut-through traffic and keep speeds low.
7. The WY22 corridor runs through our "County Valley" subarea, as defined in our Comprehensive Plan. Communities have the authority and responsibility to guide future land use, and our Plan clearly envisions the character of Highway 22—and similar roadways—evolving to include added capacity for alternative modes of travel, mitigation of wildlife-vehicle collisions (such as through wildlife crossings), and scenic enhancements. The image below, from page IV-66 of our Comprehensive Plan, highlights relevant ecosystem stewardship and growth management objectives. While these policies primarily address land use, we believe the character of WY22 should reflect and reinforce these values—supporting wildlife movement, preserving natural skylines, and protecting scenic vistas. We ask that these objectives be considered as aspects of the Community Goals (related to wildlife and environment), alongside the Purpose & Need as the team advances into the next level of screening and analysis.



Town Council
Arne Jorgensen, Mayor
Jonathan Schecter, Vice Mayor
Kevin Regan
Alyson Sperry
Devon Viehman

Policy Objectives

<i>Common Value 1: Ecosystem Stewardship</i>	1.1.c: Design for wildlife permeability
	1.3.a: Maintain natural skylines
	1.3.b: Maintain expansive hillside and foreground vistas
	1.3.c: Maintain natural landforms
	1.4.b: Conserve agricultural lands and agriculture
<i>Common Value 2: Growth Management</i>	1.4.c: Encourage rural development to include quality open space
	3.1.b: Direct development toward suitable Complete Neighborhood subareas
	3.1.c: Maintain rural character outside of Complete Neighborhoods
<i>Common Value 3: Quality of Life</i>	5.3.b: Preserve existing workforce housing stock
	7.1.f: Complete major transportation projects based on Major Capital Group approach
	7.2.d: Reduce wildlife and natural and scenic resource transportation impacts

We look forward to continued engagement and request that these priorities be reflected in upcoming alternatives and clearly addressed in future briefings and documentation.

Sincerely,
TOWN OF JACKSON, WYOMING

Arne O. Jorgensen
Mayor, Jackson Town Council

Attest: Riley Hovorka
Town Clerk

CC: John Eddins, District Engineer; Bob Hammond, Resident Engineer; Jeff Brown, Liaison; and Pete Stinchcomb, District 3 Construction Engineer.



MEMORANDUM

TO: WYDOT WY-22 Project Team

FROM: Jackson/Teton County Transportation Advisory Committee

DATE: May 16, 2025

SUBJECT: WY22 Preliminary NEPA - Level 2B Corridor Screening Comments

The Transportation Advisory Committee (TAC) thanks the Wyoming Department of Transportation and the Jacobs team for their continued partnership and willingness to engage in robust dialogue regarding potential improvements to the WY-22 corridor. As representatives of local government agencies and community interests, we understand the significance of this corridor not just for regional mobility, but for safety, livability, and community character.

We appreciate the opportunity to offer formal comments on the pre-NEPA alternatives and associated design elements. The following feedback reflects our commitment to the adopted guiding documents: the Comprehensive Plan and Integrated Transportation Plan. Our comments are organized by major themes that emerged during recent TAC discussions and align with the evaluation lenses of safety, multimodal mobility, and long-term community goals as prioritized by staff to develop our October 22, 2024 memorandum.

1. Safety: The Paramount Consideration

- **Design Speed:** The TAC supports a corridor design speed of 45 mph or less, aligning with our shared safety priorities. A lower design speed supports reduced crash severity, enhanced turning movement safety, and increased pedestrian and bicycle safety. WYDOT indicated that the corridor cross-sections may not change significantly unless the design speed is lowered to 35 mph. As noted in our October 2024 comments, “the section of WY22 being evaluated connects Wilson, Teton Village, and the Town of Jackson. All the connecting facilities have a speed limit between 30-45 mph during the day and 30-35 mph at night. A reduced design speed will result in a safer, narrower, and more reliable facility.” A 35-mph design speed could be appropriate given the speeds on these other facilities. The posted speed should also reflect the design speed, and we are willing to work with WYDOT and the state to ensure design and posted speeds that reduce crash frequency and severity for the millions of humans and wildlife that travel along this corridor.



- **Roundabout Safety Function:** While roundabouts (RABs) can provide traffic calming benefits, their effectiveness as traffic calming features is diminished if bypass lanes are included. Free-flow movements can undermine the intended metering effect, particularly at Spring Gulch and 'the Y' (the intersection between US-89/191 and WY-22). We question the necessity of a northbound bypass at the Spring Gulch RAB.
- **Signage and Driver Comprehension:** WY-22 sees heavy volumes of out-of-town visitors and infrequent drivers. Designs should minimize reliance on complex signage and instead rely on physical, intuitive features to guide behavior. Treatments such as right-in/right-out designs, physical medians, and clear channelization are preferred over signage or education campaigns.
- **Intersection Safety:** The scale and complexity of proposed 7-8 lane intersections at the Y are concerning. Such configurations are likely to create confusion and compromise safety, especially for pedestrians and cyclists.
- **Typical Section Lane Widths:** TAC did not have the opportunity to discuss lane widths in detail, but we would like to understand the implications of 11-foot lanes instead of 12-foot lanes in the typical sections.

2. Multimodal Mobility and Access

- **Transit and Mode Choice:** Multimodal infrastructure should be prioritized in every segment, including transit travel time reliability improvements such as queue jumps and pedestrian structures. However, these elements must be clearly safe and navigable in winter conditions.
- **Pedestrian/Bike Access:** Specific attention should be paid to safe connections across and along WY-22. This includes attention to the following:
 - Crossing opportunities at or near Tribal Trails, and to Teton Science Schools Mountain Academy.
 - Multimodal access to Search and Rescue Road and West View Condos, which is currently unclear.
 - Bridge segments, particularly Fish Creek, must include adequate width for pathway accommodation.
 - TAC would like to reiterate the statement from the original July 2023 scoping letter from elected officials, that design alternatives include 'continuous, separate pathways that meet or exceed the connectivity of the existing conditions and are designed to modern best practices and guidelines'.



- **Community Character:** The TAC is concerned that the current alternatives prioritize vehicle throughput over person throughput. Wide intersections and highway-like features are inconsistent with our goals to promote alternative transportation. Community character and visual impacts are important to the NEPA evaluation.
-

3. Physical Design to Drive Behavior

- **Access Management and lane add/drops:** WY-22 is not a controlled-access facility and should not be treated as such. With many driveways and access points, designs must acknowledge this 'rural arterial' reality, incorporating appropriate turn lanes and signalization. Lower design speed will support safer acceleration and deceleration for those trying to access and egress the facility, and could potentially simplify development lengths for acceleration and deceleration lanes under the 4-lane and 5-lane alternatives.
 - **Curb/Gutter and Medians:** We support the inclusion of continuous curb and gutter treatments from Spring Gulch to US-89, both from a drainage and ROW impact perspective. TAC also supports further exploration of vegetated medians and curb-and-gutter to reduce the footprint and enhance corridor safety and aesthetics. Given the number of driveways (between Mallard Lane and the Y) that someone could pull into if they are experiencing automotive issues, is an 8-foot shoulder throughout the section necessary, or could a 2-foot curb-and-gutter from Mallard to the Y enhance WY-22 as a community gateway and reduce the width of the necessary cross-section for a similar or lower cost?
-

4. Community Gateways and Traffic Calming

- **Gateway Vision for RABs:** The TAC envisions the roundabout at Spring Gulch functioning as a community gateway and traffic calming element, not merely as a throughput tool. Physical and visual design cues should signify entry into a populated area.
 - **Footprint Aesthetic Concerns:** Multiple committee members voiced concern over the visual impacts of wide intersections and excessive hardscape. These designs could trigger strong public opposition and are at odds with the rural and scenic qualities valued by the community.
-

5. Impacts: ROW, Visual, and Constructability

- **ROW and Visual Impacts:** Design alternatives that improve safety for all users are preferred. Sensitivity is needed in constrained areas such as:
 - Walton Ranch (consider small alignment shifts and vertical vs. horizontal separations)



- East of Coyote Canyon (challenging slope)
- Segment 2 intersection footprints and Segment 3 property edges
- **Design Adaptability:** The NEPA process should evaluate a slightly wider disturbance envelope to allow adaptability for potential future discoveries, such as wetlands.
- **Property Impacts:** Additional property sketches will be essential for evaluating stakeholder impacts and preparing for public outreach, such as for property accesses near the Y.

6. Wildlife and Pathway Integration

- **Pathway/Wildlife Fence Alignment:** The TAC strongly recommends that wildlife fencing and the pathway not cross one another. Designs should keep the fencing consistently on one side, with careful alignment to minimize the number and complexity of crossings. These should be evaluated early, before final design.

7. Constructability and Implementation Practicalities

- **Winter Maintenance:** Winter conditions in the corridor demand that designs accommodate plowing operations. Variations in lane widths, curbing, and island placement should be evaluated for plowability.
- **Queue Jump Feasibility:** Intersections like Buffalo Way raise questions about how queue jump lanes function with potential cul-de-sac conditions for unfamiliar drivers. Clarity and predictability must be built into these designs, e.g. an arm bar that only lifts for buses if the leg is restricted to START buses.
- **Operational Flexibility:** The TAC supports design solutions that retain operational flexibility, particularly opportunities for future transit enhancements, including high-occupancy vehicle lanes. The lanes could be deployed during peak hours only, if needed, for vehicles with e.g. three or more passengers. The image below depicts a bus-only lane that requires limited signage, however an HOV lane on WY-22 could permit any vehicle above a selected threshold to encourage carpooling.



Image Source: Seattle.gov

We recognize that many of these discussions are based on preliminary concepts. However, the TAC believes that embedding these priorities into the early NEPA evaluation will strengthen the project's alignment with community values and long-term plans.

Thank you for considering our input as this process advances. We welcome continued collaboration and look forward to engaging further during the June 4, 2025 public meeting and beyond.

COUNCIL WORK & PRIORITY ITEMS 2025		
JANUARY	FEBRUARY	MARCH
TOWN MTGS.	TOWN MTGS.	TOWN MTGS.
Affordable Non-Residential Space Scoping Report	Parking Garage Fees	Karns Meadow Monitoring/Advisory Group
Council Appointment Process	Wildlife Feeding & Bear Resistant Trash Annual Update	User Fees from EV Charging
EBike Scoping Report	Policy Manual Update	Cemetery Service Level Standards
Public Art Plan	User Fees from EV Charging (Continued)	RFP for Greenhouse Gas Inventory
JM	JM	JM
Transportation CIP	90 Virginian Lane Development Agreement	90 Virginian Lane Development Agreement
	Destination Management & Marketing Organization (DMMO)	Joint Powers Agreement Updates
	Fire/EMS JPA Process Schedule	Community Wildfire Mitigation (CWPP)
APRIL	MAY	JUNE
TOWN MTGS.	TOWN MTGS.	TOWN MTGS.
Scoping Related to LDRs (continued)	Scoping Related to LDRs	Stormwater Plan & Establishing Stormwater Utility
Legislature: WAM Update	Equity Task Force	Contract Award for Greenhouse Gas Inventory
JM	JM	JM
90 Virginian Lane	Fire/EMS Standards of Cover/Levels of Service	Safe Streets for All
Indicator Report	Fire/EMS Strategic Planning Including Housing Volunteers	90 Virginian Lane
Safe Streets for All	Housing Supply Plan & Work Plan	
	Joint Long Range Work Plan	
	Transportation Work Plan	
	90 Virginian Lane (Special Meeting)	

COUNCIL WORK PLAN CALENDAR 2025 (CONTINUED)			
JULY	AUGUST	SEPTEMBER	
TOWN MTGS.	TOWN MTGS.	TOWN MTGS.	
Ecosystem Health Indicators & Sustainability Plan Update	Strategic Budgeting	Strategic Budgeting	
Rodeo Grounds Lease	Snow King/Maple Way	Develop Sworn Mounted Patrol Unit	
Public Art Plan	Interim Parking Action Plan Update	County Water/Wastewater Service Level Connections/Policy	
Strategic Comms Plan & Language Access	Adjust Management of Grand Targhee Grant Program		
JM	JM	JM	
Joint Powers Agreement Timelines	Joint Powers Agreement Updates	Joint Powers Agreement Updates	
Housing Preservation Program	5 Year Strategic Transit Development Plan		
Transportation System Monitoring: Traffic Impact Study Update			
OCTOBER	NOVEMBER	DECEMBER	
TOWN MTGS.	TOWN MTGS.	TOWN MTGS.	
County Water/Wastewater Service Level Connections & Policy	Updates to Title 13: Utilities	Strategic Budgeting	
Int'l Energy Conservation Building Code Update	Reimagining Special Events	Stormwater Plan & Establishing a Stormwater Utility	
Town Employee Housing Strategy	Mobility Hubs		
Revaluation of 2:1 Workforce Housing Bonus	Strategic Budgeting		
Legislative Approach			
Strategic Budgeting			
JM	JM	JM	
5 Year Strategic Transit Development Plan (TDP)	Joint Powers Agreement Updates	Joint Powers Agreement Updates	
Joint Powers Agreement Updates	Health & Human ServiceUpdates	Fire/EMS Standards of Cover/Levels of Service	
		Safe Streets for All	

SHIFTS & CHANGES		SPECIAL MEETINGS
Transportation Work Plan moved from April to May—		Process of Updating Comp Plan
Strategic Comms Plan & Language Access moved from June to July		Long-term Strategic Vision/Plan Focused on Housing
5 Year Strategic Transit Development Plan moved from June to August		Community Visioning Scoping/Check in
E-Bike/Pathway Safety moved from June to August		Create 21st Century Operating System
County Water/Wastewater Service Level Connections & Policy moved from May to September		
Transportation Impact Study and LDR amendment moved from June to TBD		DURING BUDGETING PROCESS
Fire/EMS Standards of Cover/Levels of Service moved from July JM to TBD		Staff Benefit Package Review
		Grant Management Staff member or consultant