AGENDA

MEETING OF THE MINTURN TOWN COUNCIL
Minturn Town Center, 302 Pine Street
Minturn, CO 81645 • (970) 827-5645

Wednesday March 4, 2020

Executive Session – 5:30pm
Regular Session – 6:30pm

MAYOR – John Widerman
MAYOR PRO TEM – Earle Bidez

COUNCIL MEMBERS:
Terry Armistead
George Brodin
Brian Eggleton
Eric Gotthelf
Chelsea Winters

When addressing the Council, please state your name and your address for the record prior to providing your comments. Please address the Council as a whole through the Mayor. All supporting documents are available for public review in the Town Offices – located at 302 Pine Street, Minturn CO 81645 – during regular business hours between 8:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays.

The Minturn Town Council will open the Regular Meeting at 5:30pm for the purpose of convening into Executive Session. At (approximately) 6:30pm the Council will convene into Regular Session for the remainder of the meeting.

Executive Session – 5:30pm

1. **Executive Session: An Executive Session for the purpose of conferencing with the Town Attorney for the purpose of receiving legal advice on a specific legal question under CRS Section 24-6-402(4)(b) – Water Issues – Metteer**

Regular Session – 6:30pm

2. **Call to Order**
   - Roll Call
   - Pledge of Allegiance

3. **Public comments on items which are ON the consent agenda or are otherwise NOT on the agenda as a public hearing or action item. (5-minute time limit per person)**

4. Approval of Consent Agenda

A Consent Agenda is contained in this meeting agenda. The consent agenda is designed to assist making the meeting more efficient. Items left on the Consent Agenda may not be discussed when the Consent Agenda comes before the Council. If any Council member wishes to discuss a Consent Agenda item please tell me now and I will remove the item from the Consent Agenda and place it in an appropriate place on the meeting agenda so it can be discussed when that item is taken up by the Board. Do any Council members request removal of a Consent Agenda item?

- February 19, 2020 Minutes Pg 4
- Resolution No. 08 – Series 2020 a Resolution approving the Holy Cross Energy Community Enhancement funds toward the improvement of sidewalks - Metteer Pg 9

5. Approval of Agenda

- Items to be Pulled or Added
- Declaration of Conflicts of Interest

6. Special Presentations

- Council Comments/Committee Reports

PUBLIC HEARINGS AND/OR ACTION ITEMS

7. Public Hearing/Action Item: Ordinance No. 02 – Series 2020 (Second Reading) an Ordinance amending Chapter 16 of the Minturn Municipal Code – Hunn/Sawyer (30 min) Pg 11

DISCUSSION/DIRECTION ITEMS

8. Discussion/Direction Item: Water Regulations & Water System Loss – John Volk (60 min) Pg 20

9. Discussion/Direction Item: 100 Block Traffic Study – Hunn (60 min) Pg 49

10. Discussion/Direction Item: Recycle/Compost update – Metteer/Widerman (20 min) Pg 62

COUNCIL INFORMATION / UPDATES

11. Staff Updates

- Manager's Report Pg 64
- Future Agenda Items Pg 125

MISCELLANEOUS ITEMS

12. Future Meeting Dates

a) Council Meetings:

- March 4, 2020
- March 18, 2020
- April 1, 2020

13. Other Dates:

- Bar Stool Racing – March 7, 2020
- Candidate Forum – March 19, 2020

14. Adjournment

OFFICIAL MINUTES

MEETING OF THE MINTURN TOWN COUNCIL
Minturn Town Center, 302 Pine Street
Minturn, CO 81645 • (970) 827-5645

Wednesday February 19, 2020

Work Session – 5:30pm
Regular Session – 6:30pm

MAYOR – John Widerman
MAYOR PRO TEM – Earle Bidez

COUNCIL MEMBERS:
Terry Armistead
George Brodin
Brian Eggleton
Eric Gotthelf
Chelsea Winters

When addressing the Council, please state your name and your address for the record prior to providing your comments. Please address the Council as a whole through the Mayor. All supporting documents are available for public review in the Town Offices – located at 302 Pine Street, Minturn CO 81645 – during regular business hours between 8:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays.

Work Session – 5:30pm

- 3-Mile Plan Review – Hunn

Regular Session – 6:30pm

1. **Call to Order**
   - Roll Call

The meeting was called to order by Mayor John W. at 6:32pm in the Council Chambers.

Those present include: Mayor John Widerman, Mayor Pro Tem Earle Bidez and Town Council members George Brodin, Brian Eggleton, Terry Armistead, and Eric Gotthelf. Note Chelsea Winters was excused absent.

Staff present: Attorney Michael Sawyer, Town Planner Scot Hunn, and Town Treasurer/Town Clerk Jay Brunvand.

- Pledge of Allegiance

2. **Public comments on items which are ON the consent agenda or are otherwise NOT on the agenda as a public hearing or action item. (5-minute time limit per person)**

3. **Approval of Consent Agenda**

A Consent Agenda is contained in this meeting agenda. The consent agenda is designed to assist making the meeting more efficient. Items left on the Consent Agenda may not be discussed when the Consent Agenda comes before the Council. If any Council member wishes to discuss a Consent Agenda item please tell me now and I will remove the item from the Consent Agenda and place it in an appropriate place on the meeting agenda so it can be discussed when that item is taken up by the Board. Do any Council members request removal of a Consent Agenda item?

- February 5, 2020 Minutes
- Resolution 06 – Series 2020 A Resolution appointing Maggard and Hood as the Town Audit firm – Brunvand

Motion by Terry A., second by Brian E., to approve the Consent Agenda of February 19, 2020 as presented. Motion passed 6-0. Note Chelsea W. was excused absent

4. **Approval of Agenda**
   - Items to be Pulled or Added

Motion by George B., second by Terry A., to approve the Agenda of February 19, 2020 as presented. Motion passed 6-0. Note Chelsea W. was excused absent.

- Declaration of Conflicts of Interest

5. **Special Presentations**
   - Eagle County Housing Task Force – Reuther/Hunn

Scot H., Mr. George Ruther, and Dr. Bobby Lipnick updated on the County Housing Task Force. The presentation included a review of how projects are slowed down by building regulations and provided preliminary recommendations on how the processes can be enhanced.

Discussion ensued as to the next steps and how current processes can be refined to be more conducive to encourage attainable housing options.

John W. felt it would be productive to have the Task Force write municipal code to outline specific building codes and best practices that a municipality could adopt rather than require each municipality to develop their own codes acknowledging the limited resources of staff and funding. Mr. Ruther noted that in general the costs to develop development guidelines are not significant. The important aspect is to develop the public/private partnerships.

- Council Comments/Committee Reports

Brian E. noted the State of the County address. He outlined some of the successes over the past year that were mentioned in the report.

George B. and Woody Woodruff discussed a meeting between the citizens and Battle Mountain. This meeting discussed the pros of the development remaining within the town. The general consensus was that the meeting was productive and covered many items that have caused divisive concerns including previous agreements, Bolts Lake, and water issues. Michael S. noted the Town did recommend Battle Mtn to reach out to the citizens and then bring back developments from the meetings to the Town in the form of a proposal that would be vetted publicly.

Earle B. stated the Water Committee and ERWSD are working together to reestablish the relationship at the Board level. He stated they have had two very good meetings and have been able to discuss options with Bolts Lake, the Town well fields, collaborative opportunities, and other issues. The issues discussed are not insurmountable and he was encouraged that they are as receptive. He noted March 7 at noon is the Bar Stool Races and outlined the classes and how to enter. Volunteers are encouraged!

Eric G. updated on EDAC, they had their quarterly meeting and discussed the Rail Jam, and encouraged other events. The Winter Market has been discontinued and they are looking at ideas to fill that opening.

John W. noted the sustainability collaborative is moving forward. The county appears to be holding off on the sustainability codes until other municipalities move forward. The ECO Transit app is up and being tested. It is intended to simplify travel in the valley. John W. noted the water rates are based on the first 1000 gal of use. He attended the Mayors and Managers meeting. He felt it is more high level rather than the nuts and bolts. Minturn has been nominated for the Actively Green Business of the Year. Be on the lookout for the Town survey. This year will be an on-line survey and will not include a mail out portion unless specifically requested by a resident.

PUBLIC HEARINGS AND/OR ACTION ITEMS

Note: Item 7 was taken up ahead of item 6 to accommodate those waiting in the audience.

6. **Public Hearing/Action Item:** Ordinance No. 02 – Series 2020 (First Reading) an Ordinance amending Chapter 16 of the Minturn Municipal Code – Hunn/Sawyer

Scot H. outlined the proposed Ordinance and how it will address the proposed changes in Chapter 16. The Ordinance will eliminate certain sections and modify others. Second, the Ordinance will address engineering standards and specifications in Appendix C. This has been reviewed by the Planning Commission and they voted to recommend approval by Council.

Concern was addressed that how interpretations are made by the Planning Director are dependent on the expertise of the Planning Director and that perhaps some more detail might be necessary to better reduce subjectivity between future planners. Scot H. agreed and noted

that this is a stop-gap measure to allow sufficient time to review and propose additional changes. It was noted that every site and every proposal is different and requires the ability to make decisions greatly dependent on the project itself which the scope and magnitude might not be necessary to include all engineering standards for a relatively minor modification. This proposed change gives staff the ability to properly and reasonably review projects. Discussion ensued how this will be utilized at staff level and how a developer will know what is required without staff's assistance or that staff could ask for everything or nothing based on an interpretation of the Planner.

Michael S. recommended approval of the Ordinance with the direction to Staff to develop policy on how this will be implemented.

Public Hearing opened

Mr. Ken Mentz, 110 Williams St, noted that the height limit is 28 feet but that it could be interpreted differently. He wanted to ensure that this would be enforced at 28 feet.

Public hearing closed

Motion by Brian E., second by George B., to approve Ordinance No. 02 – Series 2020 (First Reading) an Ordinance amending Chapter 16 of the Minturn Municipal Code as presented. Motion passed 6-0. Note Chelsea W. was excused absent.

7. **Public Hearing/Action Item:** Resolution 07 – Series 2020 A Resolution approving a Conditional Use Permit 302 Main Street – Hunn

Scot H. outlined the proposed Resolution. Noting that the applicants were given a preliminary approval for this use in 2018. Recently the applicant came in looking to reactivate the process. The question of use and how many uses on the property exist, there is a residential, with a secondary apartment currently, the proposal calls for the current and the addition of a third use of a commercial space. The triple use triggered the need for the CUP. It is noted that the existing parking which runs parallel to Norman St is partially in the town ROW and will need to be addressed with an encroachment agreement.

Mr. Greg Sparhawk, as the architect, and Mr. Woody Woodruff, applicant, outlined the project and site information.

Public Comment Opened
No Comments
Public Comment closed

Motion Terry A./Brian E. to approve Resolution 07 – Series 2020 A Resolution approving a Conditional Use Permit 302 Main Street as proposed with the pending agreement on the parking. Motion passed 6-0.

COUNCIL INFORMATION / UPDATES

8. Staff Updates

- Manager's Report

Jay B. reminded that the candidate forum is scheduled for March 19 from 6pm to 8pm and it will be televised.

There were comments and issues with the town hall heating system. Many comments were made that the Council Room was cold. Last Thursday we had power fluctuations and outages which cause the heating system to fail. Jay B. was in on Saturday and was unable to restore so set up to have repairs ASAP. Repairs were made on Tuesday. Just prior to the meeting starting tonight, Jay B. reset the heat system and it seems to be working now.

Jay B. is working with another company on the sound system and will keep all informed as updates come.

- Future Agenda Items

MISCELLANEOUS ITEMS

9. Future Meeting Dates

a) Council Meetings:
- February 19, 2020
- March 4, 2020
- March 18, 2020

10. Other Dates:

- Bar Stool Racing – March 7, 2020
- Candidate Forum – March 19, 2020

11. Adjournment

Motion by Earle B., second by Bryan E., to adjourn at 8:55pm. Motion passed 6-0. Note Chelsea W. was excused absent.

_____
John Widerman, Mayor

ATTEST:

_____
Jay Brunvand, Town Clerk

To: Mayor and Council

From: Jay Brunvand

Date: March 4, 2020

Agenda Item: Resolution 08 – Series 2020

REQUEST:
Council is asked to approve Resolution 08 – Series 2020, a Resolution to dedicate the $2,000 Community Enhancement Donation from Holy Cross Energy to support the installation of sidewalks.

INTRODUCTION:
Annually Holy Cross Energy donates $2,000 to Minturn as part of the Franchise Agreement with the purpose of being dedicated to community enhancement.

ANALYSIS:
This will be the third year Minturn will contribute the Holy Cross Community Enhancement funds towards the sidewalk project.

COMMUNITY INPUT:
2016 Survey indicated safety and pedestrian access as community priorities.

BUDGET / STAFF IMPACT:
Decrease project cost coverage by $2,000

STRATEGIC PLAN ALIGNMENT:
In accordance with Strategy #3 to sustain and invest in the things that define Minturn as a proud, sturdy mountain town to "Keep Minturn Minturn". Minturn strongly values its full-time resident community. Founded by the working-class, the town continues to emphasize the local's experience and quality of life. To maintain the character of Minturn and its ability to transcend time, the community must continually make strides to emphasize the working class.

RECOMMENDED ACTION OR PROPOSED MOTION:
This Resolution is included in the approval of the Consent Agenda.

ATTACHMENTS:
- Resolution 08 – Series 2020

PO Box 309 • 302 Pine St • Minturn, CO 81645 • www.minturn.org • info@minturn.org • 970-827-5645

TOWN OF MINTURN, COLORADO
RESOLUTION NO. 08 – SERIES 2020

A RESOLUTION ALLOCATING THE 2020 HOLY CROSS ENERGY COMMUNITY ENHANCEMENT FUND PROCEEDS FOR THE PURPOSE OF CONTRIBUTING TO THE REPLACEMENT OF DETERIORATING SIDEWALKS IN MINTURN

WHEREAS, Section 11.1 of the Holy Cross Energy Franchise Agreement, renewed in 2011, states that Holy Cross Energy Community Enhancement funds can be used for beautification projects and development thereof; and

WHEREAS, The Town has requested the use of these 2020 funds, in the amount of $2,000, from Holy Cross for the purpose of contributing to the replacement of sidewalk sections to enhance vehicle and pedestrian traffic;

NOW THEREFORE, BE IT RESOLVED by the Town of Minturn Town Council, State of Colorado, the Holy Cross Energy Community Enhancement Fund proceeds from the fiscal year 2020 will be applied toward sidewalk restoration to enhance vehicle and pedestrian traffic.

INTRODUCED, READ, APPROVED, ADOPTED AND RESOLVED this 4th day of March, 2020.

TOWN OF MINTURN

By:_____
John Widerman, Mayor

ATTEST:

_____
Jay Brunvand, Town Clerk

To: Mayor and Council

From: Scot Hunn, Planning Director

Date: February 12, 2020

Agenda Item: Chapter 16 Amendment Ordinance

REQUEST:
Review and approval of an ordinance amending the following sections of Chapter 16 – Zoning, Minturn Municipal Code:

1. Sec. 16-2-50 – Specific Lot requirements and dimensional standards
2. Appendix 'C' – Minturn Engineering Standards and Specifications

INTRODUCTION:
The Minturn Planning Commission has been reviewing Chapter 16 – Zoning, for several months starting in August 2019. The focus of the Planning Commission's review has been to examine permitted uses within each zone district, as well as associated development and/or design standards.

The ultimate goal of the Chapter 16 Update Project will be to adopt a significantly reformatted and updated zoning document that reflects and supports the community's goals and policies by amending permitted uses as well as design and development standards within each zone district. Staff intends to complete the update project and present a draft Chapter 16 document by April or May 2020 for public review and adoption by the Town Council. This project has been ongoing and each of the Planning Commission work sessions held since August of 2019 has been advertised and open to the public.

During the course of several of those work sessions, the Planning Commission identified one particular section – *Specific Requirements and Dimensional Limitations* – needing immediate attention to amend certain provisions that no longer reflect the Town's best interests; are extraneous; or, are problematic from the standpoint of interpretation and enforcement.

Therefore, the first section of the attached Chapter 16 Amendment Ordinance sets forth a draft of proposed changes where certain provisions are eliminated, and others are amended through changes in the text. Additional amendments to Chapter 16 will be forthcoming following public review of the comprehensive update to the chapter and the accompanying zoning maps.

Similarly, the second section of the attached ordinance addresses minor revisions to the text of the Town's engineering standards and specifications, Appendix 'C' of the Minturn Municipal Code.

The Minturn Engineering Standards currently require significant and detailed engineering plans and studies for most development proposals, regardless of the scale and scope of a project (e.g., a new major subdivision vs. a new single-family home project).

This 'one-size-fits-all' approach presents practical issues and difficulties for property owners and for Town staff as each project is unique and, with the exception of major Planned Unit Development (PUD) developments or subdivisions, many smaller projects typically do not require the same level of engineering plans and specifications.

The proposed amendment to Appendix C is intended to allow the Planning Director and/or Town Engineer to waive or require certain submittal requirements – based on project scope and scale - to ensure that engineering details are right sized, rather than 'one-size-fits-all.'

Last, the Planning Commission reviewed proposed changes to Chapter 16, Article 22 – *Nonconforming Uses and Structures*, Minturn Municipal Code at the same time that they considered changes to Specific Lot Requirements and Dimensional Standards and Appendix C. Following review of the proposed changes to Article 22 – which would have provided flexibility in the Town's process to consider additions to pre-existing nonconforming structures – staff was directed to remove the proposed language from this ordinance and to allow the Town more time to analyze the existing language in Article 22 before proposing any future changes.

ANALYSIS:
The update to Chapter 16 – Zoning has been ongoing for months and is a strategic goal and priority of the Town Council as a direct means to ensure that the Town's standards and processes are consistent and effective in achieving the goals and policies outlined in the 2009 Minturn Community Plan and the 2018 Strategic Plan. Changes to Appendix C are more recent but similarly allow the Town to more consistently and effectively administer the Town's standards.

While a more comprehensive Chapter 16 amendment package will be presented to the Planning Commission and Town Council in spring 2020, the proposed changes are needed to ensure that problematic sections or provisions of the existing code are amended now before more projects are affected.

COMMUNITY INPUT:
The draft ordinance was presented to the Minturn Planning Commission on January 22, 2020. That hearing was advertised and publicly noticed in accordance with the Minturn Municipal Code. Members of the public were given the opportunity to speak at that hearing and to provide feedback to the Commission.

The same opportunity is provided at the Minturn Town Council regular meeting of February 19, 2020 when the proposed Chapter 16 Amendment Ordinance will be presented and discussed.

BUDGET / STAFF IMPACT:
N/A.

STRATEGIC PLAN ALIGNMENT:
The Planning Commission's review of proposed amendments to the Minturn Municipal Code and/or general policies contained within master planning documents aligns with the following key strategies:

PRACTICE FAIR, TRANSPARENT AND COMMUNICATIVE LOCAL GOVERNMENT

THE TOWN WILL SEEK TO MAKE INFORMED, DATA-BASED DECISIONS WITH A STANDARD OF "DOING IT RIGHT." WITH AN HONEST APPROACH TO ALL ASPECTS OF LOCAL GOVERNMENT AND A FOCUS ON THE PUBLIC PROCESS, THE TOWN COUNCIL AND STAFF ARE COMMITTED TO SERVING MINTURN WITH THE HONESTY AND INTEGRITY EXPECTED OF A SMALL-TOWN GOVERNMENT.

ADVANCE DECISIONS/PROJECTS/INITIATIVES THAT EXPAND FUTURE OPPORTUNITY AND VIABILITY FOR MINTURN

The ability for Minturn to approach development as resilient, sustainable, creative and diverse will allow the town to continue embracing what has "made Minturn, Minturn." The town can further leverage its crossroads location as a valley-wide benefit and competitive advantage.

RECOMMENDED ACTION OR PROPOSED MOTION:

1. Approve the Chapter 16 Amendment Ordinance.

   Recommended Motion:

   "I move that the Minturn Town Council approve Ordinance No. 02 – Series 2020, as presented and because the amendments are in the best interest of the public health, safety and welfare of the citizens of the Town."

ATTACHMENTS:

- Chapter 16 Amendment Ordinance

TOWN OF MINTURN, COLORADO
ORDINANCE NO. 02 – SERIES 2020

AN ORDINANCE OF THE TOWN OF MINTURN, COLORADO AMENDING THE ZONING CODE OF THE TOWN OF MINTURN SET FORTH AS CHAPTER 16 OF THE MINTURN MUNICIPAL CODE.

WHEREAS, the Town of Minturn ("Town") is a legal and political subdivision of the State of Colorado for which the Minturn Town Council ("Town Council") is authorized to act; and

WHEREAS, the Town is authorized by the Local Government Land Use Control Enabling Act of 1974, §29-20-101 through §29-20-108, C.R.S., as amended, and §31-23-301, C.R.S., as amended, to plan for and regulate the use of land within the Town's jurisdiction, and to enact zoning, subdivision, and other land use and development regulations; and

WHEREAS, the Town Council and Planning Commission have held various work sessions and public hearings to receive public input on changes to the Zoning Code; and

WHEREAS, §31-23-304, C.R.S., provides that the Town shall provide for the manner in which its land use and development regulations are amended, supplemented, or changed; and

WHEREAS, §16-21-430 of the Minturn Municipal Code provides that Town Council, Planning Commission or Planning Director may initiate an amendment of the Zoning Code, and §16-21-440 provides that the Town's Planning Commission shall review all proposed amendments to the Town's Zoning Code at a duly noticed public hearing and shall recommend approval or denial of a proposed amendment by Town Council, and that the Town Council shall finally approve or deny a proposed amendment at a duly noticed public hearing; and

WHEREAS, the Planning Commission at a duly noticed public hearing on January 22, 2020 and considered the Zoning Code amendments and provided a recommendation to the Town Council; and

WHEREAS, the Town Council at duly noticed public hearings on February 19, 2020 considered the proposed Zoning Code amendments and recommendation of the Planning Commission and determined that the amendments are in the best interest of the public health, safety and welfare of the citizens of the Town and conformed in all respects to the Minturn Municipal Code.

NOW THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF MINTURN, COLORADO:

SECTION 1. The foregoing recitals are incorporated herein as if set forth in full.

SECTION 2. Chapter 16 of the Minturn Municipal Code, the Zoning Code of the Town of Minturn, is hereby amended to read as follows, with additions shown in <u>double underlined text</u>, and ~~strike through language is deleted~~. Sections of Chapter 16 which are not expressly described in this Ordinance are deemed to continue to be in full effect without change.

Sec. 16-2-50. - Specific lot requirements and dimensional standards.

(a) Portions of a lot contained in a river or creek~~, or that are within the river or creek setback~~ as defined by the ordinary high-water mark, shall not be included in the lot's square footage for purposes of calculating the maximum building lot coverage or the maximum impervious surface area.

(b) Setback from river/creeks. A strip of land measured horizontally from the ordinary high water mark on each side of any live creek shall be protected in its natural state. If necessary to protect the river or creek, additional river/creek setback may be required. Underground utilities may be located in the river/creek setback; provided that there is no practical alternative location for such utilities, that plans are approved by the Town Council as a conditional use and that all construction scars are revegetated. Otherwise, river and creek setbacks are to remain natural vegetation.

(c) The river or creek setback shall remain, or be re-vegetated to, natural riparian vegetation. No manmade structures may be placed in the river or creek setback except as permitted by ~~Section 16-3-20(b)~~ by this Chapter 16.

(d) The ordinary high water mark shall be identified by a licensed professional surveyor on all applicable surveys, plats and plans required under this Chapter 16.

~~(e) No side yard setback is required for the party wall of a duplex.~~

~~(f) When a lot in a nonresidential zone is contiguous to a lot in a residential zone, the required side yard setback of the residential zone shall apply to the common lot line of the property in the nonresidential zone.~~

~~(g) When a corner lot is in a commercial zone and adjoins a lot in a noncommercial zone, the Planning Director shall designate where the front, side and rear yard setbacks apply.~~

~~(h) When a corner lot is in a noncommercial zone, the Planning Director shall designate the front yard and rear yard. All setbacks shall apply to the lot. Clear vision areas on all corner lots must be established.~~

~~(i) When a lot is not rectangular in shape, and the building is constructed so that one (1) side of the building is parallel to an adjacent Town street or right-of-way, the setback between the building line and that lot line which is not parallel to the building line may be calculated as the average of the nearest and farthest distances between the building corners and the lot line, except that the minimum setback at any point shall not be less than five (5) feet.~~

(~~j~~e) The minimum setback between two (2) structures on the same lot is six (6) feet.

(~~k~~f) Garage doors in the Old Town Character Area facing Main Street must be set back at least eighteen (18) feet from the lot line.

(~~l~~g) Fences and boundary walls are allowed in the setbacks subject to the following limitations.

(1) Height shall not exceed six (6) feet in the rear yard setback.

(2) Height shall not exceed six (6) feet in the side yard setback located from the front of the primary structure on the lot and the rear lot line and shall not exceed four (4) feet from the front of the primary structure on the lot and the front yard lot line. Clear vision requirements may be more restrictive.

(3) Height shall not exceed four (4) feet in the front yard setback.

(4) Height of fences shall be measured from natural grade adjacent to or underneath the fence to avoid the appearance of artificially raised fence structures; berms or retaining

walls may be used underneath or in combination with fences located within setback areas, however fence height will be measured from the base elevation (bottom of wall or toe of slope of a berm) adjacent to or underneath the fence to establish maximum height.

(~~m~~h) Encroachments of Architectural features – Rear Yard. The following architectural features ~~may not encroach into the side yard setbacks. The following architectural features~~ may encroach into the rear yard setback but must be a minimum of five (5) feet from the rear lot line(s):

(1) Unroofed terraces or patios, not to exceed forty-eight (48) inches above grade.

(2) Chimneys.

~~(3) Bay windows. Bay windows may encroach up to three (3) feet into the front yard setback.~~

(43) Awnings or shading devices.

(~~n~~i)Encroachments of Architectural features – Front Yard:

(1) Bay windows, including roof overhangs or eave lines, may encroach up to three (3) feet into the required front yard setback area.

(~~o~~j)Roofed terraces, decks and patios are not permitted in the required setbacks.

(~~o~~k) ~~Cantilevering of a structure, over the maximum ground floor square footage, is not permitted.~~ All cantilevered building elements and areas count toward maximum building lot coverage and maximum impervious lot coverage.

(~~p~~l)A maximum of eighteen (18) inches of roof eave ~~eve~~ may encroach into the required front, rear, and side yard setbacks. No encroachment of structures or roof eaves is permitted within the 30-foot live stream setback area. ~~No more than eighteen (18) inches of roof eve can encroach into a setback even with snow clips or cold storage roof. Larger roof eves are allowed, but only eighteen (18) inches can be in the setback. This restriction includes covered porches and decks.~~

(~~q~~m) The first ten (10) feet of the front yard setback shall be dedicated to landscaping, except for driveways and non-motorized sidewalks and trails. This requirement does not apply to commercial and mixed-use zones in the Old Town Character Area.

(~~r~~o) For structures two (2) or three (3) stories in height, a maximum roof length of sixty (60) feet in one (1) direction is allowed. After sixty (60) feet, the roof height needs to be lowered by a minimum of nine feet for a minimum run of twenty (20) feet in length or change directions a minimum of ninety (90) degrees for a minimum length of twenty (20) feet.

(~~s~~p) Sheds.

(1) To constitute a shed that does not require a building permit, the structure shall be no larger than one hundred twenty (120) square feet in ground floor area and no higher than twelve (12) feet. Sheds in excess of one hundred twenty (120) square feet of ground floor area or twelve (12) feet in height require a building permit.

(2) Sheds must be located in the rear or side yards, but such structures may not encroach into the side yard setbacks. A shed may encroach in the rear yard setback so long as it is a minimum of five (5) feet from all lot lines.

(3) Sheds in all character areas and zones require a limited use review permit approved by the Planning Director. The denial of a limited use review permit by the Planning Director may be appealed to the Planning and Zoning Commission.

(4) Sheds count toward the maximum impervious surface lot requirements.

(~~t~~q)Greenhouses.

(1) In all ~~character areas and~~ zones, a permanent greenhouse (which is not fully deconstructed and removed prior to winter) which exceeds one hundred twenty (120) square feet in the ground floor area or exceeds twelve (12) feet in height must receive a limited use review permit approved by the Planning Director and obtain a building permit. The denial of a limited use review permit by the Planning Director may be appealed to the Planning and Zoning Commission.

(2) Permanent greenhouses shall be counted toward maximum impervious lot coverage requirements.

(3) Non-permanent greenhouses (which are fully deconstructed and removed prior to winter every year) do not count toward maximum impervious lot coverage requirements.

(~~u~~r) Any residential structure constructed in a commercial zone district must comply with the applicable residential maximum building lot coverage limitation, the residential maximum impervious structure limitation, the residential building height limitation and residential set back requirements.

APPENDIX C - MINTURN ENGINEERING STANDARDS AND SPECIFICATIONS

~~**DEVELOPMENTS LESS THAN 1 ACRE**~~

~~**JULY 2008**~~ **FEBRUARY 2020**

CHAPTER 1 - GENERAL/SUBMITTAL REQUIREMENTS

This manual, entitled Town of Minturn Engineering Standards and Specifications, sets forth the minimum acceptable criteria for public and private utilities and facilities within the Town of Minturn. Dependent on the scale and scope of the proposed private utility or facility, the Planning Director and/or the Town Engineer shall determine applicability of these standards and specifications. Additionally, ~~D~~deviations or variances from these standards may be considered; however, it shall be the responsibility of the applicant to demonstrate to the satisfaction of the Town of Minturn that the proposed variance meets or exceeds the minimum acceptable criteria and standards.

SECTION 1 - SUBMITTAL REQUIREMENTS AND PROCEDURES

The procedures outlined herein apply to consulting engineers and developers seeking approval of civil construction plans and reports. Observing these guidelines will assist in timely review.

1.01 - Minimum Requirements for Approval

In addition to the approval of the subdivision plat and/or site plan, adequate detail drawings and specifications of all necessary public improvements and private construction work (not already covered by Town specifications or exempt from minimum requirements by the Planning Director and/or Town Engineer) shall be submitted for review and approval. Based on applicability as determined by the Planning Director and/or Town Engineer ~~B~~before issuance of a permit for any phase of development by the Town, approvals will be required for:

- storm drainage system (including drainage letter, erosion control plans and reports, storm water quality plans)
- grading plans
- geotechnical report

INTRODUCED, READ BY TITLE, APPROVED ON THE FIRST READING AND ORDERED PUBLISHED BY TITLE ONLY AND POSTED IN FULL ON THE OFFICIAL TOWN WEB SITE THE 19th DAY OF FEBRUARY, 2020. A PUBLIC HEARING ON THIS ORDINANCE SHALL BE HELD AT THE REGULAR MEETING OF THE TOWN COUNCIL OF THE TOWN OF MINTURN, COLORADO ON THE 4TH DAY OF MARCH, 2020 AT 6:30p.m. AT THE MINTURN TOWN HALL 302 PINE STREET, MINTURN COLORADO 81645.

TOWN OF MINTURN, COLORADO

John Widerman, Mayor

ATTEST:

By: _____
Jay Brunvand, Town Clerk

THE TOWN OF MINTURN, COLORADO, ORDAINS THIS ORDINANCE ENACTED ON SECOND READING AND ORDERED PUBLISHED BY TITLE ONLY AND POSTED IN FULL ON THE OFFICIAL TOWN WEB SITE THIS 4TH DAY OF MARCH, 2020.

TOWN OF MINTURN, COLORADO

John Widerman, Mayor

ATTEST:

By: _____
Jay Brunvand, Town Clerk

Order Confirmation

COLORADO MOUNTAIN NEWS MEDIA

02/24/20 8:48:37

Account	1032852	**Customer**	TOWN OF MINTURN
Ordered By	Jay Brunvand	**Customer Address**	P.O. BOX 309
Ad#	0000555345		MINTURN CO 81645 USA
Sales Rep	Jerilynn Medina	**Customer Phone**	9708275645
Order Taker	Jerilynn Medina	**Customer EMail**	treasurer@mintum.org
PO Number		**Customer Fax**	
Invoice Text	Ord. 02 Series 2020		

Net Amount	Payment Method	Payment Amount	Amount Due
$21.68	Billed-Invoiced	$0.00	$21.68

Ad Number	**0000555345-01**
Ad Size	1 X 34 li
Modular Ad Size	
Order Start Date	**02/25/2020**
Order Stop Date	**02/25/2020**
Placement	LEGALS CMN
Position	CMN Legal
Products	8INTA/8VD

TOWN OF MINTURN, COLORADO
ORDINANCE NO. 02 – SERIES 2020

AN ORDINANCE OF THE TOWN OF MINTURN, COLORADO AMENDING THE ZONING CODE OF THE TOWN OF MINTURN SET FORTH AS CHAPTER 16 OF THE MINTURN MUNICIPAL CODE

INTRODUCED, READ BY TITLE, APPROVED ON THE FIRST READING AND ORDERED PUBLISHED BY TITLE ONLY AND POSTED IN FULL ON THE OFFICIAL TOWN WEB SITE THE 19th DAY OF FEBRUARY, 2020. A PUBLIC HEARING ON THIS ORDINANCE SHALL BE HELD AT THE REGULAR MEETING OF THE TOWN COUNCIL OF THE TOWN OF MINTURN, COLORADO ON THE 4TH DAY OF MARCH, 2020 AT 6:30p.m. AT THE MINTURN TOWN HALL 302 PINE STREET, MINTURN COLORADO 81645.
TOWN OF MINTURN, COLORADO

_____
John Widerman, Mayor

ATTEST:

By: _____
Jay Brunvand, Town Clerk

Published in the Vail Daily on February 25, 2020.
0000555345

Ad shown is not actual print size.

To: Mayor and Town Council
From: Michelle Metteer
Date: March 4, 2020
Agenda Item: Water Regulations & System Loss Update

REQUEST:
John Volk, Water Quality Control Professionals LLC, is attending the March 4, 2020 Town Council meeting to provide an update pertaining to ongoing water quality regulations by the Colorado Department of Public Health and Environment (CDPHE) as well as discuss Minturn's water system loss.

INTRODUCTION:
As a Home Rule Municipality and drinking water service provider, Minturn is required to meet regulations necessary for the public consumption of water. Providing safe drinking water is a critical service the Town provides, and every effort is made to ensure the quality of the water provided meets all necessary requirements.

ANALYSIS:
The Town of Minturn strives for compliance in all aspects of our drinking water operations. Council has approved an action plan to ensure Minturn's compliance for decades to come with the installation of a new water treatment plant, water storage tank, and commitment to distribution line upgrades. The first steps within the Minturn Water Capital Improvement Plan start this spring. With the completion of this Plan Minturn expects to be in full compliance with CDPHE state regulations. (For public health and safety issues, not complying with state regulations is not an option).

COMMUNITY INPUT:
Ongoing

BUDGET / STAFF IMPACT:
See Minturn's 2019 Water Infrastructure Capital Improvement Plan

STRATEGIC PLAN ALIGNMENT:
The ability to provide a critical utility covers all four key strategies within Minturn's strategic plan:

ADVANCE DECISIONS/PROJECTS/INITIATIVES THAT EXPAND FUTURE OPPORTUNITY AND VIABILITY FOR MINTURN

PRACTICE FAIR, TRANSPARENT AND COMMUNICATIVE LOCAL GOVERNMENT

LONG-TERM STEWARDSHIP OF THE NATURAL BEAUTY AND HEALTH OF MINTURN'S ENVIRONMENT

SUSTAIN AND INVEST IN THE THINGS THAT DEFINE MINTURN AS A PROUD STURDY MOUNTAIN TOWN TO "KEEP MINTURN MINTURN"

RECOMMENDED ACTION OR PROPOSED MOTION:

- N/A

ATTACHMENTS:

- Minturn Water Treatment Plant Turbidity memo; May 29, 2017
- CDPHE Sanitary Survey; October 11, 2018
- CDPHE Sanitary Survey Corrective Action Plan; February 6, 2019
- CDPHE Requirements Change Notice – Increased Monitoring for COMBINED RADIUM
- SGM Minturn Copper Exceedance Notice Memo
- CDPHE Copper Action Level Exceedance; October 22, 2019
- Minturn Water System Loss graph
- Minturn Water System Loss chart

Water Quality Control Professionals LLC

May 29, 2017
Subject: Minturn WTP turbidity issues

Turbidity can be defined as the cloudiness or haziness of a fluid caused by suspended solids that are usually invisible to the naked eye. While the measurement of turbidity is an important test when trying to determine the quality of water it does not identify individual substances. High turbidity doesn't mean the water is unsafe to drink. It just says something is there and that there could be an issue.

The most common measurement for turbidity in the United States is the Nephelometric Turbidity Units, abbreviated from here on as NTU. There are several ways you can check turbidity in water, the most direct being a measurement of the reduction in strength of a light source as it passes through a water sample. Slowsand filtration has turbidity limits imposed by the EPA. The SS filter turbidity is required to be under 1.0. NTU 95% of the time during the monthly readings. Minturn is required to sample turbidity every 4 hours while the filter is operating.

In mid-March we started filter #3 to conduct a performance test at 90 gpm. The air temperatures were higher than normal, and we were seeing early signs of runoff. The filter was in operation for about two weeks when the effluent turbidity measurements started to rise. They climbed to 1.3 NTU and the filter was taken offline and the test aborted; however, we were under 1 NTU for 95% of the monitoring period despite the upward trend. I believed this was an issue with the filter not ripening due to cold water temperatures. I therefore switched to filter #2 because it has been in use since the fall of 2017 and was ripened. After 4 days the turbidity measurements climbed to over 1.0 and this filter was shut down as well. The filter was only in operation for 4.5 days and we were not able to meet the < 1.0 NTU for 95% of the month requirement. This is a treatment violation, and a public notice is required to be hand delivered to the residents of Minturn.

Until 2015 the Minturn WTP was monitoring NTU measurements from the clear well. This was not the appropriate monitoring point because well #3 also reports to the clear well. This would dilute the NTU readings. Minturn did not have a way to

monitor the combined effluent from the SS filters due to the configuration of the piping at the clear well. Individual NTU analyzers were installed on each filter in 2015.

During early spring runoff the Minturn WTP has been relying on well water only. The SS filters were typically started in mid-June to meet the demands of the town's irrigation needs. The plant was operated this way to prevent early fouling of the filters from runoff water with a high solids concentration.

The system is in compliance for the month of May and should remain in compliance for the remainder of the year.

Why has this not happened during previous years?
1) Well 3 was the only source being used.
2) Before 2015 the turbidity readings were being diluted by well 3.

What this is showing us is the SS filters cannot be relied upon during certain times of the year. Under current demands Minturn can use well water to remain in compliance during spring runoff. This will be difficult with increased demand.

Looking forward I do not believe rebuilding or replacing the slow sand filters is the viable solution. Alternatives such as membranes or mixed media filters should be considered before slow sand filtration. The system selected should be able to handle different sources and varying influent water quality.

Sincerely,

John M. Volk
Water Quality Control Professionals LLC
13863 W LaSalle Pl
Lakewood, CO 80228
970-389-4491
jvolk@wqcpllc.com

COLORADO
Water Quality Control Division
Department of Public Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

October 11, 2018

Mr. Jay Brunvand
Town of Minturn
PO Box 309
Minturn, CO 81645

Subject: Sanitary Survey of Town of Minturn
Public Water System Identification (PWSID) No. CO0119510
Eagle County

Dear Mr. Brunvand:

A sanitary survey was performed on September 24, 2018 by the Field Services Section of the Colorado Department of Public Health & Environment's Water Quality Control Division (the department) at Town of Minturn (the supplier) in accordance with *the Colorado Primary Drinking Water Regulations, 5 CCR 1002-11* (Regulation 11), Sections 11.38(1)(b) and 11.38(2). This letter serves to provide the supplier with written notification of the sanitary survey findings, including any identified significant deficiencies and violations of Regulation 11. The assistance provided was very helpful and is greatly appreciated. Table 1 identifies the parties present during the sanitary survey.

Table 1: Parties Present

Name	Organization
John Volk	Town of Minturn
Isaiah Martinez	Town of Minturn
Heather Drissel, PE	Colorado Department of Public Health & Environment
Kristina Quick, EIT	Colorado Department of Public Health & Environment

In response to this letter, the supplier must provide a written response, documenting resolution of all significant deficiencies and violations, and/or propose a corrective action plan with a corrective action schedule, as required by Regulation 11, Section 11.38(3)(d,f). Also, for findings that are violations of Regulation 11, the supplier must comply with the public notification requirements described in Section V, below. The supplier's written response is due within forty-five (45) days. If a corrective action plan is proposed, it must outline the course of action that has been or will be taken and the date(s) of the completed corrective action(s) and/or the date(s) by which the supplier proposes to correct each significant deficiency and violation of Regulation 11. Table 2 summarizes the number of findings and the required written response and resolution dates.

Table 2: Sanitary Survey Findings

Severity Category	Number Identified	Written Response Due (within 45 days of letter date)	Resolution Due (within 120 days of letter, or department-approved alternate date)	Public Notice Required (Violations of Regulations 11)
Significant Deficiencies	2	November 25, 2018	February 8, 2019	Not required

Severity Category	Number Identified	Written Response Due (within 45 days of letter date)	Resolution Due (within 120 days of letter, or department-approved alternate date)	Public Notice Required (Violations of Regulations 11)
Violations	6	November 25, 2018	February 8, 2019	Required
Observations - Recommendations	4	No response required	Not applicable	Not applicable

Failure to adequately address all significant deficiencies and violations referenced above may result in additional violations of Regulation 11. A list of the findings for each category in Table 2 can be found in the following sections:

Section I: Significant Deficiencies

According to Regulation 11, Section 11.3(71), a significant deficiency means:

> *any situation, practice, or condition in a public water system with respect to design, operation, maintenance, or administration, that the state determines may result in or have the potential to result in production of finished drinking water that poses an unacceptable risk to health and welfare of the public served by the water system.*

The items in this category are significant deficiencies. Please direct questions regarding resolution of the following items to the department inspector.

Significant Deficiencies 1 and 2.

T119 - Treatment: Slow Sand Filter No 1 (SDWIS ID: 013) and Slow Sand Filter No 2 (SDWIS ID: 012)
Proper Operation: Surface water or ground water under the direct influence (GWUDI) of surface water treatment operational practices. Regulation 11, Section 11.8(1)(b) and CDPHE-WQCD Policy 4.

During the sanitary survey, the Department inspector discussed the surface water treatment process with the Supplier's certified operator. The Slow Sand filtration system consists of a three filters: Filters 1 and 2 are located outside and a third filter, Filter 3 is a constructed slow sand filter with a concrete basin inside a building. The original slow sand Filters 1 and 2 were constructed in the 1960's and consist of two 60 feet by 60 feet earthen basins, operated at a capacity below 60 GPM each. The filter schmutzdecke is scraped approximately twice a year in the Fall and Spring.

Drinking Water Policy DW005 - the State of Colorado Design Criteria for Potable Water Systems requires slow sand gravity filters to include the following: a cover, protection from freezing, means to distribute the influent water over the top of the filter without scouring the sand surface. At the time of the sanitary survey, the filters were uncovered with no protection from freezing and the distribution of the water over the top of the filters consisted of an influent pipe with boulders (attachment 1).

Drinking Water Policy DW005 also requires the filter to consist of sand on graded gravel layers for a minimum depth of 30 inches with the supporting gravel must be similar to the size and depth distribution provided for rapid rate gravity filters. The mean support gravel size must be no more than four (4) times the mean grain size of the sand media to minimize intermixing. At the time of the sanitary survey, Filter 1 had approximately 33-inches of sand, however Filter 2 reportedly has only 28-inches of sand media for filtration.

Drinking Water Policy DW005 requires an underdrain system equipped with a main drain and an adequate number of lateral underdrains to collect the filtered water. The current configuration of the underdrain system for the filters is unknown and the filters basin may have had liners in the past. However, there is significant vegetative growth around the filters including trees and large shrubs that can damage a liner (attachment 2) resulting in infiltration of groundwater or short circuiting of the filter. Subsequent to the sanitary survey, the operator reported that the vegetation around the filters was cleared. There is a

remaining concern that any liner present may have been compromised by root growth from trees and shrubs. The filter elevation is also lower that the road adjacent to the filter basins and runoff from the road may wash into the filters during storm events (attachments 3 and 4). A worn pathway for animals to approach the filter was also visible (attachment 3).

Regulation 11, Section 11.8(1)(b) requires, "at a point between where the source water is not subject to recontamination and the entry point, the supplier must install and properly operate water treatment processes that reliably achieve at least the following levels of treatment: (I) 99 percent (2-log) removal of Cryptosporidium, (II) 99.9 percent (3-log) treatment, including filtration and disinfection, of Giardia lamblia,(III) 99.99 percent (4-log) treatment, including filtration and disinfection, of viruses". The Safe Drinking Water Policy 4 further defines the criteria for properly operated water treatment processes. The current condition of slow sand Filters 1 and 2 does not appear to meet the treatment techniques for surface water sources to meet Regulation 11.8(1)(b). To resolve this significant deficiency, the Department expects the Supplier to evaluate the current operation and structural configuration of the slow sand filters 1 and 2 in accordance with the Colorado Design Criteria for Potable Water Systems and industry accepted practices such as the American Water Works Association *Manual of Design for Slow Sand Filtration*. The evaluation will need to identity structural changes and operational procedures that are required to ensure Filters 1 and 2 can provide adequate surface water treatment. The Supplier should submit a plan to the Department providing a timeline for the evaluation and implementation of corrective actions. It is highly recommended that the Supplier consider coordinating with a consulting engineering firm proficient with surface water treatment to evaluate the entire water system infrastructure, plans for community expansion and possible interconnections with neighboring water suppliers.

Section II: Violations

The items in this category are violations of Regulation 11. Please direct questions regarding resolution of the following items to the department inspector.

1. R529 - Monitoring & Recordkeeping and Data Verification:
Monitoring Turbidity (T3): Supplier was not properly monitoring and or recording turbidity values. This is a violation of Regulation 11, Section 11.8(1)(2).

At the time of the sanitary survey, the supplier's turbidimeter for the Filter 1 effluent compliance monitoring location failed and the sample lines for Filters 1 and 2 were being combined and analyzed with the Filter 2 online turbidimeter (attachment 5). The current sampling configuration used by the supplier for turbidity monitoring does not meet the requirements for representative sampling. Monitoring for turbidity at locations that are not representative or do not meet the requirements for Combined Filter Effluent or Individual Filter Effluent sampling is a violation of Regulation 11.8(1). The supplier is expected to monitor for turbidity at representative locations for filter effluent. To resolve this violation, the supplier is expected to provide documentation that Filter 1 turbidimeter is back online and the monitoring points have been re-established to the appropriate locations. This violation of Regulation 11 requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below.

The supplier also reported the combined Filter 1 and Filter 2 turbidity readings during this time in a Filter 2 MOR and reported Filter 1 as being offline although the filter was operating. The supplier has contacted the Compliance Assurance Section regarding this issue and should continue to work with their compliance specialist.

2. F330 - Management:
Storage Tank Inspection Plan (T3): Supplier has not developed or maintained a finished water storage tank inspection plan. This is a violation of Regulation 11, Section 11.28(4)(a).

In accordance with Section 11.28(2)(a) of Regulation 11, suppliers of water are required to develop and maintain a written inspection plan for finished water storage tanks. At the time of the sanitary survey, the department inspector found that the supplier was conducting periodic and comprehensive tank

inspections but did not have a written storage tank inspection plan. The supplier must develop a finished water storage tank inspection plan that includes an accurate inventory of all the supplier's finished water storage tank(s). In addition, the plan must include the following:

- Tank inspection methods for performing and documenting tank inspections,
- Identification of qualified personnel to perform periodic and comprehensive tank inspections,
- Schedule for performing periodic (quarterly) and comprehensive (every five years) tank inspections,
- If applicable, alternative inspection schedule and associated justification for such a schedule, and
- Corrective action schedules for any sanitary defect identified during a tank inspection.

In order to aid in the development of the tank inspection plan, the department recommends that the supplier use the department's inspection plan template that can be accessed from the department's web site at https://www.colorado.gov/cdphe/tank. After the supplier completes development of the tank inspection plan, the supplier is required to submit a copy to the department inspector.

This is a violation of Section 11.28(4) of Regulation 11 that requires Tier 3 public notice in accordance with Section 11.33 (Public Notification Rule). Please direct questions regarding how to comply with Tier 3 public notice requirements to Tim Jones at 303-692-2085 or timothy.jones@state.co.us.

3. M610 - Management:
Backflow Prevention and Cross-Connection Control Program (T3): Supplier has failed to develop or implement a written backflow prevention and cross-connection control program. This is a BPCCC violation of Regulation 11 Section 11.39(6)(b)(i).

In accordance with Section 11.39(2)(a) of Regulation 11, suppliers of water must develop and implement a written backflow prevention and cross-connection control (BPCCC) program. At the time of the sanitary survey, the department inspector found that the supplier had a written program that did not contain all the requirements as specified under Section 11.39(2)(a)], which constitutes a BPCCC violation in accordance with Section 11.39(6)(b)(i) of Regulation 11. Uncontrolled cross connections have the potential to cause severe health risks to consumers in the water distribution system. It was discussed during the sanitary survey that the supplier is in the process of implementing the BPCCC plan, however customers are not compliant with submitting test reports for devices. The supplier's BPCCC plan needs to further document how the Town will have the legal authority to conduct surveys and establish an escalation procedure if customers will not provide test reports or fail to install devices in accordance with the BPCCC requirements. To address this violation, the department expects the supplier to update the written BPCCC program to include all the requirements specified under Section 11.39(2)(a) and submit a copy of the BPCCC program to the department inspector.

This violation of Regulation 11 requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below. For questions concerning public notice requirements, the supplier may contact Tim Jones of the Compliance Assurance Section at 303-692-2085 or at timothy.jones@state.co.us.

4. M613 - Management:
Failure to Complete an Annual Backflow Report (T3): Supplier failed to develop a written annual BPCCC program report. This is a BPCCC violation of Regulation 11 Section 11.39(6)(b)(ii).

In accordance with Section 11.39(4) of Regulation 11, suppliers of water must complete an annual written backflow prevention and cross-connection control (BPCCC) program report. At the time of the sanitary survey, the department inspector found that the supplier did not have a written program report for calendar years 2016 or 2017. The supplier did have a YTD report for 2018. The department expects that the supplier complete the annual backflow report for calendar year 2018 by May 1, 2019.

This violation of Regulation 11 requires Tier 3 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below. For questions

concerning public notice requirements, the supplier may contact Tim Jones of the Compliance Assurance Section at 303-692-2085 or at timothy.jones@state.co.us.

5. M614 - Management:
Backflow Assembly Testing Compliance Ratio (T2): Supplier has not met the annual backflow assembly testing compliance ratio. This is a BPCCC treatment technique violation of Regulation 11 Section 11.39(6)(a)(v).

In accordance with Section 11.39(3)(e) of Regulation 11, suppliers of water must ensure that backflow prevention assemblies used to control cross connections are tested annually by a Certified Cross-Connection Control Technician and must achieve the backflow prevention assembly annual testing compliance ratios specified in Table 11.39-II. For the calendar year 2017 the backflow prevention assembly annual testing compliance ratio must be greater than 0.60.

During the sanitary survey, the supplier's methods for tracking annual assembly testing and the backflow prevention assembly annual testing compliance ratio were evaluated by the department inspector. The supplier demonstrated that they were not capable of meeting the annual backflow assembly testing compliance ratio for 2017, however the YTD 2018 report provided by the supplier lists the assembly compliance testing ratio as 0.43. The supplier did not achieve the backflow prevention assembly annual testing compliance ratio by the previous compliance date, which constitutes a backflow prevention and cross-connection control (BPCCC) treatment technique violation in accordance with Section 11.39(6)(a)(v). The department expects that the supplier meet the backflow prevention assembly testing annual compliance ratio requirements. The supplier is expected to submit a BPCCC program to the department inspector outlining how they will achieve compliance with the annual backflow assembly testing ratio. Additional information on cross-connection control is available on the department's web site at: http://wqcdcompliance.com.

This violation of Regulation 11 requires Tier 2 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below. For questions concerning public notice requirements, the supplier may contact Tim Jones of the Compliance Assurance Section at 303-692-2085 or at timothy.jones@state.co.us.

6. M615 - Management:
Backflow Method Inspection Compliance Ratio (T2): Supplier has not met the annual backflow method testing compliance ratio. This is a BPCCC treatment technique violation of Regulation 11 Section 11.39 (6)(a)(viii).

In accordance with Section 11.39(3)(f) of Regulation 11, suppliers of water must ensure that backflow prevention methods used to control cross connections are inspected annually by the supplier or a Certified Cross-Connection Control Technician and must achieve the backflow prevention method annual inspection compliance ratio of greater than (>) 0.90. During the sanitary survey, the supplier's procedures for tracking inspections of backflow prevention methods and the backflow prevention method annual inspection compliance ratio were evaluated. The supplier indicated that it was not capable of determining the compliance ratio - the draft YTD 2018 report provided by the supplier has the assembly compliance testing ratio as 0 methods protecting cross connections divided by 2 methods inspected. The supplier did not achieve the backflow prevention method annual inspection compliance ratio for the 2017 annual reporting year, which constitutes a backflow prevention and cross-connection control (BPCCC) treatment technique violation in accordance with Section 11.39(6)(a)(viii). The department expects that the supplier meet the backflow prevention method inspection compliance ratio requirements. The supplier is expected to submit an updated BPCCC program outlining how they will achieve compliance with the annual backflow method inspection ratio. Additional information on cross-connection control is available on the department's web site at http://wqcdcompliance.com.

This violation of Regulation 11 requires Tier 2 public notice in accordance with Regulation 11, Section 11.33 (Public Notification Rule) as directed in the public notice instructions section below. For questions

concerning public notice requirements, the supplier may contact Tim Jones of the Compliance Assurance Section at 303-692-2085 or at timothy.jones@state.co.us.

Section III: Observations/Recommendations

The department recommends the supplier follow-up and consider the following observations-recommendations. Please direct questions regarding any of the items below to the department inspector.

1. S030 - Source: Well No 3 (SDWIS ID: 005)
Source Construction: Supplier's groundwater well does not provide adequate protection of source water.

During the sanitary survey, the Department inspector observed an opening in the side of the casing of Well 3 (attachment 6). This condition was a potential entrance for contaminants into the well. Having a well subject to contamination constitutes a risk to public health which meets the definition of a significant deficiency as defined in Regulation 11, Section 11.3(71). Subsequent to issuance of this letter, the supplier seal the casing and provided documentation to the Department inspector (attachment 7). No further follow is required to address this issue.

2. R997 - Monitoring & Recordkeeping and Data Verification:
Other Monitoring, Recordkeeping and Data Observations: department inspector identified monitoring, recordkeeping and data observation.

At the time of the sanitary survey, the supplier's online turbidity records and MORs were reviewed. The supplier is utilizing the Division's MOR template in excel and is populating the turbidity and chlorine residual data from the online analyzers. Please note that the guidance for the MORs states that for turbidity, if multiple results (online analysis) are taken in a single time period (i.e., 4 hour period) then the highest result for the time period should be entered for that time period. The supplier had been reporting the turbidity result measured at the specific time (i.e., 12:00 am) in the MOR. For EP chlorine, if monitoring continuously, a "C" should be entered in the time periods and the lowest individual daily residual should be entered. If the plant is offline, "PO" should be entered. For more information regarding MOR reporting, please contact your compliance officer, Lauren Worley at 303-691-7805 or at lauren.worley@state.co.us.

3. F310 - Finished Water Storage: Storage Tank No 1 (SDWIS ID: 008)
Storage Condition: The condition of the storage structure.

At the time of the sanitary survey, the supplier's bolted steel storage tank had been leaking water from the seam of the tank (attachment 8) and a third party contractor was on site to evaluate the tank and tighten bolts/repair gaskets. The tank company representative stated that the tanks useful lifetime is limited to another 5 years. The tank supplies water to a large section of town and is a key component in operation of the water system. As stated in Significant Deficiencies 1 and 2 above, it is highly recommended that the Supplier consider coordinating with a consulting engineering firm proficient with surface water treatment to evaluate the entire water system infrastructure, plans for community expansion and possible interconnections with neighboring water suppliers.

4. D251 - Distribution: Distribution System (SDWIS ID: DS001)
Unaccounted for Water: Determining the percentage of unaccounted for water. Colorado Design Criteria for Potable Water Systems (Design Criteria), Section 8.12.

At the time of the sanitary survey, the department inspector and the supplier discussed the percentage of unaccounted for water. The supplier indicated that the percentage of unaccounted for water can be 20-30% and the leak at the water tank may have been a significant portion of the water loss. The department recommends that the supplier continue to monitor water loss and ensure accuracy of the service meters and water production meters, to allow the supplier to calculate and track unaccounted water losses in the distribution system.

Section IV: Field Verification/Sampling

While performing the sanitary survey, the inspector performed water quality sampling for free chlorine residual. Table 3 indicates the results of the water quality sampling performed on-site.

Table 3: Sampling Results

Parameter	Sample Location	Value	Units	Notes
Entry Point Disinfectant Residual	Maloit Park Entry Point	1.35	mg/L	
Entry Point Disinfectant Residual	Town of Minturn Entry Point	1.36	mg/L	
Distribution System Disinfectant Residual	Town Hall	0.78	mg/L	

Section V: Public Notification Instructions for Violations

The public notice requirements are dependent upon the severity of the violation and any potential public health effects, pursuant to Regulation 11, Sections 11.33(1)(a,b), 11.33(2)(a), 11.33(3)(a) and 11.33(4)(a). All issued notifications must comply with the general content and distribution requirements and notice reporting requirements that are included in Regulation 11, Sections 11.33(5) and (6) and (7). Please be advised of the following:

1. For all violations that require Tier 2 public notice, the supplier must distribute the public notice as soon as possible but no later than **November 10, 2018** to all of the supplier's consumers. If the supplier posts the public notice, the notice must remain in place for as long as the violation persists or for seven days, whichever is longer. The supplier must repeat the distribution of the public notice every three months as long as the violation persists.
2. For all violations that require Tier 3 public notice, the supplier must distribute the public notice as soon as possible but no later than **October 11, 2019** to all of the supplier's consumers. If the supplier posts the public notice, the notice must remain in place for as long as the violation persists or for seven days, whichever is longer. The supplier must repeat the distribution of the public notice annually as long as the violation persists.
3. The public notice and certification template is provided at **wqcdcompliance.com/forms** under Public Notification.
4. No later than ten (10) calendar days after completing the initial and repeat public notice (if applicable), the supplier must submit a certification that states the supplier has fully complied with the public notice requirements. The supplier must include a representative copy of each distributed notice to the department.
5. The supplier's public notice and the certification form must be submitted to the department electronically through the drinking water portal at **wqcdcompliance.com/login**, by mail, or by fax at 303-758-1398 (attention to Tim Jones).

Please direct questions regarding the public notice requirements directly to Tim Jones at 303-692-2085 or timothy.jones@state.co.us.

Reminders

- Regulation 11, Section 11.4(1)(b) (Prior Approval Required) requires the department's approval prior to commencement of construction of any improvements, treatment process modifications, or the addition of new water sources.
- Most regulations, guidance documents, and forms are available on the department's website at http://wqcdcompliance.com.

- Regulation 11, Section 11.5 requires all suppliers of water to develop and implement a monitoring plan. A new version of the department's Monitoring Plan Template is now available at https://www.colorado.gov/cdphe/monitoringplans. For assistance developing or updating your monitoring plan, coaching assistance can be requested via the Local Assistance Unit website at https://www.colorado.gov/pacific/cdphe/tools-drinking-water-facilities-managers. The supplier is required to submit a copy of the updated plan via the department's online portal at https://wqcdcompliance.com/login. For portal support, please contact Kaleb Winisko at kaleb.winisko@state.co.us or 303-691-7803. The plan will then be reviewed by the Drinking Water Compliance Assurance Section. For questions regarding the Monitoring Plan requirements please contact the Compliance Assurance Section at 303-692-3556.

Attached is a form that the supplier may use to document the required written response to this letter. While using this form is optional, it will fulfill the requirement to provide a written response if completed and submitted to the department by the written response due date listed above.

Enclosed with this letter you will find a postage-paid Customer Satisfaction Survey Postcard. Please take a few moments to complete the survey and return it to the department. Your efforts to provide feedback to improve the sanitary survey process are appreciated.

If you have any questions, please contact me at (719) 295-5070 or heather.drissel@state.co.us. Thank you for your time and cooperation.

Sincerely,

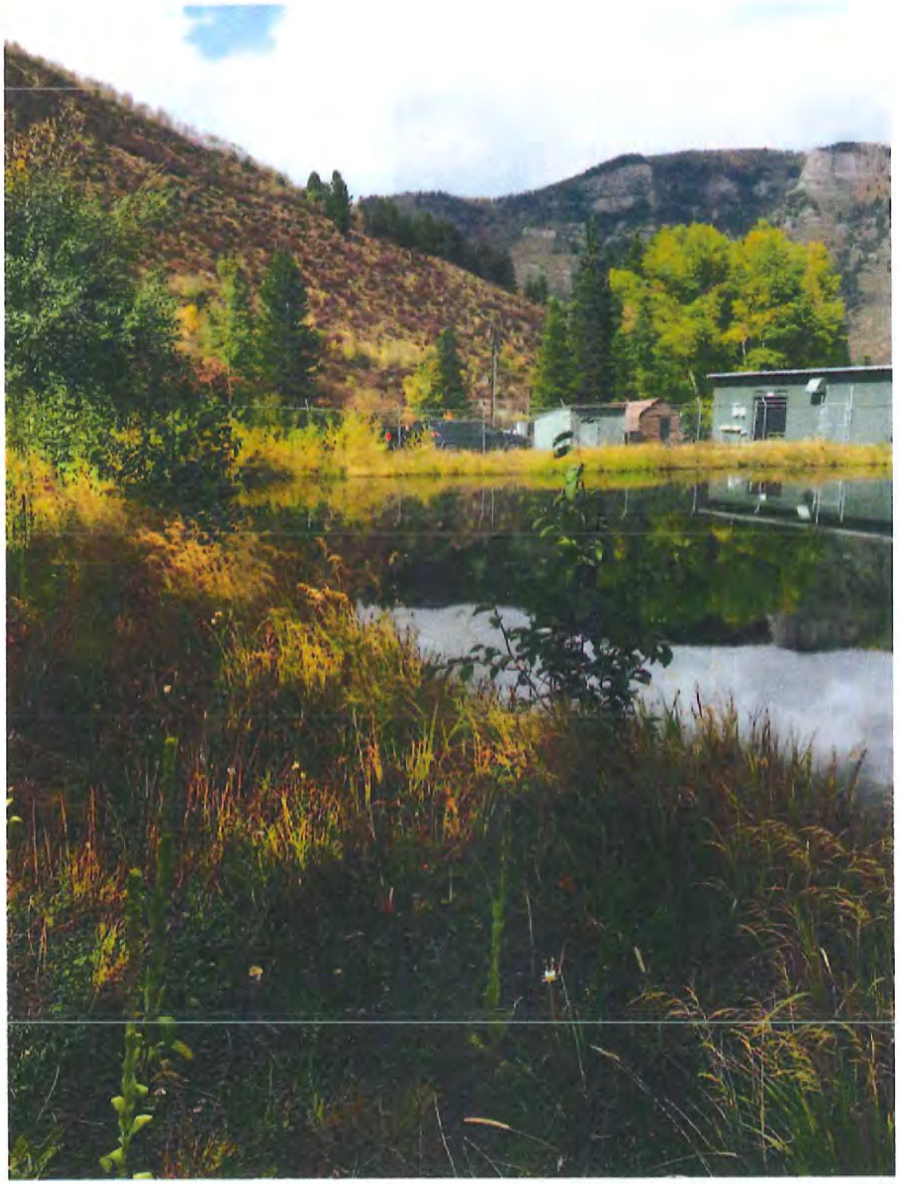
Heather Drissel, PE, Unit Manager Field Services Unit II
Field Services Section
Water Quality Control Division
Colorado Department of Public Health & Environment

cc: Eagle County
Drinking Water File, PWSID No. CO0119510
Aquifer Case FS.18.INSP.04271

Jay Brunvand, AC treasurer@minturn.org
John Volk, ORC jvolk@wqcpllc.com JM_VOLK@MSN.COM
Lauren Worley, Compliance Evaluation Specialist, CDPHE-WQCD-Compliance Assurance Section
Tim Jones, CDPHE-WQCD-Technical and Regulatory Implementation & Coordination Unit
Tyson Ingels, CDPHE-WQCD Lead DW Engineer
Aspen Coombs, CDPHE-WQCD-FSS
Kristina Quick, CDPHE-WQCD-FSS

Attachments

Attachment: 1
Severity: Significant Deficiencies 1 and 2.
Facility ID: Slow Sand Filter No 1 (SDWIS ID: 013) and Slow Sand Filter No 2 (SDWIS ID: 012)
Category: T119 - Treatment
Attachment Comments: At the time of the sanitary survey, the filters were uncovered with no protection from freezing and the distribution of the water over the top of the filters consisted of an influent pipe with boulders.



Attachment: 2
Severity: Significant Deficiencies 1 and 2.
Facility ID: Slow Sand Filter No 1 (SDWIS ID: 013) and Slow Sand Filter No 2 (SDWIS ID: 012)
Category: T119 - Treatment
Attachment Comments: Significant vegetative growth around the filters including trees and large shrubs that can damage a liner resulting in infiltration of groundwater.

Attachments: 3 and 4
Severity: Significant Deficiencies 1 and 2.
Facility ID: T119 - Slow Sand Filter No 1 (SDWIS ID: 013) and Slow Sand Filter No 2 (SDWIS ID: 012)
Category: T119 - Treatment
Attachment Comments: The filter elevation is lower that the road adjacent to the filter basins and runoff from the road may wash into the filters during storm events. A worn pathway for animals to approach the filter was also visible.

Attachment: 5
Severity: Violation
Category: R529 - Monitoring & Recordkeeping and Data Verification
Attachment Comments: The supplier's turbidimeter for the Filter 1 effluent compliance monitoring locations failed and the sample lines for Filters 1 and 2 were being combined and analyzed with the Filter 2 online turbidimeter.

Attachments: 6 and 7
Severity: Observation
Facility ID: Well No 3 (SDWIS ID: 005)
Category: S030 - Source - *Source Construction*
Attachment Comments: Opening in the side of the casing of Well 3 (attachment 6). This condition was a potential entrance for contaminants into the well. Subsequent to issuance of this letter, the supplier sealed the casing and provided documentation to the Department inspector (attachment 7).

Attachment: 8
Severity: Observation
Facility ID: Storage Tank No 1 (SDWIS ID: 008)
Category: F310 - Finished Water Storage
Attachment Comments: At the time of the sanitary survey, the supplier's bolted steel storage tank had been leaking water from the seam of the tank and a third party contractor was on site to evaluate the tank and tighten bolts/repair gaskets.

February 6, 2019

Mr. Jay Brunvand
Town of Minturn
PO BOX 309
Minturn, CO 81645

Certified Mail: 7011 2970 0003 1679 1066

RE: Corrective Action Plan Approved
Community Drinking Water System;
Town of Minturn, CO0119510, Eagle County

Dear Mr. Brunvand:

The Field Services Section of the Colorado Department of Public Health and Environment's Water Quality Control Division (the department) conducted a sanitary survey at Town of Minturn (the supplier) on September 24, 2018. The department sent a sanitary survey findings letter on October 11, 2018 that provided the supplier with written notice of significant deficiencies and/or violations identified during the sanitary survey. The sanitary survey findings letter required a written response for significant deficiencies and/or violations of the *Colorado Primary Drinking Water Regulations* (Regulation 11), 5 CCR 1002-11 by November 25, 2018.

As of the date of this letter, the department received the following response(s) to the sanitary survey letter:

- October 14, 2018 email response sent by John Volk, ORC regarding the status of the turbidimeter.
- November 25, 2018 letter from John Volk, ORC including a proposed CAP schedule.
- December 19, 2018 and January 2, 2019 email responses sent by Ryan Gordon, P.E. of SGM, Inc. on behalf of the Town of Minturn.
- January 4, 2019 amended letter outlining the proposed filter testing protocol from Ryan Gordon, P.E. of SGM, Inc. on behalf of the Town of Minturn.
- January 8, 2019 email from John Volk, ORC confirming the submittal timelines.
- January 10, 2019 email from Ryan Gordon, P.E. of SGM confirming the proposed filter testing protocol timeline.

In accordance with Regulation 11, Section 11.38(3) (f), the supplier is required to resolve significant deficiencies and/or violations of the CPDWR within 120 days of the sanitary survey findings letter or be in compliance with a department approved corrective action plan and schedule. The 120-day deadline for the supplier is February 8, 2019. Based upon the communications received to date by the department, the following actions have been taken by the supplier to address the significant deficiencies and/or violations and a proposed schedule for completing the remaining actions are as follows:

1. Based upon the communication(s) received from the supplier, the following item has been deemed resolved and no further action is required from the supplier at this time:

   (i) **R529 - Monitoring & Recordkeeping and Data Verification:**
   Monitoring Turbidity (T3): Supplier was not properly monitoring and or recording turbidity values. This is a violation of Regulation 11, Section 11.8(1)(2).

   The ORC confirmed in the October 14, 2018 email to the inspector and the Compliance Assurance specialist that the HACH 1720E NTU analyzer for filter #1 was repaired and calibrated on October 12, 2018 and that turbidities for each filter would be reported on the next MOR. The department has deemed this deficiency resolved and no further action is required.

2. Based upon the communication(s) received to date by the department, the following corrective action plan and schedule is approved:

(ii) Resolve the following significant deficiencies, including submission of reports for the liner integrity test and filter performance monitoring including data and findings by **December 31, 2019:**

1. Significant Deficiencies 1 and 2: T119 - Treatment: Slow Sand Filter No 1 (SDWIS ID: 013) and Slow Sand Filter No 2 (SDWIS ID: 012)
Proper Operation: Surface water or ground water under the direct influence (GWUDI) of surface water treatment operational practices. Regulation 11, Section 11.8(1)(b) and CDPHE-WQCD Policy 4.

January 4, 2019 letter outlining the proposed filter activities and testing protocol from Ryan Gordon, P.E. of SGM, Inc. on behalf of the Town of Minturn:

1. <u>Filter operational/maintenance activities:</u>

a. The Town will add sand to Filter 2 to achieve a minimum sand media depth of 30-inches.
b. The Town will remove all vegetation around the filters.
c. The Town will remove all debris and large rocks/boulders from the filter banks or the bottom.
d. The Town will repair holes in the fencing and ensure the fence is continuous and unbroken.
e. The Town will construct a berm along the edge of the road adjacent to the filter to redirect runoff away from the filter.
f. The Town will implement a routine and periodic inspection of the filters that will include:
1. Walk around the fence to check for holes and the presence of animal intrusion.
2. Inspect the banks of the filters for vegetation and for animal intrusion.
3. Inspect the filters for rocks and debris.
4. Walk around the filters and check for erosion and stormwater runoff.

g. The Town will continue to operate the filters with water continually flowing through the filters throughout the winter to prevent freezing.
h. The Town will monitor the inlet to the filter for scouring of the sand and will make any necessary corrections needed to the inlet/concrete pad to provide adequate energy dissipation.

2. <u>Conduct a Liner Integrity Test including the following procedure proposed by SGM, Inc.:</u>
a. Fill the filter(s) to a predetermined water elevation.
b. Install rain gauges and evaporation pans on site.
c. Isolate the filter(s) by closing the inlet and outlet valves.
d. Monitor the water level in the filter(s) over time to determine the decrease of water level correlated to the rain gauges and evaporative pans.

3. <u>Water quality testing and analysis to verify filter liner integrity and filter performance.</u> The additional sampling will begin in May 2019 when the Town transitions from ground water wells to the slow sand filters. Analysis will include the following parameters and the stated frequency:
a. Raw water and filtered water Total Coliform (with E.Coli) MPN – 1/week, paired sample.
b. Raw water turbidity – minimum of 3 times/week.
c. Raw water and filtered water aerobic spores – 1/week paired sample.
d. Raw water and filtered water microscopic particulate analysis (MPA) – 1/month paired sample.

(iii) Resolve the following violations by **March 31, 2019:**

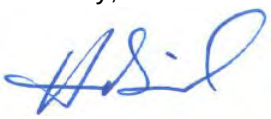
1. **F330 - Management:**
   Storage Tank Inspection Plan (T3): Supplier has not developed or maintained a finished water storage tank inspection plan. This is a violation of Regulation 11, Section 11.28(4)(a).
2. **M610 - Management:**
   Backflow Prevention and Cross-Connection Control Program (T3): Supplier has failed to develop or implement a written backflow prevention and cross-connection control program. This is a BPCCC violation of Regulation 11 Section 11.39(6)(b)(i).
3. **M613 - Management:**
   Failure to Complete an Annual Backflow Report (T3): Supplier failed to develop a written annual BPCCC program report. This is a BPCCC violation of Regulation 11 Section 11.39(6)(b)(ii).
4. **M614 - Management:**
   Backflow Assembly Testing Compliance Ratio (T2): Supplier has not met the annual backflow assembly testing compliance ratio. This is a BPCCC treatment technique violation of Regulation 11 Section 11.39(6)(a)(v).
5. **M615 - Management:**
   Backflow Method Inspection Compliance Ratio (T2): Supplier has not met the annual backflow method testing compliance ratio. This is a BPCCC treatment technique violation of Regulation 11 Section 11.39 (6)(a)(viii).

The supplier is expected to complete the corrective actions by the schedule listed above. The supplier then must supply evidence of the corrections to the Department and the date the corrections were made in accordance with Regulation 11, Section 11.38(3)(g). Evidence can be in the form of photographs, documents, or other material that will function as proof that the significant deficiencies and/or violations have been resolved. If the supplier does not provide resolution to the deficiencies and violations cited in the sanitary survey, the supplier will be in violation of Regulation 11, Section 11.38(3)(f).

The CPDWR can be found on the department's website at **http://wqcdcompliance.com**.

Thank you for your time and cooperation in this matter. If you have any questions or need additional information, please contact me by phone (719) 295-5070 or via email at heather.drissel@state.co.us.

Sincerely,



Heather Drissel, PE, Unit Manager Field Services Unit II
Field Services Section
Water Quality Control Division
Colorado Department of Public Health & Environment

cc: Drinking Water File, PWSID No. CO0119510
Aquifer Case No. Aquifer Case FS.18.INSP.04271
Greg Naugle, Section Manager, Field Services
Eagle County Health Department
Dan Romero, Sanitary Survey Follow-up Technician, Field Services Section
John Volk, ORC jvolk@wqcpllc.com JM_VOLK@MSN.COM
Ryan Gordon, P.E., SGM Inc., ryang@sgm-inc.com
Lauren Worley, Compliance Evaluation Specialist, CDPHE-WQCD-Compliance Assurance Section
Tim Jones, CDPHE-WQCD-Technical and Regulatory Implementation & Coordination Unit
Tyson Ingels, CDPHE-WQCD Lead DW Engineer
Aspen Coombs, CDPHE-WQCD-FSS
Kristina Quick, CDPHE-WQCD-FSS

COLORADO
Department of Public
Health & Environment

Dedicated to protecting and improving the health and environment of the people of Colorado

January 13, 2020

MICHELLE METTEER
MINTURN TOWN OF - PWSID CO0119510
PO BOX 309
MINTURN CO 81645

Requirements Change Notice - Increased Monitoring for COMBINED RADIUM (-226 & -228)

Dear MICHELLE METTEER:

According to the Colorado Department of Public Health and Environment ("Department") records, MINTURN TOWN OF ("Supplier") is currently required to collect 1 COMBINED RADIUM (-226 & -228) sample(s) every 9 Years at Facility ID 007 - Sample Point ID 007.

A submitted COMBINED RADIUM (-226 & -228) with the result 3.5 pCi/L has been received by the Department. Since the result is greater than or equal to 1 pCi/L, the Supplier is now required to collect 1 sample(s) for COMBINED RADIUM (-226 & -228) every 3 Years starting January 1, 2020 per Section 11.22(3)(a) of the Colorado Primary Drinking Water Regulations ("Regulation 11"), 5 CCR 1002-11.

The Supplier's monitoring schedule, posted at wqcdcompliance.com/schedules, contains detailed monitoring requirements and has been updated to reflect the changes. Please begin collecting drinking water samples in accordance with the schedule, discard any outdated schedules, and regularly check the website as schedules are updated on a weekly basis. If you have any problems accessing the schedule, or if you do not have computer access, please call 303.692.3556 or visit wqcdcompliance.com to find your compliance specialist.

If there are any questions regarding the contents of this letter and/or requirements for the Supplier, please contact Lauren Worley by phone at 303-692-3547 or by email at lauren.worley@state.co.us.

ec:
MICHELLE METTEER - MANAGER@MINTURN.ORG; AC
JOHN VOLK - JVOLK@WQCPLLC.COM; JM_VOLK@MSN.COM; OPERATOR
MAUREEN MULCAHY - MAUREEN.MULCAHY@EAGLECOUNTY.US; EAGLE COUNTY ENVIRONMENTAL HEALTH DEPT
OFFICE EMAIL - ENVIRONMENT@EAGLECOUNTY.US; EAGLE COUNTY ENVIRONMENTAL HEALTH DEPT

File: CO0119510, EAGLE COUNTY, COMMUNITY - SURFACE WATER

SGM

MEMORANDUM

TO: Michelle Metteer

FROM: Ryan Gordon, PE

DATE: February 4, 2020

RE: Minturn Copper Exceedance

Dear Michelle,

The Town of Minturn exceeded the copper limits in a water sample between the monitoring period of June 1 to September 30, 2019. The copper sample was 1.68 mg/l and the action limit set by CDPHE is 1.3 mg/l. Because of the exceedance, the Town is required to increase the number of water quality samples taken and reported to CDPHE.

Based on the water quality monitoring results, the Town is required to submit an Optimal Corrosion Control Treatment (OCCT) recommendation. The OCCT must be prepared by a professional engineer and needs to be submitted no later than March 31, 2020. The treatment strategy will either be pH adjustment using soda ash, potash or caustic soda or adding orthophosphate to the water per EPA and CDPHE guidelines.

Sincerely,

Ryan Gordon, PE
Project Manager

118 W. 6th St, Ste 200 Glenwood Springs, CO 81601 Phone: 970-945-1004 Fax: 970-945-5948

October 22, 2019

MICHELLE METTEER
MINTURN TOWN OF - PWSID CO0119510
PO BOX 309
MINTURN CO 81645

Copper Action Level Exceedance - June 1, 2019 to September 30, 2019 - Correction

According to the Colorado Department of Public Health and Environment ("Department") records, MINTURN TOWN OF ("Supplier") submitted lead and copper test results for the above-referenced monitoring period. The following 90th percentile values were calculated from the test results:

Contaminant	Sample Size	90th Percentile	Action Level
Lead	10	0.004 mg/L	0.015 mg/L
Copper	10	1.68 mg/L	1.3 mg/L

The results of the 90th percentile calculations indicate that the Supplier has exceeded the 1.3 mg/L copper Action Level for the specified monitoring period. As a result of the action level exceedance (ALE), pursuant to Section 11.26 of Regulation 11, please be advised of the following requirements:

LEAD AND COPPER TAP MONITORING

The Supplier must collect lead and copper samples in accordance with the following and report no later than ten (10) days from the end of each monitoring period. The next collection period is January 1, 2020 - June 30, 2020.

Sample Location	Sample Frequency and Sites
Lead and Copper Sample Pool Sites	20 samples every six months

WATER QUALITY PARAMETER MONITORING

No later than November 30, 2019, the Supplier must conduct the following water quality parameter (WQP) monitoring according to WQP Monitoring Attachment (Section 11.26(4)(d) and Section 11.1(6)(a)). Reporting is due no later than ten days from the end of the deadline:

Sample Location	Sample Frequency and Sites
Entry Point	2 samples at **each entry point** on different days
Distribution System	2 samples at **1 distribution tap(s)** on different days

LEAD AND COPPER SOURCE WATER MONITORING

No later than March 31, 2020, the Supplier must collect non-first draw entry point lead and copper sample(s) in accordance with the following and report the results to the Department:

Sample Location	Sample Frequency and Sites
Entry Point	1 sample at each entry point

Based on the results, submit a written source water treatment recommendation to the Department by the deadline specified above (Section 11.26(5)(b)). If the levels are less than half the action level, the Supplier may recommend "no treatment".

OPTIMAL CORROSION CONTROL TREATMENT

No later than March 31, 2020, the Supplier must submit an optimal corrosion control treatment (OCCT) recommendation (Section 11.26(3)(c)) based upon WQP monitoring results.

The OCCT recommendation must provide the information required in Appendix K of the *Design Criteria for Potable Water Systems*. For community water systems, a professional engineer is required to complete and submit the OCCT recommendation (Section 11.4(1)(b)(iii)). The Supplier should also utilize EPA's Optimal Corrosion Control Treatment Evaluation Technical Recommendations and Excel-based Templates. Webpage links provided below.

- **The Supplier may not recommend "no treatment"** or a treatment without supporting information. If the Department requests information related to the OCCT recommendation, the Supplier must respond to Department with the information promptly. Failure to submit a complete OCCT recommendation will result in a violation.

If the Department is unable to designate the Supplier's OCCT within twelve (12) months from the end of the first monitoring period with an action level exceedance, the Supplier shall be automatically triggered into performing corrosion control studies (Section 11.26(3)(c)(iii)) and must submit a complete study report within **thirty (30) months** from the end of the first monitoring period with an action level exceedance. Please note, corrosion control studies require substantial analytical and personnel costs.

Upon Department designation of OCCT, the Supplier is required to install the OCCT within 24 months and then complete one year of follow-up WQP and tap monitoring and finally maintain the OCCT treatment within Department-specified minimums and/or ranges.

Discontinuing Completion of Corrosion Control Treatment Steps

If the Supplier has not previously exceeded the lead or copper action level, the Supplier may discontinue the corrosion control treatment steps if the action level for lead and copper is met during two consecutive six-month monitoring periods. After meeting this criteria, the Supplier may submit written notification to the Department requesting to discontinue the corrosion control treatment steps. Please note, if the Supplier exceeds the action level in future, the corrosion control treatment steps must be completed in total.

Lead and Copper Links and Resources

- Colorado Department of Public Health and Environment's Lead and Copper website: wqcdcompliance.com/forms.
- EPA's Lead and Copper website: www.epa.gov/dwreginfo/lead-and-copper-rule.
- Appendix K of Design Criteria: wqcdcompliance.com/eng

- EPA's Optimal Corrosion Control Treatment Evaluation Technical Recommendations: https://www.epa.gov/dwreginfo/optimal-corrosion-control-treatment-evaluation-technical-recommendations

Please submit data, documents, reports, forms, and replies to the Department:

- **Electronically - via the Drinking Water Portal (preferred)**
  - First-time users must create an account. The Portal is located at wqcdcompliance.com/login.
- **Fax or Mail**
  - Fax: 303-758-1398
  - Colorado Department of Public Health and Environment
    Water Quality Control Division / WQCD-B2-CAS
    4300 Cherry Creek Drive South
    Denver, Colorado 80246-1530

This does not constitute an Enforcement Order and is not subject to appeal. The Department may pursue formal enforcement action with penalties concerning the above, including issuing the Supplier an Enforcement Order or amending a current order.

If there are any questions regarding the contents of this letter and/or requirements for the Supplier, please contact Lauren Worley by phone at 303-692-3547 or by email at lauren.worley@state.co.us.

ec:
MICHELLE METTEER - MANAGER@MINTURN.ORG; AC
JOHN VOLK - JVOLK@WQCPLLC.COM; JM_VOLK@MSN.COM; OPERATOR
MAUREEN MULCAHY - MAUREEN.MULCAHY@EAGLECOUNTY.US; EAGLE COUNTY ENVIRONMENTAL HEALTH DEPT
OFFICE EMAIL - ENVIRONMENT@EAGLECOUNTY.US; EAGLE COUNTY ENVIRONMENTAL HEALTH DEPT

File: CO0119510, EAGLE COUNTY, COMMUNITY - SURFACE WATER

Water Quality Parameter Monitoring Attachment

As a result of the action level exceedance, the Supplier must comply with the water quality parameter (WQP) requirements specified in Section 11.26(4). In addition to parameters specified in Section 11.26(4), the Department is requiring additional water quality data as specified below, pursuant to Section 11.1(6)(a) to aid the Department's review of optimal corrosion control treatment and/or a treatment recommendation. The Supplier must monitor for all WQPs below at representative locations within the distribution system and at each entry point within the monitoring period that the lead or copper action level is exceeded. The Supplier is required to conduct the following:

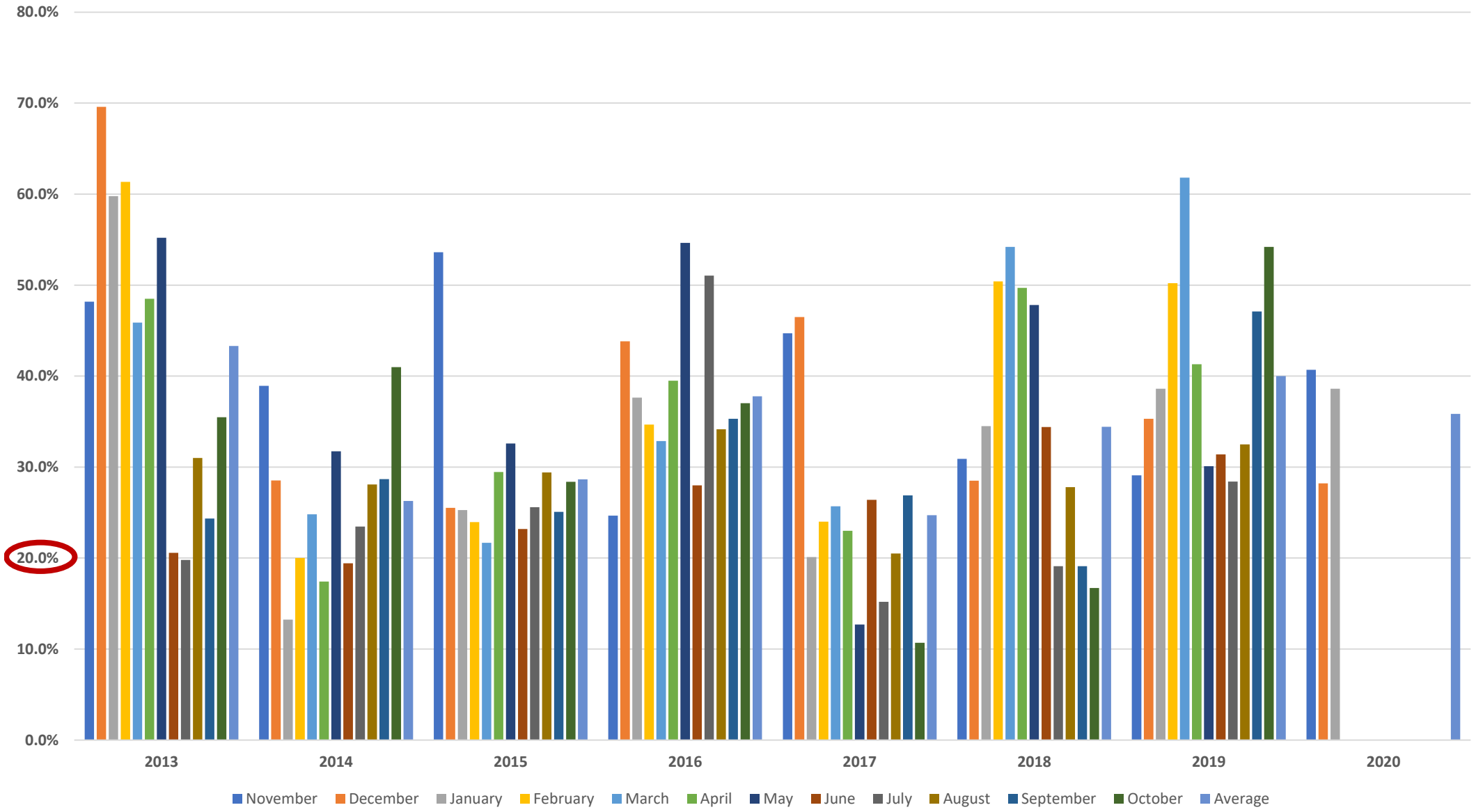
- WQP Tap Samples: All WQP samples must be representative of water quality throughout the distribution system, taking into account the number of individuals served, different sources of water, different treatment methods employed and seasonal variability. Please note that the WQP tap samples are not required to be collected at the Supplier's lead and copper tap sampling sites.
- WQP Entry Point Samples: At each entry point, collect the required monitoring for each applicable water quality parameter.

The Supplier must monitor the following WQPs at both the entry point and tap sampling locations:

- pH (field test within 15 minutes of collection)
- Water temperature (field test within 15 minutes of collection)
- Alkalinity
- Calcium (as mg/L $CaCO_3$)
- Conductivity or Total Dissolved Solids
- Silica (only if an inhibitor containing silica is used)
- Orthophosphate (mg/L as P)* (**required** even if an inhibitor containing phosphate is not used)
- Total phosphorus (mg/L as P)
- Chloride
- Sulfate
- Iron
- Manganese

* Note, if an orthophosphate concentration is given in units of "mg/L as PO_4" or "mg/L as orthophosphate," the value must be divided by 3 to convert to "mg/L as P"

MINTURN WATER SYSTEM LOSS



MONTH/YR	2013	2014	2015	2016	2017	2018	2019	2020
November	48.2%	38.9%	53.6%	24.7%	44.7%	30.9%	29.1%	40.7%
December	69.6%	28.5%	25.5%	43.8%	46.5%	28.5%	35.3%	28.2%
January	59.8%	13.2%	25.3%	37.6%	20.1%	34.5%	38.6%	38.6%
February	61.3%	20.0%	24.0%	34.7%	24.0%	50.4%	50.2%	
March	45.9%	24.8%	21.7%	32.9%	25.7%	54.2%	61.8%	
April	48.5%	17.4%	29.5%	39.5%	23.0%	49.7%	41.3%	
May	55.2%	31.7%	32.6%	54.6%	12.7%	47.8%	30.1%	
June	20.6%	19.4%	23.2%	28.0%	26.4%	34.4%	31.4%	
July	19.8%	23.5%	25.6%	51.0%	15.2%	19.1%	28.4%	
August	31.0%	28.1%	29.4%	34.2%	20.5%	27.8%	32.5%	
September	24.3%	28.7%	25.1%	35.3%	26.9%	19.1%	47.1%	
October	35.5%	41.0%	28.4%	37.0%	10.7%	16.7%	54.2%	
Average	43.3%	26.3%	28.6%	37.8%	24.7%	34.4%	40.0%	35.8%

To: Mayor and Town Council Members

From: Scot Hunn, Planning Director

Date: February 28, 2020

Agenda Item: 100-Block Transportation Plan Findings and Recommendations

REQUEST:
Review and provide feedback to Town staff regarding the 100-Block Transportation Plan completed by Stolfus & Associates Engineering.

INTRODUCTION:
The Town has engaged Stolfus and Associates Engineering, traffic and transportation consultants for the Town, to study existing conditions – public rights-of-way and private property configurations, circulation patterns, parking and loading configurations and snow storage – in the areas accessed by US Highway 24, Williams Street and Nelson Avenue, as well as alternatives aimed at short- and long-term improvements that can be made by the Town and private property owners in anticipation of redevelopment in 100-Block area. The agreement with Stolfus approved by the Town Council in October 2019 describes the following purpose of the project:

> *"Multiple adjacent properties in the ara have come under common ownership and have a high potential for redevelopment. Currently, properties in the area are accessed via the narrow Williams Street corridor, Main Street (US 24) and Nelson Avenue. Per the Colorado State Highway Access Code, redevelopment of these properties will likely trigger the need for access permits through the Colorado Department of Transportation (CDOT). Because redevelopment properties would not directly access US 24, the Town would be the permit applicant for those public street/highway intersections. In addition to CDOT permit application requirements for a traffic impact study, planning for redevelopment along Town streets is desirable. Parking, snow storage, and accommodations for delivery vehicles are all issues that should be addressed in localized planning efforts."*

The agreement describes the deliverables for the project which will be discussed during Council's March 4th work session:

> *"The transportation plan will consider existing data sources including any findings from a traffic impact study. The plan will make recommendations regarding Williams Street and Nelson Avenue. With the exception of individual access points, planning on US 24 is excluded from this scope of services. The Plan will be formalized as a set of recommendations that can be implemented over time as individual properties redevelop."*

The attached presentation by Stolfus and Associates summarizes their work (completed in January and February 2020) and their findings were presented to the Minturn Planning Commission during a work session on February 26, 2020. Three members of the public attended that work session and provided comments. The Planning Commission provided feedback at the same time.

The Town Council work session scheduled for March 4th will allow Town staff to present the findings and recommendations from Stolfus and to gather feedback on the following topics:

1) Existing conditions, constraints and opportunities;
2) Strategies and alternatives for the Town's consideration along with rationale for recommended actions;
3) Recommended short- and long-term actions and items needing further study; and
4) Next steps.

ANALYSIS:
The 100-Block Transportation Plan project was undertaken as a first step to better understand the existing conditions and established patterns of circulation, parking, loading and snow storage in the 100-Block area as well as potential opportunities and action steps to improve conditions and functionality as the Town plans for and is presented with redevelopment plans for individual properties in the area. In this way, the 100-Block Transportation Plan project directly supports and reinforces the Town's strategic growth management, capital improvements, environmental and economic development goals and policies and was a critical first step in the Town's efforts to effectuate orderly, innovative and beneficial redevelopment and infill of the area in the future.

At the work session on March 4th staff will gather feedback on the findings and recommendations by Stolfus prior to the creation of a final report and formal adoption of the 100-Block Transportation Plan at a subsequent Town Council meeting.

Following adoption of the 100-Block Transportation Plan, next steps may include:

1) Conducting a more detailed Traffic Impact Study which would support future applications to CDOT for any desired improvements impacting US 24;
2) Facilitating planning charrettes with community members, including 100-Block residents and business owners, land planners, architects and engineering consultants to further understand and refine possible redevelopment scenarios, opportunities and desired community outcomes prior to redevelopment occurring.

COMMUNITY INPUT:
The 100-Block Transportation Plan agreement with Stolfus and Associates was approved by Resolution No. 41, Series 2019 at the October 16, 2019 regular meeting of the Minturn Town Council. That meeting was properly noticed, and a copy of the agreement and project scope was published for public review.

As part of the project, Stolfus and Associates, working with Town staff, facilitated a transportation plan "kick-off" workshop on January 16, 2020 where 100-Block property owners, staff and appointed town officials were invited to participate. Existing conditions, constraints and potential solutions were discussed.

The findings and recommendations resulting from the Transportation Plan project were presented to the Minturn Planning Commission during a work session on February 26, 2020. The work session was advertised, and public notice was provided in accordance with the provisions of the Minturn Municipal Code. Three members of the public provided comments during the work session.

The work session scheduled prior to the Town Council's regular meeting of March 4th has been advertised and noticed in accordance with the MMC and the work session will be open to the public.

BUDGET / STAFF IMPACT:
The 100-Block Transportation Plan project agreement with Stolfus and Associates was approved by the Council in 2019. Expenditures associated with the approved $23,000 project budget detailed in the agreement will occur in the 2020 budget cycle. Additionally, staff time to support and direct the project has mainly involved the Town Manager, Town Planner, Public Works Supervisor and Town Engineer.

STRATEGIC PLAN ALIGNMENT:
The Town Council's review of the 100-Block Transportation Plan during a noticed work session open to the general public aligns with the following key strategies:

Practice Fair, Transparent and Communicative Local Government

The Town will seek to make informed, data-based decisions with a standard of "doing it right." With an honest approach to all aspects of local government and a focus on the public process, the Town Council and staff are committed to serving Minturn with the honesty and integrity expected of a small-town government.

Advance Decisions/Projects/Initiatives That Expand Future Opportunity and Viability for Minturn

The ability for Minturn to approach development as resilient, sustainable, creative and diverse will allow the town to continue embracing what has "made Minturn, Minturn." The town can further leverage its crossroads location as a valley-wide benefit and competitive advantage.

RECOMMENDED ACTION OR PROPOSED MOTION:

Staff requests the opportunity to present the findings and recommendations of the 100-Block Transportation Plan to the Town Council. Requested actions include providing feedback and direction to staff prior to completion of the final report by Stolfus and prior to adoption of the Plan.

ATTACHMENTS:

- Presentation Packet (Power Point by Stolfus)

Minturn 100 Block Transportation Study

Andrew Amend, PE, PTOE

Stolfus & Associates, Inc.

Existing Conditions

- Data Collection
  - Property lines obtained from Eagle County GIS and are approximate
- Existing Site Deficiencies
  - Vehicles have difficulty making right turns from Williams Street to Nelson Avenue
  - Vehicles often get “stuck” when turning from US 24 to Nelson Avenue
  - Comingling of public and private property
    - Loading trucks block traffic on Williams Street
    - Snow storage located on private property
    - Private parking and dumpster located on 1st Avenue
    - Dead end at south end of Williams Street requires vehicles to enter private property to turn around
- As redevelopment occurs, it may trigger the need for a left-turn lane at Nelson Avenue

Parking Summary

	Number of Spaces per 1994 Parking Plan	Approximate Number of Usable Spaces Today
In Public R.O.W.	29	22
On Private Property	60	60
Total	***89***	***82***

Alternative A
Nelson Avenue One-Way

- Proposes converting Nelson Avenue between Williams Street and US 24 from two-way road to eastbound one-way road
- Benefits
  - Prevents vehicles from getting “stuck” when turning on Nelson Avenue
  - Minimal construction impacts
  - No right-of-way impacts
- Limitations
  - Residents on Nelson Avenue can only access home via Williams Street
  - Moves left turns to Williams Street, which may trigger CDOT requirements for a left turn lane

Alternative B
Nelson Avenue Relocation

- Proposes relocating Nelson Avenue south of its existing location and converting it to an eastbound one-way road
- Benefits
  - Prevents vehicles from getting “stuck” when turning on Nelson Avenue
- Limitations
  - Needs CDOT approval because of proximity to Toledo Avenue
  - Involves property trade negotiations
  - Residents on Nelson Avenue can only access home via Williams Street
  - Moves left turns to Williams Street, which may trigger CDOT requirements for a left turn lane

Alternative C
Nelson Avenue Couplet

- Proposes narrowing Nelson Avenue and designating it as a westbound one-way road and adds a new eastbound one-way road connecting the south end of Williams Street to US 24
- Benefits
  - Prevents vehicles from getting “stuck” when turning on Nelson Avenue
  - Provides alternative circulation routes in the 100 Block
- Limitations
  - Needs CDOT approval because of proximity to Toledo Avenue
  - Involves property trade negotiations

Off-Street Improvement Options

- Snow Storage
  - Option 1: Install snow vault in public right-of-way
  - Option 2: With CDOT approval, store snow in US 24 right-of-way near Williams Street
- Courtyard on 1st Avenue
  - Allows outdoor seating for existing and redeveloped commercial sites
  - Extends pedestrian route from Williams Street to US 24 crosswalk
- Shared private underground parking among MR Minturn properties
- Loading Areas
  - Option 1: On Main Street, north of Nelson Avenue
  - Option 2: On Main Street, south of Nelson Avenue
  - Option 3: On Williams Street, in public ROW

Require wayfinding signage to guide trucks to the designated turnaround area off of Cemetery Road

Code Requirements

- General Commercial Use
  - Minturn Code requires 1 space/300 GSF
  - ITE Parking Generation is 5 spaces/300 GSF
  - Similar difference for dining uses
- Residential Use
  - Minturn Code requires 2 spaces/DU + 1 space/5 DUs for Multi-family
  - Accessory Apartment is required to have 1 space/DU
  - ITE Parking Generation is 1.5 spaces/DU

Recommendations

- Transportation
  - Alternative C- Nelson Avenue Couplet is recommended. If CDOT does not allow another access closer to Toledo Avenue, Alternative A is the second choice
- Code
  - Consider Code change reducing residential parking requirement in 100 Block Zone for mixed-use development with more commercial space
  - Changing Code to allow for less commercial parking is not recommended without a parking occupancy study
- Off-Street
  - Allow off-hours loading along Main Street and consider eliminating loading berth requirements for redeveloped properties with Main Street frontage
  - Request CDOT authorization to store snow in US 24 ROW. If that is not allowable, negotiate with developer to transfer 1st Avenue ROW for snow storage/snow vault

Questions?

Andrew Amend, PE, PTOE

Stolfus & Associates, Inc.

To: Mayor and Town Council
From: Michelle Metteer
Date: March 4, 2020
Agenda Item: Recycling & Composting Update

REQUEST:
Update to Council regarding current status of recycling and composting programs within Minturn and seek additional funding for the increased needs of the public.

INTRODUCTION:
The Town of Minturn has provided a small single-stream recycling station at town hall for approximately a year. More recently, the Town added a compost drop site for members of the Vail Honeywagon composting program.

ANALYSIS:
Both programs have seen increasing use. The single-stream recycle station is the only in-town option for residents to recycle cardboard and the bin is often overflowing.

COMMUNITY INPUT:
Ongoing

BUDGET / STAFF IMPACT:
$1200.00/yr

STRATEGIC PLAN ALIGNMENT:
The ability to reduce, reuse and recycle covers three key strategies within Minturn's strategic plan:

ADVANCE DECISIONS/PROJECTS/INITIATIVES THAT EXPAND FUTURE OPPORTUNITY AND VIABILITY FOR MINTURN

LONG-TERM STEWARDSHIP OF THE NATURAL BEAUTY AND HEALTH OF MINTURN'S ENVIRONMENT

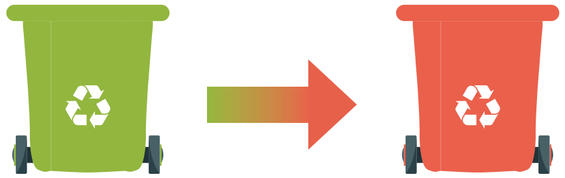
SUSTAIN AND INVEST IN THE THINGS THAT DEFINE MINTURN AS A PROUD STURDY MOUNTAIN TOWN TO "KEEP MINTURN MINTURN"

RECOMMENDED ACTION OR PROPOSED MOTION:
- Provide direction to Staff regarding approval for the necessary budget increase to allow for twice a week recycle pick up.

ATTACHMENTS:
- Be Better at Recycling

Be Better At Recycling

WHY? One bad bin can contaminate a truck of good bins.
When in doubt, check the Eagle County Waste Wizard App.



Put In Your Recycling Bin

Glass Jars
w/out lids

Plastic Bottles, Tubs, Jugs & Jars
w/ lids

Tin Cans

Aluminum Cans
plz don't crush

Glass Bottles
w/out lids

Paperboard
no frozen food boxes

Paper

Newspaper

Office/Mixed Paper

Magazines

Junk Mail

Don't Put in the Recycling Bin It Goes Somewhere Else!

- Batteries
- CFL Light Bulbs
- Electronic-Waste
- Greasy Pizza Boxes *compost if you can!*
- Large metal
- Syringes & Needles
- Textiles *clothing, sheets, fabrics, shoes*

Check the **Waste Wizard** app on where to take these items in the county.

Never Put in Your Recycling Bin

- Plastic Bags *don't bag your recyclables*
- Broken Stemware or Ceramics
- Small Plastics *utensils, cold/hot drink lids, dressing cups*
- #7 PLA Plastic
- Styrofoam

To recycle right, start here:

HOW DO YOU RECYCLE AT HOME? DO YOU PUT YOUR RECYCLING IN...

2 BINS (DUAL-STREAM) **OR** **1 BIN (SINGLE-STREAM)**

Dual-stream (2 bins) recycling means that you separate your plastics, glass, cans, bottles from the paper and cardboard. In dual-stream, cardboard is not collected curbside and should be taken to a drop-site.

> **EAGLE COUNTY DROP-SITE**
> **VAIL HONEYWAGON** in the communities of: TOWN OF EAGLE TOWN OF MINTURN

Single-stream (1 bin) recycling means you to put all recyclables into the same bin.

Note that most businesses use single-stream.

> **VAIL VALLEY WASTE**
> **WASTE MANAGEMENT**
> **VAIL HONEYWAGON** all other residential pick up aside from the dual stream communities on left.

IT'S TRICKY

- these items depend on your stream- check the Waste Wizard App for answers

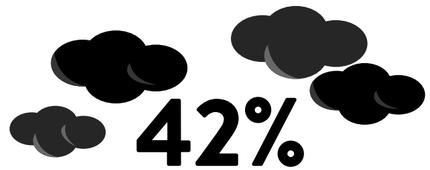
- Aseptic Cartons *juice and milk cartons*
- Cardboard
- Clam-shell containers *plastic fruit & veggies containers*
- Plastic cups
- Shredded Paper
- Starbucks/other hot cups
- Tin Foil *clean and balled up*

81%
OF YOUR WASTE
CAN BE DIVERTED FROM

26% RECOVERABLE
35% ORGANICS
20% RECYCLABLE

CURRENT DIVERSION RATES

Eagle County	17%
State Average	35%
Eagle County Climate Action Plan Goal	30% by 2030



42%
OF OUR INDIVIDUAL GHG EMISSIONS COME FROM HOW WE
PRODUCE, CONSUME, AND DISPOSE OF OUR STUFF AND FOOD

ClimateActionCollaborative.org
#BeBetterTogether

The *Eagle County Waste Wizard* is Your Free Recycling App

Download on the App Store
ANDROID APP ON Google play

Ask the Waste Wizard at walkingmountains.org/recycle

SCAN ME

CLIMATE ACTION COLLABORATIVE

walking mountains sustainability

Michelle Metteer
Town Manager
301 Boulder St #309
Minturn, CO 81645
970-827-5645 x8
manager@minturn.org
www.minturn.org

TOWN MANAGER UPDATE
March 4, 2020

Minturn Fitness Center (MFC)
I met with John Hale, COO, SSCV as well as Kris bowers and Jimmy Pritchard of the Minturn Fitness Center this week. The discussion revolved around ongoing concerns by members of the Minturn public and Council regarding ways to improve the public experience at the MFC.

Of primary interest was the opportunity to increase MFC hours for public use. The MFC staff has agreed that increasing accessible hours of operation is critical to the public benefit and has created an action plan of items to review as we gather information toward the potential use of a key-fob system.

A key-fob system would allow public memberships the ability to access the MFC without the need for the MFC to increase labor hours/costs to staff the center. Many gyms utilize this type of system and allow their facilities to be accessible to members when there is no staff on duty.

It remains to be seen if this type of system would provide the benefit the public is looking for within a budget that Minturn can afford - as Minturn would be paying for the necessary upgrades to implement this option.

The Minturn Community Survey is Live!
For anyone without access to email, hard copies are available at the town hall offices. If you are needing a link to the survey (each link is specific for each survey response) please call Cindy Krieg at 970-827-5645 x5 or events@minturn.org. A copy of the Vail Daily survey notice has been included with this update.

Programmatic Agreement
The United States Department of Agriculture (USDA) is requesting the White River National Forest (WRNF) be added as a signatory to a National Historic Preservation Act (NHPA) Programmatic Agreement (PA). There is a 30-day comment period on which to provide feedback to this request. I spoke with Mr. Thomas Fuller, Heritage Program Manager, who explained this addition to the PA request is to streamline paperwork for multi-year forest rehabilitation projects. All current required notifications to the public will remain in tack. I anticipate no comments from Minturn however is Council has specific questions you're encouraged to call Mr. Fuller directly. A copy of the PA has been included with this update for your review.

WaterSmart Grant Application
Unfortunately, Minturn was not awarded funds for the Bureau of Reclamation's 2020 WaterSmart Grant. After reviewing the award recipients, all the Colorado awards went to communities that were able to show a significantly higher water per acre-foot savings than Minturn, so the Bureau was going for the highest "bang for the buck." This seems reasonable given the goal is to save/conserve water, but still difficult news none-the-less.

Grant Application Comparisons (a copy of the grant award recipients has been included in this update for your review).

Minturn water savings expectation: 25.6 acre-feet
Grant Recipients water savings expectations:

- Aspen: 273 acre-feet
- Grand Junction: 741 acre-feet
- Greeley: 1,129 acre feet
- Longmont: 361 acre-feet
- Thornton1,165 acre-feet

Battle Mountain Open Discussions
Battle Mountain / Crave Development will be looking to hold several listening sessions pertaining to the viability of a project at the south end of town and the vision residents and businesses have for that area of the community. For anyone interested in providing feedback please contact Tim McGuire at 970-827-4609 or email tmcguire@battlemountainresort.com.

Cloud-based Smartphone Access Control

The most convenient, affordable, secure way to control access.

POWERED BY vizpin®

vizpin® lets you provide convenient, secure access to anyone with the VIZpin SMART app at the click of a button. Users simply download the app, register, and you can send them VIZpin keys that work 24/7 or on a designated schedule. Managing VIZpin in our easy-to-use portal requires no special training and because it is cloud-based, the latest features are automatically available to you. Our system controllers have built-in, long-range Bluetooth readers so they can be mounted out of site, away from vandals and the elements.

Convenient

VIZpin lets you grant and revoke access to anyone, anytime, from anywhere without having to worry about cards, FOBs or remembering PIN numbers - your phone does it all. It works even when network are unavailable.

Secure

People share cards, FOBs and PIN numbers, but not their phones, making VIZpin inherently more secure. In addition, every VIZpin smartphone credential is heavily encrypted and works without connecting to your local network eliminating the possibility of data hacking.

Affordable

VIZpin provides all the benefits of a managed access control system and costs about the same as a keypad system. There are no network support or ISP costs, and the cloud-based system ensures you have latest features and enhancements without hardware upgrades. Plus, VIZpin smartphone credentials cost just pennies.

Advantages

- Unlimited users, doors and activity records
- Simple and convenient user management
- Low-cost installation and credentials
- Low power and long read range 30’(10M)
- Retain keys on updated devices
- No network connection
- No cards/FOBs
- No PIN numbers
- Works with existing systems

Features

- Grant & revoke access
- Set individual schedules
- 30-day unlimited audit trail
- Adjustable reader settings
- First-in unlock
- Multiple administrators

Where VIZpin Makes Sense:

- Daycare facilities
- Churches & synagogues
- Delivery vehicles
- Multi-tenant commercial
- Multi-tenant residential
- Co-working spaces
- Industrial flex spaces
- Self-storage facilities
- Gates & garages
- Warehouses
- IT rooms & server cabinets
- Cash room
- Retail deliveries
- Quick-service restaurants
- Marinas
- Health/social clubs

POWERED BY vizpin®

VIZpin Inc.
355 E. LIberty Street, Suite 210, Lancaster, PA 17602
VIZpin.com • +1 717-327-4244 • info@VIZpin.com

VIZpin SMART User Guide

YOUR PHONE IS YOUR KEY

1 DOWNLOAD & INSTALL

1. Visit the Google Play Store or iTunes App Store on your phone
2. Search for “VIZpin SMART”
3. Select and download the VIZpin SMART app

* You can also use your browser to find the direct link listing at VIZpin.com and download

2 REGISTER

1. Open the VIZpin SMART app
2. Tap “New User?”
3. Complete all registration fields. The phone number used must be the one for this specific phone
4. You will receive an SMS with a security code after registration is complete
5. Enter the security code in the VIZpin SMART app
6. Enter the Location ID if provided by the Building Manager, otherwise tap “Continue”
   Your Location ID is _____
7. Proceed to login using the phone number and password entered during registration
8. Tap “Allow” for the permission requests when prompted

3 GET KEYS

1. The Building Manager must grant you access to the site
2. After access has been granted, tap the grey key to retrieve your VIZpin keys (mobile or WiFi internet connection required)

4 USE VIZpin SMART APP

1. Login and tap the appropriate key to trigger the VIZpin reader and unlock

5 KEY DETAILS

- Bluetooth must be enabled to use the VIZpin SMART app
- Understanding VIZpin Keys:
  - Only green keys can be used to trigger VIZpin readers
  - Red keys have expired and need to be refreshed by tapping the circle arrow icon in the upper right
  - Yellow keys are valid but currently not within the scheduled access hours (This key will change to green at the appropriate time)
- The VIZpin SMART app will indicate which readers are nearby as you walk in- and out-of-range:
  - Highlighted keys indicate the reader is in range
  - Dim keys indicate the reader is out of range

GENERAL TROUBLESHOOTING

If you’re having problems with the app, try these common solutions first:

- Refresh the VIZpin SMART app
- Disable and re-enable your phone’s Bluetooth radio
- Close the VIZpin SMART app and all other apps that are running on your phone (including background apps in your recent app list)
- Reboot your phone
- Disable the Bluetooth Smart feature in the app’s settings (Android only)

FORGOT YOUR VIZpin SMART PASSWORD?

1. On the VIZpin SMART login screen, tap “Forgot Password”
2. VIZpin will send an SMS that contains a security code
3. Enter the security code in the VIZpin SMART app
4. Enter your new password in the “New Password” and “Confirm Password” fields
5. Tap “Change Password”and login your new password

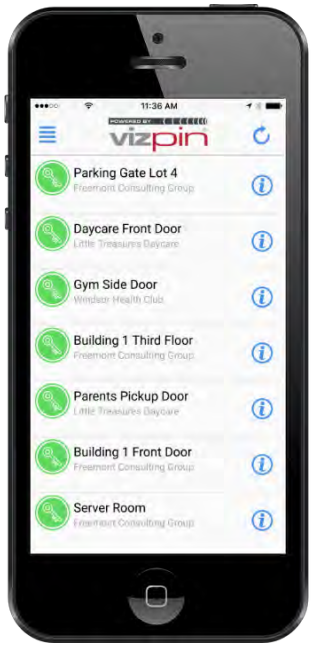
Contact your Building Manager for any questions

VIZpin Smartphone Access Control System
SECURITY OVERVIEW

The VIZpin Smartphone Access Control System was developed to improve the security, convenience and affordability of managed access control. Traditional access control systems have several vulnerabilities that compromise security. This paper describes how VIZpin addresses these.

Physical Security

In order to interact with a user interface device (UID) such as a card-reader or keypad, traditional access control systems require the UID to be mounted on the unsecure side of the door. A UID mounted on the unsecure side of the door that directly controls a door mechanism like a door strike or mag lock, can be easily opened up and ***hot-wired*** to unlock the door, which is a serious security flaw. [More information can be found here: Hot-Wiring Keypads]



If the UID is a Wiegand output device, the card data is transmitted in a well-known and unencrypted format and can be recorded by simply monitoring the data lines. [More information can be found here: Hacking Wiegand]

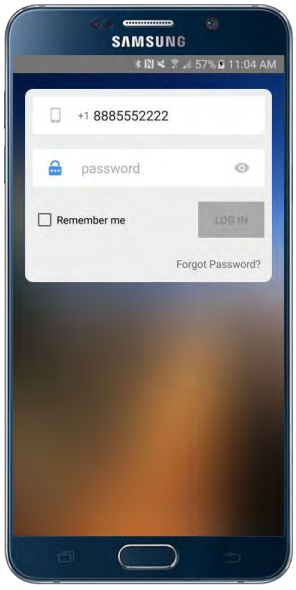
VIZpin controllers have built in Bluetooth readers. These readers work up to 30' (10M) away so the controllers can be mounted on the secure side of the door you are trying to protect. This prevents hackers from physically accessing the device, eliminating "hot-wiring," skimming and Wiegand replay attacks.

If the UID is an IP device and connected to your network, for example Power-over-Ethernet (PoE), the UID can be removed from the wall and the hacker would now have direct access to your network. If the UID is Wi-Fi enabled, a hacker can also access the network using that access point.

A hacker can now see all unencrypted Wiegand IDs being sent across the network, and can later use a ***replay attack*** or an inexpensive card programmer to program a new card with the same Wiegand ID.

VIZpin controllers have no hardwired, PoE or Wi-Fi network connection, which prevents hackers from accessing your network through our device. Additionally, our controllers require absolutely no network connection for operation; everything is performed using only Bluetooth and the user's phone. This means that we don't create any new holes in your network infrastructure or require you to run a parallel network to isolate any potential security risks. It also removes any costs associated with secure network access for the UIDs because our controllers require none.

Personal Compliance



Many locations cannot afford full-time staff to monitor end user activity so they rely on compliance to ensure security, safety and accountability. Stated policies like “Keep your card on you at all times” and “Don’t share your keypad PIN# with anyone” are difficult to enforce. Convenience often outweighs security compliance and employees share their cards and PIN#s. Most of us have been at a meeting and had to step outside. Most hosts won’t escort you, they are more likely to loan you their card or give you the keypad code. Now there is no record of who actually came and went.

In a traditional card reader system, many people leave their cards or fobs unattended. Those cards and fobs can be picked up easily and scanned in seconds without the actual user even knowing their security identity had been compromised. They are also small and easily to slip into your pocket to be used later.

People are much more careful with their Smartphone than their cards and fobs, and are very unlikely to loan their phone to anyone to “get back in.” Many businesses also mandate smartphones with corporate access have passcodes or utilize smartphone biometrics such as fingerprint recognition in order to unlock the phone. The VIZpin SMART app can be configured to require the user to login in order to access their keys adding another security layer in addition to that of the smartphone. This also prevents a hacker from gaining access to an unlocked phone and using any of that user’s keys.

Bluetooth Security

Many Bluetooth devices transmit unencrypted data in order to simplify the pairing process which raises concerns when using Bluetooth in a security application…and it should. Bluetooth is a long-range technology (30’/10M) with a published protocol and unencrypted data can be read easily by hackers using a ***man-in-the-middle attack*** *(MITM)*.

If you are using a VIZpin SMART (Bluetooth low energy, 4.0) device, VIZpin keys use double encryption including AES128 bit plus a proprietary, patented VIZpin algorithm. Every time a VIZpin key is used to connect to our controllers, it uses unique data that prevents replay and MITM attacks. To further improve security, VIZpin keys can be configured to expire as frequently as every 15 minutes, requiring the user to revalidate their keys against the server before being able to use existing keys for unlocking.

If you are using a Bluetooth Classic device, the VIZpin keys are device specific and can roll over at such a high frequency that even a small number of repeated pairing attempts to discover the key cannot be completed before the key rolls over.

Ski & Snowboard Club Vail has success abroad

Daily staff report
news@vaildaily.com

Ski & Snowboard Club Vail Alpine athletes have been experiencing tremendous success at international levels recently.

The series of competitions began with the Alpe Cimbra FIS Cup, formerly known as Tarvisio, in Bulgaria, Italy.

Two Ski & Snowboard Club Vail Alpine racers, Nick Kirwood, who qualified to represent the United States and Phoebe Heaydon, who qualified to represent Australia went head to head against athletes from all over the world in the giant slalom and slalom events.

Kirwood pulled out all the stops, securing 10th place in slalom and sitting two-tenths of a second away from a podium position after his first round of giant slalom. While his second run of GS ended with Kirwood falling in the ranks after a substantial mistake, head Alpine U16 coach Ian Lochhead said that this was a pivotal competition for the two young skiers.

"This is the first chance for kids at this age to ski on an international stage representing not just Ski & Snowboard Club Vail, but also their country," he said. "As a 15- or 16-year-old, it's a pretty great opportunity."

Moving to Baqueira-Beret, Spain, the OPA Cup, formerly called the 7 Nations Cup, is a high-level international race with U16 Alpine skiers coming out and taking part in the giant slalom and super-G events.

Facing more than 50 athletes from 10 different nations, Liv Moritz scored 15th-place finishes in both the GS and super-G races. After making the quarterfinals in the team GS alongside her American teammates, Liv went on to support her sister, Kjersti Moritz, at the Pokal Loka.

SKI CLUB VAIL | SPECIAL TO THE DAILY

Liv Moritz races down the hill at OPA Cup in Baqueira-Beret, Spain.

The Pokal Loka is one of the oldest children's FIS competitions in the world. SSCV athletes Kjersti Moritz and Tiana Bruce grabbed fifth place in GS at her first European competition, and Moritz finished seventh.

Moritz was the only woman selected for the ensuing team event, and she certainly did well. Missing finish by two-hundredths of a second, Moritz closed out the competition in fifth place. SSCV's William Wasserman also qualified to represent the United States at the Pokal Loka but was ultimately unable to attend.

Another notable achievement came from SSCV's Sophie Stocker, who qualified and competed in the slalom event on behalf of Great Britain in the Trofeu Borrufa competition in Andorra.

BEN KIRBY | SPECIAL TO THE DAILY

Battle Mountain's Will Bettenhausen flies around a turn during Thursday's state giant slalom. He finished 10th.

SKIING

From page A29

Vail Mountain was in third with 457 points. The Pattison brothers were at 8 again, with Cole in second and Mackay in fourth. Nico O'Connell was 19th.

Battle Mountain and Vail Mountain were also fourth and fifth, respectively, for the ladies. Berit Pinchbeck topped the Huskies in second, followed by Hailey [illegible]h (14th) and Malia Nelson (24th). Emma Kate Burns (16th), Quinn Kelley (17th) and Alexa Anderson (20th) were the scorers for the Gore Rangers.

Logo
USDA United States Department of Agriculture Forest Service White River National Forest 900 Grand Ave Glenwood Springs, CO 81601-3602

File Code: 2360
Date: February 12, 2020

Michelle Metteer
Historical Preservation Committee
PO Box 309
Minturn, CO 81645

Dear Mrs. Metteer,

The White River National Forest (WRNF) invites you to comment on our request to be added as a signatory to a National Historic Preservation Act (NHPA) Programmatic Agreement (PA) for landscape restoration undertakings on National Forest System lands. Three Forests in Colorado, the Routt, San Juan, and Pike-San Isabel National Forests and Cimarron and Comanche National Grasslands developed this Vegetation Management PA and are the current signatories. The intent of restoration projects is to restore the landscape to one that is resilient and better able to support more natural forest structures, disturbance regimes, vegetative diversity, wildlife habitat, proper functioning watersheds, and help prevent catastrophic wildfire.

Landscape restoration projects often utilize an adaptive management strategy where treatments may be identified on an on-going basis for multiple years. The traditional Section 106 process outlined in the implementing regulations of the NHPA is not a good fit for undertakings of this scale where an adaptive management approach is used. Rather, landscape restoration undertakings require a phased approach to NHPA compliance. Deferring final identification and evaluation of historic properties, and the subsequent phased application of criteria of adverse effect, are allowed per the implementing regulations of the NHPA if documented in a PA (36 CFR 800.4(b)(2)). In addition to the proposed phased process, the Forest Service proposes streamlined documentation and review periods for restoration undertakings. Circumstances that warrant a departure from the normal section 106 process required the development of a PA. Additionally, a PA is required since phasing results in a situation where "effects on historic properties cannot be fully determined prior to approval of an undertaking" (36 CFR 800.14(b)(1)(ii)).

Therefore, the WRNF requests to be added as a signatory to the *Programmatic Agreement Among the United States Forest Service, Rocky Mountain Regional Office, Pike-San Isabel National Forest and Cimarron and Comanche National Grasslands, Routt National Forest, San Juan National Forest and the Colorado State Historic Preservation Officer Regarding Vegetation Management Undertakings* to govern the implementation of a streamlined and phased process for landscape restoration undertakings and formally invites you to comment. A copy of the Programmatic Agreement is enclosed with this letter.

Should you elect to comment, we request that you do so within 30 days of receipt of this letter.

If you have further questions, or wish to comment via email, please contact Thomas L. Fuller, Heritage Program Manager at (970)945-3204 or thomas.l.fuller@usda.gov. If you wish to comment via letter please address your comments to: Scott Fitzwilliams, Forest Supervisor, White River National Forest, 900 Grand Avenue, Glenwood Springs, CO 81601.

Sincerely,

SCOTT G. FITZWILLIAMS
Forest Supervisor

Programmatic Agreement Regarding Vegetation Management Undertakings
cc: Tom Fuller, Rebekah Sease

PROGRAMMATIC AGREEMENT
AMONG THE UNITED STATES FOREST SERVICE,
ROCKY MOUNTAIN REGIONAL OFFICE, PIKE-SAN ISABEL
NATIONAL FOREST AND CIMARRON AND COMANCHE NATIONAL
GRASSLANDS, ROUTT NATIONAL FOREST,
SAN JUAN NATIONAL FOREST
AND THE COLORADO STATE HISTORIC PRESERVATION OFFICER
REGARDING
VEGETATION MANAGEMENT UNDERTAKINGS

WHEREAS, the Forest Service intends to implement landscape-scale vegetation management projects over several years using an adaptive management approach as authorized by the Organic Administration Act (16 U.S.C. 551), the National Forest Management Act of 1976 (P.L. 94-588, 90 Statute 2949), the Healthy Forests Restoration Act of 2003 (P.L. 108-148), and other statutes; and

WHEREAS, landscapes have been impacted by years of fire suppression and climate change which has resulted in modification to the natural fire regime and the distribution of forest vegetation; and

WHEREAS, landscape-scale vegetation management projects are proposed to restore the landscape to one that is more resilient and better able to support more-natural forest structures, disturbance regimes, vegetative diversity, wildlife habitat, and proper functioning watersheds; and

WHEREAS, landscape projects typically include vegetation treatments and associated transportation system improvements to reach desired conditions for forest health, including wildlife habitat improvement, and vegetation maintenance around facilities and significant known historic properties; and

WHEREAS, the Forest Service intends to coordinate its compliance with Section 106 of the National Historic Preservation Act (Section 106) with the applicable requirements of the National Environmental Policy Act (NEPA) (42 U.S.C.4321-4347) pursuant to 40 CFR 1500-1508; and

WHEREAS, Section 106 and its implementing regulations 36 CFR Part 800 as amended requires that federal agencies take into account the effect of an undertaking on historic properties as defined by 36 CFR 800.16(l)(1); and

WHEREAS, the Forest Service has determined that landscape level projects that include vegetation management activities that include mechanical treatments, hand treatments, prescribed burning, and activities associated with transportation system improvements, are undertakings that have the potential to affect historic properties; and

WHEREAS, Forests signatory to this programmatic agreement (PA) intend to satisfy its Section 106 responsibilities through the execution of this PA because the effects on historic properties cannot be fully determined prior to approval of landscape projects processed under this agreement (36 CFR 800.14(b)(1)); and

WHEREAS, a phased approach to the Section 106 process, as outlined by 36 CFR 800.4(b)(2), shall be used on landscape vegetation management projects because the projects are to be implemented in phases spanning more than one fiscal year, and it is not reasonably possible to complete Section 106 compliance for all aspects of the undertaking prior to signing a National Environmental Policy Act (NEPA) document. In this phased approach, a final decision under NEPA will be made prior to completion of the identification and evaluation of properties in the entire project area. According to 36 CFR 800.4(b)(2) and 5(a)(3), the agency official may use a phased process in applying the criteria of adverse effect consistent with phased identification and evaluation efforts; and

WHEREAS, Forests signatory to this PA will complete Section 106 consultation on individual landscape vegetation management project implementation activities (hereafter implementation projects) by following the stipulations of this PA; and

WHEREAS, pursuant to Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) and 36 CFR 800.2(c)(2)(ii), the Forest Service invited Indian tribes to be consulting parties on this PA, including: Ute Indian Tribe, Cheyenne and Arapaho Tribes of Oklahoma, Comanche Nation of Oklahoma, Kiowa Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe, Hopi Tribe, Jicarilla Apache Nation, Kewa Pueblo, Navajo Nation, Pueblo de Cochiti, Pueblo of Isleta, Pueblo of Jemez, Pueblo of Laguna, Pueblo of Nambe, Pueblo of Picuris, Pueblo of Pojoaque, Pueblo of San Ildefonso, Pueblo of Santa Clara, Taos Pueblo, Pueblo of Tesuque, Pueblo of Zia, Southern Ute Indian Tribe, Ute Mountain Ute, Zuni Pueblo, Ohkay Owingeh, Pueblo of Acoma, Pueblo of San Felipe, Pueblo of Santa Ana, and Ysleta del Sur Pueblo. No Indian tribes elected to participate as concurring parties. Notwithstanding any decisions by any of these Tribes to decline to participate in the initial consultation or be concurring parties, the Forests shall continue to consult with these Tribes throughout the implementation of this PA; and

WHEREAS, the Forest Service invited other parties to consult, including Colorado Council of Professional Archaeologists, Town of Walden Historic Preservation Board, Routt County Historic Preservation Board, Otero County Historic Preservation Advisory Board, Park County Historic Preservation Advisory Commission, Pueblo Historic Preservation Commission, Saguache Historic Preservation Commission, Colorado Springs Historic Preservation Board, Denver Landmark Preservation Commission, Florence Historic Preservation Commission, Buena Vista Historic Preservation Commission, Historic St. Elmo and Chalk Creek Canyon, Inc., Chaffee County Heritage Area Advisory Board, Castle Rock Historic Preservation Board, Cripple Creek Historic Preservation Commission, La Veta Historic Preservation Commission, Leadville Historic Preservation Commission, Manitou Springs Historic Preservation Committee, Salida Historic Preservation Commission, City of Woodland, Park County Department of Heritage, Tourism and Community Development, City of Pagosa Springs, La Plata County. The Park County Department of Heritage, Tourism and Community Development has elected to participate as concurring parties. Notwithstanding any decision by these other parties to decline to participate as concurring parties, the Forests shall continue to consult with these parties through the implementation of this PA; and

WHEREAS, the Forest Service has consulted with Colorado State Preservation Officer

(SHPO) pursuant to 36 CFR 800.14(b); and

WHEREAS, the Forest Service has notified the Advisory Council on Historic Preservation (ACHP) according 36 CFR 800.6(a)(l) and the ACHP by letter dated March 29, 2017 and the ACHP has elected not to participate;

NOW, THEREFORE, the Forest Service and SHPO agree that landscape vegetation management undertakings and subsequent implementation projects within the Pike-San Isabel National Forest and Cimarron and Comanche National Grasslands, Routt National Forest, and San Juan National Forest shall be governed by the following stipulations in order to take into account the effects of the undertaking on historic properties.

Contents

The Forest Service shall ensure that the following stipulations are met.

I. SCOPE

A. Applicability. This agreement can be applied to landscape vegetation management undertakings that may be implemented in phases spanning more than one fiscal year and when effects on historic properties may not be fully determined prior to the approval of the undertaking because on-the-ground treatment locations are not identified at the time the National Environmental Policy Act (NEPA) document is signed.

Landscape vegetation management undertakings may be carried out for a variety of purposes, including but not limited to, fuels reduction, fuel wood sales, watershed and forest health improvement, tree planting, habitat improvement, road-work associated with landscape projects, restoration around facilities and known historic properties. Regardless of the purpose and need, the implementation of these undertakings is often similar in that they consist of mechanical treatments, hand treatments, prescribed burning and associated road work. Activities associated with the implementation of landscape undertakings may include, but are not limited to, the following:

i. *Mechanical Treatments*. Mechanical treatments are those that utilize heavy mechanized equipment to fell and remove trees. Equipment used will vary from project to project but can include feller-bunchers, other large wheeled or track vehicles, skidders to push felled trees into larger piles, backhoes, mowers, or hydro axes.

ii. *Hand Treatments*. Hand thinning treatments rely on hand tools like chainsaws and do not include the use of heavy mechanized equipment.

iii. *Prescribed Burning*. Prescribed burning includes low to moderate intensity fires associated with broadcast burning and pile burning.

iv. *Transportation System Work*. Road work can be anticipated when the existing road systems aren't adequate to support landscape vegetation management work, or when removing part of a road system aids in restoration. Road work may include: road maintenance or rehabilitation including ripping, re-contouring, re-seeding, adding or removing drainage features and erosion controls.

Potential landscape vegetation management undertaking activities are listed below and are further described in the definitions section of the PA (Appendix B):

- branch pruning
- cable commercial/non-commercial timber harvest
- cut and chip
- cut and chunk
- cut, hand pile, and burn
- cut, mechanical pile, and burn

- drag line
- ground based commercial/non-commercial timber harvest
- helicopter commercial/noncommercial timber harvest
- application of insecticide spray or semiochemical treatment
- thinning from below

B Screened Undertaking Activities. Certain activities may be conditioned to minimize their potential to adversely affect historic properties and can be exempt from further review and consultation (Appendix A). Forest Service Heritage Professionals, meeting the professional qualifications as described below, shall review the proposed activity to determine whether it meets the exemption classification as outlined by Appendix A. Only Forest Service Heritage Professionals are authorized to determine whether an activity is exempt from further review and consultation. In consultation with SHPO, Tribes and other consulting parties, the Forest Service may propose other classes of screened undertakings and Appendix A may be revised following agreement by these parties. Such revision will not require formal amendment to the PA.

C. Unusual or Controversial Projects. If the Forest agency official, in consultation with the Heritage Professional, determines through the NEPA scoping that a proposed project has elements that are too unusual or too controversial to be covered by the stipulations in this PA, or if requested by a Tribe or local government (LG), the Forest will follow the process specified in federal regulations, "Protection of Historic Properties" (36 CFR §§ 800.3 through 800.6) to comply with Section 106 for that proposed undertaking.

D. Lead Agency. If the Forest Service designates itself lead agency, as allowed in 36 CFR 800.2(a) (2), the stipulations of this PA may be used to meet the collective responsibilities of the Forest Service and the designating agency. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance under Section 106.

II. PROFESSIONAL STANDARDS AND QUALIFICATIONS

A. Definitions. The definitions provided at 36 CFR 800.16 are applicable throughout this PA.

B. Professional Qualifications. The Forest Service Heritage Professional is an individual who meets, at a minimum, the standards set forth in Forest Service Manual 2360 and the provisions of the Office of Personnel Management Operating Manual for Qualifications X-118, and/or the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, Professional Qualifications for Archeologists and/or Historians (48 FR 190:44716-44742).

C. Documentation Standards. Written documentation of activities prescribed by this PA shall conform to the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-44740) and the Office of Archaeology and Historic Preservation's *Colorado Cultural Resource Survey Manual Guidelines for Identification:*

History and Archaeology.

D. Curation Standards. The Forest shall ensure that the materials and records resulting from the activities prescribed by this PA are curated in accordance with 36 CFR 79.

III. INTERNAL COORDINATION

A. Project Planning. Forest Service Heritage Professionals will be engaged in all aspects of project planning process, including early scoping, to ensure cultural resources are considered in planning and design. The Forest shall ensure coordination between staff throughout each implementation phase of the undertaking pursuant to the terms of this PA.

B. Roles.

i. Forest Service. In this agreement, Forest Service is used when referring to actions or responsibilities of the agency, or when referring to the collective actions or responsibilities of the participating Forests.

ii. Forest. In this agreement, Forest is used when referring to individual participating agency management units (e.g., San Juan National Forest).

iii. Agency Official. The agency official for NHPA Section 106 will coincide with the responsible official who signs the NEPA document for the undertaking, this may be the District Ranger, Forest Supervisor, or Regional Forester.

iv. Forest Service Heritage Professionals. Forest Service Heritage Professionals shall oversee Section 106 of the NHPA compliance conducted under this PA and shall make recommendations to the agency official regarding the protection of historic properties.

IV. CONSULTATION WITH TRIBES, LOCAL GOVERNMENTS, AND THE PUBLIC

A. Initial Outreach for Landscape Vegetation Management Undertakings. The Forest shall use the NEPA scoping process for undertakings subject to the terms of this PA to help identify consulting parties and interested parties, and communicate with the public as required in 36 CFR 800.3(e)-(f).

B. Tribal Consultation. The Forest shall consult with Indian tribes that attach traditional religious and cultural significance to historic properties that may be affected by the undertaking and to determine if any historic properties of cultural or traditional importance are present within the area of potential effect.

i. Once an undertaking is identified, the Forest will send a consultation letter to tribes describing the undertaking and requesting their participation to consult on subsequently phased implementation projects.

ii. For those undertakings that tribes request to participate in consultation, the Forest shall send a notification package as described below in Stipulation V.B, and a consultation letter after each identification stage conducted for an implementation project. The letter shall summarize results of the identification and request their feedback.

iii. If during consultation it is determined that an implementation project may affect a property identified by a tribe as having traditional cultural or religious significance, the Forest shall consult further with the tribe regarding the assessment of effects, and the resolution of adverse effects, if applicable, with respect to the property.

iv. The Forest shall also invite Indian tribes to participate in consultation through annual meetings or similar means throughout the life of the undertaking. The intent of this consultation is to discuss proposed implementation projects subject to the terms of this PA in the near term and to identify areas of potential importance and/or previously recorded significant sites to Indian tribes.

C. Local Government and Public Consultation. During the NEPA scoping process, the Forest will ensure that representatives of local government and are invited to consult on the undertaking and subsequent phased implementation projects. Once an undertaking is identified, the Forest Service will send notification letters to local governments, and other interested public identified through NEPA scoping, informing them of the undertaking and requesting their participation to consult on subsequently phased implementation projects.

V. COMPLIANCE PROCEDURES TO BE COMPLETED PRIOR TO SIGNING ENVIRONMENTAL DOCUMENT

A. Area of Potential Effect. As the Forest identifies a landscape vegetation management undertaking, the Forest shall determine and document the area of potential effect (APE). The Forest shall use the NEPA analysis area as the APE for the undertaking given it is sufficiently broad enough to consider the full geographic extent of the undertaking's potential direct, indirect, and cumulative effects on historic properties. The APE will be refined once individual implementation projects are identified (see below, Stipulation VI.A).

B. Notification.

i. The Forest must send notification to SHPO to use the streamlined process of this PA.

ii. The Forest shall send a notification package to SHPO and tribes who have expressed interest per Stipulation IV.B.ii prior to the signing of a NEPA document for any given landscape vegetation management undertaking processed under this PA. The notification package will include an Initial Cultural Resource Report with the following components from the Colorado Office of Archaeology and Historic Preservation (OAHP) Survey Manual Guidelines:

- Title Page, Abstract, and Introduction

- Environment
- Culture History and Previous Work
- Research Design
- Class I Results
- Map of the APE showing High Site Probability Areas, as identified using criteria outlined in Appendix C.

Upon receipt the SHPO shall assign a tracking number to the Forest for the undertaking. The Forest will include the SHPO tracking number on all subsequent submissions including addenda and final reports.

C. Implementation Projects. The Forest will complete NHPA Section 106 on implementation projects using the compliance procedures below.

VI. COMPLIANCE PROCEDURES FOR IMPLEMENTATION PROJECTS

The compliance procedures for implementation projects may be tracked using the checklist in Appendix E.

A. Refining the APE for Implementation Projects. The APE will be refined for each implementation project. Implementation projects are defined once the location of treatment units are identified. The APE is not limited to National Forest System (NFS) lands and will be based upon direct, indirect, and cumulative effects and is documented as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR 800.16(d)). The APE for direct effects is the area within which historic properties may sustain physical alteration or destruction as a result of the implementation project. The APE for indirect effects on historic properties considers visual, audible, and atmospheric elements that could diminish the integrity of historic properties for which setting, feeling, and/or association are aspects of such integrity.

B. Identification and Evaluation. As specific aspects or locations of an implementation project(s) are refined or access is gained, the agency official shall proceed with the identification and evaluation of historic properties in accordance with 36 CFR 800.4(b)(1) and (c). Identification will follow the survey strategy as outlined by Appendix C.

i. For blow down situations where ground disturbance is severely limited due to downed timber, the Forest will conduct Class III survey after the undertaking has been implemented in the blow down areas. The survey will follow the strategy outlined in Appendix C, section I.A in that the survey will focus on high site probability areas. All post-implementation survey will be reported in an Addendum Report per the process outlined in VI.C.

C. Determination of Eligibility and Finding of Effect.
An Addendum Report(s) shall be completed for implementation projects. Addendum Reports shall be submitted to SHPO prior to project implementation. Addendum Reports for implementation projects will reference the Initial Cultural Resource (Notification) Report. Addendum Reports shall include an introductory paragraph or cover letter stating the report is a phased component of the landscape undertaking and that consultation shall occur under the terms of this PA.

Addendum Reports will include the SHPO Tracking Number assigned the landscape undertaking. There is no need to duplicate information already provided in the Initial Cultural Resource Report in the individual Addendum Reports unless the Forest Service Heritage Professional identifies a need to update components (e.g., Environment, etc.) based on the location of a specific implementation project. Addendum Reports shall include a Cultural Resources Survey Management Form and a description of:

- Field Methods
- National Register of Historic Places evaluations (NRHP)
- Evaluation of survey strategy or predictive models (i.e., analysis of resources found in high or low site probability areas)
- Results and Recommendations will include a comprehensive assessment of direct, indirect and cumulative effects, actions to avoid, minimize or mitigate adverse effects to historic properties (e.g., Standard Site Protection Measures listed in Appendix D), and area(s) that require post-implementation survey.

For undertakings where tribes, local governments, or other parties are participating in consultation, the Forest shall send a letter to the interested tribes and parties after the identification stage of each implementation project. The letter shall summarize results of the identification and request their feedback, as stated in Stipulation IV. Feedback from tribes and other parties may require additional consultation. Upon request, Addendum Reports may be sent to tribes, local governments, and other parties participating in consultation on the undertaking and phased implementation projects.

i. Limited Finds. All limited finds surveys will be reported using the same process outlined in the Limited Finds PA. The Limited Finds PA process will be used throughout the duration of this PA, regardless of whether the Limited Finds PA has expired. Forests signatory to this agreement but not a signatory to the Limited Finds PA shall follow Stipulation VI.C(ii) outlined in this PA to meet NHPA 106 reporting requirements.

ii. No Historic Properties Affected. If no historic properties are present, or if they are present but will not be affected by activities associated with the undertaking, the Forest will make a determination of "No Historic Properties Affected". If SHPO does not respond within 10 business days of receipt of an adequately documented determination and finding, the Forest may assume the SHPO has no comment and proceed with the undertaking.

iii. No Adverse Effect. If a proposed undertaking may affect a historic property, but the

effects will not diminish the aspects of integrity or the characteristics that make the property eligible for the NRHP because the properties will either be avoided or protected using Standard Site Protection Measures listed in Appendix D, the Forest will make a determination of "No Adverse Effect," as defined in 36 CFR 800.6(b). If SHPO does not respond within 30 calendar days of receipt of an adequately documented determination and finding the Forest may assume the SHPO has no comment and proceed with the undertaking if consultation is complete with tribes, local governments, or other interested parties.

iv. Adverse Effect. If a proposed undertaking alters, directly or indirectly, any of the aspects of integrity or characteristics of a historic property that qualify it for inclusion in the NRHP, the Forest will make a determination of "Adverse Effect". The Forest shall consult with the SHPO, tribes, local governments, or other interested parties to develop and evaluate alternatives or modifications to the proposed undertaking that could avoid, minimize, or mitigate adverse effects on these properties.

If an adverse effect on historic properties is unavoidable, the Forest will document the finding and propose potential mitigation from the list below by sending an Addendum Report to SHPO, consulting tribes, local governments, and other parties. The SHPO will respond within 30 calendar days of receipt of an adequately documented determination and finding.

a. When options from the list below are selected to mitigate an adverse effect, a separate Memorandum of Agreement is not required.
   - Office of Archaeology and Historic Preservation's Historic Resource Documentation Standards for Level I, II, and II Documentation (January 2007).
   - Testing of sites.
   - Interpretation of sites.
   - Data recovery from sites.
   - Rehabilitation of sites, structures or buildings.
   - Removal of trees or other hazards around significant sites.
   - Synthesis of existing data into cultural contexts.
   - Ethnographic studies.
   - Historical or oral history studies.
   - Population/modification/improvement of data in the Natural Resource Manager (NRM), GIS or SHPO databases.
   - Other cultural or historical preservation or research.

b. If a mitigation option is proposed that does not meet the intent of the listed items above, the Forest shall initiate consultation with SHPO, tribes, local governments and other parties to resolve adverse effects using the process set forth in 36 CFR 800.6.

v. If the Forest and SHPO fail to reach agreement on NRHP eligibility, effect and effect resolution, consultation will follow 36 CFR 800.4 through 800.7 as appropriate.

D. Timing of Project Implementation. Project implementation may proceed once all identification, assessment, and resolution of adverse effects (if any) have been completed.

E. Final Cultural Resource Report. A Final Cultural Resource Report shall be sent to SHPO within one year of completing the final Letter Report for the last implementation project completed for any given landscape restoration undertaking. The Final Cultural Resource Report will include an evaluation of the survey strategy, evaluation of Standard Site Protection Treatments, a list of all sites recorded during the landscape restoration project, summary and conclusions from the entire project. A Final Cultural Resource Report may be sent to tribes, local governments and other parties participating in consultation on the undertaking and phased implementation projects, upon request.

VII. ANNUAL REPORT AND REVIEW

A. Annual Report. Participating Colorado National Forests and Grasslands shall provide all signatories and concurring parties to this PA an annual summary report detailing work completed pursuant to its terms. Forests shall submit their annual reports to the Rocky Mountain Regional Office. The Rocky Mountain Regional Office will compile and share one report with the SHPO and other signatories of this PA.

The report is due to SHPO by March 1. The report can be in letter format. The Annual Report should summarize activities completed under this PA during the previous federal fiscal year (October 1 – September 30), including a list of exempted undertaking activities. The report shall also include information on current project status, such as what undertakings are in progress, and the status and anticipated completion of implementation projects, if known. Such reporting shall include any scheduling changes proposed, any problems encountered, and any disputes and objections received in the efforts to carry out the terms of this PA. The format of the annual report may change upon agreement of signatories, with no need to amend the agreement.

If additional time is necessary to complete the report, the Regional Office shall notify all parties within 30 days after the report is due and propose a revised schedule. The reporting extension will be agreed upon by all parties to this PA. If participating Forests fail to contribute to the annual report by the due date, or request an extension within 30 days after the report is due, the agreement with the non-compliant Forest will then be considered terminated.

VIII. POST-REVIEW DISCOVERIES

The Forest shall follow procedures under 36 CFR 800.13(b) for post review discoveries if

historic properties are discovered or if unanticipated effects on historic properties are found after the Section 106 consultation on the effects of the undertaking are completed. The Forest will fully comply with NAGPRA regulations at 43 CFR 10.4 in the event of the discovery human remains, funerary objects, and other NAGPRA items. In the event unmarked graves are encountered on land owned by the State of Colorado or on private lands within Colorado, Colorado Revised Statute 24-80-1301-1305: Unmarked Human Graves, shall be followed.

IX. EMERGENCIES

In the event of an emergency, the Forest will follow procedures defined at 36 CFR 800.12.

X. CONFIDENTIALITY

To the extent consistent with the NHPA, Section 304, and the Archaeological Resources Protection Act, Section 9(a), cultural resources data will be treated as confidential by all signatories and are not to be released to any party not a signatory to this agreement. Duplication or distribution of cultural resource data from Forest lands by any signatory requires written authorization from the Forest.

XI. DISPUTE RESOLUTION

Should any signatory or concurring party to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, the Forest shall consult with such party to resolve the objection. If the Forest determines that such objection cannot be resolved, the Forest will:

A. Forward all documentation relevant to the dispute, including the agency proposed resolution, to the ACHP and a copy to the Regional Forester. The ACHP shall provide the agency with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, agency shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. The Forest will then proceed according to its final decision.

B. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, the Forest may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the Forest shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the PA, and provide them and the ACHP with a copy of such written response.

C. The Forest's responsibility to carry out all other actions subject to the terms of this PA that are not the subject of the dispute remain unchanged.

XII. PARTICIPATION OF OTHER COLORADO NATIONAL FORESTS TO THE AGREEMENT.

A. Other Colorado National Forests not currently signatories to this Agreement may request of SHPO to be admitted to this agreement. To be added to this agreement a Forest must:

i. Send a letter to SHPO informing them of the request to be added as a signatory to this agreement. The letter will also contain a list of the proposed tribes, local governments, and interested historic preservation groups the Forest will contact about this agreement and will request SHPO's concurrence with these parties. The Forest shall send a copy of this letter to the Regional Forester.

ii. Send letters explaining the agreement and requesting comments to tribal entities that have traditional ties to the Forest, local governments and interested historic preservation groups as identified in consultation with SHPO. Follow up with phone calls or emails, as necessary, to confirm receipt.

iii. After 30 days send the comments received and proof of consultation to the SHPO and Regional Forester.

iv. After review of the comments and consultation letters, SHPO and the Regional Forester will determine if it is appropriate for the Forest to be added as a Signatory to this agreement.

v. If the Forest is added to the agreement the Regional Forester will send a signature page with the concurring parties' signatures and the signature of the Forest Supervisor to the SHPO. Upon acceptance by SHPO, the Regional Forester will send copies back to all signatories of this agreement and to the ACHP.

B. The participation of a Forest in this agreement is independent of other Forests. If after following dispute resolution process outlined in Stipulation XI, and after consultation with the SHPO, the Regional Forester may recommend the suspension of a Forest without affecting the participation of other Forests.

XIII. AMENDMENTS

This PA may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

XIV. TERMINATION

Any signatory to this PA may initiate termination by providing written notice to the other signatories of their intent. After notification by the initiating signatory, the remaining signatories shall have 90 business days to consult to seek agreement on amendments or any other actions that would address the issues and avoid

termination. Termination of this PA or failure to abide by its terms shall require the Forest Service to comply with 36 CFR 800 with respect to undertakings that would otherwise be reviewed under the terms of this PA.

XV. DURATION

This PA shall remain in effect for up to 15 years after the date of execution. The Forest Service and SHPO shall re-evaluate the PA every 5 years or as necessary. Signatories shall ensure the PA will be re-evaluated and amended to accommodate any changes to the terms. All signatories will be consulted during the amendment process (see Stipulation XIII).

Execution of this PA and implementation of its terms evidences that the Forest Service has taken into account the effects of the vegetation management undertaking and its implementation projects on historic properties.

In witness thereof, the parties to this PA through their duly authorized representatives have executed this PA on the dates cited below, and certify that they have read, understood, and agreed to the terms and conditions of this PA as set forth therein. The effective date of this PA is the date of the last signatory signature affixed to these pages.

SIGNATORY:

UNITED STATES FOREST SERVICE,
ROCKY MOUNTAIN REGIONAL OFFICE

per _____ 12/8/2017
BRIAN FEREBEE DATE
REGIONAL FORESTER

SIGNATORY:

COLORADO STATE HISTORIC PRESERVATION OFFICE

Holly Kathryn Norton 29 Nov 2017

for STEVE TURNER DATE
STATE HISTORIC PRESERVATION OFFICER

INVITED SIGNATORY:

UNITED STATES FOREST SERVICE
SAN JUAN NATIONAL FOREST

Anthony Madrid 11/16/2017

For KARA CHADWICK DATE
FOREST SUPERVISOR

INVITED SIGNATORY:

UNITED STATES FOREST SERVICE
MEDICINE BOW-ROUTT NATIONAL FORESTS AND THUNDER BASIN NATIONAL GRASSLAND

11/27/17

RUSSELL BACON DATE
FOREST SUPERVISOR

INVITED SIGNATORY:

UNITED STATES FOREST SERVICE
PIKE AND SAN ISABEL NATIONAL FOREST AND CIMARRON AND COMANCHE NATIONAL GRASSLANDS

FOR _____ 20 NOV 17

ERIN CONNELLY DATE
FOREST SUPERVISOR

CONCURRING PARTY:

PARK COUNTY DEPARTMENT OF HERITAGE, TOURISM AND COMMUNITY DEVELOPMENT

12-7-2017

MIKE BRAZELL DATE
CHAIRMAN
PARK COUNTY BOARD OF COMMISSIONERS

Appendix A: Screened Undertaking Activities

Some activities that have limited potential to affect historic properties may be exempt from further review and consultation once screened by the Forest Service Heritage Professional. These activities require no additional consultation beyond documentation in the annual report.

The following landscape vegetation management activities either result in no ground disturbance or are conducted entirely within previously disturbed areas that are not likely to contain intact and distinct soil horizons. The screened undertakings have a low potential to affect historic properties within original depositional contexts to the depth to be excavated and/or modified.

A. Chemical Treatments and Insect Traps

i. Insecticide spraying on single trees and small stands of trees.
ii. Trap tree activities; felled, debarked, hand-piled and burned in previously disturbed burn areas. No heavy machinery is used.
iii. Lethal trap tree activities; felled, pesticide applied. No trees removed and no heavy machinery is used.
iv. Aggregate (trap-out) beetle activities; funnel traps hand-placed in trees.
v. Semiochemical treatments.
vi. Application of pesticides that do not have the potential to affect access to or use of resources by Tribes.

B. Slash Disposal

i. Slash disposal in previously disturbed areas where the slash is piled by hand and burned. Slash is either hand piled for chipping or bucked by hand, loaded on to rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type Class 3.

C. Ladder-fuel Reduction and Pruning Activities

i. Understory removal of non-commercial timber, including aspen and forest enhancement activities, using chainsaws to reduce ladder fuels, break up the continuity of fuel and to improve stand health and resiliency. Slash is either hand piled for chipping or bucked by hand, loaded into rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type Class 3.
ii. Branch pruning activities where selected trees are pruned to improve tree health and resiliency, reduce ladder fuels, and to create defensible space around structures. Slash is either hand piled for chipping or bucked by hand, loaded into rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type Class 3.
iii. Boundary treatments where dead standing trees, down trees, and slash within 100 ft. of the national Forest/private-land boundary are cleared with chainsaws, understory ladder fuels are removed, and lower branches on retained trees are pruned to create a fuel break. Slash is either hand piled for chipping or bucked by hand, loaded into rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type

Class 3.

D. Defensible Space

i. Creation of defensible space around homes and structures through removal of trees, brush, and other vegetation using chainsaws and hand tools, where such activities do not have the potential to affect the integrity of the setting of nearby historic properties. Slash is either hand piled for chipping or bucked by hand, loaded into rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type Class 3.

E. Road/Trail maintenance

i. Routine trail maintenance limited to brushing and light maintenance of existing tread with hand tools. Routine trail clearing of rocks and debris. This would include the removal of fallen trees and branches from the trail. Rock and debris will be hand carried from the trail, and piled without dragging across country. Piles may be left in place, or disposed of by chipping, loaded into rubber-tired vehicles and hauled away. This excludes the use of vehicles over vehicle type Class 3.
ii. Felling and removal of hazard and wind-throw trees from road and trail prisms where deemed necessary for health, safety, or administrative reasons, so long as trees are felled into and removed from existing road or trail prisms (area clearly associated with road construction, from road surface to top of cut and/or toe of fill) where previous disturbance is such that the presence of no known unevaluated cultural resources or historic properties is considered unlikely, and so long as ground disturbance is not allowed off previously disturbed areas associated with road or trail prisms.
iii. Issuance of road-use permits for commercial hauling over existing roads.
iv. Temporary or permanent road closures involving no new ground disturbance.
v. Maintenance or replacements to non-historic (less than 50 years) culverts including placement of rip-rap at inlet and outlets of existing culverts when activities are confined to previously disturbed areas and where there are no historic properties or unevaluated cultural resources and where the culvert itself is not a historic property.
vi. Stockpiling of road related materials in or on existing roads or turnouts.
vii. Installation of roadside safety features such as guardrails, adjacent to existing forest roads, in previously disturbed areas where the road and its features are not historic properties.

F. Other

i. Areas where mowing with a brush hog or similar rubber-tired equipment is proposed, that occurs outside of known historic property boundaries and/or buffer zones as appropriate.
ii. Areas where tree sanitation is proposed, where trees are felled, peeled, piled and removed by hand. No heavy machinery is used and activities occur outside of known historic property boundaries and/or 50 ft. buffer zones as appropriate.

Appendix B: Definitions

Black Line: Black line is a condition where there is no burnable material between the line and the fire edge. Typically, on a prescribed burn a black line strip will be placed between a hand line or road, and the interior of the burn unit before the interior is ignited.

Blowdown: When trees are blown down during a natural event, covering the ground surface and resulting in limited ground visibility.

Branch Pruning: Selected trees are pruned to remove dwarf mistletoe "witch's brooms" to improve tree health and resiliency, reduce ladder fuels, and to create defensible space around structures. Slash would either be hand-piled for chipping and/or bucked up by hand, and loaded onto rubber tired vehicles to be hauled to designated burn piles for burning. All vehicles used will be one-ton or smaller with rubber tires. Any chippers utilized will be restricted to those which are equipped with rubber tires and are small enough to be pulled by a one-ton vehicle.

Cable Commercial/Non-commercial Timber Harvest: In contrast to ground-based methods of timber harvest where a vehicle is moved to the logs and subsequently pulls them to the landing, cable systems use a stationary machine, or yarder, that pulls the logs to the landing by means of steel cables. Cable systems are commonly employed on steep slopes and over soft or wet ground which would pose problems for ground-based equipment.

Class I Inventory: A professionally prepared study that includes a compilation and analysis of all reasonably available cultural resource data and literature. Additionally, this study is a management-focused, interpretive, narrative overview, and synthesis of the data.

Class II Inventory. Class II inventory is a professionally conducted, statistically-based sample survey designed to aid in characterizing the probable density, diversity, and distribution of cultural resources within a large area. Intensive pedestrian inventory is conducted in limited and discontinuous portions of the project area. Within individual sample units, survey aims, methods, and intensity are the same as those applied in a Class III inventory. A Class II inventory may include an approach that is based on a professional but judgmental strategy that needs to be specifically defined for a project. A Class II inventory may be conducted in several phases, using different sample designs to improve statistical reliability.

Class III Inventory: Class III inventory is a professionally conducted, continuous, intensive pedestrian survey of an entire project area aimed at locating and recording all cultural resources. Intensive inventory describes the distribution of properties in an area; determines the number, location and condition of properties; determines the types of properties actually present within the area; permits classification of individual properties; and records the physical extent of specific properties.

Class 3 Vehicle: All two-axle, four-tire vehicles, other than passenger cars. Included in this classification are pickups, panels, vans, and other vehicles such as campers, motor homes,

ambulances, hearses, carryalls, and minibuses. Other two-axle, four-tire single-unit vehicles pulling recreational or other light trailers are included in this classification. (Federal Highway Administration, www.fhwa.gov/policyinfomration/mtguide/tm_2013/vehicle-types.cfm). In the Forest Service, common Class 3 vehicles include two and four-wheel drive pickup trucks.

Cut and Chip: Actions consisting of contractors, or other parties formally designed as such by the Forest Service who walk to stands from developed roads and utilize chain saws to thin out stands of oak brush, aspen and conifers. Small trees or brush are cut by hand, dropped to the ground, and subsequently sent through a mechanical chipper. The chips are distributed across the ground surface where they are left. All vehicles used will be one-ton or smaller with rubber tires. Any chippers utilized will be restricted to those which are equipped with rubber tires and are small enough to be pulled by a one-ton vehicle.

Cut and Chunk: Actions consisting of contractors, or other parties formally designed as such by the Forest Service who cut the trunk of a tree into sections normally 24 inches or less in length and leaving the sections laying directly on the ground with the intent that the bark will dehydrate faster, thereby eliminating the beetle's primary food source.

Cut, Hand-Pile, and Burn: Actions consisting of employees, contractors, or other parties formally designed as such by the Forest Service who cut the trunk of a tree into sections small enough to be transported by hand, hand-piling the sections in open areas, then later burning the dried pile during a period when the chance of wildfire is minimal. The intent is to eliminate beetles inhabiting the tree.

Cut, Mechanical-Pile, and Burn: Actions consisting of employees or contractors, or other parties formally designed as such by the Forest Service who cut the trunk of a tree into sections of varying lengths, piling the sections in open areas using mechanical equipment, then burning the dried pile during a period when the chance of wildfire is minimal. The intent is to eliminate beetles inhabiting the tree.

Dozer Line: A fire line created by a dozer down to mineral soil.

Drag Line: A line created by dragging some type of heavy (e.g., steel wheel filled with concrete) device behind usually an ATV or UTV.

Feller-Bunchers A motorized vehicle with an attachment that can rapidly cut and gather several trees before felling them. A feller-buncher consists of a standard heavy equipment base with a tree-grabbing device furnished with a chain-saw, circular saw or a shear - a pinching device designed to cut small trees off at the base. The machine then places the cut tree on a stack suitable for a skidder or forwarder, or other means of transport (yarding) for further processing (e.g., de-limbing, bucking, loading, or chipping).

Fell: To cut down.

Foam: Foam is a surfactant that expands and reduces the tension of water creating blanket that adheres to fuels to extinguish burning areas or to create a wet line to halt fire movement.

Fuel: Any living or dead material that will burn.

Ground Based Commercial/Noncommercial Timber Harvest: Methods of cutting and transporting logs where the majority of the operations are conducted on the ground surface by mechanical or hand-powered means. Ground-based operations are often less expensive than cable or aerial methods of timber harvest.

Hand Line: A fire line created manually down to mineral soil using hand tools such as Pulaski, shovel, etc. Lines are usually 12" to 18" wide and only deep enough to prevent fire from creeping across an organic material.

Helicopter Commercial/Noncommercial Timber Harvest: Helicopter logging enables logs to be transported to the landing regardless of terrain and ground conditions, however, production costs are extremely high.

Heritage Professional. A Forest Service staff or advisory position with education and expertise in archaeology, history, cultural resource management, or related disciplines. Heritage professionals are in the GS-170-History, GS-190-General Anthropology, and GS-193-Archaeology job series. They provide professional recommendations and services to help land managers meet their Heritage Program responsibilities (Forest Service Manual 2360.5).

Insecticide Spray: Chemical pesticides will be used on individual trees and on small stands of trees. Employees walk from developed roads to the infected trees, and apply the chemical by hand. No trees are removed under this activity.

Landings: Any place where round timber is stacked or assembled for further transport.

Manual treatments: Include, but are not limited to, chainsaw thinning, hand bucking and piling, and spraying of insecticides.

Masticator: A specialized cutting head on a piece of equipment used to turn stumps, wood, or other organic material into mulch.

Mechanical Treatments: Mechanical treatments include, but are not limited to, the use of heavy mechanized equipment to fell and remove trees. Equipment types used will vary from project to project but can include, among other things, feller-bunchers or other large wheeled or track vehicles, skidders to push felled trees into large piles, backhoes, masticators, and all-terrain vehicles.

Non-commercial (pre-commercial) Thinning: Thinning where trees being removed are too small to be sold for conventional wood projects such as lumber. Slash and small diameter wood residues are typically left on site after being cut, or removed as low value biomass product.

Prescribed Burn: Activity in which fire is applied generally to most or all of an area within

well-defined boundaries for reduction of fuel hazard as a resource management treatment or both.

Project Implementation: For the purposes of this agreement, project implementation means the actual construction, timber sale or other ground disturbing action of the undertaking. Contracting, planning, and landline surveys in preparation of the project are not considered part of the project implementation.

Reconnaissance Survey: A non-statistical, special-purpose survey to: 1) develop recommendations about field survey needs in previously un-surveyed areas; 2) check the adequacy of previous surveys; 3) verify assumed conditions that warrants a waiver from a more intensive survey; 4) locate architectural or other high-profile properties. (Forest Service Manual 2363.13a.a)

Retardant: Retardant is a chemical liquid that reduces the flammability of fuels or slows their rate of combustion. Usually it is applied aerially, but can be applied on the ground.

Semiochemical Treatments: Pheromones distasteful to beetles are placed in the trees to discourage beetles from accessing specific stands of trees.

Slash: Branches and other woody material left in an area after tree cutting.

Stand: A continuous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing in a group of sufficiently uniform quality to be a distinguishable unit.

Staging Area: An area in which vehicles, equipment or supplies may be parked or driven repeatedly, resulting in ground disturbance.

Structural Fire Shelter: A shelter made of fire shelter material used to wrap buildings or other improvements prior to the approach of a fire.

Thinning From Below: Thinning from below removes overtopped or suppressed, younger and generally small diameter trees to improve growth, enhance forest health, recover potential mortality, or reduce ladder fuels. This treatment often compliments other activities such as salvage, sanitation, or selection harvest (i.e., limbs, foliage, and tops). Smaller diameter wood residues resulting from treatment would either be hand or machine piled for chipping, burning, or subsequent removal as a biomass product. Removal of slash and other non-commercial material may be accomplished by skidding or forwarding with rubber tired or tracked equipment.

Treatment Units: The location of proposed project activity (i.e., implementation project).

Wet Line: Wet line is a control line created by putting down water or foam to prevent the spread of fire. It is generally only effective in grass or very light fuels.

Appendix C: Field Survey Strategy

As specific locations of Implementation Projects are refined, the Forest shall conduct Class II or Class III inventory to identify historic properties. The strategy below may be used, or individual forests may consult with signatories to use alternate strategies or predictive models. If a forest proposes to use something other than the strategy outlined in this appendix, they shall consult with and gain consensus with signatories on their proposed strategy prior to initiating survey.

I. The following areas shall be field surveyed using pedestrian transects within the refined APE of the Implementation Project:

A. Areas of high potential for historic properties:

i. Prehistoric Cultural Resources:

- Areas of known high site density and/or known site locations.
- Ecotonal boundary areas (e.g., areas between canopied and non- canopied areas).
- Areas located within ¼ mile of permanent water sources or natural travel routes associated with mountain passes.
- Geographic features within loosely canopied areas including high points and open views, saddles, terraces, benches and ridges (e.g., hunting corridors).
- South, east and west facing slopes less than 15%. On slopes between 15% - 25%, survey will focus on those areas where ground disturbance is possible because of the use of mechanical equipment for project implementation.
- Areas known to contain geological outcrops of tool stone source material.
- Areas that include old growth Ponderosa pine and or Douglas fir that might contain fire sensitive features such as CMTs and wickiups, and other fire sensitive sites listed below.
- Areas of potential importance as identified during tribal consultation.

ii. Historic Cultural Resources:

- Areas within or in close proximity to bedrock deposits containing precious or marketable metal ores.
- Natural travel corridors for pack trails, wagon trails, stock driveways, auto roads, and/or railroads.
- Areas located within ¼ mile of permanent water sources or areas in proximity to

railroad grades.

- Potential historic cultural resource identified as a result of literature search. The Forest will follow Office of Archaeology and Historic Preservation Survey Manual guidelines with respect to the documentation of historical features including dirt roads, stock ponds, soil perms, fence lines, small irrigation ditches, pastures, or fields unless they are part of a larger site, known to be significant or are named. If the resources are not fully documented, they will be generally described in the survey report.

- Areas that might contain fire sensitive sites, as listed below.

- Areas of potential importance to the public.

B. Areas where ground-disturbing activities are proposed including, but not limited to the following:

i. Any area where machine piling or any other activity using mechanized equipment, including machine piling, wind rowing, mechanical crushing, skid trails where identified, and cutting units where skid trails are not identified.

ii. Road construction.

iii. Water bars and other constructed erosional features.

C. Areas where prescribed fire is proposed:

i. Hand and mechanical control lines.

ii. Staging and safety areas.

iii. Fire sensitive sites, as follows:

a. Known Fire-Sensitive Site Types:

- Historic sites with standing, or down wooden structures or other flammable features or artifacts.
- Rock art sites.
- Cliff dwellings.
- Prehistoric sites with flammable architectural elements and other flammable features or artifacts.
- Culturally modified trees, including aspen art and peeled/scarred trees.
- Certain traditional cultural properties (based on consultation with tribes).

- Other Fire-Sensitive Sites: based on local field conditions, forest-specific concerns, or as recommended as a result of consultation with SHPO staff, tribes, local governments, or other interested parties, fire management staff, fire behavior specialists, or fire effects researchers.

II. The following areas within refined APE of Implementation Projects do not require field survey:

A. Slopes greater than 25% where modeling based on the results of previous survey work in similar settings, and/or where reconnaissance field survey indicates there is no potential for cultural resources such as rock art, rock shelters, and significant mining features.

B. Portions of the APE affected by previous ground disturbance that has modified the surface so extensively that the likelihood of finding cultural resources is negligible.

C. Areas of the APE covered by previous adequate survey. Previous survey (i.e., legacy survey) will be considered adequate if it has been previously reviewed by SHPO, and meets the intent of the guidance in the Secretary of Interior's Standards for Archaeological Documentation and the Advisory Council on Historic Preservation's "Meeting the Reasonable and Good Faith Identification Standard in Section 106 Review". When considering whether previous survey is adequate, Forest Service Heritage Professionals shall rely mostly upon agency guidance put forth in the Forest Service Heritage Program Management Handbook, FSH 2309.12, Chapter 32, Section 11 (Date Approved 04/08/2008):

> Survey data accumulated during the initial years of Forest Service cultural resource management may not meet current standards or conform to modern technologies (for example, GPS coordinates). Field conditions and surface visibility also change. These older data provide useful information for broad-scale land use planning and for cultural resource identification strategies, but do not negate the requirement for further identification and field survey. When reviewing legacy data for planning or project purposes, Heritage professionals should:
>
> - Review past and current survey coverage using project maps, survey designs, transect interval maps, GIS, survey descriptions, photographs, and related field data.
> - Identify those areas with substandard or inadequately documented survey coverage or areas where additional field survey is warranted due to better ground visibility, new cultural resource information, or other relevant factors as identified by the Heritage professional.

Generally, previous intensive field survey shall be considered adequate if the corresponding cultural resource report describes field methods that would be used today and the Forest Service Heritage Professional has confidence in the previous survey. When considering whether a survey is adequate, Heritage Professional should also consider if re-survey is appropriate based on the current undertaking's potential for effects or changed conditions.

Appendix D: Site Protection Measures

Various combinations of the following protection measures may be approved by the Forest Heritage Professionals to protect historic properties for projects listed in this agreement. Any use of these measures should be reported in addendum reports. Use of these protection measures will generally be considered to result in a no adverse effect finding. Heritage Professionals may approve additional measures to further protect historic properties; additional measures not listed below shall also be discussed in addendum reports.

I. Prescribed Burning

A. Protect fire-sensitive sites:

- Exclude from project area
- Hand line
- Black line
- Wet line
- Foam retardant
- Structural fire shelter
- Remove heavy fuels from site by hand
- Prevent in-situ heavy fuels that cannot be removed from ignition (e.g., flush-cut & bury stumps)
- Implement same protective measures for future maintenance burns.

B. Protect selected other sites from burning (optional).

C. Allow burning over non fire-sensitive sites provided:

- No ignition points within site boundaries
- No staging of equipment within site boundaries
- No slash piles within site boundaries.

D. Allow construction of safety zones and additional lines in 100% surveyed areas, with archaeological monitoring as appropriate to assure historic properties are avoided.

II. Thinning, Hand, and Mechanical Treatments

A. No treatments or ground disturbance within site boundaries -or- Allow treatments within site boundaries, provided:

- Cutting is accomplished using hand tools only
- Large diameter trees are felled away from all features
- Materials removed from the site are removed by hand
- No dragging of logs, trees, or thinned material across or within site boundaries.

B. No use of vehicles or other mechanized equipment within site boundaries.

C. No staging of equipment within site boundaries.

D. No slash piles within site boundaries.

III. Fuelwood

A. No fuelwood cutting or vehicles within site boundaries -or- Allow fuelwood cutting within sites provided that:

- No vehicles allowed within site boundaries
- No dragging of logs, trees, or cut material across or within site boundaries
- Materials removed from the site are removed by hand.

B. Allow fuelwood cutting in areas of large, continuous, low-density artifact scatters that cover large portions of a landscape provided that:

- All features and artifact concentrations are recorded and avoided
- Use of vehicles is prohibited during wet ground conditions
- Periodic monitoring is used to assess impacts and if impacts are noted, fuelwood cutting will be prohibited in the area.

IV. Activities Involving Hazardous Tree Removal, Grapple Piling, Mechanical Treatment, Skid Trails and Landing Areas

A. No mechanical treatment will occur within the site boundary of a historic property, plus a 50 foot buffer around the site. If treatment is necessary, these sites and the 50 foot buffer will be hand-treated.

V. Activities Involving Road Construction, Temporary Road Construction, Fire Control Lines, and Skid Trails

A. A 50 foot buffer around the historic properties will be established. The road control line will be moved to avoid the site and the 50 foot buffer area. If the undertaking consists of construction and there is the potential for unidentified buried cultural remains, the location will be moved to avoid the site and the construction activities in the area will be monitored by an archaeologist.

Appendix E: Checklist for Implementation Projects

This internal checklist can be used to track information to include in Addendum Reports. It may also be used to communicate implementation project status with project managers.

1. Refine the APE for the implementation project.

2. Update the Class I. Identify previously surveyed areas and previously recorded cultural resources within the refined APE.

3. Are there updates to the following components of the Initial Cultural Resource Report? If yes, provide update in the Addendum Report.

	Environment
	Culture History
	Research Design
	Class I Results
	Field Methods
	Evaluation of Hi/Mod/Low probability areas

4. Have NRHP evaluations been adequately completed for all cultural resources known in the implementation project APE?

	No. Proceed with evaluations.
	Yes. Proceed with next step.

5. Have potential adverse effects to historic properties been identified? Consider indirect effects, and cumulative effects in relation to other implementation projects.

	No, because historic properties have not been identified in the APE. Proceed to next step.
	Yes, but Site Protection Measures CAN be prescribed to eliminate the potential for adverse effect. Follow process in PA.
	Yes, but Site Protection Measures CANNOT be prescribed to eliminate the potential for adverse effects. Resolution of adverse effect will proceed per the PA.

6. The recommendation of effect for this project is:

	No Historic Properties Affected
	No Adverse Effect
	Adverse Effect

7. When NRHP evaluations and effects assessments have been completed for all cultural resources identified within the APE of the implementation project, an Addendum Report shall be written and submitted for consultation prior to project implementation.

BUREAU OF RECLAMATION

FY 2020 WaterSMART Grants: Water and Energy Efficiency Grants

California

Bard Water District, Construction of Five Gates Conveyance Improvements

Reclamation Funding: $300,000 **Total Project Cost: $642,294**

The Bard Water District, located in southern California near the Arizona border, along with the Quechan Indian Tribe, will construct conveyance improvements for the Five Gates structure, which is a series of gated culverts that act as a major chokepoint in the District's delivery system. The District will replace the existing Five Gates with new more advanced metal gates and 560 feet of pipeline to increase water use efficiency and reliability through optimal flow rates, reduced leakage, and reduced operational losses. The project is a top priority for the District and the Tribe and is expected to result in annual water savings of 1,452 acre-feet, which will remain in the Lower Colorado River System.

Beaumont-Cherry Valley Water District, Beaumont-Cherry Valley Water District Advanced Metering Infrastructure Project

Reclamation Funding: $1,500,000 **Total Project Cost: $5,704,270**

The Beaumont-Cherry Valley Water District, located in Riverside County in southern California, will install new meters and upgrade previously installed meters so that all 19,154 primarily residential water meters in the District have advanced metering infrastructure (AMI) capable technology. The District will also install repeater equipment to improve the District's leak detection program. The project is expected to result in annual water savings of 927 acre-feet by recovering losses currently caused by inaccurate metering and leaks. The area is vulnerable to drought conditions and is projected to have increasing demand due to population growth. The project will reduce the District's dependence on imported water and will offset groundwater pumping from the adjudicated Beaumont Basin.

Firebaugh Canal Water District, 2nd Lift Canal Lining Project

Reclamation Funding: $1,000,000 **Total Project Cost: $2,303,300**

The Firebaugh Canal Water District located near Mendota, California, will line 2.5 miles of the unlined 2nd Lift Canal with concrete. The District will also replace existing turnout structures with pre-cast concrete structures that can accommodate high-efficiency irrigation system upgrades. The District is located within the Grassland Drainage Area, which is underlain with a shallow, saline aquifer. As subsurface drain water generated within the region is discharged to the San Joaquin River, minerals enter the river and degrade water quality. Water that is currently lost to seepage from the 2nd Lift Canal becomes unusable when mixed with the saline sink. The project is expected to

result in annual water savings of 320 acre-feet by reducing seepage, which supports the Westside Regional Drainage Plan, a collaborative effort by local water districts to curtail discharge to the river. During normal water years, conserved water will be marketed to adjacent water districts to supplement their water supply and to offset reliance on local groundwater, which is often poor quality and contributes to subsidence. During critical years when the District's supply is curtailed, the water conserved will allow the District to make up for the reduced water allocation.

City of Needles, Needles Advanced Meter Infrastructure Project with Automated Meter Reading

Reclamation Funding: $213,826 **Total Project Cost: $427,652**

The City of Needles, located in San Bernardino County, California will install 1,944 meters with advanced metering infrastructure (AMI). The City currently relies on manual readings on a monthly basis, making it difficult to detect leaks. The project is expected to result in annual water savings of 160 acre-feet by reducing delays in leak identification and unusual consumption patterns. The water conserved will be used to meet increasing demand due to population growth, which will reduce the need for additional water rights or additional purchased water.

North Kern Water Storage District, Calloway Canal Lining and Water Delivery Improvements

Reclamation Funding: $1,500,000 **Total Project Cost: $3,100,392**

The North Kern Water Storage District, located in Bakersfield, California, will line 3,841 feet of an unlined portion of the Calloway Canal with 4-inch thick unreinforced concrete. The canal lining is expected to result in annual water savings of 1,349 acre-feet, which is currently seeping into the groundwater basin that has poor water quality. Additionally, the District will install flow meters, water level sensors, and telemetry at seven of the District's production wells. These additional improvements will provide real-time data and allow the District to better control well operations, resulting in an expected annual water savings of 289 acre-feet from reduced pumping. The groundwater basin in the San Joaquin Valley portion of Kern County is critically stressed, especially when pumping increases during dry years. Overall, the project is expected to result in 1,638 acre-feet of water savings, which will offset groundwater pumping.

City of Oceanside, City of Oceanside Advanced Metering Infrastructure Project (Phase II)

Reclamation Funding: $1,500,000 **Total Project Cost: $4,497,429**

The City of Oceanside, located in southern California, will upgrade approximately 11,429 existing primarily residential water meters to advanced metering infrastructure (AMI) smart meters. The project is expected to result in annual water savings of 784 acre-feet by providing real-time information to customers about leaks, breaks, and other unusual consumption patterns. The water savings from this project will have broad benefits in an area that has historically experienced water shortages and drought, relies on purchased water, and is projecting population and water demand increases. Currently, the City purchases approximately 90% of its potable water supply from the San Diego County Water Authority. The water conserved through this AMI project will help the City to use existing supplies more efficiently to meet demands.

Rancho California Water District, Compound Meter Upgrade Project
Reclamation Funding: $454,784 **Total Project Cost: $1,008,242**

The Rancho California Water District, located in Riverside County, California, will replace 134 existing standard compound meters with upgraded compound meters that can connect to the District's existing advance metering infrastructure system. The new meters will provide more accurate flow measurement and real-time water consumption data to customers. The project is expected to result in annual water savings of 271 acre-feet that is currently lost to leaks and customer overuse. The District and its water suppliers are susceptible to drought and face increased demand due to population growth. The water conserved will increase local water reliability and reduce imported water demand.

City of Santa Ana, Santa Ana Automated Metering Infrastructure Installation Project
Reclamation Funding: $1,200,000 **Total Project Cost: $9,286,347**

The City of Santa Ana, located in southern California, will replace 33,315 manual-read primarily residential water meters with updated advanced metering infrastructure (AMI) meters. AMI will provide real-time operational modeling information, establish a leak detection system, and provide water-consumption data to customers. The project is expected to result in annual water savings of 1,409 acre-feet that is currently lost to meter inaccuracies and leaks. The City is currently dependent on a combination of local groundwater and imported water for its supply. Water saved through the project will supplement the City's finite groundwater supply and reduce the need to purchase additional water.

City of Santa Ana, SA-1 Hydropower and Water Conservation Project
Reclamation Funding: $300,000 **Total Project Cost: $1,303,413**

The City of Santa Ana will also install a 132-kilowatt hydro turbine and generator at the Garthe Pumping station, which is expected to generate up to 877 megawatt-hours of power annually to offset existing electrical use. The project also includes the installation of smart irrigation controllers and high-efficiency nozzles on City property to reduce irrigation water use.

City of Santa Barbara, Santa Barbara Advanced Metering Infrastructure Project (Phase 2)
Reclamation Funding: $1,500,000 **Total Project Cost: $7,149,346**

The City of Santa Barbara, located in southern California, will install advanced metering infrastructure (AMI) equipment and implement a data management system, along with a customer portal that will support 27,000 primarily residential water meters that were installed in a previous phase of this overall AMI project. By providing real-time water use data about leaks and abnormal use patterns, the project is expected to result in annual water savings of 631 acre-feet and will better prepare the City for extended drought conditions. The water conserved will offset groundwater pumping and reduce the City's dependence on water imported through the State Water Project.

Sutter Mutual Water Company, Bohannon Dam Automation Project
Reclamation Funding: $806,610 **Total Project Cost: $1,613,220**

The Sutter Mutual Water Company, located near Sacramento, will install Supervisory Control and Data Acquisition (SCADA) components that allow for remote monitoring of irrigation delivery system conditions and for remote operation of delivery system control gates at Bohannon Dam weir. The project includes six Rubicon SlipGates with SCADA capability using software that allows real-time monitoring and remote access to the site. The project is expected to result in annual water savings of 20,000 acre-feet currently lost to operational spills. The water conserved as a result of the project will allow the Company to reduce diversions from the Sacramento River, eliminate surplus deliveries, and to store more water in Bohannon Dam.

Western Municipal Water District, Riverside Service Area Meter Replacement and Customer Portal (Phase 2)
Reclamation Funding: $1,000,000 **Total Project Cost: $3,690,717**

The Western Municipal Water District, located in Riverside, California, will replace 7,008 manually read residential meters with advanced metering infrastructure. The project is supported by multiple planning efforts in the region and is expected to result in annual water savings of 505 acre-feet, which is currently lost to leaks and over consumption. By completing the project, the District expects to reduce its reliance on groundwater and imports from Metropolitan Water District of Southern California.

Colorado

City of Aspen, Aspen Intelligent Metering and Meter Replacement Project
Reclamation Funding: $500,000 **Total Project Cost: $1,259,697**

The City of Aspen will convert 4,000 residential and commercial accounts to advanced metering infrastructure (AMI). The project includes the installation and implementation of all associated network hardware and software to support the AMI technology, along with a customer portal. By improving leak detection and reducing customer overuse, the project is expected to result in annual water savings of 273 acre-feet, which represents 9% of the City's current demands. The project will allow the City to reduce diversions and allow for the conserved water to remain in the Roaring Fork River for neighboring communities and the native ecosystem.

City of Grand Junction, City of Grand Junction Advanced Metering Infrastructure Project
Reclamation Funding: $300,000 **Total Project Cost: $1,821,141**

The City of Grand Junction, located in western Colorado, will upgrade 4,069 manual-read water meters with advanced metering infrastructure compatible meters. The City will also install a fixed network data collection system that will automatically collect and store hourly consumption data from its 9,867 customer meters. By providing customers with real-time data, the project is expected to result in annual water savings of 741 acre-feet, which is currently lost to customer overuse and leaks. As a result of the project, the City expects to reduce diversions from the Kannah Creek watershed, leaving water in the river system or otherwise making water available for other uses in the Upper Colorado River Basin.

City of Greeley, Greeley AMI Meter Installation Project
Reclamation Funding: $1,486,538 Total Project Cost: $6,059,617

The City of Greeley, located in northern Colorado, will convert 14,500 standard water meters to advanced metering infrastructure meters and integrate the smart meter software with Greeley Water's Supervisory Control and Data Acquisition system. The updated meters will benefit residential, commercial, and wholesale water purchaser accounts. The City owns surface water rights in four major river basins and operates six storage reservoirs in an area that faces drought, population growth, and overallocation of rivers. The project is expected to result in annual water savings of 1,129 acre-feet currently lost to seepage, leaks, and customer overuse. The water conserved will remain available in storage, supporting the City through multi-year droughts. Surface flow rights can also be sent downstream to meet return flow obligations or be made available for other uses.

City of Longmont, Longmont Automated Meter Reading Project
Reclamation Funding: $800,000 Total Project Cost: $2,642,605

The City of Longmont, located north of Denver, will upgrade 7,629 residential and 711 large analog water meters to meters with automated meter reading (AMR) technology. Once completed, the project will provide a continuous flow of data that will notify staff of customer leaks, backflow events, meter tampering, and no flow events. The AMR meters will be connected to a fixed base collector system and customer portal, which will also provide customers with real-time data on their water usage. The project is expected to result in annual water savings of 361 acre-feet, currently lost to leaks and customer overuse. The water conserved will remain instream and better prepare the City for population growth and prolonged periods of drought.

City of Thornton, City-Wide Advanced Metering Infrastructure and Residential Meter Conversion Project
Reclamation Funding: $1,500,000 Total Project Cost: $4,000,000

The City of Thornton located near Denver, Colorado, will install a city-wide advanced metering infrastructure system and replace 19,919 low resolution residential meters with high resolution meters. The project is expected to result in annual water savings of 1,665 acre-feet currently lost to inefficient customer water use and leaks. The project will support statewide goals to address water supply gaps in the state and South Platte Basin and to integrate water quantity and quality issues. The water conserved will remain in Thornton's storage reserves and reduce demands for treated water and diversions from the over-appropriated South Platte Basin.

Idaho

City of Ammon, City of Ammon Water Meter Installation Project
Reclamation Funding: $300,000 Total Project Cost: $2,593,371

The City of Ammon, located in southeastern Idaho, will install advanced metering infrastructure water meters in 916 residences that are currently unmetered. The City's population has more than doubled between 2000 and 2010 and the growth is expected to continue. The project is expected to

result in annual water savings of 258 acre-feet by allowing the City to better monitor water usage and identify leaks, fluctuations, and other inconsistencies in the system. The water conserved will remain in the Eastern Snake River Plain Aquifer, which will strengthen the reliability of the City's existing groundwater rights to adequately serve its growing population.

Big Wood Canal Company, Jim Knight and Sagebrush Hydroelectric Projects
Reclamation Funding: $1,500,000 Total Project Cost: $4,204,482

The Big Wood Canal Company located near Twin Falls, Idaho, along with the American Falls Reservoir District #2, will upgrade the Jim Knight and Sagebrush hydroelectric projects located on the Milner-Gooding Canal, including improved intake structures, mechanical equipment, and powerhouse electrical controls at both projects. Both projects will include new powerhouse structures and vertical Kaplan turbines connected to a new generator. At Sagebrush, the current concrete penstock has leaks and will be upgraded with a 10-foot diameter, 370-foot long steel penstock. The power plant rebuilds will increase the combined generation capacity of the plants from 604 kilowatts to 1050 kilowatts. The project is expected to result in annual water savings of 180 acre-feet due to leaks and seepage at Sagebrush's existing concrete penstock. The water conserved will remain in the American Falls Reservoir and Milner Lake and will allow for more efficient water deliveries to water users.

Boise Project Board of Control, New York Canal Lining (Phase 7)
Reclamation Funding: $226,832 Total Project Cost: $453,664

The Boise Project Board of Control, located in Boise, Idaho, will replace 600 feet of existing concrete and asphalt lining along the New York Canal with a multi-layer geocomposite liner with a concrete cap. Water supply has not been sufficient to meet demands, and in recent years, users within the Board's service area have had to purchase additional river water to help augment their irrigation water supply. The project is expected to result in an annual water savings of 367 acre-feet, which is currently lost to leaks and seepage. As a result of the project, the Board will be able to reduce reliance on purchased water from other sources and increase the amount of water available in Arrowrock, Anderson, and Lucky Peak Reservoirs to benefit fish and recreation.

Dixie Bench Ditch Lateral Association, Maple Creek Watershed Irrigation Efficiencies Improvement Project
Reclamation Funding: $142,357 Total Project Cost: $285,000

The Dixie Bench Ditch Lateral Association, located in southeastern Idaho, will decommission 8,000 feet of earthen canal and install 7,040 feet of high-density polyethylene pipeline and pressurized polyvinyl chloride pipeline, bypassing the original canal. The area is vulnerable to drought, and the Association experiences ongoing conflict among its residential and agricultural users. The project is expected to result in annual water savings of 90 acre-feet, which is currently lost to seepage and operational spills. As a result of the project, the Association will reduce diversions from Maple Creek and reduce the need for imported water to meet late-season allocations, allowing water to remain instream. Once completed, the pipeline will complement a current Natural Resources Conservation Service's Environmental Quality Incentives Program project to improve an existing irrigation system with pivots, wheel-line, pumping plants, and a Variable Frequency Drive.

Kansas

Kansas Bostwick Irrigation District, Converting Ridge 1.3 Right Open Lateral to a Buried Pipe System

Reclamation Funding: $163,000 **Total Project Cost: $329,451**

The Kansas Bostwick Irrigation District, located in northern Kansas, will convert 2.79 miles of open lateral canal into a buried pipeline system. The project is expected to conserve 623 acre-feet of water annually that is currently lost to evaporation, seepage, and operational spills. The area is dependent on the Republican River Basin which is over-drafted across multiple states. Groundwater depletions and overuse within the Republican River Basin have significantly impacted the District's available water supplies in recent years. The project will allow the District to more efficiently manage its current water supplies and reduce diversions from the Republican River and Harlan County Lake, the District's upstream supply reservoir. Reduced diversions from the Republican River will increase flows available for recreational activities and downstream tributaries, benefitting species including the endangered Topeka Shiner minnow.

Montana

Buffalo Rapids Irrigation Project—District 1, Lateral 1.7 Conversion Project

Reclamation Funding: $132,472 **Total Project Cost: $291,869**

The Buffalo Rapids Irrigation Project—District 1, located in eastern Montana, will convert 5,450 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 248 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Buffalo Rapids Irrigation Project—District 2, Lateral 1.6 Conversion Project

Reclamation Funding: $300,000 **Total Project Cost: $666,307**

The Buffalo Rapids Irrigation Project—District 2, located in eastern Montana, will convert 8,660 feet of open canal to a closed plastic irrigation pipeline. The District has experienced drought conditions over the last five years, and leakage and conveyance losses have contributed to water shortages and water scheduling issues. In response to system inefficiencies, the District has frequently had to divert and pump additional water from the Yellowstone River. By completing the project and increasing efficiency, the District will be able to reduce diversions. The project is expected to result in annual water savings of 1,087 acre-feet currently lost to seepage, which will remain in the Yellowstone River.

Nebraska

Nebraska Bostwick Irrigation District, Enhancing Storage in Harlan Reservoir by Automating the Headgates of the Superior and Courtland Canals

Reclamation Funding: $75,000 **Total Project Cost: $152,434**

The Nebraska Bostwick Irrigation District, located in south-central Nebraska, will install canal automation technology to provide closed-loop flow control to the Superior and Courtland Canals. Precise actuation, level measurement, and flow controllers will be installed onto existing radial gates. The District has faced water scarcity over the past decade. Farmers have adjusted by changing crops, growing crops under stress, and augmenting their delivered surface water with well water. By completing this project, the District will be able to use real-time data to more precisely match supply with demand, thereby improving management of the Harlan County Reservoir and a portion of the Republican River system. Once complete, the project is expected to result in annual water savings of 1,006 acre-feet currently lost to operational spills, which will remain in Harlan County Reservoir. The project will allow the District to more efficiently deliver water, reduce the need for groundwater pumping from the Republican River system, and provide increased instream flows later in the season for stream augmentation.

Oklahoma

City of Eufaula, Eufaula Water System Improvements (Part B & C)

Reclamation Funding: $1,500,000 **Total Project Cost: $4,032,571**

The City of Eufaula, located in southeastern Oklahoma, will convert existing corrugated metal pipe, corrugated plastic pipe, cast iron pipe, and reinforced concrete pipe in its water delivery system to 38,242 feet of polyvinyl chloride pipe. The project also includes installation of new gate and pressure valves. The water system currently faces losses as high as 53 percent due to leaks and the lack of isolation valves. The project is expected to result in annual water savings of 198 acre-feet, which will remain in Lake Eufaula.

Oregon

Klamath Irrigation District, C-4-a Canal Lining/Piping Project

Reclamation Funding: $210,650 **Total Project Cost: $421,301**

The Klamath Irrigation District, located in Klamath County, Oregon, will convert 1.5 miles of the currently open C-4-a Canal to 3,000 feet of Ethylene Propylene Diene Monomer lining and 5,000 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet which is currently lost to seepage, evaporation, and operational spills. Once the project has been completed, the District will reduce diversions from Upper Klamath Lake. The project is expected to improve lake levels to benefit fish species such as the endangered Shortnose Sucker, and to provide a potential late season supply for other water users in times of shortage. In addition, conserved water may be available for the fall waterfowl migration at the Lower Klamath National Wildlife Refuge.

Klamath Irrigation District, F-4 Canal Lining/Piping Project
Reclamation Funding: $219,704 **Total Project Cost: $439,409**

The Klamath Irrigation District will also convert 1.4 miles of the currently open F-4 Canal to 300 feet of Ethylene Propylene Diene Monomer lining and 7,392 feet of high-density polyethylene pipe. The project is expected to result in an annual water savings of 664 acre-feet.

Middle Fork Irrigation District, Coe Branch Pipeline and Irrigation Efficiency Project
Reclamation Funding: $266,600 **Total Project Cost: $1,460,400**

The Middle Fork Irrigation District, located in northwest Oregon, will install a high-density polyethylene pipe from its existing diversion on Coe Creek to an existing settling pond to provide clean irrigation water to its users. Coe Creek is a glacier-fed tributary of the Middle Fork Hood River, and its high sediment load restricts the District's ability to fully utilize the water during the irrigation season. When sedimentation worsens in Coe Creek, the District must meet irrigation demand with water from Laurance Reservoir and its tributaries. The District will use the settling pond to remove glacial sediment from the water before it is delivered to irrigators, thereby avoiding diversions from Laurance Lake. By more efficiently and effectively removing sediment, the project will also allow water users to install high-efficiency micro-sprinklers.

Texas

Cameron County Irrigation District No.6, Bennett, Swan Nelson, 134, 139, and 196 Canals Piping Project
Reclamation Funding: $300,000 **Total Project Cost: $857,143**

The Cameron County Irrigation District No.6, located in southern Texas, will convert the earthen Bennett, Swan Nelson, 143, 139 and 196 Canals to 9,330 feet of polyvinyl chloride pipe. The project is expected to result in annual water savings of 1,040 acre-feet that is currently lost to seepage and evaporation. The Lower Rio Grande Reservoir System is over allocated and susceptible to long-term drought. The project will allow the District to reduce its diversions and allow for the conserved water to remain in the Lower Rio Grande Reservoir System.

El Paso County Water Improvement District No.1, Riverside Canal Concrete Lining Project (Phase III)
Reclamation Funding: $1,000,000 **Total Project Cost: $2,039,504**

The El Paso County Water Improvement District No.1 will line 6,600 feet of the currently earthen Riverside Canal with steel-panel reinforced concrete. The project is expected to result in annual water savings of 1,770 acre-feet that is currently lost to seepage. El Paso County has experienced prolonged and extreme drought conditions, and the population of El Paso County is projected to double to over 1.5 million people by 2070. The water conserved will allow for additional Rio Grande Project water to be stored in Elephant Butte and Caballo Reservoirs, which will provide critical water supplies to the area during drought years.

Harlingen Irrigation District Cameron County No.1, Piping of Wyrick Canal (Phase II)
Reclamation Funding: $300,000 Total Project Cost: $655,331

The Harlingen Irrigation District Cameron County No.1, located in southern Texas, will convert 3,730 feet of the concrete Wyrick Canal to a 48-inch pressurized polyvinyl chloride pipe. The project will increase system reliability and reduce the amount of power needed to lift water into the distribution system. The Harlingen area is dependent on surface water from the Rio Grande and experiences water conflict as a result of drought, over-appropriation of water rights, and population growth. The project makes progress toward water management goals identified in several Rio Grande Basin planning activities, including canal piping as a recommended water management strategy, increasing delivery system efficiencies to address drought, and conserving water to relieve tension for all groups in the basin. The project is expected to result in a 92 acre-feet of water savings, which will remain in the Rio Grande River Basin to benefit domestic, municipal, industrial, agricultural, ecological, and recreational uses.

City of Wilmer, Smart Meter Conversion and SCADA System Implementation Project
Reclamation Funding: $198,802 Total Project Cost: $497,006

The City of Wilmer located near Dallas, Texas, will retrofit 1,152 existing residential water meters to advanced metering infrastructure (AMI). The City will also install Supervisory Control and Data Acquisition equipment to allow for improved water management. The project will provide more accurate and detailed leakage and billing data and is expected to result in annual water savings of 53 acre-feet. The water conserved will remain in Dallas Water Utilities reservoirs.

Utah

American Fork City, American Fork City Pressurized Irrigation Metering Project
Reclamation Funding: $1,500,000 Total Project Cost: $3,035,400

American Fork City, located near Salt Lake City, will install 2,324 water meters with advanced metering infrastructure compatible with businesses and homeowners on the City's pressurized irrigation system. Through its pressurized irrigation system, the City delivers non-potable water for outdoor use. The City often has to pump water from its culinary wells to supplement the pressurized irrigation system during peak summer months. The project will enable the City to monitor real-time flows in the pressurized irrigation system and to accurately bill consumption. The project is expected to result in annual water savings of 597 acre-feet which is currently lost to customer overuse. The water conserved will offset the need for groundwater pumping and purchased water. Additional water would remain in the American Fork River system as instream flows or for aquifer recharge.

Bear River Canal Company, West Main Canal Liner Project
Reclamation Funding: $1,500,000 Total Project Cost: $3,031,600

The Bear River Canal Company, located in northern Utah, will line 3,200 feet of the earthen and partially lined West Main Canal with geotextile fiber covered by concrete. The Company will also install a ramp flume with telemetry and a 2-kilowatt crossfloat turbine along the Hammond Canal. The West Main Canal is the primary canal that provides water to other large canals within the Company's system, including the Hammond Canal. The project is expected to result in annual water savings of 4,903 acre-feet, which is currently lost to seepage. In dry years, the water conserved will

remain in the West Main Canal, allowing the Company to avoid reduced allocations. In wet years, conserved water will remain instream within the Bear River to benefit the Bear River Migratory Bird Refuge and the Great Salt Lake. Additionally, because seepage is eroding the hillside supporting the canal, the project addresses safety and reliability concerns.

Benchland Water District, Secondary Water Project (Phase I)
Reclamation Funding: $300,000 Total Project Cost: $675,150

The Benchland Water District located near Salt Lake City, Utah, will install 450 secondary water meters as part of an overall secondary metering program. The State of Utah has experienced drought conditions in twelve of the last fifteen years. The project will allow the District to utilize advanced metering infrastructure to better detect leaks and customer overuse, which is expected to result in water savings of 175 acre-feet per year. The water conserved will remain in the District's upper reservoirs or within the Weber Basin Water Conservancy District's system or remain as instream flows to benefit the Bonneville Cutthroat Trout and Bluehead Sucker.

Benchland Water District, Secondary Water Project (Phase II)
Reclamation Funding: $300,000 Total Project Cost: $675,150

The Benchland Water District will continue implementation of its secondary metering program with the installation of an additional 450 secondary water meters, which is expected to result in water savings of 175 acre-feet per year.

Davis and Weber Counties Canal Company, Canal Piping, Lining and Hydro Project
Reclamation Funding: $1,100,000 Total Project Cost: $2,714,000

The Davis and Weber Counties Canal Company, located near Salt Lake City, will convert 1,685 feet of existing concrete liner and 1,875 feet of existing steel pipe with 2,060 feet of an 8-foot by 6-foot precast concrete box culvert and 1,500 feet of 66-inch reinforced concrete pipe. Severe drought from 2012 through 2018 has strained the water system and the Company has had to respond with shortened irrigation seasons. The project is expected to result in annual water savings of 794 acre-feet that is currently lost to seepage and evaporation. The project will allow for more water to be saved and held in the Echo and East Canyon Reservoirs, therefore remaining in the river system for longer periods and providing benefits to native fish species. Additionally, the project includes the installation of a meter station and replacement of a meter to better manage water distribution, and the installation of a 2-kilowatt hydro turbine to help offset project energy consumption.

Nibley Blacksmith Fork Irrigation Company, Quarter Circle Drive Piping Project
Reclamation Funding: $300,000 Total Project Cost: $760,000

The Nibley Blacksmith Fork Irrigation Company, located in Cache County, Utah, will convert 2,220 feet of an earthen canal known as the Quarter Circle Drive Section to irrigation pipe. The Company will also upgrade the existing headworks of the canal at the diversion point on the Blacksmith Fork River to provide more accurate flow measurement. The system of canals and pipes services approximately 3,100 acres of irrigated residential and agricultural land. The Company has had to divert additional water for delivery due to system inefficiencies and seepage losses. The project is expected to result in annual water savings of 814 acre-feet, which is currently lost to seepage,

evaporation, and heavy vegetation growth. The project will allow the Company to reduce diversions from the Blacksmith Fork River and more efficiently deliver water to its shareholders.

City of Orem, City of Orem Advanced Metering Infrastructure Program
Reclamation Funding: $1,500,000 Total Project Cost: $7,298,424

The City of Orem located near Provo, Utah, will install 18,691 advanced metering infrastructure (AMI) meters to replace existing manually read primarily residential water meters. An additional 1,451 existing meters will be retrofitted for AMI capability. The project is expected to result in annual water savings of 3,133 acre-feet through the availability of consumption data, improved leak detection, and more accurate meter reading and billing. The City is in an area that is highly susceptible to severe drought, projected population growth, and increased water demands. The water conserved will remain in the Provo River.

Riverton City, Riverton City Secondary Water Metering Project
Reclamation Funding: $1,500,000 Total Project Cost: $15,376,745

Riverton City, located in Salt Lake County, Utah, will install 9,872 meters on its secondary water distribution system. The secondary meters will be integrated with the City's advanced metering infrastructure system, which includes a data portal for customer interaction. The project will improve the reliability of the City's secondary system, preparing it for projected future growth. The project will support water conservation efforts and provide accurate, real-time data for individual users. The project is expected to result in annual water savings of 3,000 acre-feet by identifying customer overuse. The water conserved will be stored and made available for projected future demands in the area.

South Jordan City, South Jordan City Secondary Water Metering Project
Reclamation Funding: $300,000 Total Project Cost: $635,200

South Jordan City, located in Salt Lake County, Utah, will install 443 secondary water meters on existing residential connections. Secondary water meters equipped with endpoints that allow continuous data collection will provide usage information to better quantify secondary water use and promote conservation. The project will help to prevent the use of potable water for lawn and garden watering, especially during times of drought, and is expected to result in annual water savings of 172 acre-feet. The project directly supports the State of Utah's goal to reduce residential water usage per capita per day by 25%. The water conserved will remain in the Jordan River, which drains into the Great Salt Lake.

Sunrise and Bench Creek Irrigation Company, Piping and Small Hydro Project
Reclamation Funding: $538,000 Total Project Cost: $1,196,500

The Sunrise and Bench Creek Irrigation Company, located in northern Utah, will replace 7,300 feet of existing corrugated metal pipe and 500 feet of open, unlined ditch with a 26-inch high-density polyethylene pipeline. The project also includes a new inlet structure, meter station, widening of a settling pond, and an underwater micro-hydro turbine to power the meter. The existing corrugated metal pipe experiences significant leaks, causing the Company to over-divert water from the Provo River to compensate for water losses. The project is expected to result in an annual water savings of 802 acre-feet, which will reduce diversions and enable Company shareholders to reduce their

reliance on the Central Utah Water Conservancy District. The water conserved will remain in the Provo River and eventually be stored in Jordanelle Reservoir.

Uintah Water Conservancy District, Steinaker Service Canal Enclosure Project (Reach III)

Reclamation Funding: $1,500,000 Total Project Cost: $15,500,000

The Uintah Water Conservancy District, located in northeastern Utah, will convert 13,100 feet of the unlined Steinaker Service Canal to 72-inch diameter fiberglass pipe with associated appurtenances, turnouts, and measurement devices. Drought is common in the project area, and the Steinaker Reservoir is an off-channel reservoir that does not get excess flows during large precipitation years. The project is expected to result in annual water savings of 900 acre-feet currently lost to seepage, which will be stored in Steinaker Reservoir. Conserved water will be used to address shortages during drought years, reduce the need for imported water, and maintain water levels necessary for recreation at Steinaker Reservoir. In addition, the project will provide a pressurized water supply, enabling the conversion from flood irrigation to sprinklers.

Ute Indian Tribe, Ute Indian Tribe Water Meter Replacement Project

Reclamation Funding: $837,900 Total Project Cost: $1,675,800

The Ute Indian Tribe, located in eastern Utah, will replace 1,021 existing meters with cellular LTE end point technology to detect water main breaks, service line breaks, and inaccurate metering. The project is expected to result in annual water savings of 381 acre-feet currently lost to metering inaccuracy. The water conserved will remain in the river system, improving water reliability for the tribe and multiple water districts and communities in the adjacent area.

Weber Basin Water Conservancy District, Upper Willard Canal Lining Construction Project (Phase 7)

Reclamation Funding: $1,200,000 Total Project Cost: $2,425,000

The Weber Basin Water Conservancy District, located in northern Utah, will line 2,000 feet of the currently unlined Willard Canal with 6-inch steel reinforced concrete. Canal lining has been identified as a priority in the District's System Optimization Review and water conservation plan. The District administers water contracts totaling 226,170 acre-feet, serves a geographic area over 2,500 square miles, and has regional water supply responsibility for cities, districts, and companies located in five Utah counties. The area is vulnerable to drought and continues to experience rising demand from population growth. The project is expected to result in annual water savings of 3,000 acre-feet currently lost to seepage, which will be marketed to wholesale customers, mostly cities, in order to meet rapidly growing demand. Further, conserved water will remain in the Weber River for longer periods of time, benefitting species in the area, including the Bonneville Cutthroat Trout.

Weber Basin Water Conservancy District, Woods Cross Secondary Water Metering Project (Phase III)

Reclamation Funding: $300,000 Total Project Cost: $827,500

The Weber Basin Water Conservancy District will also install 650 secondary water meters with advanced metering infrastructure (AMI) to provide the District with real-time data to detect leaks and end use inefficiencies. The data will also help customers better understand how they can reduce

water usage. The area has experienced rapid population growth and drought, resulting in declining groundwater levels. The project is expected to result in annual water savings of 247 acre-feet which is currently lost to leaks and customer overuse. The water conserved will be stored to meet rising municipal demand from population growth and to regulate flows in the Davis Aqueduct, which has reached maximum capacity.

Wellsville City Irrigation Company, Wellsville Pressurized Irrigation Project
Reclamation Funding: $1,500,000 Total Project Cost: $5,895,000

The Wellsville City Irrigation Company, located in northern Utah, will convert its existing open earthen ditch system to a pressurized irrigation system throughout the City of Wellsville to provide irrigation water to city residents who are currently using potable water for indoor and outdoor use. The project also includes constructing a small storage pond with a Supervisory Control and Data Acquisition system, pumping station, and two booster pump stations. The project is expected to result in annual water savings of 1,960 acre-feet that is currently lost to seepage, evaporation, and operational spills. The project will allow for more water to remain in the Hyrum Reservoir until later in the irrigation season, which will provide increased flows in the Bear River, primarily to benefit the Bear River Migratory Bird Refuge.

Washington

Kittitas Reclamation District, South Branch Canal Efficiency Project
Reclamation Funding: $975,000 Total Project Cost: $1,950,000

The Kittitas Reclamation District located near Yakima, Washington, will install 4,637 feet of double barrel 60-inch, steel reinforced polyethylene pipe on the existing earthen South Branch Canal. The project is expected to result in annual water savings of 515 acre-feet currently lost to seepage and operational spills. The water conserved through the project will be delivered to Manastash Creek for instream flows to benefit threatened species, including Coho and Chinook salmon. The project is consistent with a memorandum of agreement between Reclamation, the Washington Department of Ecology, and the District to address water management issues in over-appropriated or flow-impaired tributaries to the upper Yakima River.

City of Leavenworth, City of Leavenworth Advanced Metering Infrastructure Project
Reclamation Funding: $300,000 Total Project Cost: $975,000

The City of Leavenworth, located in central Washington, will upgrade 1,400 existing manual-read primarily residential water meters with an advanced metering infrastructure (AMI) system. The system will include meters, data collection stations, radio transmitters, meter data analysis, and billing hardware and software. The AMI system will provide the City with real-time data to detect distribution system losses and unusual or continuous usage patterns. By improving metering accuracy, the project is expected to result in annual water savings of 22 acre-feet, which will remain in Icicle Creek.

Quincy-Columbia Basin Irrigation District, West Canal Lining
Reclamation Funding: $300,000 **Total Project Cost: $833,264**

The Quincy-Columbia Basin Irrigation District, located in central Washington, will line 2,500 feet of the earthen West Canal with a geotextile liner covered with concrete to address seepage losses. The project advances the goals of a Memorandum of Understanding (MOU) between the three Columbia Basin Project irrigation districts, the Washington State Department of Ecology, the Washington State Department of Fish and Wildlife, and the Bureau of Reclamation, where the parties have agreed to address regional water reliability concerns including drought, groundwater issues, and improved stream flows to assist salmon recovery. The project is expected to result in annual water savings of 850 acre-feet that is currently lost to seepage. The water conserved will be used to meet actions identified in the MOU, including offsetting groundwater pumping and enhancing flows in the Columbia River.

Wyoming

Austin/Wall Irrigation District, Wall Reservoir Improvement Project
Reclamation Funding: $300,000 **Total Project Cost: $900,000**

The Austin/Wall Irrigation District, located in southwestern Wyoming, will install a clay liner on a portion of the Wall Reservoir to reduce seepage losses. During times of shortage, when water deliveries under existing water rights from the Blacks Fork River are curtailed, the Wall Reservoir serves as a critical source of water for many growers. By addressing seepage, the District expects to be able to fill the reservoir more quickly, allowing for reduced diversions from the Blacks Fork River. Once complete, the project is expected to result in annual water savings of 1,048 acre-feet. Water conserved as a result of the project will help to avoid reduced allocations in times of shortage and will otherwise remain in the Blacks Fork River.

Eden Valley Irrigation and Drainage District, Farson Lateral Phase III Piping and Hydro Project
Reclamation Funding: $1,500,000 **Total Project Cost: $3,182,900**

The Eden Valley Irrigation and Drainage District, located in western Wyoming, will convert 6,200 feet of the unlined Farson Lateral to a 63-inch high-density polyethylene pipeline. Water is currently lost to seepage to the sandy subsurface, which raises the water table and brings salts to the surface. In addition, the project area has a low water holding capacity, resulting in an inefficient delivery system in a region prone to drought. As a result, the District diverts more water from the reservoirs than users require in order to account for seepage loss. The project is expected to result in annual water savings of 666 acre-feet by improving delivery efficiency. The conserved water will be used to avoid reduced water allocations during dry years and will otherwise remain in the Big Sandy and Eden Reservoirs and in the river system, providing recreation and wildlife benefits. This project also positions farmers in the District to implement on-farm improvements through the Natural Resources Conservation Service's Environmental Quality Incentives Program by providing a pressurized system that can be used by farmers to convert to sprinkler irrigation. Lastly, the project includes the installation a 2-kilowatt hydro turbine to help offset project energy consumption.

Kirby Ditch Irrigation District, Kirby Ditch Lower Reach Piping Project

Reclamation Funding: $737,966 **Total Project Cost: $2,236,260**

The Kirby Ditch Irrigation District, located in central Wyoming, will convert 2.56 miles of the open Kirby Ditch to a buried polyvinyl chloride pipeline. The pipeline will service six landowners, totaling 704 acres, and enable improved water delivery. The project is expected to result in annual water savings of 1,008 acre-feet, which is currently lost to seepage. As a result of the project, the District will reduce its diversions from the Big Horn River and will also be able to avoid purchasing water from Boysen Reservoir. Once completed, the project will allow landowners to increase on-farm irrigation efficiency by converting to gated pipe and pivot irrigation.

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Below reflects proposed topics to be scheduled at future Town Council meetings and is informational only. Dates and topics are subject to change.

REGULAR TOWN COUNCIL MEETINGS
March 4, 2020
Discussion/Direction – Water Regulations Update – John Volk
100-Block Study Presentation
Ordinance No. ___ - Series 2020 (Second Reading) an Ordinance amending Chapter 16 of the Minturn Municipal Code. – Hunn/MJS/RJP
March 18, 2020
Discussion/Direction – Short Term Rental Regulations Review - Metteer
Ordinance No. ___ - Series 2020 (First Reading) an Ordinance amending sections of the Minturn Municipal Code pertaining to the "Mountaintop area" - MJS
Ordinance No. ___ - Series 2020 (First Reading) an Ordinance implementing requirements pertaining to the Town of Minturn Housing Plan - Hunn
Ordinance No. ___ - Series 2020 (First Reading) An Ordinance Amending Chapter 8 of the Minturn Municipal Code to Adopt the 2020 Model Traffic Code for Colorado with Local Amendments
April 1, 2020
Special Presentation – Minturn 2020 Community Survey Results – Intercept Insights/Metteer
Discussion/Direction – General Fund Capital Improvement Plan Public Comment & Feedback
Discussion/Direction – Water Capital Improvement Plan Update – Metteer/Gordon
April 15, 2020
Swearing in of new Council members and mayor - Brunvand
Work Session – Minturn Fitness Center Discussion
July 1, 2020
Public Hearing/Action Item: Ordinance 08 – Series 2019 (Second Reading) An Ordinance approving Disconnection of Real Property from the Town of Minturn – Battle Mountain Bolts Lake Property – Sawyer