Jefferson and Madison Counties encompass an expansive 5,262 square miles of Southwest Montana and are home to nearly 21,000 residents. Agriculture, mining, recreation, and tourism represent the top industries in these counties. Centrally located between the two counties, our office is in the unofficial Southwest Montana hub of Whitehall. Shared county Extension services have been available in Madison and Jefferson counties since 1936, and a sole agent in Madison County as early as 1917. Currently the office staffs three full time MSU Extension Agents, one part time Agent and two support staff, offering programming in Agriculture, Natural Resources, 4-H/Youth Development and Community and Economic Development. Our two community and economic development agents manage the Jefferson Local Development Corporation (JLDC), whose mission is to promote the general welfare of Jefferson County through business assistance, enhancing the tax base, and development of projects and studies. JLDC maintains a strong partnership with local government, civic bodies, and area businesses to foster the renewal and development of Jefferson County. JLDC also employs a full time project officer and continues to be a resource for small businesses seeking COVID-19 related support and guidance.

For more information about JLDC and its partnership with Montana State University, please visit https://www.jldcmt.com/.

Outdoor Educational Programming

COVID-19 brought with it some unique challenges to deliver hands-on educational programming in our communities. After several creative planning sessions with community partners, we moved forward with a few outdoor educational events. In June, we held a 4-H Garden Workshop in an outdoor pavilion where youth learned about soil texture, composting, seed starting, and harvesting greens. We introduced microgreens, highlighting their flavor profiles and nutritional benefits. To conclude our workshop, youth participated in a taste test, trying two types of pea shoot microgreens and dandelion jelly. The results: overwhelmingly positive.

In August, 20 residents from four communities gathered in Whitehall for a walking, tree pruning tour. MSU Extension Forestry Specialist Peter Kolb, PhD, led folks through a socially distanced, interactive workshop, covering essential tools, proper tree care, and various pruning techniques. Attendees left the workshop better equipped to tackle pruning needs on their own properties.
In September, we teamed with the Ruby Valley Conservation District, presenting to Twin Bridges third and fourth grade classes as part of the annual Kids River Resource Day. Our gardening lesson looked a little different as we started the talk with a hand sanitizing station. After sprinkling some colored dye on the kids hands and highlighting the ‘fake germs’ with a blacklight, students compared the effectiveness of different brands of hand sanitizer in addition to comparing a hand-washing station equipped with soap and warm water. After everyone was properly sanitized, we brought out the compost bin and plant propagation demonstrations. Each student went home with a small plant to care for and watch grow during the winter months.

4-H Madison/Jefferson Livestock Shows and Sale Success

With the year starting out with challenges from the COVID-19 pandemic restrictions, the volunteers in our Madison/ Jefferson Program put on impressive 4-H and FFA livestock shows and a sale. We were able to have our shows and sale in person, and include a new option to participate via livestream. Families and bidders had the option of participating virtually, providing the community with more opportunities to show support. One of the 4-H moms said, "My son and daughter’s father is deployed overseas, and for the first time, he was able to watch his kids show!” Using YouTube as a platform to livestream the shows, we saw a record-breaking number of over 500 individuals participate remotely.

Our livestock sale always draws a big crowd and this year was no exception. We had participants in the grandstand and more than 50 buyers watching and bidding remotely via proxy bidders, which resulted in a record-breaking sales tally for the livestock sale. This year was a real testament to our community, to see such strong support for our youth and our 4-H and FFA programs. One buyer said this was the best sale they had been to all year, and we completely agreed.

Footage of the livestock shows and sale is available to view on YouTube at the following links:
- 2020 Sale -- https://youtu.be/EVKDanPyZg0
- Rabbit Show -- https://youtu.be/nFN5NqSNKmE
- Swine Show -- https://youtu.be/Aqd-AvcNMPE
- Poultry Show – https://youtu.be/C3686ZCa5hc
- Sheep and Goat Show -- https://youtu.be/U6xQZV8KD7U

Boulder Project Work

In 2017, legislative action directed the closure of the Boulder Montana Developmental Center (MDC), resulting in the loss of the largest community employer. MSU Extension helped the community establish working groups to look at facility re-utilization options and coordinate with potential end users. Progress is being made with establishing a veteran pain management center, veteran support center, and commercial kitchen re-utilization. There are ongoing discussions about using the facility as a central training center for workforce development, central logistical distribution facility and medical component manufacturing. A site master plan and infrastructure analysis are in progress to help with future re-utilization decision making. A community $500,000 legislative appropriation helped mitigate the economic impacts from the closure of the MDC. MSU Extension provided assistance and leadership with the implementation of a Downtown Master Plan, updated Growth Policy, River Trails Master Plan with trail design, Recreation Park Master Plan, establishing a $100,000 business revolving Loan Fund (RLF), accomplishing downtown business building façade improvements, development of a Boulder brand and logo, erecting gateway signs, development of a Boulder website, constructing outdoor restrooms supporting increased park activities, installation of fiber high-speed internet lines, and several other projects contributing to community vitality.

Babysitter Training Course

A babysitting course was offered to help middle school and teenage youth learn what it takes to be a responsible, caring, trustworthy, and safe babysitter. A group of 16 youth ranging from fourth to ninth grade came together for seven hours of training over the course of several weeknights. Students actively participated in learning new skills including safety, understanding child development, nutrition, discipline and first aid. Many the student participants care for younger siblings already, so the class content had immediate positive impacts on local families. Some of the youth participants also have plans to babysit for others so the business planning aspect of the course was well received.

Students learned a lot and the parents enjoyed hearing about the class on the drive home. A parent shared feedback that “My daughter always loves classes with hands-on activities, and culinary arts is a passion, so the nutrition night where they made a healthy and fun recipe was her favorite. She’s been excited to create a babysitter magic bag full of fun things to take to her first job.” This was a fun and engaging class, and plans are being made to offer another based on the interest and positive feedback received.

Groundwater Studies and Jefferson Slough Eurasian Milfoil

Our economies are tied to water resources supporting agriculture, recreation, and future growth. The interaction between ground and surface water is key to sustaining water
Top Row: (left) Twin Bridges students learn about gardening and compost at the annual Ruby Valley Conservation District Kids River Resource Day, by Audra Bell; (right) Rabbit Show, by Alison Richardson;

Center Row: (left) New gateway sign in Boulder, by Alison Richardson; (right) Youth bite into Montana apples during the Babysitting food and nutrition class, by Kaleena Miller;

Bottom Row: (left) Pipestone Creek, by Alison Richardson; (right) Local orchard owners discuss fruit tree care with Master Gardeners, by Kaleena Miller
assets and MSU Extension assisted with the Boulder River and Upper Jefferson River Groundwater studies focused on water recharge helping to sustain late season stream flows and drought management plans. The Pipestone Creek sedimentation project is helping reduce streambank erosion, downstream sediment buildup, and reducing the spread of the waterborne noxious weed, Eurasian Milfoil, from impacting the Missouri River fishery. The successful Jefferson Slough realignment project is being engineered for expansion and is a collaborative project involving many stakeholders that has enhanced communications and the public/private partnership.

**Master Gardening Success**

In early 2020, we held a Level One Master Gardener Course in Whitehall. Twenty-four gardeners traveled from five communities to learn about soil fertility, vegetable and flower gardening, landscape design, pest management, tree pruning and more. Attendees listed over 30 new skills gained during the course, including soil testing, proper tree watering and pruning techniques, integrated pest management, and understanding plant growth and development stages. Eighty percent of course participants stated they were interested in taking Level Two Master Gardener and more than 50 percent said they made a new connection among their classmates as a result of attending the course. Since the course has concluded, the graduates have logged hundreds of hours of volunteer service collectively. They have pruned trees, taught youth about gardening, and maintained community garden spaces.