BIG THOMPSON WATERSHED COALITION

Rossum-Wilson River Restoration Community Revegetation Project: Final Report

To: Colorado Watershed Assembly - Healthy Rivers Fund

Big Thompson River along Rossum-Wilson Project Site

Produced by Big Thompson Watershed Coalition:

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Project Description

Big Thompson Watershed Coalition completed two projects between Rossum and Wilson Avenues: a river restoration project (Rossum-Wilson) and a ditch improvement project (Rist-Goss). Budgets for these projects included post-construction revegetation, but site visits identified a greater need for native vegetation than originally anticipated. This need, plus the opportunity to build on BTWC’s adaptive management and community stewardship efforts, led to this community revegetation project.

The project takes place on a mix of public and private lands, which includes City of Loveland and Loveland Ready Mix properties. The site was heavily damaged during the 2013 floods and prior to the floods had been intensively grazed by cattle. The river restoration project, funded largely through the Department of Local Affairs (DOLA) worked to restore channel function, improve bank stability, reconnect the river and floodplain, and introduce native vegetation. The City has also discontinued leasing their land for cattle grazing, helping to ensure the success of revegetation efforts.

The Community Revegetation Project funded by Healthy Rivers adds to the footprint of overarching restoration projects in the area, which benefits multiple land and water users, improves the overall health of the watershed more than each individual project would alone, and engages the community in stewardship of the watershed.

Project Goals

The planting and monitoring efforts of this project will:

- Help with bank stabilization, supporting the surrounding flood-recovery projects
- Reduce sediment and pollutant inputs into the Big Thompson River
- Manage weed infestations, allowing preferred vegetation to flourish
- Involve community volunteers in stewardship of the Big Thompson River through native plant plantings, invasive weed removal, and native plant care
- Educate the community about the Big Thompson River and the importance of riparian and upland vegetation by creating volunteer stewardship opportunities
- Strengthen BTWC partnerships with the City of Loveland, Loveland Ready Mix, and other partner organizations/groups
- Provide improved public enjoyment to an area the City of Loveland will soon be converting to Open Lands
# Timeline of Healthy Rivers Events

<table>
<thead>
<tr>
<th>EVENT DATE</th>
<th>DESCRIPTION OF EVENT</th>
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<tbody>
<tr>
<td>August 26, 2019</td>
<td><strong>CSU CONSERVATION LEADERSHIP GRADAUTE STUDENT VOLUNTEER DAY</strong></td>
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<tr>
<td></td>
<td>BTWC staff led 21 CSU graduate students and faculty through a 3-hour volunteer workday along our Rossum-Wilson site. Volunteers spent half the time removing debris and non-native weeds from the site and half the time on native plant care--staking and weeding around them. Staff time for this day was covered by DOLA funding.</td>
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<tr>
<td>September 24, 2019</td>
<td><strong>HACH COMPANY VOLUNTEER DAY</strong></td>
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<td>BTWC staff led 13 HACH employees through a 3-hour volunteer workday along the Rossum-Wilson project site. HACH volunteers spent the 3-hours on native plant care--staking and clearing weeds from around them. Staff time for this event was covered by CWCB funds.</td>
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<tr>
<td>October 16, 2019</td>
<td><strong>BTWC STAFF MONITORING AT ROSSUM-WILSON</strong></td>
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<tr>
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<td>BTWC staff spent the day collecting photo points along the full 2-mile stretch of this project. Photo points were uploaded to our database and compared with pre-construction photo points at identical locations. Staff time for this day was covered by CWCB funds.</td>
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<tr>
<td>October 20, 2019</td>
<td><strong>CSU FLY FISHING CLUB VOLUNTEER WORKDAY</strong></td>
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<tr>
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<td>BTWC staff led 8 CSU Fly Fishing Club members through a 3-hour volunteer workday along the Rossum-Wilson project site. Volunteers spent the 3-hours on native plant care--staking and clearing weeds from around them. Staff time for this event was covered by DOLA funding.</td>
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<tr>
<td>June 5&amp;6th, 12&amp;13th, 19&amp;20th, 2020</td>
<td><strong>BTWC’S HEALTHY RIVERS VOLUNTEER PLANTING WEEKENDS</strong></td>
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<td>BTWC staff, with the help of City of Loveland, Loveland Ready Mix, and Colorado State Forest Service Nursery, hosted 6 volunteer workdays over 3 weeks. Every Friday and Saturday consisted of a morning and afternoon group of up to 8 volunteers, per CDC recommendations. With COVID protocols in place, volunteers were each given a set of native plants to plant and also removed invasive thistle and other weeds as well as mulched and watered in all of the planted natives.</td>
</tr>
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</table>
Results Achieved

1. 21 volunteers each worked 3 hours, equaling 63 total hours for a total of $1,602.09 in volunteer labor (volunteer labor=$25.43/hour). Volunteers staked approximately 750 plants over the workday and removed weeds from around most of those plants. Also removed 8 truckloads of debris (City trucks were brought in and removed debris off site). Debris consisted of large downed woody material, trash, and remnants from the 2013 flood. Also made connections with the CLTL graduate program and educated them on project site and our organization.

2. 13 volunteers each worked 3 hours, equaling 39 total hours, for a total of $991.77 in volunteer labor. Volunteers staked approximately 1,000 plants over the workday and removed weeds from around most of those plants. Also improved our working relationship with HACH and educated them on the value of the project and our organization.

3. BTWC staff were able to monitor the whole 2-mile stretch of this project and took approximately 70 photo points to document the current, post-construction status of project. These were then compared with pre-construction photo points.

4. 8 volunteers each worked 3 hours, equaling a total of 24 hours for a total of $610.32 in volunteer labor. Volunteers staked approximately 600 plants over the workday and removed weeds from around most of those plants. We also solidified our relationship with the Fly Fishing Club, demonstrated the recreational value of the project, and granted them an afternoon of fly fishing access to the site.

5. Hosted 62 volunteers over 6 days. Each volunteer worked 3 hours, equaling a total of 186 hours for a total of $4,729.98 in volunteer labor. CSFS Nursery provided us with a purchase of ~500 native plants. All of those plants were planted by volunteers over these 3 weekends. Volunteers also staked, mulched, watered, and weeded around each of those 500 plants. Volunteers and staff also worked on weed removal, with a focus on thistle. Over the course of the 3 weekends, 25 25lb bags were removed from the site and disposed of. This equals approximately 600lbs of thistle and other non-natives that were removed from the site. These days also allowed us to work with CSU groups, Rocky Mountain Flycasters, our own Board of Directors, and make connections with many new volunteers who are invested in stewardship of the Big T and want to continue to work with BTWC in the future.
Results Achieved in Total

- Volunteers Engaged: 104 volunteers
- Volunteer Hours Worked: 312 hours
- Value of Volunteer Labor: \((312 \times \$25.43) = \$7,934.16\)
- Native Plants Installed: 500 native plants
- Native Plants Staked & Weeded: \(~2,850\) plants staked
- Non-Native Weeds Removed from Site: \(~600\) lbs
- Truckloads of Debris Removed from Site: 8 large city trucks

City of Loveland Contributions

The City of Loveland’s Parks and Recreation Department was a crucial partner in this project. Most of the volunteer days were conducted on the City’s Medina’s property at our Rossum to Wilson project site along the Big T. This site will be opened for public access in the coming years so our volunteer days were a great way to excite community members with the prospect of a new open space and give them some ownership of the space as they planted it!

Throughout this project the City also contributed:
- Additional volunteer tools
- Donated extra work gloves which volunteers could keep as part of our COVID protocol
- Installed and maintained an on-site portalet through the month of June for our volunteer days
- Installed and refilled an on-site 250 gallon water tank so that we could effectively water installed native plants
- Staff time for:
  - Water tank installation and refills
  - Portalet installation and removal
  - City staff watering days for our installed native plants in May and June
  - City staff contributions to event coordination

The contributions by the City equaled a total of $665.00 and also further solidified our working relationship with them.
COVID-19 Volunteer Event Adaptations

Spring 2020 and the start of our traditional volunteer event season also brought with it a drastic change to our world and lives—the COVID-19 pandemic. COVID quickly and dramatically re-shaped our ability to host and organize safe community volunteer events.

From March through May, BTWC monitored the state of the pandemic and worked with partner organizations to identify how to safely and appropriately conduct volunteer events. In June 2020, we decided that with safety precautions, limited groups sizes, and other protocols we could host a series of native plant planting days as part of this Community Revegetation Project.

As an organization that works to create strength and resiliency in both our natural and human communities, we had a strong mandate to ensure the safety of our volunteers, but we also recognized that during these trying times many people needed the benefit of time outdoors and community engagement.

To conduct social distancing friendly events, we used the following methods:

1. Advertised the events with clear safety guidelines for volunteers, so interested parties knew what would be required of them before deciding their participation.

2. Increased online communication with potential volunteers:
   - Sent out volunteer packet with BTWC’s COVID-19 protocol (see appendix). Volunteers had to agree to the protocol before they could be registered.
   - Asked volunteers to complete their liability waiver with electronic signature or by printing, filling out, and sending us a photo
   - Safety guidelines for at risk groups and volunteers who were 65+

3. Restricted group size to 8 volunteers and 2 staff to keep total number at 10 or below. Hosted a morning 3-hour morning event and 3-hour afternoon event to increase our volunteer capacity each day. We also limited carpooling to household units and asked volunteers to bring their own gloves, water, snacks, and any other supplies they needed, as they could.

4. Followed CDC guidelines throughout the event.
   - All volunteers wore masks (they were able to take these off when working in household unit clusters away from all other volunteers)
   - All volunteers practiced 6-8 ft. social distancing
   - Volunteers used hand sanitizer before beginning the event

5. Each volunteer or household unit received one set of tools to use for the full 3 hours. Equipment was then disinfected after each group in preparation for the next group.

Rossum-Wilson River Restoration Community Revegetation Project Final Report
Lessons Learned

Quickly adapting our organization and volunteer events in the face of COVID-19 meant that we were learning as we went. We worked with partner organizations--most notably Wildlands Restoration Volunteers--to develop our COVID volunteer protocols and communicated with each volunteer individually before the event, but there were still lessons to be learned.

**Lesson 1:** Clarify safety guidelines for at-risk groups and 65+ volunteers. These guidelines were included in the COVID protocol, but should have been more front and center. We had a number of volunteer cancel as they did not originally see those additional guidelines.

**Lesson 2:** Recommend household unit groups of volunteers. Volunteers who came with those they lived with were able to more comfortably and efficiently work together. It was difficult for solo volunteers to navigate how to interact and work together with other solo volunteers.

**Lesson 3:** Improve electronic liability waiver system. Many volunteers did not have electronic signatures and others did not have an at-home printer to print and fill out by hand. Creating a webpage or form that allowed an electronic signature to be generated on the form would likely resolve this issue.

**Lesson 4:** The higher amounts of communication with volunteers prior to the event and the limited group size meant that although staff time to coordinate events increased the amount of possible volunteer hours contributed decreased. More efficiencies in the communication and outreach process should be adopted to reduce the high rates of coordination time.
Project Additions

Although we were able to adapt our June volunteer days to our newly formed COVID protocol, the pandemic had an effect on our ability to carry out all the volunteer plantings we would’ve liked. As we did not start volunteer planting days till June, our planting window was heavily reduced. July and August are too hot and dry to effectively install new plants in the ground. This was especially evident this year as we entered a statewide drought at the beginning of August.

This reduced planting window meant that there were additional “supplies” funds remaining in the grant budget. BTWC worked with Diane Kielty of CWA to creatively adjust what could be done with the remaining funds.

Project additions include:

1. Purchase of a small engine powered irrigation pump and hoses that could be connected to the 250-gallon water tank that City of Loveland installed on-site. To allow much more effective watering of the 500 installed native plants, rather than hand water each plant with buckets. The budget for pump and hose set up was $500.

2. To increase the educational aspect of this project, it was decided that educational resources on native plants should be developed. These resources will be shared through BTWC’s outreach channels as well as shared with CWA and other conservation partners.

Produced materials include:
- Fact sheet on the benefits of using native plants in Colorado (see appendix)
- Fact sheet on Northern CO native plant nurseries (see appendix)
- Creation of a short educational video on the benefits of native plants
- Creation of a short educational video on how to plant native plants for the highest likelihood of success
BTWC would like to thank Colorado Watershed Assembly & the Healthy Rivers Fund for making this community revegetation project possible.

Big Thompson Watershed Coalition staff and Board of Directors June planting day.
Appendix

- Full Rossum-Wilson River Restoration Community Revegetation Project Budget
- BTWC’s COVID-19 Volunteer Protocol
- "Why Native Plants" fact sheet (*produced by BTWC*)
- "Northern Colorado Native Plant Nurseries" fact sheet (*produced by BTWC*)
### CHRF Total Contact Budget
- **Project Management (BTWC Staff)**: $3,000.00
- **Technical Oversight, Field Prep, & Monitoring**: $3,950.00
- **Plants**: $3,500.00
- **Supplies + Video Contract**: $250.00
- **Labor**: -
- **Project Administration**: -

### CHRF Previously Billed
- **Project Management (BTWC Staff)**: -
- **Technical Oversight, Field Prep, & Monitoring**: -
- **Plants**: -
- **Supplies + Video Contract**: -
- **Labor**: -
- **Project Administration**: -

### CHRF Billed this Invoice
- **Project Management (BTWC Staff)**: $2,925.00
- **Technical Oversight, Field Prep, & Monitoring**: $4,140.00
- **Plants**: $1,991.34
- **Supplies + Video Contract**: $1,667.34
- **Labor**: -
- **Project Administration**: -

### Total Costs to Date
- **Project Management (BTWC Staff)**: $2,925.00
- **Technical Oversight, Field Prep, & Monitoring**: $4,140.00
- **Plants**: $1,991.34
- **Supplies + Video Contract**: $1,667.34
- **Labor**: $7,934.16
- **Project Administration**: $1,000.00

### Other Funds
- **DOLA/NW Implementation Funds + 47 hours of BTWC staff time covered through unrestricted funds**: $10,714.16

### Volunteer Labor
- **Organizing & leading 6 volunteer workdays. Volunteer labor is from City of Loveland staff contributions**: $560.00
- **Volunteer tools and COVID volunteer supplies, irrigation pump + accessories, and native plant video contract. Match is donated and borrowed supplies from City of Loveland**: $105.00

### Total Cost
- **TOTAL COST**: $10,723.68

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**Certification:**

This itemization reflects only those items eligible for reimbursement as described in the Subgrant Agreement.

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**Signed:**

Date: 10/12/2020
COVID-19 PROTOCOLS FOR VOLUNTEERS

Following are rules and expectations you are expected to abide by when volunteering with Big Thompson Watershed Coalition. Thank you for helping us heal the land while keeping our community safe and healthy!

COVID-19 Safety Protocols

1. All volunteers shall adhere to CDC physical distancing recommendations of 6-8 feet when interacting with those who are not members of their own household.
2. All volunteers are required to wear a face covering for the duration of the project. If volunteers do not have one, disposable masks are available.
3. All volunteers are required to use hand sanitizer before starting registration and lunch, handling tools, or using water sources. Hand sanitizer will be provided by BTWC at registration and portalet locations.
4. Carpooling, name tags, and shared food service is suspended until further notice. Volunteers will be asked to provide their own food and water for projects. BTWC will provide water for refills.
5. Tools, hard hats, and other shared equipment will be washed/sanitized at the end of each project. Do not use bleach on tools.
6. Volunteers are encouraged to bring their own personal work gloves. BTWC will be giving away work gloves to volunteers who are unable to provide their own.
7. Registration areas will have extra pens on hand and will be sanitized between uses. Volunteers should NOT dig through shared equipment bins. Volunteers assisting with equipment hand out should wear nitrile or gardening gloves.

BEFORE THE EVENT

- Bring your own food & water. Currently, we are not providing food/snacks for volunteers. Please bring your own lunch and any snacks that you may need for the day. We also ask that you bring your own water. We will have plastic water bottles to share with volunteers, but encourage all to start with your own reusable water bottle.
- Bring work gloves & a cloth mask (can be a bandana or scarf) which covers your nose and mouth. We have some gloves and masks available if you don’t have one.
- Read your Project Details email for directions and a list of other items to bring.
- Sign your waiver you should receive an emailed copy of our liability waiver. Please either sign this with an electronic signature or print and sign it, then take a picture and send it to us. If neither of these work for you, we will have some to sign on-site.
- No carpools at this time with those who do not live in your household.
- Update your emergency contact on your waiver. Note that BTWC staff and volunteers cannot provide transportation this year, therefore transport to a hospital would be by ambulance.
- **Don’t come if you are sick:** If you are exhibiting any symptoms (fever, dry cough, sore throat, shortness of breath) or have not been fever-free without medication for 72 hours, do not come. If you have been exposed to someone exhibiting symptoms within the past 14 days, do not come.

**DURING EVENT -- Video/Images to come**
- Maintain **physical distance** of 6+ feet between you and anyone not in your household
- Wear a **mask** as much as possible, and anytime you are near others
- Wear **gloves** when touching any tool or other surface which may be touched by others
- Use **hand sanitizer** at least upon arrival to the site and at lunchtime
- **Note:** Individuals who resist or ignore any rules will be immediately dismissed!

**AFTER EVENT**
- Contact will.davis@bigthompson.co or (970) 800-1126 if you experience any COVID-19 symptoms within 14 days.

**GENERAL GUIDELINES FOR CHOOSING AN EVENT**
- **Limit travel:** We ask volunteers to limit their travel, including to BTWC project sites. The Safer at Home guidelines state that recreational travel should be limited to your own community like your county of residence or no more than ~10 miles. If your home county has extended Stay at Home orders, we ask that you follow those restrictions.
- **Limit social interactions:** Under the Safer at Home guidelines, Coloradans are called to reduce interactions with others by about 65%. Therefore, we ask that you take this into account when planning your participation with BTWC. For example, consider “saving up” by avoiding trips in the days before and after participating on a restoration activity.
- **Vulnerable populations & seniors:** If you are a member of an at-risk group or are age 65+, you are encouraged to continue to stay at home unless absolutely necessary. Also if you live with or are in close contact with vulnerable individuals, we ask that you reconsider participating in BTWC activities at this time.
Native plants are not only an important feature of Colorado's many natural areas, but can be a beautiful addition to any garden or landscape. Native plants have many advantages over non-natives and they are an easy way to utilize CO's unique, hardy plants and contribute to the overall health of the state's ecosystems and wildlife.

If you are looking for more information, Colorado Native Plant Society and local plant nurseries are wonderful resources and provided much of the content for quick info sheet!

Photos provided by Aquatic & Wetland Nursery in Fort Lupton, CO

**BENEFITS OF NATIVE PLANTS:**

**LOCALLY ADAPTED**
Adapted to CO’s climate, soils, water availability, and environment. This means when growing native plants you are working with nature rather than trying to grow plants that may not be happy in their new home.

**LESS WATER**
Better adapted to CO’s dryer climate and soils, meaning they often require less water. Approximately 55% of residential water use is from landscape water, and much of that is for grass lawns. Introducing native plants to your landscape can reduce stress on our residential water systems and availability.

**LESS INPUTS**
On average, CO soils have lower amounts of organic material and higher pH (higher acidity). For many non-native plants, this type of soil would be unsuitable. Native plants however, can thrive in these soils and may not require any soil amendments to flourish on your lands.

**BIODIVERSITY & HABITAT**
Maintain and increase biodiversity and habitat. As CO’s populations and development continues to increase, the amount of biodiversity and habitat for wildlife decreases. Landscaping with natives, on any scale, helps maintain biodiversity and provides food, shelter, and more to wildlife, birds, and pollinators—especially in urban areas.

**PREVENTS NOXIOUS WEEDS**
Many noxious weeds were brought to CO for gardens and later spread to our natural areas. Bringing native plants onto your lands can help compete against noxious weeds, reduce their spread, and ensure you don’t introduce new ones to the area.

**BEAUTY & PLANT SUCCESS**
A gorgeous addition to any garden size and type. There are many natives to choose from, including grasses, ground cover plants, shrubs, trees, and lots have hardy blooms and berries. A native garden can bloom from spring until after the first snowfall, if you plant species with various bloom times.

**SENSE OF PLACE**
Utilizing CO’s many native plants can help bring a special sense of place to your lands. Creating a native landscape allows you to not only celebrate CO’s uniqueness and splendor but show off your own creativity and originality while enjoying other benefits.
Native plant nurseries are a crucial resource for conservation work. Whether the project is across a landscape, a community, or in a garden pot, native plants look beautiful, help our environment, and are an easy way to increase stewardship of our watershed. All the nurseries below grow or source native plants, but an **"** next to a nursery name means BTWC or partners have worked with them to restore the river and watershed.

**NATIVE PLANT NURSERIES IN YOUR AREA:**

- **COLORADO STATE FOREST SERVICE NURSERY**
  3842 W. Laporte Ave. Fort Collins 80521
  (970) 491-8429
  The state's leader in producing low-cost, Colorado-grown seedling trees and shrubs for conservation. The Nursery grows more than 40 native species, which are ideal for landowners and land managers to use for larger area conservation in Colorado's diverse environments. (large volume orders only)

- **AQUATIC & WETLAND NURSERY**
  11998 Co Rd 22, Fort Lupton, CO 80621
  (303) 442-4766
  AWN grows native wetland, riparian, and upland plants for ecological restoration projects and is a contract-grow company. With over 30 years of experience in wetland and stream restoration, the company is one of the most experienced suppliers in CO. (large volume orders only)

- **HIGH PLAINS ENVIRONMENTAL CENTER**
  2968 Bluestem Willow Dr. Loveland 80538
  (970) 622-9676
  HPEC grows native plants from seed, many are locally collected ecotypes that are valuable for restoration projects. HPEC is proud to have a shared mission to support native plant preservation, conservation, education, and use.

- **COBLUEY'S NURSERY**
  4795 N, 26th St, Boulder, CO 80301
  (303) 939-9403
  Harlequin's Gardens is a small family business that specializes in Colorado-adapted plants: hardy roses, xeriscape plants, natives, perennials, shrubs, herbs, rock garden plants, and fruiting trees. They have been testing these plants since 1985 at their North Boulder location.

- **FOSSIL CREEK NURSERY**
  7029 S College Ave. Fort Collins, CO 80525
  (970) 226-4924
  Fossil Creek is positioned on 15 acres of hillside overlooking Benson Reservoir. Fossil Creek offers an exquisite garden center and greenhouse with numerous products and landscaping displays. Their focus is helping customers find inspiration to create the ultimate outdoor experience for their own homes.

- **THE FLOWER BIN**
  1805 Nelson Rd, Longmont, CO 80501
  (303) 772-3454

- **PAWNEE BUTTES SEED COMPANY**
  605 25th St, Greeley, CO 80631
  (970) 356-7002
  Ribes aureum - Golden Currant

- **FORT COLLIN'S NURSERY**
  2121 E Mulberry St, Fort Collins, CO 80524
  (970) 482-1984

- **SHARP BROTHERS SEED COMPANY**
  101 E 4th Street Rd, Greeley, CO 80631
  (800) 421-4234
  Prunus virginiana - Chokecherry

- **Ribes aureum**

- **Picea pungens**

- **Prunus virginiana**

Contact these local nurseries to better identify which native plant species will best thrive where you live and match your stewardship goals. If none of these nurseries are close to you or you're looking for more options, please visit: [https://www.nurserytrees.com/States/state%20Colorado.htm](https://www.nurserytrees.com/States/state%20Colorado.htm)