Northern Bedrock Historic Preservation Corps

Building a Pathway to the Preservation Trades

2018 Field Season
2018 Field Season Report

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Building a Pathway to the Preservation Trades

Report produced by
Northern Bedrock Historic Preservation Corps Staff

December 2018

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ACKNOWLEDGEMENTS

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Ethan Bexell, Minnesota Discovery Center
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Sam Olson, Archeological Technician, Forest Service, Superior National Forest
Sara Markoe, Hanson, White Bear Lake Area Historical Society
Sean Dunham of U.S. Forest Service, Chippewa National Forest
Shirley Dalaska - Cemetery Association Secretary, Oakwood Cemetery Association
Sue Hunter Weir of Friends of the Cemetery, Minneapolis Pioneers & Soldiers Memorial Cemetery
Susan M. Garrett, Habitat for Humanity
Tim Leonard, Cuyuna Iron Range Heritage Network
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EXECUTIVE SUMMARY

Summary
During the 2018 Field Season, Northern Bedrock Crews improved the aging stock of Minnesota’s historic resources by coordinating with project hosts and technical specialists to maintain and repair structures and landscapes. Northern Bedrock staff, project hosts and technical specialists trained and worked with corpsmembers in cemetery restoration, carpentry, archaeological surveying, window restoration, scraping, painting and staining, log building maintenance, chinking and daubing and documentation. While serving on projects across the state, corpsmembers spent time outdoors, met new people and made personal and professional connections, and learned historic preservation and life skills while contributing the preservation of our cultures.

Purpose
This report covers the 2018 Field Season (April - October). It includes an overview of the field season structure, the field season schedule, a map of the projects, project reports for each individual project, the impact on historic resources, and the impact on the corpsmembers lives. Additionally, it illustrates how the organization has grown sustainably through cost sharing and in-kind contributions over time.

Outcomes
This year, our 26-week field season consisted of three, six-person crews. Northern Bedrock selected 20 corpsmembers and collaborated with 21 project hosts and eight technical specialists. We worked on 26 structures, seven cemeteries, and five archaeological hitches for a total of over 17,700 hours of hands-on historic preservation. The MNHS partnership funded two crews and a portion of the overhead for the program as a whole.
ORGANIZATIONAL OVERVIEW

About Northern Bedrock
Northern Bedrock Historic Preservation Corps was created to serve two converging trends in Minnesota: the aging stock of historic resources and the growing need for job training for young adults. In partnership with the Minnesota Historical Society (MNHS), Northern Bedrock reduces the backlog of maintenance and repair needed on historic structures, and provides young people a strong foundation of historic preservation trade knowledge by integrating training and services with the conservation corps model. Through mentorship and training with technical specialist on the job site, Northern Bedrock provides young people the opportunity to explore diverse skills in the building trades. Northern Bedrock’s Mission is to develop lifelong workforce skills by connecting young people to the earth, cultures, and traditions through historic preservation work and outdoor service. Northern Bedrock is dedicated to training the present and future stewards of Minnesota’s historic structures.

The Corps Model
Northern Bedrock’s goal is to introduce young adults to historic preservation, and provide a pathway to the preservation building trades. Since preservation is a multi-year and multi-skill career path, corpsmembers gain exposure and a base knowledge in a variety of trades, helping them to choose the next steps in their career path.

2018 crews consisted of one Crew Leader and five to six Crew Members, all of whom were considered corpsmembers. Each crew served on a site for a stretch of time (a “hitch,” usually eight days long), then has off time (usually six days). Hitches allow for complete immersion into a project and skill set development. Corpsmembers camp on or near the work site. Some project hosts coordinate community meals and potlucks along with educational opportunities about the area. This year the season consisted of 13 hitches total. Since project sites are located throughout the state, a hitch schedule allows for longer travel times and provides the project host with a constructive block of work hours to complete the project.
FIELD SEASON OVERVIEW

Recruitment

Northern Bedrock received 73 applications for 18 AmeriCorps Member Positions. Northern Bedrock staff recruited through direct outreach and relationship building, and online advertising to ensure a diverse field of quality applicants. Both educational and professional experience varied by corpsmember, with the common variable being a genuine interest in learning more about the historic preservation trades. This season we had an 80% AmeriCorps member retention rate. We enrolled 20 members into AmeriCorps, 16 corpsmembers completed their term of service and were granted their education awards. Of those who did not complete their term of service, three members left early, and one member was released for cause.

For each of the past two years, we have recruited and retained three students from the Guadalupe Alternative Program school in St. Paul. Their mission is to empower communities challenged by transition and poverty through education and enrichment opportunities, social and emotional support, and training that leads to employment. We have worked with Lifehouse whose mission is to reconnect homeless and street youth to their dreams. Life House has five programs to address the unique needs of each of the youth who come to Life House: the Youth Drop-In Center, Mental Health & Wellness, Housing, Futures Education & Employment, and Safe Harbor. We have began working with the City of Duluth’s YES (Youth Employment Service) program which provides education and employment services to youth and young adults aged 16 to 24. The success of the students we recruit from these organizations exemplifies how strong long-term relationships can provide lasting career development opportunities to young people.

The 2018 field season was Northern Bedrock’s second successful year as an AmeriCorps program. Our crews consist of young adults, ages 18-25 who receive a bi-weekly stipend to cover living expenses, and the opportunity to take advantage of student loan forbearance during their term of service with Northern Bedrock. Any accrued interest on the loan during that time will be retroactively taken care of by AmeriCorps. Additionally, corpsmembers receive an education award upon completion of our program, which can be used on past or future educational expenses.

Corpsmember Home States
12 from Minnesota
5 from Wisconsin
1 from Ohio
1 from Tennessee
1 from Texas

Demographics
3 identifying as Asian
1 identifying as African American
16 identifying as Caucasian
*The 4 who did not complete the program identified as caucasian
CORPSMEMBER TRAINING

Summary
Throughout the field season, crews were presented with trainings that allowed them to acquire industry-recognized certifications. These included OSHA 10, Lead Renovator, CPR/First Aid/AED and Leave No Trace. Trainings in topics such as masonry, chinking & daubing, historical site assessment, log maintenance, cemetery restoration, roofing and window reglazing were all provided to the crews in the field as on-the-job training. In addition to the physical skills, Northern Bedrock teaches life skills such as teamwork, meal planning, and career planning.

Standards
Historic Preservation 101
Cemetery Restoration
Window Restoration
Chinking and Daubing
OSHA 10
First Aid/AED/CPR
Lead Renovator
Tool Safety
Carpentry Basics
Leave No Trace

Skills
Log Structures Preservation
Headstone Cleaning, Edging, Resetting
Window Sash Glazing and Repair
Chinking and Daubing
Roofing Repairs and Maintenance
Paint / Stain Removal and Application
Pest and Lead Paint Mitigation
Repointing Stone
Fascia and Siding Repair and Replacement
Archeological Shovel Testing

The Impact*
93% are more knowledgeable about historic preservation
93% have a better idea of what their career goals are
93% gained and improved on their technical skills
86% have a stronger sense of responsibility to preserve historic places and structures
*Based on a corpsmember exit survey

A sampling of 2018 Corpsmember Next-Steps
• South Carolina Archival AmeriCorps Program Participant
• Iscon Global Logistics Operator in St. Paul Minnesota
• Guadelupe Alternative School Mentor in St. Paul Minnesota
• Appalachian Forest Heritage Area's Hands On Team in South Carolina Member
Technical Specialists
The program relies heavily on in-kind technical specialist time and the ability to pay trainers and technical specialists, much like the Civilian Conservation Corps with the Local Experienced Men (LEM). This year the program spent $5,200 on Technical Specialist time. A large portion of our technical specialists were from the host agency with which we work. Their in-kind support totaled over $31,150.

<table>
<thead>
<tr>
<th>TECHNICAL SPECIALIST</th>
<th>SKILLS TAUGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ryan Brown</strong> - East Zone Archaeologist, Forest Service, Superior National Forest</td>
<td>Archeological Shovel Testing</td>
</tr>
<tr>
<td><strong>Sam Olson</strong> - Archeological Technician, Forest Service, Superior National Forest</td>
<td>Archeological Shovel Testing</td>
</tr>
<tr>
<td><strong>Ray Degrugilier</strong> - Carpenter and Trolley Mechanic for the Minnesota Discovery Center</td>
<td>Carpentry Skills - Fascia, Siding Replacement, Window Sill Repair</td>
</tr>
<tr>
<td><strong>Mel Gagnon</strong> - Maintenance Supervisor, Grand Portage National Monument</td>
<td>Log Stockade Repair</td>
</tr>
<tr>
<td><strong>Jay Smrekar</strong> - Civil Engineer, Forest Service, Chippewa National Forest</td>
<td>Maintenance of Historic Log Cabins</td>
</tr>
<tr>
<td><strong>Jason Patterson</strong> - Construction Manager, North St. Louis County Historical Society</td>
<td>Carpentry Skills - Flooring Installation, Sidewalk Pouring, and Shed Building</td>
</tr>
<tr>
<td><strong>Gerald David</strong> - Timber Framer and Restoration Professional, GFD Woodworking</td>
<td>Log Building - Materials and Sharp Tool Handling, Hewing, and Dovetail Joinery Cutting</td>
</tr>
<tr>
<td><strong>Mark Johnston</strong> - Historic Design Consulting, LLC</td>
<td>Historic Woodworking Tool Usage, Shutter Building</td>
</tr>
</tbody>
</table>

![Image of technical specialists at work]
Career Days
During the final hitch Northern Bedrock staff hold Career Days, two days of skill building. The focus is on translating the corps experience into future job and career goals. Objectives covered include: word banks, resume writing, cover letter writing, job search, and how to answer difficult interview questions. This year we were conducted mock interviews both with staff and Phill Rojeski from Building Restoration Corps. We also conducted a panel of preservation professionals and corps alumni. Crew members connected with professionals asking questions and advice. Overall the message to the young people in the room was that a person's career will take many forms, keep historic preservation in your heart and follow your strengths.

Advice from 2018 Alumni to future Corpsmembers:

• "You will be cold, you will hurt, you will have fun."
• "Make the most out of it! If you get the chance to learn something new-do it! If there is something specific you’re interested in, ask the staff about what sort of opportunities there might be for it."
• "Don’t Stress about the work. Learn as much as possible and ask your project hosts as many questions as possible."
• "There are going to be times when you feel drained and want to quit, Don’t!"
• "Have fun while you work!"
# MEDIA AND COMMUNICATIONS

The 2018 field season brought much attention to Northern Bedrock in the media, with several features on television and newspaper. Social media also played a part in media and communications with over 500 followers on Facebook a 20% increase from 2017 and 376 Instagram followers a 45% increase from 2017.

<table>
<thead>
<tr>
<th>HOST</th>
<th>HEADLINE</th>
<th>MEDIA OUTLET</th>
<th>AUTHOR</th>
<th>MEDIA TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Caretakers are restoring life to Minnesota’s 5,876 graveyards - Bill’s intent is to help take care of those who “helped build the state”</td>
<td>Star Tribune</td>
<td>Mark Brunswick</td>
<td>Online</td>
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<tr>
<td>Marine Restoration Society</td>
<td>Cemetery project aims to repair monuments, spur stewardship</td>
<td>Country Messenger</td>
<td>Suzanne Lindgren</td>
<td>Online</td>
</tr>
<tr>
<td>Chippewa National Forest: Shingobee</td>
<td>Deliver Benefits to the Public Northern Bedrock Corps Restores Historic Buildings Across Minnesota</td>
<td>US Forest Service - Inside the Forest Service</td>
<td></td>
<td>Online</td>
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<tr>
<td>Chippewa National Forest: Shingobee</td>
<td>Northern Bedrock partners with Chippewa National Forest to preserve the Shingobee Lodge at the Shingobee National Recreation Area.</td>
<td>Lakeland PBS</td>
<td>Shirelle Moore</td>
<td>TV Segment</td>
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<td>Chippewa National Forest: Shingobee</td>
<td>AmeriCorps crew cleans up historic Minneapolis cemetery - Volunteers preserve and repair headstones at historic Pioneers and Soldiers Memorial Cemetery</td>
<td>WalkerMN.Com Pilot Independent</td>
<td>Dean Morrill</td>
<td>Online</td>
</tr>
<tr>
<td>Pioneers and Soldiers’ Cemetery</td>
<td>Restoration by movie and tour funds – Markers keep memories aboveground</td>
<td>Star Tribune</td>
<td>Katie Galioto</td>
<td>Online</td>
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<tr>
<td>Pioneers and Soldiers’ Cemetery</td>
<td>News briefs: Service organization to help preserve Hastings cemeteries; School Recycling Workshop July 12</td>
<td>Alley Newspaper</td>
<td>Sue Hunter Weir</td>
<td>Online</td>
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<td>Oakwood and St. Lukes Cemetery</td>
<td>White Bear Town Hall exterior gets finishing touches - Time honored carpentry skills and tools help preserve historic building</td>
<td>White Bear Press</td>
<td>Paul Dols</td>
<td>Online / Print</td>
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<td>White Bear Lake Historical Society</td>
<td>Northeast Journal August 2018 - White Bear Lake Town Hall</td>
<td>Northeast Journal</td>
<td></td>
<td>Online</td>
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<td>Cuyuna IronRange Heritage Network - Soo Line Depot</td>
<td>AmeriCorps Members Do</td>
<td>Crosby Ironton Curier</td>
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<td>Online / Print</td>
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<td>Halfway Ranger Station Historic District</td>
<td>Log Lessons AmeriCorps project highlights hewn log structure construction</td>
<td>Ely TimberJay</td>
<td>Keith Vandervort</td>
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<td>Minnesota Discovery Center</td>
<td>Historic Preservation Crew at Work at Minnesota Discovery Center</td>
<td>Hibbing Daily Tribune</td>
<td>Marie Tolonen</td>
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<td>WDIO</td>
<td>Alejandra Palacios</td>
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<td>The Armory</td>
<td>City Looks to Continue Renovations to Preserve Historic Building</td>
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<td>Viktoria Capek</td>
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<td>Kyle Kuphal</td>
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<td>Trade Skills</td>
<td>Trade Skills Are In Demand</td>
<td>Minnesota Public Radio</td>
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HISTORIC PRESERVATION IMPACT

Cemetery
The 2018 field season found the cemetery projects to be those in the most need of preservation and maintenance. Crews reset 142, cleaned 251, edged 166, excavated 51, and repaired 12 monuments between seven cemeteries in MN. This work mitigates future safety and liability concerns of toppling heavy headstones in these public spaces as well as instilling a deep sense of history in the corpsmembers.

Window Restoration
This year crews completed seven projects that included window restoration. Crew members scraped paint, removed glazing, replaced glass, re-glazed, painted and repaired 84 window sashes and 13 screens.

Archeological Shovel Testing
The Superior National Forest and the Minnesota DNR initiated a land-swap involving over 8,000 acres of land. The land must be surveyed to identify any heritage resources. Crews surveyed 240 acre of land. They learned how to shovel test and catalogue items.

Carpentry
Crews worked on five major carpentry projects. They learned how to tear down and replace siding, replace window sill and casement, replace trim, build shutters, build a shed and install flooring.

Scraping, Painting and Staining
Historic Preservation tasks such as scraping, painting and staining structures is often not a priority for host sites, in particular the Historical Societies. Northern Bedrock crews were able to support hosts in these efforts on five historic structures.

Log Building Maintenance
Log buildings were the most common type of structure worked on this season. Crews maintained 12 log buildings, providing hosts with skills and outcomes scarcely found locally. Log buildings are often nationally or locally significant, linked to great histories that engage the public; an impact that would be lost without the preservation work completed by corpsmembers.

Chinking and Daubing
Chinking and daubing is a technical skill that many local historical societies do not have the capabilities to administer. Northern Bedrock Corpsmembers were taught the proper technique and completed historically accurate chinking and daubing on three log structures. This task is critical to a structures’ preservation as it provides weatherization and mitigates damage from pests.

Documentation
The results of project documentation and assessments of historic properties aid in the survival and accuracy in future interpretation of the property. Corpsmembers documented each project through photos and individual hitch reports. These reports can be utilized by hosts when determining priority maintenance tasks, used to explain what Northern Bedrock crews can accomplish and to document work completed.
## HISTORIC STRUCTURE IMPACT

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<td>CCC-ID build bridge</td>
<td>Stone cleaning and tuck pointing</td>
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<td>Grand Portage National Monument</td>
<td>Stockade</td>
<td>Replacement of whalers</td>
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<td>Halfway Ranger Station</td>
<td>Classroom / Lab</td>
<td>Patched the roof</td>
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<td>Halfway Ranger Station</td>
<td>Boat House</td>
<td>Borate exterior</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>Pump House</td>
<td>Borate exterior</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>District Office</td>
<td>Borate exterior</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>Oil House</td>
<td>Borate exterior</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>Ranger Dwelling</td>
<td>Cleaned</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>Sauna</td>
<td>Covered with tarps to protect it from the elements</td>
</tr>
<tr>
<td>Halfway Ranger Station</td>
<td>Hewn Log Structure</td>
<td>Built a second for testing</td>
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<tr>
<td>Halfway Ranger Station</td>
<td>Warehouse / Garage</td>
<td>Window restoration</td>
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<tr>
<td>North St. Louis County Habitat for Humanity</td>
<td>Residential House- New Construction</td>
<td>Tile flooring, linoleum, flooring, and shed building</td>
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<td>Minnesota Discovery Center</td>
<td>The Location House</td>
<td>Window restoration, and exterior siding, trim, and window casement replacement</td>
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<td>Chippewa National Forest</td>
<td>Shingobee Chalet</td>
<td>Window restoration, window screening and exterior siding repair</td>
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<td>Chippewa National Forest</td>
<td>Joyce Estate - Main Lodge</td>
<td>Borate exterior, scrape and paint / stain exterior</td>
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<tr>
<td>Chippewa National Forest</td>
<td>Joyce Estate - Joyce Cabin</td>
<td>Borate exterior, scrape and paint / stain exterior</td>
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<td>Chippewa National Forest</td>
<td>Joyce Estate - Root Cellar</td>
<td>Paint doorway</td>
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<td>Chippewa National Forest</td>
<td>Cut Foot</td>
<td>Primed windows</td>
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<td>Cuyuna Iron Range Heritage Network</td>
<td>The Soo Line Depot</td>
<td>Window restoration</td>
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<td>Duluth Arts and Music Center</td>
<td>The Armory</td>
<td>12 rooms of basement paint scraping, window restoration</td>
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<td>Sts Mary and Joseph Church</td>
<td>Sts Mary and Joseph Church</td>
<td>Chinking and daubing</td>
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<td>White Bear Lake Historical Society</td>
<td>White Bear Lake Old Town Hall</td>
<td>Built replica shutters with hand tools</td>
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<td>Winona County Historical Society</td>
<td>Hill House - County FairGrounds</td>
<td>Chinking and daubing, porch step</td>
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<td>Heritage House Museum</td>
<td>Heritage House</td>
<td>Chinking and daubing</td>
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<tr>
<td>Nobles County Historical Society</td>
<td>General Store</td>
<td>Siding repairs and window restoration</td>
</tr>
<tr>
<td>Murray County Historical Society</td>
<td>Round Barn</td>
<td>Scraping and painting</td>
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</table>

Total 26
Northern Bedrock reached out to more than 219 organizations this season including historical societies, governmental organizations, cemeteries, nonprofits and individuals. Northern Bedrock continues to reach out to history organizations and work with them on funding, and maintenance planning to collaborate on projects. The Northern Bedrock Staff conducted 32 site visits. Most of the sites visited have multiple structures and buildings in need of maintenance and repair, which extends our work plan into the 2019 field season.

**Non-Profit History Organizations**
- White Bear Lake Area HS
- Winona County HS
- Cuyuna Iron Range Heritage Network
- Nobles County HS
- Heritage House Museum
- Minnesota Discovery Center

**Non-Profit Cemeteries**
- Temple Emanuel Cemetery
- Lakeview Cemetery
- Pioneer & Soldiers Cemetery
- St. John’s Cemetery
- Oakwood Cemetery
- St. Luke’s Cemetery
- St. Michael’s Cemetery

**Other Non-Profits**
- Duluth Armory
- Sts Mary and Joseph Church
- North St. Louis County Habitat for Humanity

**Government Sites**
- Chippewa NF - Shingobee
- Chippewa NF - Joyce Estate
- Superior NF - Archeology
- Grand Portage NF - Bridge, Stockade
- Halfway Ranger Station
- Murray County
HISTORIC PRESERVATION PROJECTS

Introduction and Interactive Map
Northern Bedrock’s 2018 Field Season began on May 15, 2018 with crew member orientation and lasted until November 7, 2018. Crew leaders started two weeks earlier than the rest of the crew to assist Northern Bedrock staff with preseason planning and organization. During this 26-week season, the crews logged 15,802 project work hours.

Click on the map above to find an online map that includes project photos, information about projects and project hosts. Or use the link below in a browser.

https://tinyurl.com/NBHPC-ProjectMap
FIELD SEASON HITCHES

Crew Leader Training
210 corpsmember hours

Hitch 1
1410 corpsmember hours
- Orientation and Training - Halfway Ranger Station, Ely
- Cemetery Training Lakeview Cemetery, Tower

Hitch 2
1322 corpsmember hours
- Chippewa National Forest (x2 crews): Shingobee building rehab
- Duluth Armory: Lead Paint Mitigation and Window restoration

Hitch 3
1291 corpsmember hours
- Sts Mary and Joseph Church, Chinking and Daubing, Sawyer
- Pioneers and Soldiers Cemetery, Minneapolis
- Grand Portage National Monument: Maintenance and Bridge restoration / Stockade repair

Hitch 4
1370 corpsmember hours
- Superior National Forest: Archeology
- Chippewa National Forest: Joyce Estate building repair, Bovey
- Grand Portage National Monument: Bridge restoration

Hitch 5
1200 corpsmember hours
- St. John's Cemetery, Stillwater
- HALF: Oakwood Cemetery, and St. Luke’s Cemetery, Hastings
- HALF: White Bear Lake Area Historical Society: Built and installed shutters on the old Town Hall Building
- Winona County Historical Society: chinking and daubing cabin during county fair, St. Charles

Hitch 6
1560 corpsmember hours
- Superior National Forest: Archeology
- Murray County Historical Society, round barn painting, Slayton (2 crews)

May 15, 2018 - August 1, 2018
Service Hours for DEED (1 Crew) 1,771
Service Hours for MNHS (2 Crews) 6,592
Corpsmember Service Hours (3 Crew) 8,363
**Hitch 7**
- Halfway Ranger Station, Ely (2 crews)
- St. Michael’s Cemetery, Bayport (1/2 Hitch)
- Superior National Forest: Archeology

1250 corpsmember hours

**Hitch 8**
- Superior National Forest: Archeology
- Murray County Historical Society, round barn painting, Slayton (2 crews)

1117 corpsmember hours

**Hitch 9**
- Halfway Ranger Station, Window Restoration, Ely
- Grand Portage National Monument
- Cuyuna Iron Range Heritage Network: Depot window restoration, Crosby

1203 corpsmember hours

**Hitch 10**
- Superior National Forest: Archeology
- Heritage House Museum, Chinking and Daubing, Westbrook
- Nobles County Historical Society, Pioneer Village Building Rehab, Worthington

1200 corpsmember hours

**Hitch 11**
- Minnesota Discovery Center Window Restoration, and Siding, Trim and Window Casement Replacement, Chisholm
- Halfway Ranger Station, log dovetail hewn structure workshop with Gerald David, Ely

1180 corpsmember hours

**Hitch 12 - Field Season Wrap-Up**
- Carpentry Union Tour and Clayton, Jackson, McGhee Monument Tour
- Duluth Armory, Window Restoration
- Cloquet Forestry Center, Career Days, Preservation Panel, Celebration and Graduation

1100 corpsmember hours

**Bonus Project**
- North St. Louis County Habitat for Humanity, Virginia

270 corpsmember hours

**Crew Leader Close Out**
- Documentation and Gear and Tool Organization

82 corpsmember hours

---

**August 8, 2018 - November 7, 2018**

Service Hours for MNHS (2 Crews) 7,440

**Total Program Service Hours**
- Total Corpsmember Service Hours 15,802
- Total Staff and Technical Specialist Hours 1,910
- 17,712
PROJECT HOST: Orientation at Halfway Ranger Station Historic District I Ely, MN
HITCH 1.1: Wednesday, May 16, 2018-Wednesday, May 23, 2018
STAFF TRAINERS: Kate Ruble, Dan Green, Chris Severson, John Lindelhof, Rhea Harvey, and Rolf Hagberg
FIELD HOURS: Corpsmember- 148  Staff- 210

HITCH SUMMARY
The Halfway Ranger Station Historic District (HRSHD) is located on the South Kawishiwi River, 10 miles south of Ely, MN. The Historic District consists of seven log buildings constructed, in 1934, by locally based Civilian Conservation Corps companies and the buildings of the Lakes States Forest Experimental Station (LSFES), which started operating possibly as early as 1924 doing forest research in the area. From at least 1910 until 1950, the site was the location for the Halfway Ranger Station of the Superior National Forest. Management of the site was taken over by the Northern Research Station in 1968, and the buildings were utilized by federal biologists conducting long-term, large mammal research. Northern Bedrock Historic Preservation Corps has entered into a Participating Agreement with the Forest Service to preserve the site for its adaptive re-use.

Northern Bedrock holds Americorps member orientation at Halfway Ranger Station. The different presentations and trainings include:

- **Historic Preservation 101** - Presented by Kate Ruble, Historic Preservation Specialist
- **Log Building 101** - Presented by Kate Ruble, Historic Preservation Specialist; Chinking and Daubing, Borate log maintenance and more!
- **CPR, First Aid and AED** - Training Administered by Chris Severson, Program Director
- **Tools and Carpentry Training** - Training by Dan Green, Field Coordinator
- **Vehicle and Tailgate Safety Session Training** - Training by Chris Severson and Dan Green
- **Crew Dynamics, Teams and Conflict Resolution** - Crew contracts are made as a group.
- **Lead Renovator Certification**
- **Window Restoration Training**
- **Cemetery Restoration Training** - Cleaning, edging and resetting stones

Scaffolding Training  
Cemetery Restoration Training
Circular Saw Training

Chinking and Daubing

Experiment

Window Restoration Training

First-Aid/CPR Training

Chinking and Daubing

Tool Training

Tool Training

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www.northernbedrockcorps.org
ABOUT THE SITE
Lakeview Cemetery in Tower, MN was established in the late 1800’s in the small mining town. Tower is the oldest city north of Duluth, MN incorporated in 1889. Anishinabeg or Ojibwe peoples originally lived in this area. The Tower-Soudan Historical Society explains that the first white family to reside near tower was probably George E. Wheeler, a government agent at the Indian Reservation and his wife, a school mistress there. The earliest recorded burial at the Lakeview Cemetery is 1884.

HITCH SUMMARY
During this training, AmeriCorps members learned how to clean, edge, and reset monuments and headstones using the gentlest means possible.

BEST PRACTICES
Use the proper tools and supplies because it is critical to the cleaning and resetting process. Many cleaning products and methods do permanent damage to the stones.

TECHNICAL PROCESSES/TASKS COMPLETED

EDGING:
• Two-inch perimeter dug around the ground-level of the stone and the depth of the stone
• Used spades and pry bars to reset stone to level it with the ground
• Filled in indents in other areas of the cemetery lawn with the leftover sod.

RESETTING:
• Leveled and straightened the lower base using heavy-duty pry bars
• Prepared and cleaned the paired surfaces that were being joined, then applied epoxy in center
• Placed lead spacers near each corner of the lower paired surface
• Set strips of monument setting compound near the corners of the lower paired surface
• Used tripod and hoist as needed to lift the upper section(s) of stone onto the base
• Trimmed excess monument setting compound pressed out by the weight of the stone

CLEANING:
• Saturated stones with water, then applied a solution of D2
• Scraped off heavy lichen with plastic putty knives
• Scrubbed the stones with soft-bristle brushes to remove bio-growth
• Removed lichen from engraved lettering using bamboo skewers
• Rinsed the stones thoroughly with water
2018 FIELD SEASON REPORT

PROJECT HOST: Chippewa National Forest – Shingobee Lodge

HITCH 2.1 & 2.3: May 30, 2018 – June 6, 2018

TECHNICAL SPECIALIST: Jay Smrekar, U.S. Forest Service Civil Engineer

FIELD HOURS: Corpsmember- 735.5 Staff- 32 Technical Specialist- 29 Volunteer- 20

ABOUT THE SITE
Americorps members served at the Chippewa National Forest making repairs at Shingobee Lodge in Walker, MN. Shingobee Lodge is a well-known feature of the Shingobee Recreation Area developed as a downhill ski area by the Civilian Conservation Corps in the early 1930’s. The lodge, also known as the “Chalet,” was constructed by the Forest Service and local volunteers later in the 1930’s. The “Chalet” is currently used by community groups in its intended purpose.

HITCH SUMMARY
One crew’s main objective at Shingobee Lodge was to repair and replace windows, screens, and door. The windows required some reglazing and replacing of broken glass. There were two types of windows, casement and hinged windows. The screens needed some replacement boards and new screens. The windows had a variety of past glazing on them and the screens were replaced at different times as well. The crew repaired and replaced so the windows and screens are even.

A second crew worked to stabilize and repair the wooden exterior cladding. First, siding boards were inspected for damage. Rotten boards were replaced in-kind. Next, the crew caulked areas of bad water infiltration and then stained the entire exterior of the building. Another objective was to put a water shield and new shingles on the cellar door to prevent water infiltration. Other tasks were caulking the chimney and removing hardened epoxy from the floor by sanding it.

QUANTITATIVE MEASUREMENTS

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Windows Reglazed</td>
<td></td>
</tr>
<tr>
<td>1 Door Refinished</td>
<td></td>
</tr>
<tr>
<td>13 New Window Screens</td>
<td></td>
</tr>
<tr>
<td>1100 sq. ft. of paint/stain applied</td>
<td></td>
</tr>
<tr>
<td>5385 sq. ft. Structure Cleaned</td>
<td></td>
</tr>
<tr>
<td>45 Boards Replaced</td>
<td></td>
</tr>
<tr>
<td>1104 sq. ft. Borate Logs Treated</td>
<td></td>
</tr>
<tr>
<td>0.75 Acres of Land Affected</td>
<td></td>
</tr>
</tbody>
</table>

BEST PRACTICES
Make sure to label every piece to ensure correct placement back. Avoid direct sunlight on fresh stain, stain a building in rotation based on where the sun is at the moment. The first coat of stain should be dry before applying another coat.

TECHNICAL PROCESSES/TASKS COMPLETED

WINDOW REGLAZING:
- Numbered lites and windows
- Removed old glazing
- Sanded muttons for new glazing
- Applied setting bed layer (DAP acrylic Latex caulk with silicone)
- Replaced glass pane if needed
- Reglazed windows
- Returned windows

REPLACED SCREENS:
- Removed screens and inspected for repairs
- Removed wire screens from wood frames
- Repaired wood if needed
- Stapled new wire screens on wood frames
- Stained wood frames and returned screens
REPAIRED SOUTH SCREEN DOOR:
- Removed door from hinges
- Labeled and cleaned hardware
- Applied Wood Epoxy and LiquidWood to wood frame

REPLACED SIDING:
- Removed rotten siding boards and battens
- Reused boards if possible
- Measure and cut new boards
- Replaced siding boards and battens

PREPARED EXTERIOR CLADDING FOR STAIN
- Removed existing wooden siding and inspecting it for damage
- Measured and cut new boards for replacement of rotten siding boards
- Caulked in areas to prevent water infiltration
- Stained new and old boards for consistent color
PROJECT HOST: Duluth Armory
HITCH 12: Wednesday, October 17, 2018 - Monday, October 22, 2018
FIELD HOURS: Corpsmembers- 568 Staff- 8

ABOUT THE SITE
The Armory was built in 1915 as an armory for the National Guard. It is a three story brick building with a basement and sub basement. There is a stage and a balcony on the main level with individual rooms on the second and third floors. It has a low-sloping roof with a brick parapet. The armory is listed on the National Register of Historic Places and is a contributing property of the Duluth Commercial Historic District. The building has a beautiful brick facade, recently cleaned. The friends of the Duluth Armory are working hard to raise the funds to continue its restoration.

HITCH SUMMARY
The Americorps members worked in the basement of the Armory reglazing windows. They worked in many different rooms and set up work stations for each task that needed to be done to each window.

QUANTITATIVE MEASUREMENTS
- 18 sashes paint scraped
- 18 sashes primer applied
- 18 sashes painted
- 658 In ft glazed
- 30 window weights restrung
- Acres of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
WINDOW REGLAZING:
- Numbered lites and windows
- Removed old glazing
- Removed old paint
- Sanded sashes and muttons for new paint and glazing
- Relazed windows
- Applied Primer to wooden sashes
- Applied Paint to wooden sashes and glazing
- Returned windows

Before

After
ABOUT THE SITE
The Duluth Armory was built in 1915 and originally served as a military training facility for the Minnesota National Guard and Naval Militia. The building also played an important role as the cultural and entertainment hub of the Duluth region. The armory is listed on the National Register of Historic Places and is a contributing property of the Duluth Commercial Historic District. Today the Duluth Arts and Music Center is the non-profit group advocating for this historic building.

HITCH SUMMARY
The Duluth armory project included removing hazardous material, preparing the building further for a rehabilitation projects. The main hazardous material worked with was lead paint. The building has a lot of hazardous material and needs some general maintenance to go further into the group’s vision and to complete its rehabilitation. The work area was covered in sheets of plastic to contain the material as it is removed then the lead paint was scraped from the walls and ceiling. After the clean up, the crew moved onto window restoration. Windows were scraped, reglazed, and repainted.

QUANTITATIVE MEASUREMENTS
- 900 sq. ft. Ceiling Deconstruction
- 48 sq. ft. Insulation Removal
- 620 Bricks Cleaned
- 40,344 sq. ft. Paint Removed
- 4 Windows Reglazed
- 1 Acre of Land Affected

BEST PRACTICES
The crews used communication with each other about safety and efficiency to keep each other aware of surrounds and to contain the hazardous material in the best way.

TECHNICAL PROCESSES/TASKS COMPLETED

REMOVED HAZARDOUS MATERIAL:
- Contained area with plastic
- Scrapped peeling paint from walls and ceiling
- Swept and shoveled materials into contractor bags

RESTORED WINDOWS:
- Removed paint from window sashes
- Removed old glaze and lites
- Reglazed windows
- Added a mixture of linseed oil and paint thinner to the woodd

Before

After
ABOUT THE SITE
St. Mary and Joseph Church was built in 1884 by Moses Posey, with the assistance of other Chippewa parishioners. The extant structure consists of 5 sections, section 1 being the original 1884 structure, followed by a central chamber and three annexes attached in the 1920’s. The building effort for the church was encouraged by Father Vogt who began his ministry to the Sawyer Indian community in 1882. It replaced a large wigwam structure. The historical significance of this site lies in its representation as one of the earliest Catholic churches among the Chippewa Indians of Minnesota, its distinctive and well-engineered architectural features, as well as it being one of the few remaining historic structures in Carlton County. (From National Register of Historic Places Inventory-Nomination Form, 1984).

HITCH SUMMARY
The project finished up Northern Bedrock’s work at St. Mary and Joseph’s Church in Sawyer, MN. The crew worked on removing daubing and tuckpointing the chimney. The daubing was removed and the chinking was looked at to make sure it was still good. The crew then applied new daubing over the chinking and voids on the building.

QUANTITATIVE MEASUREMENTS
• 2311.53 ln. ft. Chinking
• 709.44 ln. ft. Daubing
• 89.84 sq ft. Stone repointed
• 0.1 Acres of Land Affected

BEST PRACTICES
Keep mortar moist and wet to help with the application and curing process. Make a dry batch of the mix to have ready to go saves time and helps with consistency.

TECHNICAL PROCESSES/TASKS COMPLETED

CHINKING AND DAUBING:
• Removed failed daubing
• Reinforced chinking
• Mixed consistence and correct daubing mixture
• Applied daubing mixture to spaces with chinking

REPOINTING:
• Constructed safe scaffolding
• Mixed mortar mix
• Applied mortar to voids on stone chimney
PROJECT HOST: Grand Portage National Monument

HITCH 3.2: Friday, June 15, 2018- Friday, June 22, 2018

HITCH 4.3: Wednesday, June 26, 2018- Wednesday, July 3, 2018

TECHNICAL SPECIALIST: Gary Zbel, Chief of Masonry, Historic Preservation Training Center (HPTC)

Eric Hutchinson, Historic Stone Mason HPTC

FIELD HOURS: Corpsmember- 398     Technical Specialist- 66

ABOUT THE SITE
The stone bridge was constructed by the Civilian Conservation Corps-Indian Division (CCC-ID) in 1938-1940. This Grand Portage CCC-ID company was made up of Minnesota Chippewa enrollees, established in 1936. A HAER report was completed in 2015-2016 to document the architectural and historical significance of the bridge.

HITCH SUMMARY
The crew worked on the stone bridge with the Historic Preservation Training Center (HPTC). The crews raked all the joints on the wingwall to prepare for the re-pointing of the stone bridge. Next, the crew cleaned the stones with vinegar to remove the calcium carbonate build-up. Next, they mixed the mortar and pushed it in to the open joints. The mortar set in 1-3 hours and then the crew went back and scraped to create a recessed joint, remove the hardener (the cement and lime) on top and remove any tuckpointer lines that have hardened. A wet sponge was then used to wash away any excess cement and lime and release the aggregate to create an aged aesthetic.

QUANTITATIVE MEASUREMENTS

• 455 sq. ft. Stone Cleaned
• 375 sq. ft. Stone Repointed

• 7 Wooden chicken ladders built for bridge
• 0.06 Acres of Land Affected

BEST PRACTICES
Vinegar can cause more calcium from the stone so make sure the stones are rinsed well with water.

TECHNICAL PROCESSES/TASKS COMPLETED

PREPARING FOR A NEW MORTAR
• Chipped out failing mortar twice the thickness of the width of the joint
• Cleaned out mortar so the exposed sides of the stones were cleaned for new mortar
• Sprayed the stones with vinegar and let set for 10 minutes to remove the calcium carbonate build-up
• Scrubbed vinegar off with white brushes and water

REPOINTING THE BRIDGE:
• Mixed the mortar in a wheelbarrow with a hoe
• Recipe: 3 parts type N mortar, 3 parts lime, 1 part sand
• Pushed the “mud” (mortar) into the open joints from a hawk using a tuck-pointer
• Scraped the joint after 1-3 hours to create a recessed joint
• Washed away excess hardener to release the aggregate to create an aged aesthetic
Set Up

Removing Old Mortar

Cleaning the Stones

Mixing Mortar “Mud”

Washing Away Excess

After
PROJECT HOST: Pioneers and Soldiers Memorial Cemetery

HITCH 3.3: Friday, June 15, 2018- Friday, June 22, 2018

FIELD HOURS: Corpsmember- 335  Staff- 3

ABOUT THE SITE
In the heart of South Minneapolis, this cemetery holds significant history for the city of Minneapolis. This is the oldest cemetery in Minneapolis and is one of the very few in the nation listed on the National Register of Historic Places.

HITCH SUMMARY
The cemetery needs monuments cleaned, edged, and reset. The crew used the techniques they had learned in their training to accomplish the tasks at hand.

QUANTITATIVE MEASUREMENTS
- 29 Monuments Cleaned
- 21 Monuments Edged

- 67 Monuments Reset
- 3 Acres of Land Affected

BEST PRACTICES
Save the excess sod from edging to use for fill in section of the cemetery or in resetting another stone.

TECHNICAL PROCESSES/TASKS COMPLETED

EDGING:
- Two-inch perimeter dug around the ground-level of the stone and the depth of the stone
- Used spades and pry bars to reset stone to level it with the ground
- Filled in indents in other areas of the cemetery lawn with the leftover sod.

RESETTING:
- Leveled and straightened the lower base using heavy-duty pry bars
- Prepared and cleaned the paired surfaces that were being joined, then applied epoxy in the center
- Placed lead spacers near each corner of the lower paired surface
- Set strips of monument setting compound near the corners of the lower paired surface
- Used tripod and hoist as needed to lift the upper section(s) of stone onto the base
- Trimmed excess monument setting compound pressed out by the weight of the stone

CLEANING:
- Saturated stones with water, then applied a solution of D2
- Scraped off heavy lichen with plastic putty knives
- Scrubbed the stones with soft-bristle brushes to remove bio-growth
- Removed lichen from engraved lettering using bamboo skewers
PROJECT HOST: Chippewa National Forest - Joyce Estate and Cutfoot Ranger Cabin

HITCH 4.2: Wednesday, June 26, 2018 - Wednesday July 3, 2018

TECHNICAL SPECIALIST: Jay Smrekar, U.S. Forest Service Civil Engineer

FIELD HOURS: Corpsmember - 480

ABOUT THE SITE
The Joyce Estate is located in the Chippewa National Forest, on Trout Lake, near Grand Rapids, MN. The estate was built by David Joyce from 1917-1935 and originally consisted of 40+ buildings, with the property spanning 4,500 acres. The Joyce Family, from Chicago, acquired their fortune through the logging industry in Itasca County. Boasting a nine-hole golf course, airplane hangar, greenhouse, dog kennel, tennis court, and observatory, to name a few, the estate was an unusual, yet magnificent, experience in its time. The family used the estate until 1972, with at least one caretaker living on site year-round until 1986. Many of the buildings are no longer extant, but those that remain represent a unique Adirondack style architecture, not commonly found. In fact, the site’s significance stems from it being Minnesota’s only known example of a family summer home built in the tradition of the “great Camps” of the Adirondacks region of New York State. Quoted from a visitor of the estate, it was “one of the most soul inspiring recreation camps to be found between the two oceans”-McDonald and Mack, 1987.

HITCH SUMMARY
The goal of the project was to apply a fresh coat of stain to the exterior of the two main cabins at the Joyce Estate. The 2017 field season prepared the structures for staining the 2018 season. This year’s crew in addition to staining the two main cabins, scraped, primed, and painted the exterior door and window trim, replaced a section of fascia on the backside of the Joyce Cabin, and replaced the door trim on the entrance to the root cellar. The process for the staining aspect of the project began with using wire brushes to rough up the surface of the existing stain and remove any loose flakes. Once this was done, the entire exterior surface of the cabin was treated with a borate solution, to prevent further rot. The stain was then applied systematically with large brushes over the entire exterior of the two buildings, as well as the bathroom. Also, the crew cleaned the interior of the buildings with wood soap and uncovered a portion of a lost sidewalk. At the end of the hitch, the crew moved to the Cutfoot Ranger Cabin and scrapped and primed the windows.

QUANTITATIVE MEASUREMENTS
- 969 sq ft of Landscaping Grounds
- 644 sq ft Pest Mitigation
- 3 Trees Removed
- 11,145 sq ft Structures Cleaned
- 23,000 sq ft Borate Treated Logs
- 16 ln ft Fascia Boards Removed
- 16 ln ft Fascia Boards Replaced
- 10 sq ft Paint Removed
- 10 sq ft Primer Applied
- 23,901 sq ft Paint/Stain Applied
- 17 ln ft Trim Replaced
- 1 Acre of Land Affected

BEST PRACTICES
Stain in a systematic way to provide organization and efficiency. Also, take care when removing and reinstalling fascia boards.

TECHNICAL PROCESSES/TASKS COMPLETED

STAINING EXTERIOR BUILDING:
- Used wire-brushes to roughen up surfaces and remove loose areas
- Treated logs with borate solution
- Applied stain with brushes

PAINTING TRIM:
- Scraped off old paint
- Applied Primer
- Painted Trim Green
During-Borate Treatment

Cutfoot Cabin Before

During-Painting

Cutfoot Cabin After
**PROJECT HOST:** St. John's Cemetery  
**HITCH 5.1:** July 11, 2018- July 18, 2018  
**FIELD HOURS:** Corpsmember- 337.5   Host- 4   Volunteer-1

**ABOUT THE SITE**  
St. John Church was incorporated in 1956, but had been in operation for 100 years prior. The original church building, which still exists today, was built in 1861 and functions as a portion of the Parish Hall. It fell into disuse and disrepair in the 1990’s, but was renovated in 2003 to its existing condition. Church members were originally made up of German, Lutheran settlers. The cemetery has been part of the church since it was incorporated.

**HITCH SUMMARY**  
The crew worked on cleaning, edging, resetting and raising monuments using the gentlest means possible.

<table>
<thead>
<tr>
<th>QUANTITATIVE MEASUREMENTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>94 Monuments Cleaned</td>
<td>12 Monuments Infilled</td>
</tr>
<tr>
<td>50 Monuments Reset</td>
<td>104 Stones Affected</td>
</tr>
<tr>
<td>41 Monuments Edged</td>
<td>0.5 Acres of Land Affected</td>
</tr>
</tbody>
</table>

**BEST PRACTICES**  
Streamline the process; for example, focusing on leveling all the bases and then come back and to the top tiers with setting compound and epoxy.

**TECHNICAL PROCESSES/TASKS COMPLETED**

**EDGING:**
- Two-inch perimeter dug around the ground-level of the stone and the depth of the stone
- Used spades and pry bars to reset stone to level it with the ground
- Filled in indents in other areas of the cemetery lawn with the leftover sod.

**RESETTING:**
- Leveled and straightened the lower base using heavy-duty pry bars
- Prepared and cleaned the paired surfaces that were being joined, then applied epoxy in the center
- Placed lead spacers near each corner of the lower paired surface
- Set strips of monument setting compound near the corners of the lower paired surface
- Used tripod and hoist as needed to lift the upper section(s) of stone onto the base
- Trimmed excess monument setting compound pressed out by the weight of the stone

**CLEANING:**
- Saturated stones with water, then applied a solution of D2
- Scraped off heavy lichen with plastic putty knives
- Scrubbed the stones with soft-bristle brushes to remove bio-growth
- Removed lichen from engraved lettering using bamboo skewers
- Rinsed the stones thoroughly with water
Before

After

Cleaning

Edging

Resetting
ABOUT THE SITE
Oakwood Cemetery was established in 1856 and has more than 500 people interred on the property. The Oakwood Cemetery Association was started in 1987 to oversee maintenance.

HITCH SUMMARY
The crew worked on cleaning, edging, resetting and raising monuments using the gentlest means possible.

QUANTITATIVE MEASUREMENTS
- 59 Monuments Cleaned
- 57 Monuments Edged
- 49 Monuments Excavated
- 0.08 Acres of Land Affected

BEST PRACTICES
One best practice is learning about the site from the community to learn a new appreciation.

TECHNICAL PROCESSES/TASKS COMPLETED

EDGING:
- Two-inch perimeter dug around the ground-level of the stone and the depth of the stone
- Used spades and pry bars to reset stone to level it with the ground
- Filled in indents in other areas of the cemetery lawn with the leftover sod.

RESETTING:
- Leveled and straightened the lower base using heavy-duty pry bars
- Prepared and cleaned the paired surfaces that were being joined, then applied epoxy in the center
- Placed lead spacers near each corner of the lower paired surface
- Set strips of monument setting compound near the corners of the lower paired surface
- Used tripod and hoist as needed to lift the upper section(s) of stone onto the base
- Trimmed excess monument setting compound pressed out by the weight of the stone

CLEANING:
- Saturated stones with water, then applied a solution of D2
- Scraped off heavy lichen with plastic putty knives
- Scrubbed the stones with soft-bristle brushes to remove bio-growth
PROJECT HOST: White Bear Lake Historical Society
HITCH 5.2: Sunday, July 15, 2018- Wednesday, July 18, 2018
TECHNICAL SPECIALIST: Mark Johnston, Historic Design Consulting LLC.
FIELD HOURS: Corpsmember- 200 hours  Technical Specialist- 35 hours

ABOUT THE SITE
The White Bear Lake township building was built in 1885 to further the townships goals of government and a sense of community. The township hall building was designed by to Cass Gilbert in his early years as a step into his public building career. The site will soon be used for interpretive programs, professionally guided tours, exhibits, and many other educational presentations.

HITCH SUMMARY
The project’s goal was to build and prime ten historically accurate shutters on the historic town hall. The crew used hand tools and traditional methods of carpentry. Some of the tools used were hand planes, hand saws, marking gauges, and story sticks. First the crew measured the window frames, cut the boards precisely, fit the boards together, and the rough shutter was trimmed to fit the window. The crew learned carpentry and hand tool skills.

QUANTITATIVE MEASUREMENTS
- 10 Window Shutters Constructed
- 40 sq ft Primer Applied
- 0.5 Acres of Land Affected

BEST PRACTICES
Best management practices included good tool management, precise measurements, and not overworking muscle groups to be efficient.

TECHNICAL PROCESSES/TASKS COMPLETED
BUILDING SHUTTERS:
- Measured window frames with story stick
- Divided measurement into smaller equal pieces
- Found thickness for each board in shutters
- Rip-cut to thickness with skillsaw
- Jointed with a hand plane
- Rabbeted (groove cut) with a fillister rabbet plane a joint for the shiplap
- Fit the board together using wood shims
- Fastened cleat boards to shutter using wood screws
- Took final measurements
- Trimmed shutters to fit
- Treated the ends with a solution to prevent warping
- Applied primer
PROJECT HOST: Winona County Historical Society

HITCH 5.3: July 11, 2018- July 18, 2018

FIELD HOURS: Corpsmember- 350

ABOUT THE SITE
The Winona County Historical Society operates the Rural Heritage Museum, which exhibits rural life in Winona County. The Museum has a log barn, schoolhouse, and the Hill Log Home. The Hill Log Home was owned by the Hill sisters, Mary and Bertha, and was moved just after their deaths from Rushford, MN in 1957. The sisters lived in this home their entire lives.

HITCH SUMMARY
The project included chinking and daubing, building a step for the door, replacing siding boards, and repairing the air vent screens. The crew did chinking and daubing demonstration and let fair-goers try the technique at 1pm each day of the fair.

QUANTITATIVE MEASUREMENTS

- 474 ln. ft. Chinking
- 474 ln. ft. Daubing
- 2 Boards Replaced

- 552 sq. ft. Borate Logs Treated
- 1 Step Built for Front Door
- 0.008 Acres of Land Affected

BEST PRACTICES
Using a wire brush helped clean the wood on the top layer of the course where it was difficult to get a chisel or slick.

TECHNICAL PROCESSES/TASKS COMPLETED

CHINKING AND DAUBING PROCESS:
- Removed old mortar with chisels and hammers
- Removed rotten and greying wood from chinking spaces
- Pushed backer rod and original chinking material in voids
- Measured and Cut Metal Lath to fit the voids
- Mixed mortar daubing mixture
- Applied daubing to the courses

BORATE LOGS:
- Mixed Borate solution
- Sprayed borate solution evenly on the logs

Before

After
Before

After

Before

After
ABOUT THE SITE
Located in the heart of the St. Croix Valley, neighboring the scenic bluffs on the St. Croix River, St. Michael's Cemetery is a historic cemetery characterized by majestic trees, serene and sacred grounds and monuments of Catholic families in Stillwater and Bayport, Minnesota. The 17.6-acre property was originally opened in 1873 and is a joint cemetery supported by the Churches of St. Michael and St. Mary in Stillwater and administered by the Church of St. Charles in Bayport, Minnesota.

HITCH SUMMARY
During this training, AmeriCorps members learned how to clean, edge, and reset monuments and headstones using the gentlest means possible.

QUANTITATIVE MEASUREMENTS
- 40 Monuments Cleaned
- 30 Monuments Edged
- 10 Monuments Reset
- 0.5 Acres of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
RESETTING:
- Leveled and straightened the lower base using heavy-duty pry bars
- Prepared and cleaned the paired surfaces that were being joined, then applied epoxy in the center
- Placed lead spacers near each corner of the lower paired surface
- Set strips of monument setting compound near the corners of the lower paired surface
- Used tripod and hoist as needed to lift the upper section(s) of stone onto the base
- Trimmed excess monument setting compound pressed out by the weight of the stone

CLEANING:
- Saturated stones with water, then applied a solution of D2
- Scraped off heavy lichen with plastic putty knives
- Scrubbed the stones with soft-bristle brushes to remove bio-growth
- Removed lichen from engraved lettering using bamboo skewers
- Rinsed the stones thoroughly with water

EDGING:
- Two-inch perimeter dug around the ground-level of the stone and the depth of the stone
- Used spades and pry bars to reset stone to level it with the ground
- Filled in indents in other areas of the cemetery lawn with the leftover sod.
**PROJECT HOST:** Cuyuna Iron Range Heritage Network  
**HITCH 9.3:** Wednesday, September 5, 2018- Wednesday, September 12, 2018  
**FIELD HOURS:** Corpsmembers- 382.5

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**ABOUT THE SITE**  
The Soo Line Depot was built in 1910 as part of a project to construct a rail line from Superior, WI to Thief River Falls, MN with an extending branch through the Cuyuna Iron Range (Crosby, MN). It is a simple, red brick structure with a hipped roof and large double hung windows (shutters not original to the building). The Depot now functions as museum interpreting the history of Crosby, MN, most notably, the rich logging and mining history of the area. The building was listed on the National Register of Historic Places in 1980 citing its significant associations with the mining industry and transportation. This depot was the western terminus of the railroad that returned back to Superior Wisconsin. It brought an influx of people and provisions to the area and allowed for the shipping of mining products to the Duluth-Superior area (Skrief, SHPO, 1980).

**HITCH SUMMARY**  
The Americorps crew project was to restore the depot’s historic windows. This process involved removing the old glazing, scraping the old paint, priming the wooden sashes, reglazing, and painting.

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**QUANTITATIVE MEASUREMENTS**

- 22 Windows Reglazed  
- 44 Sashes Paint Scraped  
- 44 Sashes Primer Applied

- 44 Sashes Painted  
- 0.5 Acres of Land Affected

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**BEST PRACTICES**  
Keep the glass vertical when removing and setting it back in to reduce the amount of strain on the glass.

---

**TECHNICAL PROCESSES/TASKS COMPLETED**

**WINDOW REGLAZING:**

- Numbered lites and windows  
- Removed old glazing  
- Removed old paint  
- Sanded sashes and muttons for new paint and glazing  
- Relazed windows  
- Applied Primer to wooden sashes  
- Applied Paint to wooden sashes and glazing  
- Returned windows
Uninstalling Windows

Removing Glazing

Scraped Sash

Painting Sashes

Finishing Sashes

After
PROJECT HOST: Heritage House Museum
HITCHES 10.2: Wednesday, September 19, 2018- Wednesday, September 26, 2018
FIELD HOURS: Corpsmember- 256  Staff- 10

ABOUT THE SITE
The Westbrook Heritage House Museum is run by a volunteer committee. The museum is located in the historic Westbrook Depot building, built in 1900. A very active, busy train line ran through Westbrook, through to Currie, MN (End-O-Line) from 1900 to 1976. In 1983, restoration efforts began and are ongoing. The log cabin was donated and moved to its present location adjacent to the depot in the early 2000’s and has also undergone various restoration efforts. The cabin is single story, single unit, front-front gabled, hewn-log cabin.

HITCH SUMMARY
The project’s main goal was to chink and daub the historic log cabin on site. The crew removed all the old daubing and rotten chinking from the courses. Any gaps were filled with backerrod or pieces of chinking that fell out. Next the crew added metal lath to the voids for daubing mixture to adhere to. The daubing mixture was applied at a proper angle for water run-off.

QUANTITATIVE MEASUREMENTS
- 650 ln. ft. of Chinking
- 650 ln. ft. of Daubing
- 650 ln. ft. of Removing Old Daubing
- 0.02 Acres of Land Affected

BEST PRACTICES
Make sure that the surfaces keep wet for proper curing of daubing mixture to wood surfaces.

TECHNICAL PROCESSES/TASKS COMPLETED

CHINKING AND DAUBING:
- Removed failed daubing
- Reinforced chinking with backerrod and metal lath
- Mixed consistent and correct daubing mixture
- Applied daubing mixture to spaces with chinking
Removing Old Daubing

Preparing Surface

Securing Metal Lath

During

After
ABOUT THE SITE
Nobles County Historical Society operates and maintains a large pioneer village in Worthington, MN. The village contains 49 buildings collected over the years and interpreted to present rural heritage of the area. The General Store (#26) was originally built as a saloon and later established as a General Store. It was moved to the Pioneer Village in 1971. The building is front-gabled, stick framed with dimensional lumber, 1.5 stories, with a medium-angled roof. Various styles of lap siding, painted white covers the exterior and is in very poor condition.

HITCH SUMMARY
The main focus of the hitch was the General Store building on site. The crews took down the temporary sheathing, and tore off the siding on the South side of the building. Next, the crew cut plywood to use as new sheathing and cut dimensional lumber to build new window frames. After the window frames were installed, the siding was put up on the South side. The old paint on the rest of the building was scraped and the lead pain was abated. An oil base primer was applied and then latex paint.

QUANTITATIVE MEASUREMENTS
- 801 sq ft. of Paint Removed
- 1197 sq ft. of Primer Applied
- 1197 sq ft. of Paint Applied
- 396 sq ft. of Siding Repaired
- 4 Windows Reglazed
- 1 Window Frame Built
- 0.03 Acres of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
RESIDING:
- Removed rotting sheathing and plywood covering window openings
- Cut new plywood sheathing
- Made new window frames
- Put on new siding

PAINTING:
- Scraped paint (lead paint precautions)
- Applied oil based primer
- Painted after primer dried
New Siding and Window Frames

Scraping Paint

Scraping Paint

After
ABOUT THE SITE
The Discovery Center is about 660 acres that tells the story of the Iron Range. Through exhibits, interpretation, programming, and its research facility they educate about “The Land, The Mines, The People, and The Work.” The highlighted story is about the European immigrants who migrated to the region to work in the iron-ore industry. The Center also has the Iron Range Research Center where they have a collection about The Civilian Conservation Corps. The main site the crew is working on is the Location House. The house is located in the Glen Location, which is a landscape set up with many different structures and features to show a 1903 mining community. One of these structures is the Location House, which portrays living conditions of the employees set up by the mining employers.

HITCH SUMMARY
The crew’s main objective of the project was to remove and replace siding on the Discovery Center’s Location House. The Discovery Center’s staff removed one and half sides of siding starting the project for preparation for the crew. Working around starting on the left side of the building, the building side was measured, siding was cut to length, tar paper was attached to the sheathing, and then the siding was nailed to the building. The crew also patched glazing where needed on the windows and assisted technical specialist Roy Degrugillier with jacking up the building and replacing a couple of bottom sheathing boards. Also, the crew winterized the building and others around the site.

QUANTITATIVE MEASUREMENTS
- 575 sq. ft. of Siding Repaired
- 7 Windows Reglazed
- 14 Boards Replaced
- 0.01 Acres of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
RESIDING:
- Took off siding as needed
- Replaced bottom sheathing boards
- Measured length needed
- Cut siding to length
- Used a staple hammer to attach tarpaper
- Mark studs on tarpaper
- Nailed siding along the studs

WINDOW REGLAZING:
- Patched glazing on windows
- Winterized windows with plywood
Residing Residing

Before Removing Siding

Residing

During

After
PROJECT HOST: Halfway Ranger Station- Hewing Workshop, Historic Preservation Education Foundation
HITCH 11.2: Wednesday, September 19, 2018- Wednesday, September 26, 2018
TECHNICAL SPECIALIST: Gerald David
FIELD HOURS: Corpsmember – 245  Staff - 60  Technical Specialist - 90

ABOUT THE SITE
The Hewing workshop was partially funded by a Historic Preservation Education Foundation grant to teach and train the different skills and techniques of building a hewn dovetailed structure for future trainings and curriculum building at Halfway Ranger Station Historic District.

HITCH SUMMARY
The Hewing Workshop at Halfway Ranger Station sought to teach the corpsmembers the process of hand-hewing logs with dovetail notching followed by the assembly of a small hewn structure. Under the instruction of Gerry David, an expert timber framer, one Northern Bedrock crew successfully built a small hewn structure, two courses high. The structure will later be used for crew training in chinking and daubing techniques.

QUANTITATIVE MEASUREMENTS
- 26 Logs Hewed and Notched
- 8’ x 8’ Structure
- 0.03 Acres of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
HEWING AND DOVETAIL NOTCHING:
- Peeled bark from logs
- Determined best sides for hewing
- Measured and cut logs to 7’8”
- Found center point on log end
- Established hewing lines and marked with chalk
- Hewed log with broad axes
- Cut the last 7” of each log end to 6” in width
- Established inside, outside, butts, and tips of logs
- Drew dovetail shape on each end
- Used handsaw to cut the shoulder line down to the cheek
- Used large chisel to cut extra material off and smooth surface
Peeling Logs

Measuring

Joggling

Hewing

Measuring Dovetails

Cutting Dovetails
PROJECT HOST: Murray County Historical Society
HITCHES 6.2 & 6.3: Wednesday, July 25, 2018- Wednesday, August 1, 2018
HITCHES 8.1 & 8.3: Wednesday, August 22, 2018- Wednesday, August 29, 2018
FIELD HOURS: Coprsmembers-1201  Staff- 4

ABOUT THE SITE
The Murray County Historical Society was established in 1934 and operates the Murray County Historical Museum in Slayton, MN. Over the years, the society has restored a handful of historic structures including the 4-H Round Barn. The octagonal structure, built in the 1937 by the WPA, is on the national register, and is currently used as a community space for presentations and events. The covered exterior is used as a horse barn. It is historically significant for its associations with agriculture, social history and local politics and government, with a period of significance from 1936-1955.

HITCH SUMMARY
The Americorps members’ project for Murray County Historical Society was to scrape and paint their historic round barn on the county fairgrounds. There were many different types of surface prep such as sanding, removing staples, and scraping. Next, the crews applied primer to the walls after dusting off all the debris and then a final top coat was applied.

QUANTITATIVE MEASUREMENTS
- 4974 sq. ft. Paint Removed
- 4974 sq. ft. Primer Applied
- 1.1 Acres of Land Affected

BEST PRACTICES
Stain in a systematic way to provide organization and efficiency. Also, take care when removing and reinstalling fascia boards.

TECHNICAL PROCESSES/TASKS COMPLETED
SCRAPING AND PAINTING:
- Scraped old paint off with carbite scrapers
- Removed nails and staples for smooth surface
- Sanded the last of the old paint off
- Dusted off surface
- Applied primer
- Painted

Before

After
During
Scraping
Sandng
Scraping

Scraping
After
PROJECT HOST: Superior National Forest

HITCHES 4.1: Wednesday, June 26, 2018- Wednesday, July 3, 2018
   6.1: Wednesday, July 26, 2018- Wednesday, August 1, 2018
   7.3: Tuesday, August 7, 2018- Tuesday, August 14, 2018
   8.2: Wednesday, August 22, 2018- Wednesday, August 29, 2018
   10.1: Wednesday, September 19, 2018- Wednesday, September 26, 2018

TECHNICAL SPECIALIST: Ryan Brown, NFS; Sam Olson, NFS

FIELD HOURS: Corpmembers- 1658   Host- 404   Technical Specialists- 448   Volunteer - 80

ABOUT THE PROJECT
The US Forest Service and the Minnesota DNR are conducting a land-swap and an archaeological survey must be done to identify heritage resources on the land. The objective of the project was to gain an understanding of cultural resources within the project to aid Forest Service decision makers in the development of the land exchange and to satisfy the obligation of the Forest to Section 106 of the National Historic Preservation Act.

TECHNICAL PROCESSES/TASKS COMPLETED
The different tasks involved in the survey, mapping, and documentation are:
• Intensive shovel test archaeological survey along shorelines or relic shoreline features, consisting of 30-40cm excavation test pits to sterile soil horizons or bedrock, spaced at 10 meter intervals.
• Walk-over survey following historic trail corridors.
• Metal-test survey in areas determined to be high probability for historic sites or containing pre-contact copper artifacts
• Site mapping and GPS use
• Documentation of survey coverage and methodology
• Documentation of cultural resources within the project area
• Documentation, collection, processing, and curation at Superior National Forest facilities of artifacts recovered during sub-surface testing

QUANTITATIVE MEASUREMENTS
• 22 Sites Identified
   9 Lithic Scatters
   1 Lithic and precontact copper (privately collected) site
   Lithic, ceramic and faunal site
   3 Lithic isolates
   1 Multicomponent lithic scatter and 20th century camp or homestead
   3 Historic isolates
   1 Historic railroad grade
   1 Earthen dam
   2 19th or 20th century homestead sites
• 240 Acres of Land Affected
ABOUT THE SITE
Grand Portage National Monument is located on the north shore of Lake Superior within the Grand Portage Indian Reservation and is dedicated to the preservation of the center of fur trade activity and Anishinaabeg Ojibwe heritage. The land was established as a National Monument in 1960. It explores the partnership between the Grand Portage Ojibwe and the North West Company during the North American fur trade. The park is home to a heritage center, an Ojibwe Village exhibit, Canoe Warehouse, kitchen, reconstructed Great Hall Depot, the Grand Portage trail, and Fort Charlotte and is surrounded by the Grand Portage stockade. It is reported by the National Park Service that “no historic structures remain from the fur trade era at either site; nor have any illustrations or detailed descriptions of the depot buildings been discovered” Rather the structures present are recreations and representation of the past, specifically the late 18th and early 19th centuries. A significant amount of archaeological research has been conducted at the site, which has contributed greatly to the understanding of the site and how it is interpreted today.

HITCH SUMMARY
One of the man projects at Grand Portage National Monument was the replacement of the stockade whalers. The whalers are the horizontal logs holding together the vertical logs of the stockade surrounding the historic fur trading post site. The old whaler is cut down from the stockade and measured for the new whaler. Once the new whaler is ready, the vertical logs are placed back up and the new whaler is attached to the vertical pieces with cedar dowels. The new whaler is attached to the king posts with 8” lag screws to keep the pieces secured together. The crews also helped with other tasks around the monument such as replacing a board on the dock, and creating molds for cemetery stones.

QUANTITATIVE MEASUREMENTS
• 185 ln. ft. of logs replaced
• 0.5 Arces of Land Affected

TECHNICAL PROCESSES/TASKS COMPLETED
SCRAPING AND PAINTING:
• Raked back rocks around posts
• Used sawzall to cut dowels holding posts to whalers
• Caught and removed post
• Measured new whaler
• Attached whaler to king posts with 8” lag bolts
• Set vertical posts back and connected to whalers with wooden dowels
• Raked rocks back into place
Drilling Holes for Dowels

Securing Dowels

Securing Dowels

Attaching Whaler
**ABOUT THE SITE**
The Halfway Ranger Station Historic District (HRSHD) is located on the South Kawishiwi River, 10 miles south of Ely, MN. The Historic District consists of seven log buildings constructed, in 1934, by locally based Civilian Conservation Corps companies and the buildings of the Lakes States Forest Experimental Station (LSFES), which started operating possibly as early as 1924 doing forest research in the area. From at least 1910 until 1950, the site was the location for the Halfway Ranger Station of the Superior National Forest. Management of the site was taken over by the Northern Research Station (formerly LSFES) in 1968, and the buildings were utilized by federal biologists conducting long-term, large mammal research. Northern Bedrock Historic Preservation Corps has entered into a Participating Agreement with the Forest Service to preserve the site for its adaptive re-use.

**HITCH SUMMARY**
The main projects at Halfway Ranger Station Historic District for the 2018 season were site stabilization, replacing fascia board, program work, windows, dry wall replacement in Ranger Dwelling basement and classroom, removed the District Office floor and log preservation.

**TASKS COMPLETED**

**SITE STABILIZATION:**
- Mowed grass
- Graded behind the District Office and Warehouse to prevent moisture and soil from the deteriorating the structure
- Cleared debris and brush from trails and open areas
- Cleaned up woodchips in driveways

**REPLACING FASCIA BOARD:**
- Replaced the fascia board on the classroom that was damaged
- Applied primer to the new board
- Painted the new board with appropriate brown paint

**PROGRAM WORK:**
- Moved refrigerator into kitchen
- Assembled bed frames in Ranger Dwelling
- Constructed sawhorses
- Constructed bat houses
- Installed new walk boards on scaffolding
- Installed shelves in new trailer
- Cleared space and installed posts for second hewn structure
- Hewing Workshop

**LOG PRESERVATION:**
- Applied borates to the exterior of the District Office, Pump House, Boathouse, Warehouse, and Oil House
- Applied borated to the interior of the District Office

**WINDOWS:**
- Reglazed 10 warehouse windows

**REPLACING FASCIA BOARD:**
- Replaced the fascia board on the classroom that was damaged
- Applied primer to the new board
- Painted the new board with appropriate brown paint
PROJECT HOST: North St. Louis County Habitat for Humanity
BONUS HITCH: Monday, October 29, 2018- Thursday, November 1, 2018
TECHNICAL SPECIALIST: Jason Patterson, Construction Manager
FIELD HOURS: Corpsmember- 270 Host- 24

HITCH SUMMARY
The Bonus Hitch was a service project with North St. Louis County Habitat for Humanity. The crew of seven went to Virginia, MN to learn and work on a new build for a family. The crew worked on floor installation, a sidewalk pour, and helped build a shed.

Overview

Building a Shed

Sidewalk Pour

The Crew

Installing Flooring
# 2018 Field Season Report

## May 2018 - November 2018

### Quantitative Impact

<table>
<thead>
<tr>
<th>WORK TYPE</th>
<th>TOTAL</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carpentry</strong></td>
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<tr>
<td>Boards, Replaced</td>
<td>64</td>
<td>Units</td>
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<tr>
<td>General Small Structures</td>
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<td>Units</td>
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<td>Large Structures</td>
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<td>Log, Replaced</td>
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<td><strong>Cemetery</strong></td>
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<tr>
<td>Monument Cleaned</td>
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<tr>
<td>Monument Edged</td>
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<td>Units</td>
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<td>Monuments Excavated</td>
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<td>Monuments Repaired</td>
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<td>Units</td>
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<td>Monument, Reset</td>
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<td><strong>Deconstruction</strong></td>
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<tr>
<td>Ceiling</td>
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<td>Insulation, Removal</td>
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<td><strong>Plaster, Concrete, Masonry &amp; Brick</strong></td>
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<td>Bricks, Cleaned</td>
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<td>Stone, Repointed</td>
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<td><strong>Site Stabilization</strong></td>
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<td>Grounds Repair</td>
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<td>Pest Mitigation</td>
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<td>Roof Cleaned</td>
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<td>Trees, Removed</td>
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<td><strong>Structure, Exterior Maintenance</strong></td>
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<td>Borate, Logs Treated</td>
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<td>Chinking / Daubing</td>
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<td>Fascia, Removal</td>
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<td>Fascia, Replaced</td>
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<td>Siding, Repair</td>
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<td>Window, Screens</td>
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<td><strong>Structure, Interior Maintenance</strong></td>
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<td>Historic Structures Affected</td>
<td>26</td>
<td>Units</td>
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<tr>
<td>Public Lands</td>
<td>21</td>
<td>Projects</td>
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</table>
TRAINING COSTS, IN-KIND CONTRIBUTIONS

In addition to the base support from partnerships and grants, Northern Bedrock's work depends on technical specialists, cost sharing and in-kind contributions. The program relies heavily on the ability to pay trainers and technical specialists, much like the Civilian Conservation Corps with the Local Experienced Men (LEM). In kind contributions fill in funding gaps and provide meaningful experiences for the corpsmembers and communities. Project hosts contribute cost sharing to Northern Bedrock on a sliding scale based on the organization's ability to pay and the quality of the Corpsmember experience. This allows the crews to assist small organizations in maintaining and repairing their historic resources.

<table>
<thead>
<tr>
<th>TECHNICAL SPECIALIST</th>
<th>SKILLS TAUGHT</th>
<th>AMOUNT PAID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gerald David - Timber Framer and Restoration Professional, GFD Woodworking</td>
<td>Log Building - Materials and Sharp Tool Handling, Hewing, and Dovetail Joinery Cutting</td>
<td>$3,500</td>
</tr>
<tr>
<td>Mark Johnston - Restoration Professional, Historic Design Consulting, LLC</td>
<td>Historic Woodworking Tool Usage, Shutter Building</td>
<td>$1,700</td>
</tr>
</tbody>
</table>

Total $5,200

In-Kind Contributions

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>CONTRIBUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camping or Facility</td>
<td>$1,450</td>
</tr>
<tr>
<td>Educational Tour or Training</td>
<td>$413</td>
</tr>
<tr>
<td>Food and Refreshments</td>
<td>$941</td>
</tr>
<tr>
<td>Materials and Equipment</td>
<td>$743</td>
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<tr>
<td>Parking</td>
<td>$1,160</td>
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<tr>
<td>Project Host Support</td>
<td>$48,189</td>
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<tr>
<td>Technical Specialist Time</td>
<td>$30,150</td>
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<tr>
<td>Volunteer Time</td>
<td>$2,052</td>
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Total $85,098
## Cost Sharing

<table>
<thead>
<tr>
<th>HITCH</th>
<th>PROJECT NAME</th>
<th>COST SHARING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Temple Emanuel Cemetery (training)</td>
<td>$0</td>
</tr>
<tr>
<td>1</td>
<td>Lakeview Cemetery, Tower (training)</td>
<td>$0</td>
</tr>
<tr>
<td>2</td>
<td>Duluth Armory</td>
<td>$10,000</td>
</tr>
<tr>
<td>3</td>
<td>Pioneer &amp; Soldier Cemetery, Minneapolis</td>
<td>$4,500</td>
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<tr>
<td>3</td>
<td>Sts Mary and Joseph Church, Sawyer</td>
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<tr>
<td>5</td>
<td>Oakwood Cemetery, Hastings</td>
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<tr>
<td>5</td>
<td>St Luke's Cemetery, Hastings</td>
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<tr>
<td>5</td>
<td>St. John's Cemetery, Stillwater</td>
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<tr>
<td>5</td>
<td>White Bear Lake Area Historical Society</td>
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<tr>
<td>5</td>
<td>Winona County Historical Society, St. Charles</td>
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<tr>
<td>7</td>
<td>St. Michael's Cemetery, Bayport</td>
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</tr>
<tr>
<td>9</td>
<td>NPS: Grand Portage National Monument (fall pjt)</td>
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<tr>
<td>9</td>
<td>Cuyuna Iron Range Heritage Network, Crosby</td>
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<tr>
<td>10</td>
<td>Heritage House Museum, Westbrook (c&amp;d)</td>
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<tr>
<td>10</td>
<td>Nobles County Historical Society, Worthington</td>
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<tr>
<td>11</td>
<td>Halfway Ranger Station Hewing Workshop</td>
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<tr>
<td>11</td>
<td>Minnesota Discovery Center, Chisholm</td>
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<tr>
<td>12</td>
<td>Duluth Armory</td>
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<tr>
<td>2,4</td>
<td>USFS: Chippewa NF</td>
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<tr>
<td>3,4</td>
<td>NPS: Grand Portage National Monument (bridge pjt)</td>
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<tr>
<td>4,6,7,8,10</td>
<td>USFS: Superior NF (5 hitches) archeology</td>
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</tr>
<tr>
<td>6,6,8</td>
<td>Murray County, Slayton</td>
<td>$15,000</td>
</tr>
<tr>
<td>7,7,9</td>
<td>Halfway Ranger Station</td>
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<tr>
<td>Bonus</td>
<td>North St. Louis County Habitat for Humanity, Virginia</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>$181,900</strong></td>
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</tbody>
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