APPENDIX E

Cultural Resource Investigation Report
for the Broadwater Power Project
HERITAGE RESOURCE MANAGEMENT PLAN

BROADWATER POWER PROJECT RELICENSING REQUEST:
BROADWATER COUNTY, MONTANA

Document prepared for
the Montana Department of Natural Resources
and Conservation (DNRC)
Helena, MT  59620

by

Patrick J. Rennie (DNRC, Helena)

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1.0 INTRODUCTION

In 1940, a run-of-the-river dam was constructed on a reach of the upper Missouri River approximately 3.9 miles southeast of Toston, Montana and approximately 13.25 miles downstream (northeast) of the River’s source. From 1940 until 1989, the Toston Dam was designed and operated exclusively for irrigation purposes (Broadwater-Missouri Diversion Project). Development of a hydroelectric plant (Broadwater Power Project) did not occur until 1989. Today the Toston Dam serves a dual role for both irrigation and hydroelectric production. The dam and all currently associated features (assigned Smithsonian Trinomial 24BW126) are owned by the State of Montana Department of Natural Resources and Conservation (DNRC), and operated by the State Water Projects Bureau (SWPB)—a division of the DNRC. All features associated with the Broadwater Power Project are actively used and maintained.

The Federal Energy Regulatory Commission (FERC) granted the State of Montana a license to operate the Broadwater Power Project for 40 years. The license was issued April 23, 1984. It expires July 1, 2024. Non-federal hydroelectric projects are subject to periodic relicensing by FERC. The legal basis for relicensing is found in Part 1 of the Federal Power Act, 16 USC §§791 (a) through 825(r), as amended. The DNRC is requesting of FERC license renewal for a 50 year operating term.

The area affected by the Broadwater Power Project (Area of Potential Effect or APE) can be seen, in part, in Figure 2. It consists of the Toston Dam, the small hydroelectric plant at the north end of that dam, a 2.77 mile long 100kV overhead powerline, and a substation at the north end of the powerline. Excluding the reservoir, the APE is a slightly sinuous corridor measuring approximately 2.8 miles in length and 80 yards in width. Including the reservoir adds 4.5 river miles and increases the corridor width in that location to approximately 600 feet.

2.0 CULTURAL RESOURCES

Cultural resources are considered here to be archaeological, historical, or architectural properties, buildings, structures, objects, and districts, as well as properties of traditional cultural importance to living communities. Cultural resources can be Prehistoric (pre-European contact), Historic, or both Prehistoric and Historic in age. In most instances, however, the term cultural resource applies to only those above mentioned phenomena that are at least 50 years of age.

A cultural resource site (site) is “the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure” (NRB 15:5). A district “…possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development” (NRB 15:5). Landscapes may also be cultural resource sites, especially when they have been created or transformed by man's modification of the environment (e.g., the Berkeley Pit in Butte, Montana).
Figure 2: Topographic map with the location of site 24BW126 indicated.
Historic properties (36 CFR 800.2) as applied in reference to Section 106 of the National Historic Preservation Act (NHPA), and “Heritage Properties” under the Montana State Antiquities Act, are those cultural resources which meet both the criteria for significance and for integrity established by the Secretary of the Interior (36 CFR 60.4). By definition Historic Properties/Heritage Properties are cultural resources eligible for National Register of Historic Places (NR) listing. The NR is the official list of cultural resources determined worthy of preservation (i.e., Historic Properties/Heritage Properties). The NR is maintained by the National Park Service.

2.1 Determination of the Eligibility of Cultural Resources for Listing on the NR

The NR’s standards (National Register Bulletin [NRB] 15 [1997 revision]) of significance used for evaluating whether cultural properties are potentially eligible for listing in the NR are those:

A) that are associated with events that have made a significant contribution to the broad patterns of our history; or
B) that are associated with the lives of persons significant in our past; or
C) that embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D) that have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting the above criteria of significance, a cultural property must also possess integrity. The NR criteria stipulate that a property must possess integrity of location, design, setting, materials, workmanship, feeling, and association. The importance of each of these aspects of integrity depends upon the nature of the property and the criterion or criteria under which it is being nominated. Integrity of location, design, materials, and association are of primary importance, for example, when nominating archeological sites under Criteria A and B. Integrity of setting and feeling usually increase the recognizability of a site or district, and enhances one’s ability to interpret its historical significance (NRB 36 [2000]:40-42). It is important to note that under Criteria A and B the archaeological site must have demonstrated its ability to convey its significance, as opposed to sites eligible under Criterion D where only the potential to yield information is required (NRB 15 [1997]:48).

* Location. The location of a property often helps explain its importance. (Historic) archeological sites and districts almost always have integrity of location. Integrity of location is closely linked to integrity of association.

* Design. Integrity of design generally refers to the patterning of structures, buildings, or discrete activity areas relative to one another. It is of paramount importance under Criterion C and is extremely important under Criteria A and B. Recognizability of a property, or the ability of a property to convey its significance, depends largely upon the degree to which the design of the property is intact. Under Criteria A, B, and C, the NR
places a heavy emphasis on a property looking like it did during its period of significance. One of the tests is to ask if a person from the time, or the important person who lived there, would recognize it. If the answer is yes, then the property probably has integrity of design. If the answer is no, then the property probably does not.

* Setting. Setting includes elements such as topographic features, open-space, views, landscapes, vegetation, man-made features and relationships between buildings and other features. (Historic) archeological sites may be nominated under Criterion D without integrity of setting if they have important information potential. For example, if a site has rich and well-stratified archeological deposits but is located under a modern parking lot, it may still qualify under Criterion D. In this case, the setting does not detract from the information potential of the site. With regard to Criterion A, however, if a site’s or district’s historical setting (or the physical environment as it appeared during its period of significance) is not intact, the ability of the site or district to convey its significance is diminished. If on the other hand, the setting conveys a property’s significance, then the site has integrity of setting under Criteria A. In order to convey significance, the setting must 1) appear as it did during the sites or districts period of significance, and 2) be integral to the importance of the site or district.

* Materials; Workmanship. Under Criterion A, integrity of materials and workmanship should be considered within the framework of a property’s significance.

* Feeling. A property has integrity of feeling if its features in combination with its setting convey a historic sense of the property during its period of significance. Integrity of feeling enhances a properties ability to convey its significance under all of the criteria. Taking the example provided in NRB 36 (2000) of an abandoned railway stop located in the desert, if the site is still in a remote area of the desert and what remains at the site evokes a feeling of early railroad days, then the site has integrity of feeling under Criterion A. The presence of remnant archeological features in combination with the sites remoteness conveys feelings of times past. If the site itself were still intact but it was now surrounded by housing subdivisions and commercial buildings, then the site would not have integrity of feeling under Criterion A.

* Association. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Integrity of association is very important under Criteria A and B. The association between a property and its stated significance must be direct under these two criteria (Shull 1997:3-4).

Only when a cultural property meets both the criteria of significance and of integrity is it potentially eligible for listing on the NR.

3.0 CULTURAL RESOURCE LAWS APPLICABLE TO THIS PROJECT

The study and treatment of the cultural resources are governed by a series of federal and state laws, implementing regulations, Executive Orders, policies, and guidelines. Laws
are legal statutes established by congressional or state level legislators. Implementing regulations are documents issued by federal departments or state agencies that specify how specific agencies will comply with the laws. Executive Orders are presidential or gubernatorial proclamations that give specific direction to government departments or agencies. Policies and guidelines may be issued by any government agency. Federal and state statutes, implementing regulations, Executive Orders, policies and guidelines directly relevant to cultural resources and the Broadwater Power Project are described in general terms below.

**National Environmental Policy Act (NEPA).** Becoming law in 1964, NEPA established a decision making process that involves evaluation of direct, indirect and cumulative impacts of a proposed project. Impacts associated with various alternatives are assessed, and economic and environmental factors are balanced in determining the preferred alternative. Generally, NEPA documents defer to Section 106 of the National Historic Preservation Act for identifying and evaluating project related effects to cultural resources. After balancing the various impacts, NEPA allows for the acceptance of negative effects to cultural resources if the need for the project and its positive effects outweigh the loss or diminution of Historic Properties/Heritage Properties.

**National Historic Preservation Act (NHPA).** The NHPA mandates the heads of federal agencies to take into account adverse effects to Historic Properties/Heritage Properties that a proposed development on federal land, or where federal funding or permitting is required, might have. The NR was established as a result of the NHPA, and so were State Historic Preservation Officers (SHPO) and the Advisory Council on Historic Preservation (ACHP). The SHPOs are appointed officials in each of state, territory, and the District of Columbia responsible for conducting an on-going statewide inventory of cultural resources, and for encouraging preservation of historic properties/heritage properties. The SHPOs serve in an advisory capacity to state and federal agencies, private sector individuals or organizations, and tribes when so requested. The ACHP is an independent federal agency that oversees federal preservation programs and acts as an arbitrator between the various SHPOs and state agencies, federal agencies, and tribes, when a federal undertaking may result in adverse effects to Historic Properties/Heritage Properties, or generate ethos driven animosity. Specific to the Broadwater Power Project, Section 106 of NHPA requires FERC to take into account the effect that relicensing might have on historic properties/heritage properties before approving a new license. It requires that FERC consult with the SHPO and the Advisory Council to identify, and avoid or reduce an adverse effect.

**American Indian Religious Freedom Act (AIRFA).** This joint congressional resolution was designed to protect four things:

1) access to sacred sites,
2) the freedom to practice traditional religions,
3) the right to use and transport ritual objects such as eagle feathers, and
4) to facilitate the respectful treatment of traditional practitioners at border crossings, for
example, not opening sacred medicine bundles.

AIRFA is especially important for cultural resources less than 50 years old and associated with traditional cultural activities and/or intangible spiritual values. The NHPA does not apply to cultural resources less than 50 years old or intangible beliefs. Potential impacts to a vision quest site or ceremonial ground built 20 years ago or to a community's religious values could be an AIRFA, but not a NHPA issue.

Archaeological Resources Protection Act (ARPA). This law establishes a permitting procedure where culture historians document their academic and work experience credentials, and explain their rationale for the proposal to investigate cultural resource.

The ARPA also establishes criminal and civil penalties for the desecration of historic properties. Inadvertent damage (including neglect leading to harm) to historic properties may result in civil penalties in the form of fines. Intentional destruction of historic properties may result in jail terms, confiscation of property and fines. Unlike the NHPA, the ARPA applies only to historic properties that are at least 100 years old.

Native American Graves Protection and Repatriation Act (NAGPRA). This law protects marked and unmarked Indian graves on federal lands. This protection extends to associated and unassociated grave goods and items of cultural importance belonging to the contemporary tribe claiming cultural or other affiliation. Further, it established a process where all museums receiving federal funds would publish and inventory their human skeletal remains, grave goods and sacred objects. At the completion of the process, the tribes have the opportunity to request return of these catalogued items.

Enabling Regulations. The enabling regulations for the NHPA and the ARPA are found in the Federal Register. Regulations can be viewed and downloaded on-line at wais.access.gpo.gov. Regulations are usually talked about in terms of their referencing numbers in the Federal Register, for example 36CFR800. The relevant regulations are listed below:

- 36CFR60 - National Register of Historic Places
- 36CFR61 -Procedures for approved State and local government historic preservation programs (SHPOs)
- 36CFR63 - Determinations of Eligibility to the National Register of Historic Places
- 36CFR68 - Secretary of the Interior's standards for Historic Preservation Projects
- 36CFR800 - Protection of Historic Properties (Advisory Council on Historic Preservation)
- 43CFR7 -Protection of Archaeological Resources (ARPA)
- 43CFR10 - Native American Graves Protection and Repatriation Act (NAGPRA)
- 36CFR79 - Curation of Federally Owned and Administered Archaeological Collections
**National Park Service Bulletins.** The National Park Service, part of the Department of the Interior, has issued a series of guidance documents called Bulletins. These National Register Bulletins give detailed instructions on how to evaluate a cultural resource for listing on the National Register. Most important for the work in the Missouri River Headwaters area are Bulletins 15, 16, 36, and 38.

- Bulletins 15 and 16 give direction on how to evaluate historic properties in general.
- Bulletin 36 outlines the process for evaluating archaeological resources.
- Bulletin 38 provides guidelines for evaluating sites under Criteria A, B and C in terms of the culture that generated these sites. *Bulletin 38* is applicable to sites created by tribal peoples and ethnic groups. Tribal peoples or Tribes means American Indians, Native Alaskans and Native Hawaiians. Ethnic groups include a wide variety of peoples, such as Amish and Hispanic communities in the Southwest. Sites, artifacts, landscapes and districts that qualify under Criteria A, B or C from the perspective of tribal or a specific ethnic community's history and culture are called Traditional Cultural Properties (TCPs).

**Federal Executive Orders.** Executive Order 11593 directs federal agencies to provide leadership in preserving, restoring and maintaining the historic and cultural environment of the nation. It further directs these agencies to locate, inventory, and nominate to the NR all properties under their control that meet the criteria for nomination. It directs agencies to ensure that cultural resources are not inadvertently damaged, destroyed or transferred before completion of the inventory and evaluation process. It also contains a confidentiality clause for site disclosure. The intent of this executive order has been integrated into the NHPA, Section 110 through the 1980 amendments.

Executive Order 13007 directs federal land managing agencies to accommodate access to sacred sites by traditional Indian practitioners, and to protect those sites from impacts. American Indian Tribal Governments directs federal agencies to conduct their relationship with federally recognized Indian tribes on a government to government basis.

**Montana State Antiquities Act.** The Montana State Antiquities Act (Montana Code Annotated 22-3-421 to 442) stipulates that state agencies adopt rules to avoid, whenever feasible, adverse effects to Antiquities in agency actions or agency assisted or licensed actions on state owned lands or structures. Antiquities consist of heritage properties and paleontological remains. Paleontological remains are those fossilized plant and animal remnants considered rare and critical to scientific research. Heritage properties, as defined under the Montana State Antiquities Act, are synonymous with Historic Properties under the federal mandates. Further, the same criteria established by the Secretary of the Interior are used by state land/property managing agencies for assessing a cultural resource’s significance and integrity.
Montana Environmental Policy Act (MEPA).
The Montana Environmental Policy Act (MEPA), in part, requires state agencies involved in funding, permitting or otherwise authorizing an “Action” (i.e., an undertaking that would require the preparation of an Environmental Assessment) on state or private lands to identify, and make efforts to avoid damaging, significant cultural resources.

Montana State Burial Ordinance. The Human Remains and Burial Site Protection Act of 1991 (22-3-802 et seq.; herein referred to as the Burial Act) provides protection to human remains, and all associated grave goods, while providing for potential law enforcement interests. In Montana, when human remains are found on non-federal lands, first the local coroner is called and then the State Burial Board. The State Burial Board is made up of tribal representatives, representatives of the SHPO, the State Coroners Association, physical anthropologists, and archaeologists.

4.0 APPLICABLE AGENCIES AND ADVISORY GROUPS

One federal agency, and two agencies of the State of Montana have responsibilities for assessing potential adverse effects to historic properties/heritage properties in the APE:

Federal Energy Regulatory Commission (FERC).

The FERC issues licenses for up to 50 years for the construction, operation and maintenance of a non-federal hydroelectric project. As part of project relicensing, FERC must comply with Section 106 of the NHPA. The FERC typically delegates much of its Section 106 coordination responsibilities to the license holder or relicense applicant, in this case, the DNRC. The DNRC, through the Heritage Resource Management Plan, provides adequate information to assist these agencies with historic preservation law compliance.

As the lead federal agency in complying with Section 106, it is FERC's responsibility to provide the Montana SHPO and the ACHP the opportunity to review and comment on the subject Heritage Resource Management Plan regarding the inventory and evaluation of cultural resources in the APE, and potential for effects to those resources determined to be historic properties/heritage properties.

Montana Department of Natural Resources and Conservation (DNRC).

The DNRC is the state agency that administers the bulk of state owned natural resources. It is comprised of five divisions. The Trust Lands Management Division administers and manages the state school trust timber, surface, and mineral resources for the benefit of the common schools and the other endowed institutions in Montana, under the direction of the State Board of Land Commissioners.

The Water Resources Division is responsible for managing Montana’s water for the present and future needs of its people. It quantifies federal reserved water rights held by Montana Indian
tribes and federal agencies, and also manages the operation and maintenance of 24 state-owned dams and 250 miles of irrigation canals.

The Forestry Division promotes responsible and proactive stewardship of Montana’s forests and rural lands. Its programs help private landowners manage their forested lands, and help cities and towns develop vibrant parks, boulevards and natural areas.

The Montana Board of Oil and Gas Conservation protects citizens and the environment from the impacts of oil and gas activities. The Board is responsible for permitting all oil and gas wells and regulates the underground injecting program.

Grant and loan programs administered by the Conservation and Resource Development Division enable communities to modernize wastewater treatment and water systems; to reclaim lands impacted by mining; and fight the spread of aquatic invasive species.

**Montana State Historic Preservation Office (SHPO).**

The Montana State Historic Preservation Officer (SHPO) is the appointed official responsible for conducting an on-going statewide inventory of cultural resources, and for encouraging preservation of historic properties/heritage properties. The SHPOs serve in an advisory capacity to state and federal agencies, private sector individuals or organizations, and tribes when so requested. The SHPO lacks jurisdiction on Indian Reservations, so the SHPO defers to the Tribal Historic Preservation Officer (THPO) on those lands unless SHPO assistance is requested by the THPO. The SHPO may review and comment on all federally mandated cultural resource work in the state. They may concur or not concur with site eligibility recommendations, determinations of effect, and treatment plans. The Montana SHPO is the state official who participates in consultation with the Advisory Council during the routine Section 106 review process.

**4.0 DETERMINATION OF PROJECT EFFECTS ON HISTORIC PROPERTIES**

Following Section 800.16.i of the National Historic Preservation Act (NHPA), a proposed undertaking [action under MEPA] or development will have an Effect on a historic property if the development will alter the characteristics that qualify it for inclusion in the NR. If the state land managing agency official determines that a heritage property will be affected with a proposed development, then he must assess whether or not the heritage property will be affected adversely. If the agency official, in consultation with the SHPO concludes a finding of Adverse Effect, then mitigation measures intended to offset the diminishing effects of the development must be considered and, if feasible, implemented. In some instances, a historic property/heritage property can be affected by a development, but the agency official, in consultation with the SHPO, may propose a finding of No Adverse Effect. In this instance an action’s effects are either considered to not be adverse, or the undertaking is modified, or conditions are imposed, to render potential effects insignificant.
Alternately, in the following instances if:

1) no cultural resources were identified in a project’s APE;

2) a cultural resource was identified within a project’s APE, but was evaluated
   and determined **NOT** to be a historic property (ineligible for listing in the NR); or

3) a historic property was identified within a project’s APE, but the development will not alter the characteristics that qualify it for inclusion in the NR

then the primary land managing, funding, or permitting agency can seek, in consultation with the SHPO, a finding of *No Historic Properties Affected.*

### 6.0 CLASS I SURVEY RESULTS (LITERATURE REVIEW)

In April of 2018, the DNRC requested the SHPO to conduct a search of its statewide (Cultural Resource Information System (CRIS) and Cultural Resource Annotated Bibliography System (CRABS) databases. The area for which cultural resource site and previous inventory coverage information was requested consists of those legally described sections of ground containing the APE (Figures 2 and 3):

1) T4N R2E Sections 1, 2, 11, 12, 13, and 14;
2) T4N R3E Sections 6, 7, and 18
3) T5N R2E Sections 35 and 36; and
4) T5N R3E Section 31

The APE for this relicensing request is tantamount to the arbitrarily defined boundaries of the Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District. This historic district has been assigned Smithsonian Trinomial 24BW126. The CRIS and CRABS database searches indicated that Class III cultural resource inventories have covered most of the terrain extending a minimum of ½ mile to either side of the APE (Murdo 2018; Table 1; Figure 3). The search also revealed that 24 cultural resource sites have been documented in, or within ½ mile of, the APE (Murdo 2018; Table 2; Figure 4). Only four cultural resources (24BW126, 24BW149, 24BW499, and 24BW570), however, are documented to be at least partially within the APE boundaries.
<table>
<thead>
<tr>
<th>Class III Inventory Report</th>
<th>Reporter</th>
<th>Report Date</th>
<th>Report Title</th>
<th>Legal Location of Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRABS Reference #</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GA 6 12529</td>
<td>Baumler, Mark F. and David Schwab</td>
<td>1991</td>
<td>A Preliminary Archaeological and Historical Survey of the Bar None Ranch, Montana.</td>
<td>T4N R2E Sections: 1, 12, 13; T4N R3E Sections: 7, 18</td>
</tr>
<tr>
<td>BW 2 1453</td>
<td>Clark, Gerald R.</td>
<td>1989</td>
<td>Toston Road Gravel Permit</td>
<td>T5N R3E Section: 31</td>
</tr>
<tr>
<td>BW 6 37998</td>
<td>Davidson, Douglas</td>
<td>2015</td>
<td>Big Springs Ditch Company Water Conservation Permit.</td>
<td>T4N R3E Section: 6</td>
</tr>
<tr>
<td>BW 1 16565</td>
<td>Fairchild, Gary S.</td>
<td>1994</td>
<td>MDFWP's Toston Fisheries Improvement Project.</td>
<td>T4N R3E Section: 6</td>
</tr>
<tr>
<td>BW 6 1469</td>
<td>Herbort, Dale P.</td>
<td>1986</td>
<td>Cultural Resource Investigation on the Broadwater Dam Project.</td>
<td>T4N R2E Sections: 1, 11, 12; T4N R3E Sections: 6, 7, 18; T5N R2E Sections: 35, 36; T5N R3E Section: 31</td>
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<tr>
<td>BW 6 1471</td>
<td>Herbort, Dale P.</td>
<td>1988a</td>
<td>Excavation and Mitigation of the Toston Site, 24BW 182.</td>
<td>T4N R2E Section: 11</td>
</tr>
<tr>
<td>BW 6 1470</td>
<td>Herbort, Dale P.</td>
<td>1988b</td>
<td>Broadwater Project: 100 kV and 12.5 kV Powerlines.</td>
<td>T4N R3E Sections: 6, 7; T5N R2E Sections: 35, 36; T5N R3E Section: 31</td>
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<td>LC 2 38243</td>
<td>Kiely, Carrie</td>
<td>2015</td>
<td>Toston Campground Expansion Class III.</td>
<td>T4N R3E Section: 6</td>
</tr>
<tr>
<td>BW 2 1450</td>
<td>Kingsbury, Lawrence A.</td>
<td>1987</td>
<td>Canal Re seeding Project.</td>
<td>T5N R2E Section: 36; T5N R3E Section: 31</td>
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<tr>
<td>BW 5 1463</td>
<td>Passmann, Dori</td>
<td>1987</td>
<td>Powerlines for DNRC's Toston Project.</td>
<td>T4N R3E Section: 6; T5N R2E Section: 36</td>
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<tr>
<td>BW 2 15999</td>
<td>Sanders, Darrell J.</td>
<td>1993</td>
<td>Huempfner Land Exchange.</td>
<td>T4N R2E Section: 12</td>
</tr>
<tr>
<td>BW 2 19074</td>
<td>Sanders, Darrell J.</td>
<td>1997</td>
<td>Cultural Resource Inventory Report on the Lombard Historic District.</td>
<td>T4N R3E Sections: 1, 2, 11, 12, 13</td>
</tr>
<tr>
<td>BW 4 32202</td>
<td>Wagers, Scott J.</td>
<td>2010</td>
<td>Montana Highway 284: A Cultural Resource Inventory Northeast of Townsend, Broadwater County, Montana Control # 284-3(5)23.</td>
<td>T4N R3E Section: 6; T5N R2E Section: 36; T5N R3E Section: 31</td>
</tr>
</tbody>
</table>
Figure 3: Topographic map showing areas of Class III Survey in relation to the project APE.
<table>
<thead>
<tr>
<th>Site #</th>
<th>Twp</th>
<th>Rng</th>
<th>Sec</th>
<th>General Description</th>
<th>Spatial Relationship to APE</th>
<th>NR Status</th>
<th>Proposed Relicensing Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>24BW126</td>
<td>4N</td>
<td>2E</td>
<td>1, 2, 11, 12, 13, 14</td>
<td>Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District</td>
<td>In APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW126</td>
<td>4N</td>
<td>3E</td>
<td>6, 7, 18</td>
<td>Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District</td>
<td>In APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW126</td>
<td>5N</td>
<td>2E</td>
<td>35, 36</td>
<td>Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District</td>
<td>In APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW126</td>
<td>5N</td>
<td>3E</td>
<td>31</td>
<td>Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District</td>
<td>In APE (probably inundated by reservoir waters or destroyed with 1939 dam construction camp development)</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW149</td>
<td>4N</td>
<td>3E</td>
<td>7</td>
<td>Possible Corps of Discovery campsite (general site location based on a journal entry, but not ground truthed)</td>
<td>Outside APE (probably inundated by reservoir waters or destroyed with 1939 dam construction camp development)</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW180</td>
<td>4N</td>
<td>2E</td>
<td>12</td>
<td>Historic coke oven and slag pile associated with local coal mining: 1920-1930</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW181</td>
<td>4N</td>
<td>2E</td>
<td>11</td>
<td>Precontact stone circle site</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW182</td>
<td>4N</td>
<td>2E</td>
<td>11</td>
<td>Chipped stone detritus and FCR</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW184</td>
<td>4N</td>
<td>3E</td>
<td>18</td>
<td>Historic homestead remnants: 1920-1930</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW493</td>
<td>5N</td>
<td>3E</td>
<td>31</td>
<td>Historic Coal Mine: 1920-1930</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW494</td>
<td>4N</td>
<td>3E</td>
<td>6</td>
<td>Stage stop/homestead</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW496</td>
<td>4N</td>
<td>3E</td>
<td>6</td>
<td>Historic homestead remnants: 1920-1930</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW497</td>
<td>4N</td>
<td>3E</td>
<td>18</td>
<td>Historic District: Lombard Townsite (Broadway County portion)</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW499</td>
<td>4N</td>
<td>3E</td>
<td>6, 7</td>
<td>Historic Irrigation System: Broadwater-Missouri eastside and westside canals</td>
<td>Partially in APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW499</td>
<td>5N</td>
<td>2E</td>
<td>35, 36</td>
<td>Historic Irrigation System: Broadwater-Missouri eastside and westside canals</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW499</td>
<td>5N</td>
<td>3E</td>
<td>31</td>
<td>Historic Irrigation System: Broadwater-Missouri eastside and westside canals</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW570</td>
<td>4N</td>
<td>2E</td>
<td>1</td>
<td>Chipped stone detritus, firehearths or Roasting Pits, and FCR</td>
<td>In APE (probably inundated by reservoir waters)</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW571</td>
<td>4N</td>
<td>2E</td>
<td>11</td>
<td>Precontact stone circle site</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW575</td>
<td>4N</td>
<td>3E</td>
<td>6</td>
<td>Chipped stone detritus</td>
<td>Outside APE</td>
<td>Undetermined</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW765</td>
<td>4N</td>
<td>2E</td>
<td>12</td>
<td>Historic homestead remnants: 1920-1930</td>
<td>Outside APE</td>
<td>Unresolved</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW766</td>
<td>4N</td>
<td>2E</td>
<td>1</td>
<td>Historic Building Foundation</td>
<td>Outside APE</td>
<td>Unresolved</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW767</td>
<td>4N</td>
<td>2E</td>
<td>12</td>
<td>Historic Building Foundation</td>
<td>Outside APE</td>
<td>Unresolved</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW768</td>
<td>4N</td>
<td>2E</td>
<td>12</td>
<td>Historic Building Foundation</td>
<td>Outside APE</td>
<td>Unresolved</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW771/</td>
<td>4N</td>
<td>3E</td>
<td>7, 18</td>
<td>Historic Railroad</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW771/</td>
<td>4N</td>
<td>3E</td>
<td>1, 11, 12, 13</td>
<td>Historic Railroad</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW818</td>
<td>4N</td>
<td>3E</td>
<td>6, 7</td>
<td>Historic Railroad</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW818</td>
<td>5N</td>
<td>2E</td>
<td>36</td>
<td>Historic Railroad</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW835</td>
<td>4N</td>
<td>2E</td>
<td>12</td>
<td>Historic Trash Dump</td>
<td>Outside APE</td>
<td>Ineligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW836</td>
<td>4N</td>
<td>3E</td>
<td>6</td>
<td>Historic Irrigation System</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW836</td>
<td>5N</td>
<td>3E</td>
<td>31</td>
<td>Historic Irrigation System</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW836</td>
<td>5N</td>
<td>2E</td>
<td>36</td>
<td>Historic Irrigation System</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW963</td>
<td>4N</td>
<td>2E</td>
<td>2, 11</td>
<td>Historic Irrigation System</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24BW963</td>
<td>5N</td>
<td>2E</td>
<td>35</td>
<td>Historic Irrigation System</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24GA1096</td>
<td>4N</td>
<td>3E</td>
<td>18</td>
<td>Historic Railroad</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
<tr>
<td>24GA1389</td>
<td>4N</td>
<td>3E</td>
<td>18</td>
<td>Historic District: Lombard Townsite (Gallatin County portion)</td>
<td>Outside APE</td>
<td>Eligible</td>
<td>No Effect</td>
</tr>
</tbody>
</table>
Figure 4: Topographic map showing the location of documented cultural resources in, and near, the project APE.

**Legend:**
- Green line (100 kV) overhead powerline
- Pink: Substation
- Blue: Warehouse
- Orange: Toston Dam
- Red: Historic District boundary (4BW126)
- Black dashed: Project APE boundary

USGS Topographic Map Composite: Lombard, MT and Toston, MT (1986 provisional editions)
7.0 PROJECT EFFECTS ON HISTORIC PROPERTIES

Only two cultural resources presently determined to be eligible for listing in the NR are within the project APE (Appendix 1). Site 24BW126 is the Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District. The boundaries of this site are tantamount to the project APE and is the subject of this relicensing request. Site 24BW499 is the Broadwater-Missouri Eastside and Westside Canals. This irrigation canal system was constructed as part of the Broadwater-Missouri Diversion Project in 1940. The point of diversion and approximately 100 yards of the westside canal are within the project APE (Figure 4).

Two cultural resources presumably within the reservoir margins of the APE have not been evaluated to determine if they are NR eligible properties (Appendix 1). Site 24BW149 is reported to be a Lewis and Clark (Corps of Discovery) campsite used on July 25, 1805 (24BW149). The site locality is presumed based on an entry in the Lewis and Clark Journals. No physical evidence of the site was identified before the site form was completed and filed with the MT SHPO in 2000. The other site (24BW570) is reported to be an eroded Precontact Native American campsite consisting of a remnant hearth and a limited amount of chipped stone items. The site was vaguely reported in 1974 to be in eroded sands along the reservoir pool margin (Figure 4).

No evidence of sites 24BW149 and 24BW570 was identified during several Class III surveys of the general site areas conducted in 1981, 1986, 1987, 1988, and 1993 (Figure 3). Because the pool level was increased by three feet (approximately 3949.7 feet to 3952.6 feet) since 1974, the evidence is strong that both 24BW149 and 24BW570 are beneath the reservoir waters. Additionally, if any physical evidence of site 24BW149 did exist, those remains were heavily disturbed or destroyed in 1939 when a dam-worker’s camp was constructed at the reported Corps of Discovery campsite. Based on a lack of physical evidence for either 24BW149 or 24BW570, the DNRC recommends both sites to be ineligible for NR listing.

Considering that the proposed project involves only the relicensing of the Broadwater Power Project, issuance of a license will not result in operational changes, structural changes, changes to the reservoir pool level, or changes to the local environment that could affect integrity of sites 24BW126 or 24BW499. Relicensing will result in No Historic Properties affected.

8.0 SUMMARY AND RECOMMENDATIONS

The Federal Energy Regulatory Commission (FERC) granted the State of Montana a license to operate the Broadwater Power Project for 40 years. The license was issued April 23, 1984. It expires July 1, 2024. Non-federal hydroelectric projects are subject to periodic relicensing by FERC. The DNRC is requesting the FERC to relicense the operation of the Broadwater Power Project for an additional 50 year term.

The area affected by the Broadwater Power Project (Area of Potential Effect or APE) can be seen, in part, in Figure 2. It consists of the Toston Dam, the small hydroelectric plant
at the north end of that dam, a 2.77 mile long 100kV overhead powerline, and a substation at the north end of the powerline. Excluding the reservoir, the APE is a slightly sinuous corridor measuring approximately 2.8 miles in length and 80 yards in width. Including the reservoir adds 4.5 river miles and increases the corridor width in that location to approximately 600 feet.

Class III cultural resource inventories have covered the majority of the APE, and areas immediately adjoining the APE (Figure 3). The exception is the inundated zone assigned to the reservoir portion of 24BW126. Several cultural resources have been documented in and near this project’s APE. Four cultural resources have been documented within the APE. Two are historic properties (24BW126 and 24BW499), one has never been positively identified on the ground (24BW149), and one has not been re-identified since its documentation in 1974 (24BW570). The latter two sites, are presumed here, if they in fact exist, to be beneath the waters of the reservoir. The former two resources, determined to be historic properties/heritage properties, will not be affected if the Broadwater Power Project is relicensed.

As a side note and management recommendation, the resources associated with the Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District (24BW126) should be reevaluated in 20 years as it is highly likely the powerline, substation, hydroelectric plant, and warehouse would be considered contributing resources (50 years after their construction) at that time.

If the DNRC determines, at a future date, that historic properties in or near the APE will be adversely affected as a result of relicensing of the Broadwater Power Project, the following procedure will be followed: The DNRC will contact the FERC and the SHPO to determine what course of action needs to be followed to allow the FERC to remain in compliance with the National Historic Preservation Act. Following FERC guidance, the DNRC will take reasonable steps to ensure that treatment plans or other procedures developed in consultation between the FERC and the SHPO, will be followed to mitigate potential adverse effects to historic properties.
REFERENCES CITED

Murdo, Damon

NRB (National Register Bulletin) 15

NRB (National Register Bulletin) 36
Appendix 1: CRIS forms for 24BW126, 24BW149, 24BW499, and 24BW570
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

SITE REPORT FORM

1. County: Broadwater County
2. Site No: 24BW126
3. Name of Project: Toston Dam
4. Twn: T4N   Rng: R3E   Section: NW-NW1/4 of Section 7
5. UTM: Zone 12; 468 520 mE  51 07 260 mN
6. USGS 7.5' quad: Lombard, MT, 1986
7. Elevation: 3942 ft.
8. Type of Site: Concrete Gravity Dam
9. Dimensions:
   Structural Height – 56 ft.
   Hydraulic Height – 56 ft.
   Crest Length – 705 ft.
   Crest Width – Varies
10. Description of Site (condition, visibility, previous disturbance, description of features observed):

    Toston Dam (Broadwater Power Project) is owned by the State of Montana Department of Natural Resources and Conservation. Water from the reservoir is used for irrigation and power generation. The primary purpose of the reservoir is to provide supplemental irrigation on approximately 23,600 acres of agricultural land through the Broadwater Missouri Canal and provide for Power Generation at the Broadwater Hydroelectric Power Plant. The site consists of a concrete gravity dam, a ten megawatt hydropower facility, a powerhouse, and a concrete spillway. The reservoir storage capacity at the minimum dam crest elevation is approximately 3000-acre feet. The reservoir, dam and hydropower complex are easily seen from the county road that serves as main access from Toston and U.S. Highway 287. A major rehabilitation of the dam occurred in 1989. The dam, hydropower facilities, spillway and outlet works are currently in good condition and meet or exceed existing dam safety standards.
History:

Toston Dam was financed by the State Water Conservation Board, with the project submitted to the Board on February 6, 1934—a date of only several weeks after the Board was created. The dam was constructed by the Utah Construction Company, under a contract awarded to it by the Board on May 5, 1935 for $642,210.85. Construction was started on July 1, 1939 and completed on November 6, 1940.

11. Landform and Soil:

The landforms in the immediate area consist of rocky hills, benches and high terraces, with moderate to steep slopes that are dissected by entrenched streams, narrow stream valleys and the Missouri River. Elevations generally range from 3500 to 5500 feet. Major soil types include Nielsen and Rencot channery loams on 15 to 60 percent slopes. Soils in the area are characteristically shallow, well drained, with moderate permeability.

12. Vegetation: Vegetation is generally sparse, with bluebunch wheatgrass, threadleaf sedge, needleland thread grass and sage the most prominent species. Douglas fir, ponderosa pine, juniper, cottonwood, and aspen are found in isolated pockets along the Missouri River and surrounding stream valleys. Dry land wheat, hay and irrigated vegetable crops are cultivated in the smooth, gently sloping benchlands and terraces further to the west.

13. Associated Sites: None present.

14. Possible Destruction: The dam, canal and hydropower plant will be maintained and operated into the foreseeable future.

15. Recommendations: This site should be documented and recorded for historic records. No other action is recommended.

16. Site Significance: As indicated on page 12 of National Park Service Bulletin #15 (NPSB 15) a property can be considered significant in association with Criterion A if a relationship between the site and a significant event or pattern of events within a defined time period can be demonstrated. Additionally, "Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A (NPSB 15:12). Site 24BW126 is associated with early hydroelectric development of western waterways and is generally associated with agricultural development in the west. The latter in the sense that it is provides a reservoir of water for ongoing agricultural commercialization in the area. There is, however, neither an indication that the development of the Toston Dam influenced agricultural settlement of the area, nor has it had a significant impact on the local agricultural economy.

A property is considered significant in association with Criterion B if a link between the site and a person significant in local, regional, or national history or prehistory can be demonstrated (NPSB 15:14). So far, no such association has been identified.
24BW126

A property can be considered significant in association with Criterion C if it can be demonstrated to, "Embody distinctive characteristics of a type, period, or method of construction (NPSB 15:18)." In order for a property to meet that requirement it must exhibit a sufficient number of "distinctive characteristics" representative of a particular method of construction. Further, "Characteristics can be expressed in terms such as form, proportion, structure, plan, style, or materials. They can be general, referring to ideas of design and construction such as basic plan or form... (NPSB 15:18)". Additional research is necessary to determine if the Toston Dam is an architecturally significant structure.

Finally, a property is considered significant in association with Criterion D if it has yielded, or may be likely to yield, information important in prehistory or history (NPSB 15:21). Although it has not been determined whether the site contains buried, associated cultural materials, it is unclear what relevant research questions could be addressed with associated cultural materials to provide a better understanding of important or unknown aspects of activities associated with dam construction.

Based on the previous analysis, site 24BW126 is recommended here as significant in association with, at least Criterion A and it appears to retain adequate integrity to make the site eligible for listing in the National Register of Historic Places.

17. Recorded by: James P. Domino

18. Date 12/28/90
Photo 1. Upstream face of the dam looking from the left abutment.

Photo 2. Upstream face of the dam looking from the right abutment.
Photo 3. Downstream face of the dam.
Detailed map with the location of the Toston Dam (24BW126) indicated.
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
HISTORIC CULTURAL RESOURCE SITE FORM

I. IDENTIFICATION:  Smithsonian No.: 24BW126 update 2018  

Site Name: Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District

II. LOCATION:  State: MT  

County: Broadwater  

County Status: State of Montana (DNRC administered)  

1:24,000 USGS Maps: Lombard, MT (1986 Provisional Edition) and Toston, MT (1986 Provisional Edition)  

Legal Descriptions:  Dam: NENNW1/4 Section 7, T4N R3E;  

Warehouse: SENWNENNW1/4 Section 7, T4N R3E;  

Reservoir: T4N R2E: S1/2 Section 1, SESE1/4 Section 2, E1/2 and E1/2E1/2NW1/4 Section 11, NWNWNW1/4 and S1/2SW1/4 Section 12, and N1/2N1/2 Section 13;  

T4N R3E: SWSWSW1/4 Section 6, NWNW1/4 Section 7, and N1/2NW1/4 Section 18;  

100 kV Overhead powerline:  

T4N R2E: S1/2 Section 1;  

T4N R3E: W1/2W1/2 Section 6 and NWNENNW1/4 Section 7;  

T5N R2E: S1/2NE1/4 and S1/2SW1/4NW1/4NE1/4 Section 35; and  

S1/2 Section 36;  

Substation: T5N R2E: S1/2SW1/4NW1/4NE1/4 Section 35

UTM Coordinates:  Zone 12, Datum: NAD83 conus  

Dam center: 468,452 mE; 5,107,464 mN  

Hydroelectric plant: 468,506 mE; 5,107,517 mN  

Warehouse: 468,587 mE; 5,107,571 mN  

Reservoir (North end): 468,450 mE; 5,107,464 mN  

Reservoir (South end): 469,4089 mE; 5,105,889 mN  

Overhead powerline (South end): 468,506 mE; 5,107,517 mN  

Overhead powerline (North end) and substation: 466,125 mE; 5,110,634 mN

III. ACCESS:  The Dam and Reservoir portions of the site are located on the Missouri River approximately 3.9 miles southeast of Toston, Montana. The warehouse is above the river on an artificial terrace at the north side of the Dam. The overhead powerline extends 2.77 miles northwesterly from the hydroelectric plant at the north side of the dam, to a substation on a dry upland bench above the Missouri River. Direct access to the dam can be obtained by following the Toston Dam road, from its intersection with Highway 287, southeasterly approximately 5 miles.

IV. TYPE:  Concrete, gravity overflow dam and small hydroelectric plant.

V. PERIOD OF SITE USAGE OR CONSTRUCTION:  Constructed in 1940 with rehabilitation work occurring in 1989, 2002, 2005, 2009, 2012, and 2014. From 1940 until 1989, the site was designed and operated exclusively for irrigation purposes (Broadwater-Missouri Diversion Project). Development of a hydroelectric plant (Broadwater Power Project) did not occur until 1989. Today the Toston Dam serves a dual role for both irrigation and hydroelectric production. The dam and all currently associated features are actively used and maintained.
VI. DESCRIPTION: The Broadwater-Missouri Diversion Project and the Broadwater Power Project is owned by the State of Montana Department of Natural Resources and Conservation (DNRC), and operated by the State Water Projects Bureau (SWPB). The site, as defined here, consists of a concrete gravity overflow dam, 378 feet of spillway, and outlet works (Toston Dam), a 10 megawatt hydroelectric plant, a 2.77 mile long overhead powerline that connects to a substation northwest of the dam, a tin sided warehouse, and a reservoir formed by impounding a reach of the Missouri River. The site was previously also assigned Smithsonian Trinomial 24BW183. The SHPO has recalled that site number, so all future references to the Broadwater-Missouri Diversion Project and the Broadwater Power Project will be by 24BW126. The SHPO recommends the site to be a Historic District. Within the site or Historic District boundaries, are both contributing and noncontributing elements to the qualities of the site that make it eligible for listing in the National Register of Historic Places.

The Toston Dam and Reservoir was constructed as part of the State Water Conservation Board’s Broadwater-Missouri Diversion Project. The dam was originally intended to divert water from the Missouri River (Toston Reservoir) into the Broadwater-Missouri Westside Canal at the north side of the dam (State Engineer's Office 1956:26). For reasons unknown, the Broadwater-Missouri Westside Canal and Eastside Canal were documented previously as irrigation features distinct from the Toston Dam/Reservoir and were assigned Smithsonian Trinomial 24BW499. So as not to confuse the issue, site 24BW126 consists of the features defined in the preceding paragraph. The Broadwater-Missouri Westside and Eastside Canals (24BW499) will be treated as distinct from site 24BW126 even though these canals were constructed as part of the original Broadwater-Missouri Diversion Project. Further, site 24BW499 predates, and is in no way associated with, the Broadwater Power Project.

**Toston Dam and Hydroelectric Plant (one contributing and one noncontributing feature)**

The run-of-the-river Toston Dam (contributing) has a structural height of 51.5 feet and a crest length of 705 feet. Crest width varies. Capping the length of the dam is a walkway or bridge that measures approximately 12-13 feet in width. Water from the impounded Missouri River flows over seven ogee weir sections beneath the spillway bridge. Each weir section measures 54 feet in length and exhibits inflatable rubber bladder flashboards for controlling pool levels. Although the dam retains most of its historic appearance, major rehabilitation and modification work occurred in 1989. At that time, the original flashboards were replaced with inflatable rubber bladder flashboards, the 10 megawatt hydroelectric plant (noncontributing) was added at the north end of the dam, and access and maintenance roads were improved. In 2002, an automated trash rake was installed for cleaning debris from the upstream side of the dam. In 2005, the spillway bridge was replaced, and in 2014 all seven rubber bladder flashboards were replaced. The dam, hydropower facilities, spillway, and outlet works are currently in good condition and meet or exceed existing dam safety standards.

**Reservoir (one contributing feature)**

The reservoir is not much wider than the original river channel at approximately 600 feet. The original storage capacity of the reservoir behind Toston Dam was approximately 4,100 acre-feet at the normal pool elevation of 3952.6 feet ASL. A bathymetric survey of much of the reservoir area was performed in 2008. Based on the most current data, the current reservoir volume at elevation 3952.6 feet ASL is approximately 1,900 acre-feet. The dam impounds water upstream of the Toston Dam over approximately 4.5 river miles and covers 327 surface acres.

**Powerline and substation (counted as one noncontributing feature)**

The 2.77 mile long overhead 100 kV (10 megawatt) powerline, and associated substation at the NW end of the line, were constructed in 1989. The support towers are largely twin vertical wooden poles connected by X-bracing. The substation is within a perimeter fenced containment that measures approximately 150 feet NE/SW x 105 feet NW/SE.

**Warehouse (one noncontributing feature)**

The warehouse was constructed in 1991 or 1992. It is a tin sided building with walls 16 feet tall, and a 4:12 pitch tin covered gable roof. Windows are not present apart from those in the 14 x 14 feet roll-up bay doors centrally positioned at each gable end. The warehouse measures 40 feet NE/SW x 60 feet NW/SE and it is 24 feet tall at the peak. An open sided 40 feet NE/SW x 12 feet NE/SW shed roof awning addition is located at the NE side of the warehouse. The addition was installed in 2017.
Previous documentation (Davis and Bell 1980, GCM Services, Inc. 1988, Herbert 1986) indicates several administrative and worker’s camp buildings were associated with the site. Most of the construction camp buildings were removed following dam construction. The few that remained in 1986, presumably, were demolished and hauled away in 1989 when major modification and rehabilitation work occurred to the dam. Whatever the case, no evidence of these buildings exists today.

As noted by Herbert (1986): Placing a dam at the mouth of the Missouri River Canyon near Toston was first recommended in a geological report made to Secretary of War, Lamont, in 1894. In 1934 a delegation formally submitted the project application to the Montana State Water Conservation Board. Application was then made to the Public Works Administration (PWA) for construction funds in 1935. Later, in 1938, a water filing on the Missouri River was submitted for 16,000 miners inches (State Engineer’s Office 1956:26).

The State Water Conservation Board (SWCB) advertised for bids to construct the project in November 1938. J.C. Boespflug was the low bidder for construction of the dam and siphon on a bid of $529,585.10 and the contract was awarded subject to the approval of the Public Works Administration (PWA). Shortly after contract award, The Montana Power Company filed suit in the Montana District Court of the United States against the SWCB over the interference with existing water rights. The federal government insisted on a settlement of the suit before funds would be made available, so the SWCB rescinded all original award of bids made in connection with dam construction. The District Court ruled in favor of The Montana Power Company; however, an appeal was made to the Ninth Circuit, United States Circuit Court for Appeals. The Circuit Court for Appeals reversed the judgment and decree of the lower court, and ordered the dismissal of the suit on grounds that the federal court lacked jurisdiction over state agencies and state matters.

In May 1939, bids were again received on dam construction and Utah Construction Company was awarded the contract at a cost of $642,210.85. Douglas and Genger were awarded a contract for constructing the irrigation diversion canals at their bid of $138,439.00. Work on the project was commenced July 1, 1939 and the dam was accepted as complete on November 6, 1940. The contract for the Broadwater-Missouri Westside and Eastside canals (24BW499) was accepted as complete on July 8, 1940 (GCM Services, Inc. 1988, Herbert 1986, State Engineer’s Office 1956:26).

The Broadwater-Missouri Diversion Project is identified as one of the most important irrigation systems in Broadwater County. Further, construction of the Toston Dam and Reservoir stabilized the local agriculture economy by ensuring adequate forage for livestock, and increasing the income from the sale of crops. Water diverted from the Missouri through the Broadwater-Missouri westside and eastside canals (24BW499) is utilized by approximately 87 individual operators and provides reliable irrigation water for as much as 15,000 acres of cropland near Toston and Townsend (State Engineer’s Office 1956:11-13, 26-27). Crop production and sales accounted for 65% of the agricultural income in Broadwater County in Year 2000 (Broadwater County Commissioners 2003:22).

The Broadwater-Missouri Diversion Project is also significant to the local economy because it substantially increased the value of land that the project irrigates compared to adjoining non-irrigated land. Although land values bracketing completion of the Broadwater-Missouri Diversion Project (1939-9141) could not be found, currently for the general project area, dryland crops and grazing land sells for $600-$800 per acre while irrigated land sells for approximately $4000 per acre (DNRC n.d.).

The Broadwater Power Project, while temporally and functionally distinct from the Broadwater-Missouri Diversion Project, is fully intertwined and fully dependent upon the Toston Dam and Reservoir portion of 24BW126. For this reason, the discrete features of the Broadwater Power Project (warehouse, hydroelectric plant, overhead powerline, and substation) are included as features associated with 24BW126. Without the Toston Dam and Reservoir, the Broadwater Power Project would be inoperable. Today, NorthWestern Energy purchases power from the hydroelectric plant. Net revenues are used for maintenance of various state-owned water projects. Revenues anticipated for 2014 were 1.3 million dollars.
VII. WATER:

Permanent (name): Missouri River
Elevation: 3959 feet ASL  Distance and Direction from Site: At Toston Dam.

VIII. TOPOGRAPHY: The landforms in the immediate area consist of rocky hills, benches, and high terraces. The moderate to steep mountain slopes are dissected by narrow stream valleys, with larger, more open valleys downstream along the associated canals (24BW499).

IX. GEOLOGY AND SOILS: The landforms in the immediate area consist of rocky hills, benches and high terraces, with moderate to steep slopes that are dissected by entrenched streams, narrow stream valleys and the Missouri River. Elevations generally range from 3500 to 5500 feet. Major soil types include Nielsen and Rencot channery loams on 15 to 60 percent slopes. Soils in the area are characteristically shallow, well drained, with moderate permeability.

X. VEGETATION: Vegetation is generally sparse, with bluebunch wheatgrass, threadleaf sedge, needle and thread grass and sage the most prominent species. Douglas fir, ponderosa pine, juniper, cottonwood, and aspen are found in isolated pockets along the Missouri River and surrounding stream valleys. Dry land wheat, hay, and irrigated vegetable crops are cultivated in the smooth, gently sloping benchlands and terraces further to the west.

XI. MANAGEMENT DATA:

A. X Recorded Collected X Mapped Shovel/Auger Probed Excavated

Stabilized Other (explain):

Detail the level of testing or research carried out: A general visual inspection and a detailed literature review was carried out.

Artifact Repository: N/A

B. Project Impacts: None presently identified.  Other Impacts: None presently recognized.

C. National Register Eligibility: The site has been determined eligible for listing in the National Register of Historic Places (consensus determination) during consultation between the NRCS and the SHPO (January 27, 2000). A search of the SHPO files could not locate correspondence that would expand on why the Consensus Determination was reached. Because the original correspondence is not available, an effort is made hereafter to outline the significance of site 24BW126.

Discussion of Significance: As indicated on page 12 of National Register Bulletin #15 (NRB 15) a property can be considered significant in association with Criterion A if a relationship between the site and a significant event or pattern of events within a defined time period can be demonstrated. Additionally, “Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A (NRB 15:12)”. The Broadwater-Missouri Diversion Project is generally associated with agricultural development the west, in the sense that it is part of ongoing agricultural practices in the region. Construction of the Reservoir did not cause people to settle and take up agriculture in the upper Missouri River valley. The area was being settled for several decades prior to dam construction. The significance of the Broadwater-Missouri Diversion Project is that it stabilized agriculture in the area by supplying a reliable flow of water to cropland over the summer months. The dominance of irrigated crop revenues in the agricultural economy of Broadwater County would not be possible without large scale water diversion efforts such as the Broadwater-Missouri Diversion Project. Further, the demonstrated ability of the Broadwater-Missouri Diversion Project to increase irrigated cropland values by at least five times over those of adjoining dryland crop and grazing land is irrefutable proof of the Project’s significance on the local economy. Another aspect of the Broadwater-Missouri Diversion Project’s Criterion A significance is that it is associated with the PWA which arose during the FDR New Deal administration. The Broadwater-Missouri Diversion Project is one...
of the first funded by the SWCB. The SWCB not only formed as a result of the PWA, but is also unique to Montana and state water conservation efforts.

The hydroelectric plant, overhead powerline, substation, and warehouse were constructed between 1989 and 1992, so they are less than 50 years old. Following guidelines in NRB #15 (II. Criteria Considerations), … “properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register”. Whereas the Broadwater-Missouri Diversion Project features give site 24BW126 significance under Criterion A, the Broadwater Power Project features are currently non-contributing elements to the qualities of the site that make it a National Register eligible property. This aspect will need to be revisited when the Broadwater Power Project features become 50 years old.

A property is considered significant in association with Criterion B if a link between the site and a person significant in local, regional, or national history or prehistory can be demonstrated (NRB 15:14). Because no such association can be made, the site is recommended as insignificant in association with Criterion B.

A property can be considered significant in association with Criterion C if it can be demonstrated to, “Embody distinctive characteristics of a type, period, or method of construction (NRB 15:18).” In order for a property to meet that requirement it must exhibit a sufficient number of “distinctive characteristics” representative of a particular method of construction. Further, “Characteristics can be expressed in terms such as form, proportion, structure, plan, style, or materials. They can be general, referring to ideas of design and construction such as basic plan or form… (NRB 15:18)” The Toston Dam is a low-profile, concrete gravity structure of a common design, but the design exemplifies run-of-the-river diversion dam engineering practices of the late 1930s to early 1940s. For this reason, the dam is recommended here to be significant under Criterion C. In contrast, the reservoir is comparatively small, and the associated canals (24BW499) are typical excavated trenches common to all time periods. The hydroelectric features and the warehouse are small in scale, lack aesthetic architectural attributes or themes, and more importantly are less than 50 years old. Because of this, these latter noted features are considered non-contributing elements to the qualities of site 24BW126 that give it Criterion C significance.

Finally, a property is considered significant in association with Criterion D if it has yielded, or may be likely to yield, information important in prehistory or history (NRB 15:21). Associated buildings predating 1989 have been obliterated, and no physical evidence of these structures exist today. Because a great deal of documentation exists concerning the Broadwater-Missouri Diversion Project and the later Broadwater Power Project, it is doubtful that any buried, associated cultural remains could add substantially to our knowledge of the projects. Therefore, site 24BW126 is recommended as insignificant in association with Criterion D.

Discussion of Integrity: Integrity is the ability of a property to convey its significance. To be listed in the National Register of Historic Places (NR), a property must not only be shown to be significant under the NR criteria, but it also must have integrity. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property’s physical features and how they relate to its significance.

Historic properties either retain integrity (that is, they convey their significance) or they do not. Within the concept of integrity, the NR criteria recognize seven aspects or qualities that, in various combinations, define integrity. Those seven aspects are: location, design, setting, materials, workmanship, feeling, and association. The site retains integrity of location, design, setting, materials, workmanship and association. Integrity of feeling is not readily apparent, but assessment of feeling may vary from individual to individual.

Although some changes to the Broadwater-Missouri Diversion Project dam have occurred since its construction, the changes reflect maintenance and improved technology allowing the dam to continue to function in its original capacity and to do so efficiently and safely. The changes to the dam reflect the evolution of the facility since its construction. The reservoir remains virtually unchanged since the construction of the dam. The addition of the Broadwater Power Project hydroelectric plant, powerline, substation, and even the 1991 warehouse, also reflect the narrative of the growing importance of the facility to the surrounding area, shifting from irrigation only, to include
power generation. While the powerline, substation, hydroelectric plant, and warehouse are considered noncontributing to the district at this time, this is not due to lack of importance, but due to lack of age. While the two projects that comprise the district were constructed at different times, they are intricately entwined. The construction of the later Broadwater Power Project resources could not exist without the presence of the dam and reservoir. The resources associated with the Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District should be reevaluated in the future as it is highly likely the powerline, substation, hydroelectric plant, and warehouse would be considered contributing resources within 20 years (50 years after their construction).

Based on the previous analysis, the district is recommended as significant under Criterion A for its association with New Deal PWA programs, the SWCB, large scale irrigation and the resultant economic impact to the local area. Additionally, the dam is also considered eligible for listing under Criterion C because it is representative of run-of-the-river diversion dam engineering practices of the late 1930s to early 1940s. In addition to meeting these two significance criteria, the district retains sufficient integrity to make it eligible for listing in the National Register of Historic Places.

D. Known Collections, Publications, or Reports Pertaining to this Site:
State Engineer's Office

E. References Cited:
Broadwater County Commissioners

Davis, Carl and Patti Bell

DNRC

GCM Services, Inc.
1988 Cultural Resource Investigation, Broadwater Project 100 kV and 12.5 kV Powerlines. Consultant’s report (GCM Services, Inc., Butte, MT) prepared for the Montana Department of Natural Resources and Conservation, Helena.

Herbort, Dale
1986 Cultural Resource Investigation on the Broadwater Dam Project. Consultant’s report (GCM Services, Inc., Butte, MT) prepared for the Montana Department of Natural Resources and Conservation, Helena.

National Register Bulletin #15

State Engineer's Office

F. 2018 Update: John Boughton, Jim Domino, David Lofftus, and Patrick Rennie
Date: 04-20-2018

G. Map: Attach 1:24,000 scale topographic map, photos, and other relevant documentation
Looking SW at the downstream face of the Toston Dam (24BW126).

Looking W at the downstream face of the Toston Dam (24BW126).
Looking SW at the downstream face of the Toston Dam (24BW126) during rubber bladder replacement in 2014.

Looking S at upstream face of the Toston Dam and reservoir (24BW126). Associated overhead 100 kV powerline in foreground.
Looking N at the downstream face of the Toston Dam (24BW126).

Looking NW at the access road and warehouse at the NE side of the Toston Dam (24BW126).
Looking SE at the access road and warehouse at the NE side of the Toston Dam (24BW126).

View S of the dam crest and hydroelectric plant (24BW126).
View SE of the Toston Dam hydroelectric plant (24BW126).

Looking N/NE at the associated overhead 100 kV powerline at the Toston Dam (24BW126).
General view of substation at NW end of overhead 100 kV powerline in site (24BW126).

Construction of Toston Dam (24BW126) underway in 1939-1940.
Construction of Toston Dam (24BW126) underway in 1939-1940.
Construction of Toston Dam (24BW126) underway in 1939-1940.
Construction camp at Toston Dam (24BW126) in 1939-1940.

Looking N at downstream face of the Toston Dam (24BW126) following construction in 1940.
Technical drawing of the Toston Dam (24BW126).
Technical drawing of the hydroelectric plant at Toston Dam (24BW126).
Topographic map with the location of site 24BW126 indicated.
<table>
<thead>
<tr>
<th>1.1 Site Number:</th>
<th>1.2 Site name/field designation:</th>
<th>1.3 County:</th>
</tr>
</thead>
<tbody>
<tr>
<td>24BW 0/4/47</td>
<td>Capt. Meriwether Lewis Campsite-July 25, 1805</td>
<td>Broadwater</td>
</tr>
</tbody>
</table>

1.4 Township/Range/Section:
NW4, NW4 Section 7, Township 4 North, Range 3 East

1.5 UTM Coordinates:

<table>
<thead>
<tr>
<th>Easting</th>
<th>Northing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lat. 46°, 07', 15&quot; N</td>
<td>111°, 24', 31&quot; W</td>
</tr>
</tbody>
</table>

1.6 Site Type:
Historic campsite, Lewis & Clark Expedition.

1.7 Recording status: _X_ surface examination _X_ photo/map _ tested _

1.8 Administrative/surface ownership:
Site is located under water behind the Broadwater Missouri Diversion Dam. Surface recreation area administered by the Bureau of Land Management.

1.9 Mineral Ownership:
Unknown

1.10 Project Name:
Project Number:

1.11 General Narrative Description of Site:
The site is the encampment of Capt. Meriwether Lewis, with 8 canoes and the main party of the Corps of Discovery on July 25, 1805.

1.12 Map Reference: USGS 15 Minute Toston

1.13 City/Town:
Vicinity of: 6.4 Kilometers (4 miles) south of Toston, MT.

1.14 Narrative of access to site:
From Toston, MT. travel S-SW on Highway 10N (287) for two miles, turn left onto Toston Dam road, follow main gravel road 5 miles to Diversion Dam. Use caution. Site is approximately 60 to 120 meters upstream from dam axis, underwater.
2.1 Geographic Setting:
The Big Belt mountains, a front range of the Rockies, borders the Townsend Valley on the east. At the southern end of the mountain range a lower ridge extends south-southwest. The Missouri River cut a channel through the ridge into the Townsend Valley. The cut is a narrow, deep canyon or gorge that follows a double horseshoe course into the valley. The site is located in the narrow gorge on the left bank of the river.

2.2 Elevation: 1204 meters (3950 feet)

2.3 View/aspect (estimated direction and distance):
The sharp bends of the river and narrow canyon walls limit the viewing distance in all directions to about one-half mile.

2.4 Major River Drainage: Missouri

2.5 Minor Drainage: Sixteenmile creek enters 5 miles upstream. Crow creek (Gass' creek) enters 8 miles downstream.

2.6 Available water sources
<table>
<thead>
<tr>
<th>Names</th>
<th>Distance (in Meters)</th>
<th>Elevation Change (in Meters)</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.7 Vegetation - regional: Mountain Juniper, Mountain Mahogany, Skunkbush Sumac, Red Osier Dogwood, Willow, Big Sagebrush, Rabbitbrush, Currents, Prickly pear, Bluebunch Wheatgrass, rough fescue, Idaho fescue, Needle & thread, Green needle grass, Prairie June grass, and Yucca.

2.8 Vegetation - local:
Vegetation listed is that found in the immediate area around the site of the alluvial fan.

2.9 Soils: The site is (was) on an alluvial fan. The soils above the fan are Nielsen Channery loam on slopes of 15 to 60 percent. Run-off rate on the soil is rapid & erosion hazard severe. Precipitation zone 15"-19".

2.10 Surface Visibility/season of survey:
Under water.

2.11 Other environmental factors pertaining to site: Site was inundated when the Broadwater Missouri Diversion Dam was built in 1939. Spillway of the dam is 40 feet above the river bed. Site may be 10 to 20 feet below current water surface.
3.1 Condition of site:
The site is under the back water of the Broadwater Missouri Diversion Dam and is not accessible to any intrusions other than boats and fishermen.

3.2 Recommended Site Significance:

Site Evaluation Procedures:

Recommendations of eligibility for the NRHP:

106 Compliance Management Data: Formal Determination of Eligibility:

- undetermined date: __________
- formally determined ineligible for NRHP date: __________
- formal consensus determination, eligible for NRHP date: __________
- Listed on NRHP date: __________

Updated Management information __________ date: __________

3.3 Possible impacts to site:

3.4 Recommendations:

3.5 Site located by: Capt. Meriwether Lewis Date: July 25, 1805

3.6 Site recorded by: Troy Helmick, John Stoner, and Hal Price Date: July 25, 2000

3.7 Site form update and revisions by: Date: __________

3.8 Federal or State Permit no.:

3.9 Publication(s) where site is described:

3.10 Artifact Repository:
No artifacts.

3.11 Fieldnotes/maps/photo repository: Crimson Bluffs Chapter, Lewis and Clark Trail Heritage Foundation, 415 S. Front St., Townsend, MT 59644.

3.12 Photo and accession numbers:
MONTANA CULTURAL RESOURCES INVENTORY FORM
Form No. 4: Prehistoric Site Description

Site No. ____________________________

4.1 Site Dimensions:

___ estimated  _____ measured

4.2 Subsurface Testing:

4.3 Feature Descriptions:

4.4 Artifact Descriptions:

4.4 Cultural/temporal classification:

Assessment based on:

4.5 Site function:
5.1 Site dimensions, shape, how dimensions determined:

____ estimated ______ measured

5.2 Features:


5.3 Artifacts observed, collected:

None

5.4 Historical information, context and evaluation:
July, 1805 the Lewis & Clark Expedition traveled up the Missouri River, through the Townsend Valley. Capt. Lewis and the main party with 8 canoes traveled on and along the river. Capt. Clark with 4 men traveled on foot, west of the river. Capt. Lewis recorded courses and distances along the river and Capt. Clark later developed a map of the area. The map and other data recorded by expedition members, along with later maps and photos of the area indicates the location of Capt. Lewis' campsite of July 25, 1805. A recent re-survey confirms the location.


5.6 Subsurface Testing Methods and Results:
Maps attached:

Capt. Clark's map of the Townsend Valley and Vicinity.

The date and location of Capt. Lewis' encampment on July 25, 1805 is wrong. Capt. Lewis' journal entries and courses and distances properly locates the site as shown on the U.S.G.S. map.

U.S.G.S. 15' Toston Quadrangle Topography Map.

Indicated on this map are approximate locations of Lewis' camp of July 24, Clark's camp of July 23, and the site of Lewis' encampment of July 25, 1805.

Capt. H.F. Hodges' map of the Missouri River (1893).


Photo of cliff and campsite opposite.

Legend

Map Drawn By

Date

Scale
CAPT. LEWIS
Courses & distances
JULY 25, 1805

G.P.S.
Courses & distances
JAN. 5, 2001

LITTLE GATES OF MOUNTAINS

SPRING
EXAMINATION OF THE MISSOURI RIVER

THREE FORKS TO CANTON FERRY.

INVESTIGATED AND DRAFTED

under direction of

Colonel E. F. HODGES

Cooper of Engineers, U.S. A.

by

K. D. VISCHER, Junior Engineer.

1855.

Note. The blue line indicates the area to be flooded by the proposed dam.
1.1 Site number: 24BW499

1.2 Site name/field designation: Broadwater-Missouri Canals

1.3 County: Broadwater

1.4 Township/range:
T4N R3E N1/4 Section 7, E1/2 Section 6; T5N R3E SW1/4 Section 31; T5N R2E N1/4 and SE1/4 Section 36; E1/2 Section 27; SW1/4 Section 25

1.5 UTM: N/A

Zone_________ ___________ Easting ___________ Northing

1.6 Site type: historic canals

1.7 Recording status & comments: recorded and evaluated

1.8 Administrative/surface ownership:
Pete Tocci and W. O. Smith
Toston, Montana
State of Montana
Bureau of Land Management

1.9 Mineral ownership: various

1.10 Project name: DNRC - Broadwater Dam

1.11 General narrative description of site:
The site consists of two canals, The Broadwater-Missouri Westside and Eastside, that were constructed in 1941 in conjunction with the Broadwater Dam.

1.12 Map reference:
Toston USGS 15 min quad 1949

1.13 City/town: x vicinity of Toston

1.14 Access to site:
From State Highway 287 at Toston, take the Toston Reservoir road towards Broadwater Dam. The canals are along the road and on both sides of the river.
3.1 Condition of site: Excellent.

3.2 Site significance (NRHP): The canals were constructed under State contract in 1941. They are not architecturally unique or of historic significance. They have contributed to economic ranch development over recent years.

3.3 Impacts: Some changes in the canal have been made and will continue to be made in conjunction with the reconstruction of Broadwater Dam.

3.4 Recommendations:

3.5 Site located by: Dale Herbort

3.6 Site recorded by: Dale Herbort

3.7 Revisions by: Dale Herbort

3.8 Permit No.: 6/5/88

3.9 Publications concerning site:

3.10 Artifact repository: NA

3.11 Field notes/maps/photo repository: NA

3.12 Photos & accession No:
No. Description View
MONTANA CULTURAL RESOURCE INVENTORY
Form No. 5. Description of Historic Sites

Site number: 24BW499

5.1 Site dimensions, how determined:
The canals are approximately 25 ft wide and 10 ft deep and extend for an
undetermined distance initiating at Broadwater Dam.

5.2 Features:
Slew gates, constructed of concrete are present along the canal, otherwise
all construction is earthen.

5.3 Artifacts (observed, collected):
NA

5.4 Historical information and evaluation:
See attachment.

5.5 References
Directory of State of Montana, Federal Agencies, and Private Groups Active
in the General Field of Water Resources, Inventory Series No. 1.

5.6 Subsurface testing, results, methods, etc.
NA
Broadwater-Missouri Diversion Project

Broadwater County

Project No. 21

Series "S" Bond Issue (purchased by Board July 11, 1951)

Introduction: The project consists of a concrete diversion dam across the Missouri River located about five miles above Toston in Broadwater County. It includes 48.2 miles of canals. The main canal has an initial capacity of 342 second feet. The project was designed to irrigate 21,000 acres of land and to furnish two acre feet per acre. It is presently estimated that there are about 15,000 acres being served by the project.

The project was first submitted to the Board by a delegation on February 6, 1934 and an application to the Public Works Administration was made for construction funds on April 5, 1935. The 1937 legislative session adopted a memorial urging the Board to build the project. A water filing on the Missouri River was made on June 28, 1938. Right of way secured for the project will be covered in a separate report.

Broadwater-Missouri Water Users' Association: Articles of Incorporation for the Association were filed on November 10, 1938. Sixty Thousand shares of stock at $1.00 par value were authorized. The seven directors provided for in the articles employ a manager who is in charge of operation of the project. The present operation and maintenance levy is 41 cents per acre foot.

Construction Contracts: The Board advertised for bids to construct the project to be received on November 19, 1938. J. C. Boespflug was the low bidder for construction of the dam and siphon on his bid of $529,585.10, and the contract was awarded to him subject to approval of the Public Works Administration. Shortly after the award was made the Montana Power Company objected to the project claiming that it would interfere with present water rights and the government insisted on a settlement of this matter before it would make funds available so it was necessary to rescind the original award of bids. On May 5, 1939 bids were again received and the Utah Construction Company was awarded the contract for building the dam at a cost of $642,210.85. Douglas and Genger were awarded a contract for constructing the canals at their bid of $138,439.00. Involved in the contract was the raising and relocating of three and one-half miles of the main line of the Northern Pacific Railway. Work on the contracts was started on July 1, 1939 and the dam was accepted as complete on November 6, 1940. The contract for the canals was accepted as complete on July 8, 1940. The Utah Construction Company alleged that delays in the contract and also extra items for which they claimed payment was not made amounted to $53,000.00. A suit was started against the Board to collect this amount but was subsequently dismissed.

Other Construction: The original contract on the canals did not include the furnishing and placing of turnouts. This work was subsequently done at a cost of approximately $20,000.00. Besides normal replacement, operation of the project showed the need for some extra structures which were constructed. There has also been one major failure in the main canal.
Water Purchase Contracts: The Loan and Grant offer required obtaining water purchase contracts for 42,000 acre feet at 91 cents plus operation and maintenance charge per year for a period of thirty years. After these contracts had been obtained the Public Works Administration questioned the water supply for the project and it was necessary to resign all the contracts and to include in them a provision acknowledging an obligation to purchase 10,000 acre feet of water annually from the Ruby River Storage Project. The delay in completing construction on the project together with the fact that there was a great deal of outside ownership of lands resulted in a heavy default in the contracts even on the first year. Of the 42,000 acre feet of original contracts it was subsequently necessary to cancel out 24,955 acre feet of these contracts. Steady progress has been made in securing adjustment of the contracts on the project and at present there are 141 water purchase contracts for 27,440 acre feet outstanding. Only three small contracts are delinquent. The remaining payments due on these contracts amount to $386,322.30 as of June 30, 1960.

Water Supply: On May 19, 1939 officials of the Montana Power Company met with the Board advising them that they were commencing a suit against the Board to prohibit it from diverting water for the project during the low flow season. The officials declined to negotiate an agreement with the Board even though the Board offered to recognize the minimum rights of the Company.

On May 23, 1939, the Montana Power Company filed a complaint in the District Court of the United States for the District of Montana, Helena Division, against the Broadwater-Missouri Water Users' Association and the State Water Conservation Board and its members. The purpose of the suit was to quiet title to plaintiff's alleged water rights at seven dams and hydroelectric plants on the Missouri River and to enjoin defendants from interfering therewith, and the prayer of the complaint asked that the defendants be permanently enjoined from constructing and maintaining the project.

The case was referred to a Special Master to take testimony and make findings of fact and conclusions of law. After extensive hearings before the Special Master, he made his report which was approved by the District Court. On October 2, 1942, a decree was entered confirming in the Montana Power Company the right to the use and control of the waters of the Missouri up to a stated maximum flow necessary to operate the power plants of the Company, plus the flow requisite to keep its storage reservoirs filled. The decree permanently enjoined the defendants from diverting, storing, or using the waters of the river except at times when the prior demands of the plaintiff have been satisfied. An appeal was taken from the decree to the United States Circuit Court for the Ninth Circuit.

The Circuit Court of Appeals reversed the judgment and decree of the lower court and ordered the dismissal of the suit on grounds that the Federal Court lacked jurisdiction. The Court held that the State Water Conservation Board is an agency
of the State of Montana and in effect a part thereof. That a state is not a citizen and, absent a federal question, the federal district courts are not possessed of jurisdiction of suits by or against a state. That there was no federal question involved. The decision is reported in 139 Fed. (2d) 998.

After the lawsuit was filed the Board authorized the employment of additional counsel and engineering experts. In addition to the counsel the Board employed, the Reconstruction Finance Corporation employed Judge Blair of Spokane and the local water users were represented by an attorney. In the interim, taking cognizance of the possibility of the loss of this suit by the Board, the Public Works Administration held up funds for the project until such a time as the Board would provide 10,000 acre feet from its storage projects for use on this project. This was accomplished by having the Association subscribe for 10,000 acre feet of water from the Ruby River Storage Project, which contract was subsequently cancelled.

Approximately 3,800 acre feet of water subscribed for under the project is used to exchange for regular stream flow in Deep Creek. An arrangement for this exchange was converted into an agreement in 1957.

At various times claims have been made against the Board for damages claimed to have been caused by the dam holding up ice jams that resulted in flooding land. Because investigation at the time these claims were made showed open water between the dam and the lands flooded, these claims have all been denied.

Financial: The Board accepted a Loan and Grant agreement from the Public Works Administration on November 2, 1938. Under the agreement $495,000.00 in bonds were to be issued and $405,000.00 was to be in the form of a grant. On June 19, 1940 an additional grant of $58,500.00 was authorized making the total federal funds available $958,500.00. Following is a report of the federal and state funds spent on the project up to June 30, 1960:

<table>
<thead>
<tr>
<th></th>
<th>Federal Funds</th>
<th>State Funds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right of Way</td>
<td>26,650.77</td>
<td>8,286.54</td>
<td>34,947.31</td>
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<tr>
<td>Construction Contracts</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Utah Cons. Co.</td>
<td>730,227.80</td>
<td></td>
<td>730,227.80</td>
</tr>
<tr>
<td>Douglas and Genger</td>
<td>152,754.85</td>
<td>8,109.35</td>
<td>160,864.15</td>
</tr>
<tr>
<td>N. P. Ry. Co.</td>
<td>8,109.35</td>
<td>891,092.00</td>
<td>899,201.35</td>
</tr>
<tr>
<td>Construction Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Damtender's Salary</td>
<td>42,195.13</td>
<td></td>
<td>42,195.13</td>
</tr>
<tr>
<td>Ruby W. U. A.</td>
<td>24,870.00</td>
<td></td>
<td>24,870.00</td>
</tr>
<tr>
<td>Advances to Ass'n</td>
<td>7,600.00</td>
<td></td>
<td>7,600.00</td>
</tr>
<tr>
<td>Engineering</td>
<td>10,572.63</td>
<td>103,628.88</td>
<td>114,201.51</td>
</tr>
<tr>
<td>Legal &amp; Administration</td>
<td>16,818.36</td>
<td></td>
<td>18,442.96</td>
</tr>
<tr>
<td>Administration Charge</td>
<td>11,322.67</td>
<td></td>
<td>11,322.67</td>
</tr>
<tr>
<td>Int. during construction</td>
<td>28,050.00</td>
<td></td>
<td>28,050.00</td>
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<tr>
<td></td>
<td>$958,500.00</td>
<td>$227,949.24</td>
<td>$1,186,449.24</td>
</tr>
</tbody>
</table>

19
It will be noted that amongst the items which the Board has
spent included payments to the Ruby River Water Users' Association
of $7,800.00 on the 10,000 acre foot contract. Also the Board has
provided a damtender since August 1, 1941 at a cost of $23,550.00.
The Board is presently paying the damtender $130.00 for six months
and $90.00 a month for the other six months each year.

The following is the present status of the bond issue as of
June 30, 1960:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Issue</td>
<td>$495,000.00</td>
</tr>
<tr>
<td>Interest Coupons Due</td>
<td>345,240.00</td>
</tr>
<tr>
<td>Interest on Past Due Bonds</td>
<td>66,920.00</td>
</tr>
<tr>
<td><strong>Total Bond Issue</strong></td>
<td><strong>$907,160.00</strong></td>
</tr>
<tr>
<td>Bonds Paid</td>
<td>$58,000.00</td>
</tr>
<tr>
<td>Interest Coupons Paid</td>
<td>345,240.00</td>
</tr>
<tr>
<td>Interest Paid on Past Due Bonds</td>
<td>12,840.00</td>
</tr>
<tr>
<td><strong>Total Paid on Bond Issue</strong></td>
<td><strong>$416,080.00</strong></td>
</tr>
<tr>
<td>Balance Due - Bond Issue</td>
<td>$491,080.00</td>
</tr>
</tbody>
</table>
MONTANA CULTURAL RESOURCES INVENTORY

Amended Site Form

Form No. 1. Locational Information

<table>
<thead>
<tr>
<th>1.1 Site Number:</th>
<th>1.2 Site name/field designation</th>
<th>1.3 County:</th>
</tr>
</thead>
<tbody>
<tr>
<td>24BW0499</td>
<td>Broadwater Missouri Diversion Project</td>
<td>Broadwater</td>
</tr>
</tbody>
</table>

1.4 Township/Range:
See Attached pages

1.5 UTM:
See Attached pages

1.6 Site type: Historic Irrigation System.

1.7 Recording status: The site has been mapped, recorded, photographed and significance assessed.

1.8 Administrative/surface ownership: Private, Broadwater-Missouri Water Users’ Association,

1.9 Mineral ownership:

1.10 Project name: Hysham -- West, Cultural Resource Inventory and Assessment, prepared for the Montana Department of Transportation by Frontier Historical Consultants.

1.11 General narrative description of site: Located in central Montana on a broad ridge sloping down to the Missouri River, the site consists of the Broadwater – Missouri Diversion Project and its associated canals. This site consists of a historic irrigation system developed beginning in 1938. The site has excellent integrity, and is recommended to be eligible for the NRHP under Criterion A.

1.12 Map reference: USGS Toston, Parker, Lombard, and Plunket Lake, Montana Quadrangles. Scale 1:24,000.

1.13 City/town:
Vicinity of: Myers, Hysham and Sanders, Montana

1.14 Access to site: The recorded portion of the site includes the Westside Canal crossing of US Highway 287 one mile southwest of Toston and the Lombard Canal running parallel to Highway 287 two miles southwest of Toston.
### 1.4 Township/Range:

<table>
<thead>
<tr>
<th>Description</th>
<th>T</th>
<th>R</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westside Canal</td>
<td>4N</td>
<td>3E</td>
<td>6 (Origin)</td>
</tr>
<tr>
<td></td>
<td>5N</td>
<td>3E</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>5N</td>
<td>2E</td>
<td>5, 8, 17, 20, 26, 27, 28, 29, 35, 36</td>
</tr>
<tr>
<td></td>
<td>6N</td>
<td>2E</td>
<td>32 (Terminus)</td>
</tr>
</tbody>
</table>

### 1.5 UTM:

<table>
<thead>
<tr>
<th>Description</th>
<th>Zone</th>
<th>Easting</th>
<th>Northing</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westside Canal Diversion</td>
<td>12T</td>
<td>468508</td>
<td>5107332</td>
<td>3947</td>
</tr>
<tr>
<td>Westside Highway 287 Crossing</td>
<td>12T</td>
<td>464494</td>
<td>5111454</td>
<td>3948</td>
</tr>
<tr>
<td>Westside Canal Terminus</td>
<td>12T</td>
<td>460941</td>
<td>5120512</td>
<td>3897</td>
</tr>
</tbody>
</table>
MONTANA CULTURAL RESOURCES INVENTORY

Form No. 2. Environmental Setting

2.1 Geographic Setting:
Regional: The site is located in the gently rolling hills of Eastern Montana.
Local: The linear site runs along a relatively flat bench cut by water courses on the south side of the Yellowstone River.

2.2 Elevation: 3897 - 3948 ft (1188 - 1203 m)

2.3 View/aspect: View is open in all directions

2.4 Major drainage: Missouri River

2.5 Minor drainage:

2.6 Water sources

<table>
<thead>
<tr>
<th>Names</th>
<th>Distance (in m)</th>
<th>Elev. Change (in m)</th>
<th>Type/seasonality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Missouri River</td>
<td>0 m</td>
<td>0 m</td>
<td>Perennial</td>
</tr>
<tr>
<td>2. Missouri River</td>
<td>0 m</td>
<td>0 m</td>
<td>Perennial</td>
</tr>
</tbody>
</table>

2.7 Vegetation - regional: Intermountain Valley Grassland and Meadow: Cheatgrass, needlegrass, meadow grasses, sedges and willows (Payne 1973).

2.8 Vegetation - local: Native and non-native grasses, non-native weeds, willows

2.9 Soils: Stream deposited gravels and loams

2.10 Surface visibility/season of survey: Fall / 100 percent

2.11 Other environmental factors pertaining to site location:

* Frontier Historical Consultants. 24265 River Road • Grand View, ID 83624 • (208) 834-3061 •
MONTANA CULTURAL RESOURCES INVENTORY

Form No. 3. Site Assessment and Recording Documentation

3.1 Integrity of site: The site has excellent integrity. The irrigation system has been maintained in its original form. Most of the structures are original or have been replaced with compatible components. The site has excellent values of location materials, workmanship, setting, design, and feeling.

3.2 Site significance (NRHP): The Broadwater – Missouri Diversion Project is a small mid-20th Century irrigation system. The site has made limited contributions to local history (Criterion A). It is not associated with individuals important to history (Criterion B). While an example of a small mid-20th Century irrigation system, the engineering used is common throughout the west and is not noteworthy. It is not recommended as an irrigation engineering example (Criterion C). The site has little potential to reveal important historical information through subsurface investigations (Criterion D).

3.3 Impacts:

3.4 Recommendations: The site has been recorded, mapped and photographed. No further work is required.

3.5 Site located by: Dale Herbort Date: 6/5/88

3.6 Site recorded by: Dale Herbort Date: 6/5/88

3.7 Revisions by: Connie Moore and Don Barnhill Date: 9/25/05

3.8 Permit No. N/A

3.9 Publication(s) where site is described:
Gray, Dale M.
2005 "Cultural Resource Inventory and Assessment of Toston - South", prepared for the Montana Department of Transportation Frontier Historical Consultants, Grand View, Idaho.

3.10 Artifact repository: N/A

3.11 Fieldnotes/maps/photo repository: Frontier Historical Consultants, 24265 River Road, Grand View, Idaho. 83624

3.12 Photo and accession numbers:

<table>
<thead>
<tr>
<th>Photo</th>
<th>Location</th>
<th>Accession</th>
<th>Serial</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSCN1292</td>
<td>Hysham Main Canal</td>
<td>Highway 287 crossing</td>
<td>W</td>
</tr>
<tr>
<td>DSCN1293</td>
<td>Hysham Main Canal</td>
<td>Highway 287 crossing</td>
<td>E</td>
</tr>
</tbody>
</table>

* Frontier Historical Consultants. 24265 River Road • Grand View, ID 83624 • (208) 834-3061
*
MONTANA CULTURAL RESOURCES INVENTORY
Form No. 5. Description of Historic Sites

5.1 Site dimensions, shape, how dimensions determined: The linear site dimensions (20 wide x 52.3 miles long = 5,522,900 square feet) were determined by the extent of the combined Main, Westside and Eastside Canal system. The site contains about 127 acres.

5.2 Features:
F-1 Westside Canal. This linear feature originates at the end of the Main Canal (Feature 3) below the Broadwater Missouri Dam and flows 12.4 miles to the northwest to a point on the Missouri River opposite Holker. In a narrow portion of the Missouri River Canyon, the water flows through a 1,443-foot-long inverted siphon 52 inches in diameter. The canal provides irrigation water to lands along the Missouri floodplain. The canal has an initial capacity of 90 c.f.s. on good water years, but may not have any water on dry years. The canal was recorded where it crosses Highway 287.

F-2 Eastside Canal. This 38.4-mile-long canal runs along the east side of the Missouri River, running through the town of Toston, to bring irrigation water to farmlands on the east side of the river north of Toston. The canal originates at the end of the Main Canal (Feature 3) and then spans the Missouri River in an 87-inch diameter steel pipe that is 667 feet long and is supported by concrete piers. The canal terminates at Duck Creek (Confederate Gulch) near where it enters Canyon Ferry Reservoir. An abandoned segment of the canal continues north about two more miles to Horse Creek. This canal was not recorded during the survey. The maximum discharge in the canal during the historic era was 240 c.f.s. on June 16, 1946. Records for the canal begin in 1941. The canal was not recorded during the survey.

F-3 Main Canal. This linear feature originates at a headgate on the west end of the Broadwater Missouri Dam. It runs 1.5 miles to the northeast where it divides into the Eastside and Westside Canals. The Main Canal has a capacity of 342 c.f.s. This canal was not recorded during the survey.

F-4 Broadwater Dam. Built around 1940 the dam is located about 5 miles southeast of the Toston, Montana. The dam is an overflow, gravity-type concrete diversion dam across the Missouri River. The diversion dam was not recorded during the survey.

5.3 Artifacts (observed, collected): Artifacts are listed with feature descriptions. None collected.

5.4 Historical information and evaluation:
The Broadwater – Missouri Diversion Project originated in plans were submitted to the State Water Conservation Board on February 6, 1934. An application for construction funds was filed in 1935 with the Public Work Administration. Water Rights on the Missouri River were filed on June 28, 1938. The Board received an offer of a Federal loan of $900,000 to finance the project on October 27, 1938. The Board advertised for construction bids on November 19, 1938. J. C. Boespflug successfully bid $529,585.10 for the construction of the dam and siphon. This bid was rescinded when Montana Power contested the water rights. Although the impending water rights suit was not resolved until it reached the Ninth Circuit Court of Appeals in 1942, the project was once again put out to bid in the spring of 1939 and this time the Utah Construction
Company won the contract to build the dam for $642,210.85. Douglas and Genger won the contract for construction of canals for $138,429.00. This latter contract included the relocation of 1.5 miles of the Northern Pacific Railway. Work began on July 1, 1939. The Utah Construction Company stated that delays in awarding the contract cost them an additional $53,000. Also $20,000 was need to complete the construction of turnouts for the water (SEO 1951; Herbort 1988).

The loan offer was expanded an additional $58,000 in 1940. Of this $463,000 was to be a grant, while the remaining $495,000 was to be financed through a loan. This loan was in the form of a Water Conservation Board “S” Series bond. This was to be repaid by the newly-created Broadwater-Missouri Water Users’ Association through the sale of 42,000 acre feet of water. Construction was completed on July 8, 1940 and the first water flowed in the system the following year. In all, the distribution system had the potential to provide water for about 21,000 acres of land with 15,000 acres of land actually irrigated in 1951 (Herbort 1988).

As a result of the Montana Power Litigation, payment from the Public Works Administration was held up until the Water Board could provide 10,000 acre feet of water storage for the project. This was accomplished by subscribing from the Ruby River Storage Project. This was subsequently canceled and exchanged for 3,800 acre feet of stream flow from Deep Creek. This exchange was formalized in 1957 (Herbort 1988).

The acreage irrigated by the Broadwater – Missouri Diversion Project was reduced by the construction of the Canyon Ferry Dam. In 1955, only 11,478 acres were irrigated. These acres were restored to the Water Users’ Association through the Crow Creek Pumping Unit. Physical construction began in 1952 and was completed in 1954 when the Crow Creek Pumping Unit began providing water for 23,400 acres of new farmland (SEO 1951; Herbort 1988; Gray 2005).

5.5 References:

Gray, Dale
2005 Creek Pump Unit (24BW499), Montana Cultural Resource Inventory Site Form.

Herbort, Dale
1988 Broadwater Missouri Canals (24BW499), Montana Cultural Resource Inventory Site Form.

Payne, Gene F.

State Engineer’s Office (SEO)

5.6 Subsurface testing results, methods, stratigraphy, etc. none
Figure 5. Missouri – Broadwater Diversion Project on USGS Quadrangles (1:48,000).
Figure 6. Westside Canal / Highway 287 crossing 1.5 miles southwest of Toston viewed to east.

Figure 7. Westside Canal / Highway 287 crossing 1.5 miles southwest of Toston viewed to west.
IRRIGATION FEATURE FORM

Site No.: 24BW499
Division: East Side Canal
of the Broadwater-Missouri Water Users Association

Feature Name: main canal
Functional Type: water delivery

Legal Location: 6N-2E-10 NE¼SW¼SE¼NW¼SW¼

UTM: 12: 463871 mE 5126047 mN

Located on the main canal approximately 200 feet (0.04 miles) downstream from the Deep Creek Cemetery Road in 6N-2E-10.

USGS Quad: Holker

Description: This form documents a 20 foot section of the approximately 35+ mile long East Side Canal. The project will install a new inlet on the west side of the main canal to deliver water to a new pivot system irrigating 21 acres.

The East Side Canal in this section is an open earthen ditch measuring approximately 41 feet wide across the top, 15 feet across the bottom, and averaging about 6.7 feet deep with interior slopes of 2:1. Average water flow depth is 4 feet at about 340 cfs. Excavated material tends to be along both sides of the canal through this area. The berms are at least 2 feet high and 16 to 20 feet wide. There is an access road along the west side.

About 200 feet south of the project area is a road crossing marked by a bridge with concrete abutments. Approximately 10 feet north on the east side is an inlet structure with pump.

Function: The East Side Canal delivers water to several thousands of acres and numerous operators.

Age: The Broadwater-Missouri Canal system first operated in 1941 thus making the canal about 69 years old.

Landscape Changes: The project will cause very little change in the appearance since inlet structures are a common feature on irrigation systems.

Recorded By: Max Blodgett, Soil Conservation Tech
Townsend Field Office

Project: Lewis Center Pivot

Date: 3/5/2010

Photo(s) and USGS Topo attached.
Broadway - Missouri Canal
Class Section
@ STA 0 + 80

24 BW 499
EAST SIDE CANAL
6N 2E 10
View N, looking downstream

View S, looking upstream
NRCS AVOIDANCE SITE FORM

This site form is used to document sites that will be avoided by the proposed practice but is within 91 meters (100 yards) of the APE.

1. County: BROADWATER

2. Site Number: 24BW499

3. Legals (Twn-Rng-Sec):
   - T 4N, R 3E, Section 6: NE 1/4 NW 1/4
   - T 5N, R 3E, Section 31: SW 1/4
   - T 5N, R 2E, Section 36: NE 1/4 SE 1/4, S 1/2 NE 1/4, NE 1/4 NW 1/4
   - Section 25: SW 1/4
   - Section 26: NE 1/4 SE 1/4, NE 1/4
   - Section 23: W 1/2 SE 1/4, W 1/2 NE 1/4
   - Section 14: SW 1/4 SE 1/4, NE 1/4 SW 1/4, NW 1/4
   - Section 11: SW 1/4, NW 1/4
   - Section 2: SW 1/4, W 1/2 NW 1/4.
   - T 6N, R 2E, Section 35: W 1/2 SW 1/4, E 1/4 NW 1/4
   - Section 26: SW 1/4
   - Section 27: NE 1/4
   - Section 22: SE 1/4, NE 1/4
   - Section 15: S 1/2 SW 1/4 SE 1/4, E 1/2 SW 1/4, N 1/2 NW 1/4
   - Section 10: SW 1/4, NW 1/4, W 1/2 NE 1/4
   - Section 3: S 1/2 SE 1/4 SW 1/4
   - Section 9: NE 1/4 NE 1/4
   - Section 2: E 1/2 SE 1/4, E 1/4 NE 1/4
   - T 7N, R 2E, Section 34: E 1/2 SW 1/4, E 1/4 NW 1/4
   - Section 27: SW 1/4, E 1/4 NW 1/4
   - Section 22: E 1/2 SW 1/4, SW 1/4 NE 1/4, NE 1/4 NW 1/4
   - Section 15: W 1/2 SE 1/4, NE 1/4
   - Section 14: NW 1/4 NW 1/4
   - Section 11: W 1/2 SW 1/4, W 1/2 NW 1/4
   - Section 2: W 1/2 SW 1/4, NW 1/4
   - T 8N, R 2E, Section 35: SW 1/4, W 1/2 NW 1/4
   - Section 26: SW 1/4 SW 1/4
   - Section 27: NE 1/4 SE 1/4, NE 1/4, NE 1/4 NW 1/4
   - Section 22: SW 1/4
   - Section 21: NE 1/4 SE 1/4, NE 1/4
   - Section 16: SW 1/4, NW 1/4
   - Section 9: NW 1/4
   - Section 8: E 1/2 SE 1/4, NE 1/4
   - Section 5: SW 1/4, NW 1/4 NW 1/4
   - Section 6: NE 1/4 SE 1/4, SE 1/4 NE 1/4
   - T 9N, R 2E, Section 32: SW 1/4
   - UTM:
     - 12  468998  5109139
     - 469050  5109375
     - 465383  5119050
4. Site Type: historic canal – East Side Canal of the Broadwater-Missouri Water Users Association

5. USGS Quad: Toston, Holker, Gurnett Creek West, Townsend NE

6. Ownership: private

7. General Description of cultural resource:

This form lists the legals for the East Side Canal of the Broadwater-Missouri Water Users Association. This system starts with a main canal which then splits into the West Side and the East Side Canals. The East Side Canal is abandoned, but still visible on the landscape, north of Duck Creek in 8N-2E-9 and is approximately 38 miles long.

8. Geographic Setting:

The site is located east of the Missouri River and Canyon Ferry Lake. The general topography is rolling valley bottom bordered by foothills. The canal is located on terraces following along a gently sloping grade.

9. Elevation: approximately 3900 feet to 3940 feet

10. Nearest Water: Missouri River is usually within 3 miles west, route crosses several west flowing tributaries, and crosses Duck Creek near the north end.

11. Vegetation: Vegetation includes agricultural and other introduced species, riparian, and native species associated with short grass prairie.

12. Soils: surface texture is generally silty along the south half becoming mostly sandy along the north half

13. Recorder: Dori Passmann, Archaeologist, Bozeman SO

   Date: 4/1/2010

Attach copy of USGS map with site location clearly marked.
24BW499
4N, 5N-3E, 5N, 6N, 7N, 8N, 9N-2E
East Side Canal
Broadwater-Missouri Water Users Association
24BW499
4N, 5N-3E, 5N, 6N, 7N-2E
East Side Canal
Broadwater-Missouri Water Users Association
24BW499
7N, 8N, 9N-2E
East Side Canal
Broadwater-Missouri Water Users Association

ANRCS
HISTORIC IRRIGATION DITCH INVENTORY

HISTORIC NAME: Broadwater-Missouri Irrigation Ditch: Eastside
SITE NO. 24BW0499 Update

COMMON NAME:

USGS Quad: Toston, Mont. 1986; Holker, Mont. 1986; Gurnett Creek West, Mont. 1986; Townsend NE, Mont. 1986

Township/Range:
Segment 1 T8N R2E Sec 35 NWSWNW
Segment 2 T8N R2E Sec 27 SESESE, Sec 26 SWSW
Canal crosses Highway 284 in T8N R2E Section 27

Eastside:
T9N R2E Section 32: North End-Canal Ends
T8N R2E Sections 5, 6, 8, 9, 16, 21, 22, 26, 27, 35
T7N R2E Sections 2, 11, 14, 15, 22, 27, 34
T6N R2E Sections 3, 4, 9, 10, 15, 22, 26, 27, 35
T5N R2E Sections 2, 11, 14, 23, 25, 26, 36
T5N R3E Section 31
T4N R3E Section: South End-Canal Begins

UTMS: NAD83 Zone: 12 Easting: Northing:
Canal crosses Hwy 284 E 465275m N 5140523m
Canal ends, North End, E 461047m N 5148823m
Canal begins, South End, E 469027m N 5109218m

Private: Yes Owner: Broadwater-Missouri Water Users' Association
Public: Address:

Date of Construction: 1938 Estimated Documented X

Builder: Utah Construction Company; Douglas and Genger

Original Owner:

Resource Sources: Plat records/maps [ X ] Tax Records
Where Diverted: T4N R3E Section 3 of the Missouri River; Eastside Segment splits from Main Canal in T4N R3E Section 6.

Ditch-related Structures Observed: Yes [ ] No [ X ]

Describe:
Unlined [ X ] Lined [ ]

Historical Information: Site 24BW0499 is identified as the Broadwater-Missouri Eastside Irrigation Ditch. Two segments of this ditch were encountered during the present project: Segment 1 is located 100 feet east of Montana Highway 284 and 400 feet west of St. Joseph’s Catholic Church in the NWSWNW of Section 35 in T8N R2E; and Segment 2 is located in the SESESE of Section 27, T8N R2E. The irrigation ditch system begins at its diversion point at the gravity-type Broadwater Dam on the Missouri River located approximately 5 miles south of Tosten, Montana in Section 3, T4N R3E. The main ditch follows along the west side of the Missouri River for approximately 1 mile and divides into two separate ditches in T4N R3E Section 6: the Westside and the Eastside ditches. The Westside ditch then flows to the northwest for approximately 12.5 miles and terminates near Holker where it empties into the river. The Eastside ditch (this project) diverts from the main ditch and spans the Missouri River through an 87-inch diameter steel pipe. The Eastside ditch then flows to the north and northeast along the east side of the river valley for 38.5 miles and terminates at Confederate Gulch (Duck Creek) where it empties into Canyon Ferry Reservoir. Both the Westside and the Eastside ditches are earthen-lined and have the usual associated concrete and steel spills, drops, and turnouts, several of which are reported to be original.

Segment 1 is located in the NWSWNW of Section 35 in T8N R2E and on the date of inspection had a large volume of water flowing through it. This portion of the Broadwater-Missouri Eastside Ditch within the project area is approximately 480 feet in length. The earthen-lined ditch is an estimated 10 feet wide at the water surface and has an unknown depth. The berms flanking the ditch rise above the water surface between 4 and 6 feet and are 12 feet wide. Segment 1 parallels Montana Highway 284 and the top of the western berm of the ditch is an estimated 15 to 20 feet above the highway ROW ditch. There were no associated features observed with Segment 1.

Segment 2 is located in the SESESE of Section 27, T8N R2E and on the date of inspection had a large volume of water flowing through it. This segment of the ditch is
800 feet long, 12 feet wide and flows from the southeast to the northwest under Montana Highway 284 through a 9 foot diameter corrugated galvanized metal culvert. Segment 2 did not have berms and has an unknown depth. There were no associated features observed with Segment 2.

The 1956 Water Resources Survey for Broadwater County (State Engineer’s Office: 1956: II-13) indicates there may have been two associated laterals or natural drainages associated with the Broadwater-Missouri Eastside Ditch within the project area. The first is supposed to have been located in the SENWNW of Section 35, T8N R2E, approximately 600 feet north of Segment 1. An examination of this locale did not identify either a lateral or a natural drainage. At this location there is an abandoned sand pit of recent age that may have destroyed this linear feature. The second lateral/natural drainage is located in the SESESE of Section 27, T8N R2E, approximately 1100 feet south of Segment 2. A culvert under the highway was found at this location but the waterway flowing through it has in no way been modified and appears to be a natural drainage. A swamp is located along the east side of the highway at this location, as well as several natural springs. This location was covered with a thick growth of reeds and aspen trees on both sides of the highway, surrounded by a large amount of standing water. This drainage feature appears on the 1868 GLO map and is depicted as a natural drainage.

Previous Investigations
Site 24BW0499 was first documented by Herbot (1988) who encountered segments of both the Eastside and Westside Ditch that are located outside of the current project area. At that time, the site was not considered potentially eligible to the NRHP. Segments of the site outside of the current project area were revisited by Gray (2005) and the irrigation ditches were not recommended as eligible to the NRHP.

History
The Broadwater-Missouri Irrigation Project was begun in 1938, completed in July 1940, and went into operation in 1941. The Utah Construction Company constructed the Broadwater Diversion Dam and, Douglas and Genger constructed the irrigation ditches. The irrigation project was originally designed to divert 42,000 acre feet of water per season from the Missouri River to provide irrigation for up to 16,000 acres (NPRR 1942). Currently, the system diverts 27,000 acre feet of water and irrigates just less than 11,500 acres. The history of the Broadwater-Missouri Irrigation Project has been previously documented in detail in other reports and will not be further discussed here. See State Engineer’s Office (1956: 26-27), GCM Services (1988: 13, and Appendix 1: 17-20), and Gray (2005: 10-15, and Appendix A) for an historical overview of the irrigation project.

Condition/Integrity: The overall condition and integrity of the Broadwater-Missouri Irrigation Ditches is excellent. The ditches are still in use and are well maintained.

NRHP Eligibility Recommendation: Yes | X | No | | Undetermined | |
Eligibility Justification:
Site 24BW0499 was previously determined NRHP eligible with MTSHP concurrence. Ethnoscience observed nothing within the project area that would warrant a re-evaluation of this site's eligibility.

Bibliography and Informants:

GCM Services, Inc.
1988 Cultural Resource Investigation Broadwater Project: 100kV and 12.5 kV Powerlines. GCM Services, Butte, MT. Submitted to the Montana Department of Natural Resources and Conservation, Helena.

Gray, Dale M.
2005 Cultural Resource Inventory and Assessment: Toston-South, Broadwater County. Frontier Historical Consultants, Grandview, ID. Submitted to the Montana Department of Transportation.

Herbort, Dale
1988 Site Form, 24BW0499

Northern Pacific Railway (NPRR)
1942 New Farm Land on the Broadwater-Missouri Irrigation Project, Montana. Agricultural Development Department, Northern Pacific Railway. Record PAM 884, Montana Historical Society Research Center, Helena.

Payne, G. F.
1973 Vegetative Rangeland Types in Montana. Montana Agricultural Experiment Station Bulletin 671, Bozeman, MT.

State Engineer's Office

Form Prepared By: Scott J. Wagers
Name: Dale Herbort Date: 6/5/88

Project: MDT-284 STPS 284-3(5)23
Name: Wagers, Scott J.

Updated: Scott J. Wagers, 5/11/2010
Observed Site Location
Projected Site Location

Gurnett Creek West, MT (1986) & Townsend SE, MT (1986) 7.5 Minute Quadrangles

Miles
0 0.25 0.5 1

Kilometers
0 0.25 0.5 1 1.5
Observed Site Location
Projected Site Location

Gurnett Creek West, Montana (1986)
7.5 Minute Quadrangle
JOT

Observed Site Location
Projected Site Location

Gurnett Creek West, Montana (1986)
7.5 Minute Quadrangle
Observed Site Location

Projected Site Location

Holker, Montana (1986)
& Gurnett Creek West, Montana (1986) 7.5 Minute Quadrangles
Observed Site Location
Projected Site Location

Holker, Montana (1986)
7.5 Minute Quadrangle
Holker, Montana (1986) &
Toston, Montana (1986)
7.5 Minute Quadrangles
Observed Site Location

Projected Site Location

Toston, Montana (1986)
7.5 Minute Quadrangle
Overview of Segment 1, Eastside, View to the East

Overview of Segment 2, Eastside, View to the Southeast
IRRIGATION FEATURE FORM

Site No.: 24BW0499
Division: Broadwater-Missouri Canal

Feature Name: main canal – east side
Functional Type: water conveyance

Legal Location: 6N-2E-10 S½SW¼NE¾SW¾NE¼

UTM: 12; 464637 mE; 5126604 mN

The project is located on the main canal approximately 3,443 feet (0.65 miles) downstream from the crossing with the Deep Creek Cemetery Road in section 10 of 6N-2E.

USGS Quad: Holker

Description: This form documents a 15 foot section on the approximately 38 mile long East Side Canal of the Broadwater-Missouri Water Users Association. This project will install a new headgate structure on the east bank of the canal.

The project section is an open earthen ditch measuring approximately 25 feet across the top, 4 feet across the bottom, and 6 deep with 1:1 side slopes. The water flow depth is about 5 feet at a rate of about 125 cfs. There are high peaked berms a several feet high on both sides giving the canal the appearance of great depth.

There are no other water control structures in this section of canal.

Function: The canal supplies water to numerous operators irrigating thousands of acres. The headgate provides about 6.5 cfs of water to a single operator irrigating about 398 acres of irrigated cropland.

Age: The Water Users Association first operated in 1941 making the physical features at least 72 years old.
Landscape Changes: Since water control structures are common features on irrigation ditches, the visual changes will be minor. Once construction damage has vegetated it will not be possible to identify the project area.

Reference: Field Office personnel notes
Water Resources Survey for Broadwater County, 1956

Recorded By: Justin Meissner, District Conservationist, Townsend Field Office

Date: 2/13/2013

Project: FHG Inlet Structure

Photo(s) and USGS Topo attached.
View NW, project area

View NE, structure location
24BW0499
6N-2E-10
East Side Canal
Broadwater-Missouri Water Users Assn.
IRRIGATION FEATURE FORM

**Site No.:** 24BW0499 - update  
**Division:** Broadwater-Missouri Water Users Association

**Feature Name:** East Side main canal  
**Functional Type:** water conveyance

**Legal Location:** 6N-2E-15 NW¼NE¼NE¼NW¼NW¼  
**UTM:** 12; 463902 mE; 5125555 mN

The project is located on the main canal approximately 8,552 feet (1.62 miles) downstream (flow is north) from the crossing with the county road on the south section line of 15 (Shelly Road).

**USGS Quad:** Holker

**Description:** This form documents a 20 foot section of an approximately 38 mile long East Side Canal of the Broadwater-Missouri Water Users Association. The proposed project installs a new headgate structure in the west bank of the canal.

The project section is an open earthen ditch measuring approximately 25 feet across the top, 16 feet across the bottom, and 5 feet deep with 1:1 side slopes. The water flow depth is about 3 feet at a rate of about 125 cfs. There are low broad berms on both sides of the canal.

There are no other water control structures in this section of the canal.

**Function:** The canal supplies water to numerous operators irrigating thousands of acres. The new structure provides about 6.2 cfs of water to five operators irrigating approximately 390 acres.

**Age:** The Water Users Association first operated in 1941 making the physical features at least 73 years old.

**Landscape Changes:** The inlet structure is a permanent feature where one did not exist before. However these types of structures are not out of character for irrigation systems and once vegetation has hidden construction scars the inlet will not stand out.
Reference: Water Resources Survey for Broadwater County, 1956
                      Field Office personnel notes

Recorded By: Justin Meissner, Supervisory Soil Conservationist, Townsend Field Office

Date: 3/8/2014

Project: HG Irrigation Project

Photo(s) and USGS Topo attached.
24BW0499
6N-2E-15
East Side Canal
Broadwater-Missouri Water Users Assn.
24BW0499
6N-2E-15
East Side Canal
Broadwater-Missouri Water Users Assn.
HISTORIC NAME: Broadwater-Missouri Irrigation Ditch: Eastside

COMMON NAME: Broadwater-Missouri Canal

USGS Quad: Toston, Montana (Provisional Edition 1986) 7.5 Minute Quadrangle

Township/Range: T5N R2E Section 23 SENWSE & NENWNE

Private: Yes  Owner: Broadwater-Missouri Water Users’ Association

Public:  Address:

Date of Construction:  Estimated  Documented
1938-1940  X

Builder:

Original Owner:

Resource Sources:  Plat records/maps  X  Tax Records  X
  Newspapers  Biographies
  Montana Water Resources Survey  X
  Local Histories  X

Where Diverted:
  Please see below.

Ditch-related Structures Observed:  No  X  Yes

Describe:

Unlined  X  Lined
**Historical Information:**

The Broadwater-Missouri Irrigation Project was begun in 1938 and completed in 1940. The Point of Diversion for the Broadwater-Missouri Irrigation Project is approximately five miles south of Toston in Section 3, T4N R3E, Broadwater County. The canal flows north along the west side of the Missouri River to Section 6, T4N R3E, where it splits into two canals: the Eastside canal and the Westside canal. The Eastside canal then crosses the Missouri River in an 84-inch diameter 667-foot long pipe and flows north along the east side of the river for a distance of 38.4 miles, where it terminates and empties into the Canyon Ferry Reservoir. The Westside canal extends 12.4 miles to the lower end of the Crow Creek Valley. The Broadwater-Missouri Irrigation Diversion Project originally authorized the sale of 42,000 acre feet of water and had the capability of irrigating an estimated 15,000 acres of farmland in the late 1930s. By 1955, the project diverted about 27,000 acre-feet of water annually from the Missouri River and irrigates nearly 12,000 acres of cropland (State Engineers Office 1956:I:26-27). The history of the project has been previously documented and discussed by GCM Services (1988) and Gray (2005).

---

**Condition/Integrity:**

NRHP Eligibility Recommendation: Yes [X] No [ ] Undetermined [ ]

Eligibility Justification:
The ditch has been previously recommended NRHP eligible with Montana State Historic Preservation Office concurrence.

---

**Bibliography and Informants:**

GCM Services, Inc.
1988 *Cultural Resource Investigation Broadwater Project: 100kV and 12.5 kV Powerlines. GCM Services, Butte, MT.* Submitted to the Montana Department of Natural Resources and Conservation, Helena.

Gray, Dale M.
2005 *Cultural Resource Inventory and Assessment: Toston-South, Broadwater County.* Frontier Historical Consultants, Grandview, ID. Submitted to the Montana Department of Transportation.

Herbort, Dale
1988 Site Form, 24BW0499
State Engineer’s Office  
Engineer’s Office, Helena, Montana.

State of Montana Department of Natural Resources and Conservation  

Form Prepared By: Scott J. Wagers

Name: Ethnoscience  
Date: 5/1/2014

Project: Toston Structures NH 8-4(65)86
Name: Toston Structures
Report: Toston Structures: A Class III Cultural Resource Inventory in Broadwater  
County, Montana [NH 8-4(65)86]
Updated:
Photographs:

Irrigation ditch, view to the north
Site Maps:
IRRIGATION FEATURE FORM

Site No.: 24BW0499 - update
Division: Broadwater-Missouri Canal

Feature Name: main canal – east side  Functional Type: water conveyance

Legal Location: 7N-2E-2 SW¼SE¼NE¼NW¼SW¼

UTM: 12; 465609 mE; 5137470 mN

The project is located on the main canal approximately 27688 feet (5.25 miles) downstream from the point of intersection with Hwy 12 east of Townsend in section 34.

USGS Quad: Gurnett Creek West

Description: This form documents a 20 foot section of the approximately 38 mile long East Side Canal of the Broadwater-Missouri Water Users Association. The proposed project replaces an existing 25 year old structure that is not large enough to supply the needed water to supply two new pivots.

The project section is an open earthen water conveyance measuring approximately 27 feet across the top, 10 feet across the bottom, and 5.6 feet deep with interior side slopes of 3:1. Water flow depth is averages around 3.2 feet at about 125 cfs. There is broad low berm of excavated material mounded along the west side of the canal and over time the top has flattened.

The existing water control structure is a formed concrete headwall with wingwalls measuring 4 feet tall, 4.2 feet wide, and 6 inches thick. The metal frame supporting a 2.5 foot wide slide gate is 5 feet tall including the wheel lifting mechanism.

Function: The canal supplies water to numerous operators irrigating thousands of acres. This new water control structure supplies water to a single operator irrigating approximately 122 acres using 2.4 cfs of water.

Age: The Water Users Association first operated in 1941 potentially making some of the physical features 76 years old.
**Landscape Changes:** There should be minimal landscape changes since a water control structure already exists at this location. Visible construction scars are considered short term.

**Reference:** Water Resources Survey, Broadwater County 1956
Field Office personnel notes

**Recorded By:** Eric Wyatt, Soil Conservationist, Townsend Field Office

**Date:** 4/6/2017

**Project:** BI Irrigation Project

Photo(s) and USGS Topo attached.
View N, looking downstream

View S, looking upstream
View W, front of existing structure

View W, existing structure
Top view of existing structure
1. **IDENTIFICATION**

*required to receive Smithsonian number

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<th>24BW0499 update 2018</th>
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<td>Broadwater-Missouri Westside and Eastside Canals</td>
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<td>1.3 Project Name:</td>
<td></td>
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<tr>
<td>1.4 Agency Project Number:</td>
<td></td>
</tr>
<tr>
<td>1.5 Consultant Project Number:</td>
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</table>

2. **LOCATION**

*2.1 Legal Locations:*

| Westside Canal Point of Diversion: | T4N R3E NENNW1/4 Section 7 |
| Westside Canal Tail Out:           | T6N R2E SWSWSE1/4 Section 17 |
| Eastside Canal Point of Diversion: | T4N R3E SENENW1/4 Section 6 |
| Eastside Canal Tail Out:           | T9N R3E SWNESW1/4 Section 32 |

*See attached tables for a complete list of legal locations that the Broadwater-Missouri Westside and Eastside Canals pass through.*

*2.2 County: Broadwater

*2.3 UTM Coordinates: Zone 12*

| Westside Canal Point of Diversion: | E 468,464m N 5,107,513m |
| Westside Canal Tail Out:           | E 461,179m N 5,124,089m |
| Eastside Canal Point of Diversion: | E 468,990m N 5,109,106m |
| Eastside Canal Tail Out:           | E 460,985m N 5,148,891m |

*2.4 Administrative/Surface Ownership:*

The site is owned by the State Water Projects Bureau (SWPB), State of Montana, Department of Natural Resources and Conservation (DNRC). It is operated by the Broadwater-Missouri Water User’s Association.

*2.5 7.5° USGS Maps Names, Dates: Gurnett Creek West, Holker, Lombard, Parker, Toston, Townsend, and Townsend NE (1986 provisional editions)*

*2.6 Narrative of access: Site 24BW499 can be seen and accessed from a number of private and county roads.*

2.7 City/Town: *Vicinity of:* The ditch system is situated near Toston and Townsend, MT.

3. **DESCRIPTION**

*3.1 Site Category (choose one):☐ Prehistoric ☒ Historic ☐ Paleontological ☐ Combination ☐ Other*  

*3.2 Site Type (see recommended site type list, choose all that apply): Historic irrigation ditch*

3.3 **Narrative Description of Site:** The Broadwater-Missouri Diversion Project, which includes portions of site 24BW126 (Broadwater-Missouri Diversion Project and Broadwater Power Project Historic District) and all of site 24BW499 (Broadwater-Missouri Eastside and Westside Canals) is owned by the State Water Projects Bureau (SWPB), State of Montana, Department of Natural Resources and Conservation (DNRC). Site 24BW499 is operated by the Broadwater-Missouri Water User’s Association. The dam portion of site 24BW126 was originally intended to divert water from the Missouri River (Toston Reservoir) into the Broadwater-Missouri Westside Canal at the north side of the dam (State Engineer's Office 1956:26). For reasons unknown, the Broadwater-Missouri Westside Canal and Eastside Canal were documented previously as irrigation features distinct from the Toston Dam/Reservoir and were assigned Smithsonian Trinomial 24BW499. So as not to confuse the issue, the Broadwater-Missouri Westside and Eastside Canals (24BW499) will be treated as distinct from site 24BW126 even though these canals were constructed as part of the original Broadwater-Missouri Diversion Project.

The site consists of the 32.14 miles long Broadwater-Missouri Eastside Canal and the 16.4 miles long Broadwater-Missouri Westside Canal. At their upper ends, the canals are approximately 25 ft wide and 10 ft deep. The lower (terminal) ends were not inspected, but are presumably more narrow and shallow. The site and its associated features have been documented in detail with past updates to the original site form. The 2018 update neither adds to nor modifies any of the narrative provided in the original site form all subsequent updates. The 2018 update is primarily intended to explain the distinction being made between site 24BW126 and site 24BW499, even though both are related. It is also intended to give a complete legal description of the canals that comprise the site.

*After Smithsonian number received, submit completed form to theArchaeological Records Office.*
The Broadwater-Missouri Diversion Project, of which 24BW499 is a part, is identified as one of the most important irrigation systems in Broadwater County. Further, construction of the Toston Dam and Reservoir stabilized the local agriculture economy by ensuring adequate forage for livestock, and increasing the income from the sale of crops. Water diverted from the Missouri through the Broadwater-Missouri westside and eastside canals (24BW499) is utilized by approximately 87 individual operators and provides reliable irrigation water for as much as 15,000 acres of cropland near Toston and Townsend (State Engineer’s Office 1956:11-13, 26-27). Crop production and sales accounted for 65% of the agricultural income in Broadwater County in Year 2000 (Broadwater County Commissioners 2003:22).

The Broadwater-Missouri Diversion Project is also significant to the local economy because it substantially increased the value of land that the project irrigates compared to adjoining non-irrigated land. Although land values bracketing completion of the Broadwater-Missouri Diversion Project (1939-9141) could not be found, currently for the general project area, dryland crops and grazing land sells for $600-$800 per acre while irrigated land sells for approximately $4000 per acre (DNRC n.d.).

### 3.4 Site Dimensions:

- **Surface visibility:** 85%.

### 3.5 Feature Descriptions:

- **Artifacts:**
  - Chipped Stone
  - Wood
  - Ground Stone
  - Ceramics
  - Bone
  - Trade
  - Other

- **Description:** See Section 3.3 above.

### 3.7 Diagnostic Artifacts:

- None observed.

### 3.8 Subsurface Testing:

- None conducted.

### 3.9 Site function/interpretation:

- The site is associated with late 19th and early 20th Century water conservation and irrigation/agriculture development in the western United States.

### 4. PERIOD

<table>
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<th>Prehistoric</th>
<th>Historic Period</th>
<th>Paleontological</th>
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<tbody>
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<td><strong>Smithsonian Number:</strong> 24BW499 update 2018</td>
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</table>

### 5. ENVIRONMENTAL SETTING

#### 5.1 Geographic Setting:

- The site is located in the Upper Missouri River valley largely between Toston and Townsend, MT. The topography over which the canals pass is characteristically gently to moderately undulating prairie.

#### 5.2 Contour:

- **Known**
- Approximate

#### 5.3 Elevation:

- 3959-3900 ft ASL

#### 5.4 View/Aspect (estimated direction and distance):

- The view is generally open in all directions.

#### 5.5 Sediments:

- The landforms in the immediate area consist of rocky hills, benches and high terraces, with moderate to steep slopes that are dissected by entrenched streams, narrow stream valleys and the Missouri River. Major soil types include Nielsen and Rencot channery loams on 15 to 60 percent slopes. Soils in the area are characteristically shallow, well drained, with moderate permeability (Veseth and Montagne 1980). These soils tend to be thin and gravelly.

#### 5.6 Available Water Sources:

- **Stream/River/Creek**

#### 5.7 Major River Drainage:

- Missouri River, at Westside Canal Point of Diversion, 3959 ft ASL

#### 5.8 Minor Drainage:

- N/A

<table>
<thead>
<tr>
<th>Local Vegetation</th>
<th>Regional Vegetation</th>
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<tbody>
<tr>
<td>Short prairie grasses, prickly pear cactus, and sagebrush. Willow and cottonwood occurs along the more substantial drainages.</td>
<td>Short prairie grasses, prickly pear cactus, and sagebrush. Willow and cottonwood occurs along the more substantial drainages.</td>
</tr>
</tbody>
</table>
6. ASSESSMENT, RECORDING & MANAGEMENT

6.1 Significance: The site has been determined eligible for listing in the National Register of Historic Places (consensus determination) during consultation between the NRCS and the SHPO first in 2006 and again in 2010. Based on correspondence in the SHPO files relating to why the Consensus Determination was reached, an effort is made hereafter to outline the significance of site 24BW499.

As indicated on page 12 of National Register Bulletin #15 (NRB 15) a property can be considered significant in association with Criterion A if a relationship between the site and a significant event or pattern of events within a defined time period can be demonstrated. Additionally, “Mere association with historic events or trends is not enough, in and of itself, to qualify under Criterion A (NRB 15:12)”. The Broadwater-Missouri Diversion Project is generally associated with agricultural development the west, in the sense that it is part of ongoing agricultural practices in the region. Construction of the Reservoir did not cause people to settle and take up agriculture in the upper Missouri River valley. The area was being settled for several decades prior to dam construction. The significance of the Broadwater-Missouri Diversion Project is that it stabilized agriculture in the area by supplying a reliable flow of water to cropland over the summer months. The dominance of irrigated crop revenues in the agricultural economy of Broadwater County would not be possible without large scale water diversion efforts such as the Broadwater-Missouri Diversion Project. Further, the demonstrated ability of the Broadwater-Missouri Diversion Project to increase irrigated cropland values by at least five times over those of adjoining dryland crop and grazing land is irrefutable proof of the Project’s significance on the local economy. Another aspect of the Broadwater-Missouri Diversion Project’s Criterion A significance is that it is associated with the PWA which arose during the FDR New Deal administration. The Broadwater-Missouri Diversion Project is one of the first funded by the SWCB. The SWCB not only formed as a result of the PWA, but is also unique to Montana and state water conservation efforts.

A property is considered significant in association with Criterion B if a link between the site and a person significant in local, regional, or national history or prehistory can be demonstrated (NRB 15:14). Because no such association can be made, the site is insignificant in association with Criterion B.

A property can be considered significant in association with Criterion C if it can be demonstrated to, “Embody distinctive characteristics of a type, period, or method of construction (NRB 15:18).” In order for a property to meet that requirement it must exhibit a sufficient number of “distinctive characteristics” representative of a particular method of construction. Further, “Characteristics can be expressed in terms such as form, proportion, structure, plan, style, or materials. They can be general, referring to ideas of design and construction such as basic plan or form... (NRB 15:18)”. The two canals that comprise site 24BW499 are typical excavated trenches common to all time periods. Because of this, the site lacks significance under Criterion C.

Finally, a property is considered significant in association with Criterion D if it has yielded, or may be likely to yield, information important in prehistory or history (NRB 15:21). Because a great deal of documentation exists concerning the Broadwater-Missouri Diversion Project, it is doubtful that any buried, associated cultural remains could add substantially to our knowledge of the undertaking. Therefore, site 24BW499 is recommended as insignificant in association with Criterion D.

6.2 Condition/Integrity: Integrity is the ability of a property to convey its significance. To be listed in the National Register of Historic Places (NR), a property must not only be shown to be significant under the NR criteria, but it also must have integrity. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property’s physical features and how they relate to its significance.

Historic properties either retain integrity (that is, they convey their significance) or they do not. Within the concept of integrity, the NR criteria recognize seven aspects or qualities that, in various combinations, define integrity. Those seven aspects are: location, design, setting, materials, workmanship, feeling, and association. The site retains integrity of location, design, setting, materials, workmanship and association. Integrity of feeling is not readily apparent, but assessment of feeling may vary from individual to individual.

Although some changes to the Broadwater-Missouri Diversion Project have occurred since its construction, the changes reflect maintenance and improved technology allowing the dam and canals to continue to function, and to do so efficiently and safely.

After Smithsonian number received, submit completed form to the Archaeological Records Office.
MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

Based on the previous analysis, site 24BW499 is significant under Criterion A for its association with New Deal PWA programs, the SWCB, large scale irrigation and the resultant beneficial economic impact to the local area. In addition to meeting at least one significance criteria, the site retains sufficient integrity to make it eligible for listing in the National Register of Historic Places.

6.3 Possible impacts to site: None identified. The ditch system is actively used and maintained. By state law, the function of the ditch cannot be interfered with, so it will continue to be used indefinitely.

6.4 Evaluation: Does this property meet National Register criteria for eligibility? ☒ Yes ☐ No ☐ Unevaluated

Evaluation Procedures/Justification: See Sections 6.1 and 6.2 above.

6.5 Recording status: ☒ surface examination ☒ photo ☒ map ☐ subsurface tested

6.6 Recommendations: The property has been documented in detail, and determined to be eligible for listing in the National Register of Historic Places (M. Phair, MT SHPO pers. comm. 2018). No additional investigative or documentary work is currently recommended.

6.7 Site Located by: Various Date Located:

6.8 Site Recorded by: Various Date Recorded:

6.9 Site form update and revisions by: Patrick Rennie Date updated: 05/11/2018

6.10 Federal/State Permit No:

6.11 Publication(s)/Report(s) where site is described: See Section 6.14 below.

6.12 Artifact Repository: No artifacts were collected.

6.13 Field notes/maps/photos repository: DNRC, Helena, MT

6.14 References Cited:

Broadwater County Commissioners

DNRC
n.d. Limited Valuation Website at:

National Register Bulletin #15

State Engineer's Office

Veseth, R. and C. Montagne

6.15 Map: Attach a sketch map (if applicable) and photocopy of 7.5' Quad showing site location.

Smithsonian Number: 24BW499 update 2018

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Canal construction underway-1940.

Canal construction underway-1940.

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Westside Canal buried pipeline construction underway-1940.

Eastside Canal diversion pipeline construction underway-1940.

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Eastside Canal diversion pipeline completed-1940.

After Smithsonian number received, submit completed form to the Archaeological Records Office.
**Legal locations of the Broadwater-Missouri Westside Canal (24BW499).**

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<th>RGE</th>
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<th>NW</th>
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Total length of the Westside Canal = 16.4 miles.

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Legal locations of the Broadwater-Missouri Eastside Canal (24BW499).

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Total length of the Eastside Canal (includes diversion pipe)= 32.14 miles.

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Topographic map showing points of diversion of the Broadwater-Missouri Eastside and Westside Canals (24BW499).

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MONTANA CULTURAL RESOURCES INFORMATION SYSTEM (CRIS) FORM

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Topographic map showing southern segments of the Broadwater-Missouri Eastside and Westside Canals (24BW499).

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Topographic map showing a central segment of the Broadwater-Missouri Westside Canal (24BW499).

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Topographic map showing a central and northern segment of the Broadwater-Missouri Westside Canal (24BW499).

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After Smithsonian number received, submit completed form to the Archaeological Records Office.

Topographic map showing the north end of the Broadwater-Missouri Westside Canal (24BW499).
Topographic map showing a southern segment of the Broadwater-Missouri Eastside Canal (24BW499).

After Smithsonian number received, submit completed form to the Archaeological Records Office.
Topographic map showing a central segment of the Broadwater-Missouri Eastside Canal (24BW499).

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Topographic map showing a central segment of the Broadwater-Missouri Eastside Canal (24BW499).

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Topographic map showing a northern segment of the Broadwater-Missouri Eastside Canal (24BW499).
Topographic map showing a northern segment of the Broadwater-Missouri Eastside Canal (24BW499).

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Topographic map showing the north end of the Broadwater-Missouri Eastside Canal (24BW499).

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## STATEWIDE ARCHAEOLOGICAL SURVEY

- UNIVERSITY OF MONTANA

### 1. County
- **Broadwater**

### 2. Map
- **Toston Quad**

### 3. Site No.
- **2481, 570 (Devil's Bott. Hill)**

### 4. Twp., Range
- **W/N, Range 2E, 3/4 of SW, 3/4 of Sec. 1**

### 5. Contour Elevation
- **3830'**

### 6. Location and Access
- In deflated sand zone along lake shore above Toston Dam about 1 mi.

### 7. Type of Site
- **Occupation**

### 8. Description of Site
- Downriver from Broadwater-Missouri Pumphouse, in the steep-sided canyon of the Missouri above Toston Dam. Small hearth, fire cracked rock near large river terrace.

### 9. Previous Designations

### 10. Published References

### 11. Owner
- **Unknown**

### 12. Address

### 13. Present Tenant

### 14. Site Area
- **Very Small**

### 15. Est. Depth
- **About 6" of fill has been eroded to expose the hearth.**

### 16. Vegetation
- **Covered with sagebrush and scattered juniper.**

### 17. Nearest Water
- **Very close to lake.**

### 18. Possibility of Destruction

### 19. Recommendations

### 20. Artifacts Collected
- **Basalt Knife**

### 21. Artifacts Observed

### 22. Foto Numbers

### 23. Recorded By
- **John Darroch**

### 24. Date
- **7-10-74**