CITY OF POCATELLO
CITY COUNCIL MEETING AGENDA

November 14, 2016 · 6:00 PM
Council Chambers | 911 N 7th Avenue

1. ROLL CALL AND PLEDGE OF ALLEGIANCE

2. INVOCATION
   The invocation will be offered by Pastor Jacqueline Thomas, Praise Temple of God.

3. CONSENT AGENDA
   The following business items may be approved by one motion and a vote. If any one member of the Council so desires, any matter listed can be moved to a separate agenda item.

   (a) MINUTES: Council may wish to waive the oral reading of the minutes and approve the minutes from the Clarification and Regular Council meetings of October 20, 2016 and November 3, 2016.

   (b) TREASURER'S REPORT: Council may wish to consider the Treasurer's Report for October showing cash and investments as of October 31, 2016.

   (c) CHILD CARE ADVISORY COMMITTEE APPOINTMENT: Council may wish to confirm the Mayor's appointment of Laura Thomas to serve as a member of the Child Care Advisory Committee, replacing Kari Giesbrecht. Ms. Thomas' term will begin November 18, 2016 and will expire December 4, 2017.

   (d) CONSTRUCTION BOARD OF APPEALS AND REVIEW APPOINTMENT: Council may wish to confirm the Mayor's appointment of Richard nelson to serve as a member of the Construction Board of Appeals and Review, filling a long-term vacancy. Mr. Nelson's term will begin November 18, 2016 and will expire December 31, 2018.

   (e) COUNCIL DECISION—MARTINEZ ESTATES SUBDIVISION FINAL PLAT: Council may wish to adopt its decision approving the Final Plat for Martinez Estates Subdivision, which divides .94 acres into two (2) residential lots, zoned Residential Medium Density (RMS) Single Family Density, subject to conditions. The proposed subdivision is east of Gathe Road and both lots will have frontage access from Aspen Lane.

   (f) COUNCIL DECISION—JUNIPER RESERVE DIVISION ONE FINAL PLAT: Council may wish to adopt its decision approving the Final Plat for Juniper Reserve Division One Subdivision, which divides 9.3 acres into 16 residential lots, zoned Residential Low Density, subject to conditions. The proposed subdivision is east of Stoneridge Drive and has access via Shadowpines Way.

   Documents:

   AGENDA-ITEM3.PDF

4. COMMUNICATIONS AND PROCLAMATIONS

5. CALENDAR REVIEW
   Council may wish to take this opportunity to inform other Council members of upcoming meetings and events that should be called to their attention.

6. REVOCABLE USE LICENSE—2901 TRAPPER COURT

Tiago Rodriguez (mailing address: 2901 Trapper Court, Pocatello, ID 83201) is requesting a Revocable Use License to: a) plant grass; and b) provide minimal landscaping and irrigation; on a 20-foot wide easement adjacent to his property and located on Lot 19 Block 2 High Country Subdivision belonging to the City of Pocatello, subject to Legal Department review. Mr. Rodriguez will improve this area at his expense.

Staff recommends approval of the request subject to conditions.

(Pertinent information attached.)

Documents:

AGENDA-ITEM6.PDF

7. PIGGYBACK BID—SANITATION DEPARTMENT

Council may wish to accept the following recommendations of staff regarding the purchase of two (2) commercial trucks trucks using a piggy-back bid awarded to the City of Idaho Falls from Jackson Group Peterbilt.

(a) Purchase two (2) 2018 Peterbilt 320 cab/chassis and Labrie Automizer packer body in the amount of $272,455.67 per truck for a total bid price of $544,910.94; and if accepted

(b) Authorize the Mayor to sign the necessary documents, subject to Legal Department review.

Funds for the truck purchase are available in the Sanitation Department's Fiscal Year 2017 budget.

(Pertinent information attached.)

Documents:

AGENDA-ITEM7.PDF

8. TRADE AND PURCHASE OF FIREARMS—POLICE

Council may wish to consider the Police Department's recommendation and accept the quote from Salt Lake Wholesale (Blue Label Glock Dealer for Law Enforcement) for the following firearm upgrades:

(a) Trade-in 15 older officer duty guns at $300.00 each (total $4,500.00); and

(b) Purchase 15 new Glock 21 officer duty guns at $474.00 each (total $7,110.00).

Final cost will be $2,600.00. The purchase of new firearms is included in Police Department's 2017 Fiscal Year budget.

(Pertinent information attached.)

Documents:

AGENDA-ITEM8.PDF

9. PUBLIC HEARING—PORTNEUF RIVER VISION STUDY

This time has been set aside to receive public comments regarding the Portneuf River Vision Study.

(Pertinent information attached.)

Documents:

EXECUTIVE-SUMMARY-DRAFT.PDF
THE-VISION-STUDY-DRAFT.PDF
APPENDIX-A-STAKEHOLDER-ASSESSMENT.PDF
APPENDIX-B-LITERATURE-REVIEW.PDF
APPENDIX-D-CONCEPTS-(ARTIST-RENDERINGS).PDF
APPENDIX-E-MAPS.PDF

10. DISCUSSION ITEMS
    This time has been set aside to hear discussion items not listed on the agenda. Items which appeared somewhere else on the agenda will not be discussed at this time. The Council is not allowed to take any official action at this meeting on matters brought forward under this agenda item. Items will either be referred to the appropriate staff or scheduled on a subsequent agenda. You must sign in at the start of the meeting in order to be recognized. (Note: Total time allotted for this item is fifteen (15) minutes, with a maximum of three (3) minutes per speaker.)

PUBLIC HEARING PROCEDURE

1. Explanation of hearing procedures by Mayor or staff.
    - Ten (10) minute time limit on applicant presentation.
    - Three (3) minute time limit on public testimony.
    - Names and addresses are required from those presenting/testifying.
    - Questions/comments should be addressed to the Mayor and Council.
    - Council members must make their decision regarding the application on facts already in the record and information presented at the public hearing. Conflicts of interest, site visits and ex-parte contacts by Council members will be acknowledged.
    - Protocol requires that Council and audience be recognized by the Mayor prior to speaking.
2. Mayor opens hearing.
3. Presentation by applicant.
   Note: Remember, applicant bears the responsibility for making his/her case. This is also the time for Council members to ask their questions of the applicant.
4. Presentation by staff.
5. Written correspondence submitted for the record.
6. Testimony by those supporting the application.
7. Testimony by those uncommitted on the application.
8. Testimony by opponents to the application.
9. Rebuttal by the applicant.
10. Mayor closes the hearing and initiates motion/deliberations.
    Note: The Mayor may choose to require a motion prior to the discussion in order to focus deliberations, or, the Mayor may choose to allow deliberations prior to the motion in order to facilitate wording of the motion.
11. Develop a written and reasoned statement supporting the decision.

READING OF AN ORDINANCE PROCEDURE

1. Council determines which option below will be used to read the Ordinance by roll call vote.
2. The Ordinance is read by City Staff (usually City Attorney).
3. Mayor will declare the final reading of the ordinance and ask “Shall the Ordinance pass?”
   After roll call is taken, Mayor will announce whether or not the ordinance passed.

3(a)

CITY OF POCATELLO, IDAHO
CITY COUNCIL AGENDA
CLARIFICATION MEETING AND
REGULAR CITY COUNCIL MEETING
NOVEMBER 3, 2016

CLARIFICATION MEETING

The City Council Agenda Clarification meeting was called to order at 5:32 p.m. by Mayor Brian Blad. Council members present were Heidi Adamson, Roger Bray, Steve Brown, Gary Moore and Michael L. Orr. Council member Jim Johnston was excused. No motions, resolutions, orders or ordinances were proposed. No vote was taken.

REGULAR CITY COUNCIL MEETING

AGENDA ITEM NO. 1: ROLL CALL AND PLEDGE OF ALLEGIANCE

The Regular City Council meeting was called to order at 6:04 p.m. by Mayor Brian Blad. Council members present were Heidi Adamson, Roger Bray, Steve Brown, Gary Moore and Michael L. Orr. Council member Jim Johnston was excused.

Mayor Blad led the audience in the pledge of allegiance.

AGENDA ITEM NO. 2: the INVOCATION

The invocation was given by Lieutenant Tami Moore representing Salvation Army.

AGENDA ITEM NO. 3: CONSENT AGENDA

Council was asked to consider the following business items.

-MINUTES (a)

Waive the oral reading of the minutes and approve the minutes from the October 13, 2016 Study Session; and the October 13, 2016 Executive Session.

-PAYROLL AND MATERIAL CLAIMS (b)

Payroll and material claims for the month of October 2016 in the amount of $7,849,517.46.

-GOLF ADVISORY COMMITTEE APPOINTMENT (c)

Confirm the Mayor's appointment of Ginger Smith to serve as a member of the Golf Advisory Committee, representing the High River Ladies League. Ms. Smith's term will begin November 4, 2016 and will expire November 4, 2019.

-HUMAN RELATIONS ADVISORY COMMITTEE REAPPOINTMENT (d)

Confirm the Mayor's reappointment of Mohammad Safdar to continue his service as a member of the Human Relations Advisory Committee. Mr. Safdar's term will begin November 19, 2016 and will expire November 19, 2020.

-RATIFICATION OF GRANT APPLICATION ASPCA AND SUBARU PET ADOPTION EVENT (e)

Ratify submission of a grant sponsored by the ASPCA and Subaru Dealership in the amount of $2,500.00, authorize acceptance of the grant and authorize the Mayor to sign, subject to Legal Department review, documents related to the grant. This Share the Love Adoption Event will promote adoption of animals from the Animal Shelter. This is an annual grant request and there is no City match.

A motion was made by Mr. Bray, seconded by Mr. Brown, to approve the items on the consent agenda. Upon roll call, those voting in favor were Bray, Brown, Adamson, Moore and Orr.

AGENDA ITEM NO. 4: COMMUNICATIONS AND PROCLAMATIONS

Ms. Adamson, on behalf of Mayor Blad, proclaimed November 26, 2016 to be Small Business Saturday in Pocatello and urged residents to support small businesses and merchants on Small Business Saturday and throughout the year.

Matt Hunter, President/CEO of Pocatello/Chubbuck Chamber of Commerce, accepted the proclamation on behalf of the Chamber of Commerce and Old Town Pocatello. He thanked the Council for the proclamation and encouraged community members to support small businesses.

AGENDA ITEM NO. 5: CALENDAR REVIEW

Mayor Blad announced that the November 10th Study Session Session had been canceled; and reminded the Council of the November 17th Regular Council meeting at 6:00 p.m.

Mayor Blad announced that City Offices would be closed on November 11th to observe Veterans Day. However, garbage and recycling pickups will remain on their regularly scheduled days; the Sanitation Department annual leaf pick-up program will take place November 14th through December 2nd. He reminded citizens that only leaves in compostable bags would be eligible for pick-up on the regular collection day; a City survey is open until November 17th regarding the creation of a business registry/license for city businesses and is encouraging business owners to participate in the survey. Contact Planning and Zoning for more information; and submissions for the City's new flag design will be accepted until December 2nd. Visit the website at flag.pocatello.us for more information.

Mayor Blad reminded citizens that early in-person voting is open at the Bannock County Elections Office, 141 North 6th Avenue. The last day to vote early is November 4th. Election Day is November 8th.

AGENDA ITEM NO. 6: CHILD CARE LICENSE DENIAL APPEAL -SMITH

Jordan Smith was present to appeal the decision of Police Department staff which denied Ms. Smith a Child Care license.

Jené Purman, License Enforcement Officer, stated Ms. Smith's Child Care license application was denied based upon a 2015 conviction of petit theft.

Jordan Smith, 921 South 8th Avenue, stated the conviction was for a misdemeanor charge of petit theft, which she has taken full responsibility. She added that since the conviction, she has paid court fines, currently holds a full time job and an additional part time job and has enrolled at Idaho State University, pursuing a degree.

A motion was made by Mr. Moore, seconded by Mr. Brown, to overturn the decision of the Police Department and approve a Child Care license for Jordan Smith.

Mr. Brown stated he feels that Ms. Smith has taken appropriate steps to correct her path and is making positive changes in her life. He feels because of these changes, he can support the motion to approve her Child Care license application.

Mr. Moore's motion was voted upon at this time. Upon roll call, those voting in favor were Moore, Brown and Bray. Adamson and Orr voted in opposition to the motion. The motion passed.

AGENDA ITEM NO. 7: CHILD CARE LICENSE DENIAL APPEAL -MONTANO

Delisia Montano was present to appeal the decision of Police Department staff which denied Ms. Montano a Child Care license.

Jené Purman, License Enforcement Officer, stated Ms. Montano's Child Care license application was denied based upon admission of her involvement in a 2012 assault. Ms. Montano was not charged.

Delisia Montano, Pocatello resident, stated in May 2012, when she was a senior in high school, she was involved in an altercation with a neighbor who confronted her in her own driveway. Ms. Montano pushed the neighbor and another individual. She stated assault charges were later dropped. Ms. Montano stated she has worked for the Community Council of Idaho (Headstart) in Aberdeen for four years and would like to continue working with children. She stated her employer was present at the meeting. Ms. Montano submitted reference letters to the Council members.

A motion was made by Mr. Moore, seconded by Mr. Orr, to overturn the decision of the Police Department and approve a Child Care license for Delisia Montano. Upon roll call, those voting in favor were Moore, Orr, Adamson, Bray and Brown.

AGENDA ITEM NO. 8: CHILD CARE LICENSE DENIAL APPEAL -RUCKER

Nicole Rucker was present to appeal the decision of Police Department staff which denied Ms. Rucker a Child Care license.

Jené Purman, License Enforcement Officer, stated Ms. Rucker's Child Care license application was denied based upon a January 2016 conviction of frequenting a location where controlled substances are sold.

Nicole Rucker, 921 South 8th Avenue, stated her January 2016 conviction stemmed from an incident where drug paraphernalia was found at her residence. She stated no drugs were present. Ms. Rucker added that she had been working at the daycare on the Idaho State University (ISU) campus for three years. She stated her Child Care License was up for renewal and was denied based upon the January conviction. Ms. Rucker expressed her remorse for the incident and stated she no longer uses drugs, paid all court fines, was not sentenced to probation and has had a successful semester at ISU.

In response to questions from Council, Ms. Rucker stated she is originally from Santa Rosa, California, where she grew up in a religious household. She added that this was her first offense of any kind. Ms. Rucker stated she would submit to drug tests over the course of the year, if the Council chose to add that condition to her Child Care license. She clarified that she is scheduled to graduate in 2018 and will move back to California in May 2017 to finish her education.

A motion was made by Ms. Adamson, seconded by Mr. Bray, to uphold the decision of the Police Department and deny a Child Care License to Nicole Rucker. Upon roll call, those voting in favor were Adamson, Bray, Brown and Moore. Mr. Orr voted in opposition to the motion. The motion passed.

AGENDA NO. PROPERTY ACCEPTANCE/PLAT AMENDMENT -PARTRIDGE RIDGE SUBDIVISION 6TH ADDITION	9:	Council was asked to consider a request from Ryan Satterfield of Satterfield Realty and Development (mailing address: 2432 Andrew Street, Pocatello, ID 83201) regarding an amendment to the Partridge Ridge Subdivision 6th Addition.
-ACCEPT DEDICATION	a)	Accept dedication of Lot 13, Block 3 and Lot 4 Block 4 Partridge Ridge Subdivision 6th addition via a warranty deed for stormwater detention/retention maintenance and appurtenances to the City; and, if accepted
-AMEND PLAT NOTE 3 TO DEDICATE LOTS TO CITY	b)	Direct staff to prepare a Council Decision to effectively amend said plat Note 3 to state: the non-buildable lots are hereby dedicated to the City of Pocatello for the purpose of stormwater detention/retention maintenance and appurtenances.

The Partridge Ridge Subdivision 6th Addition plat was recorded on October 6, 2006 instrument number 20622791.

In response to questions from Council, Merril Quayle, Development Engineer, stated the request is regarding two lots in the Partridge Ridge Subdivision 6th Addition, originally set aside for stormwater detention/retention. He stated the subdivision was recorded in 2006 with the condition that a Homeowners' Association (HOA) be formed and the two lots conveyed to the HOA. Mr. Quayle added that the HOA was not formed prior to recording and the lots were not conveyed to the appropriate lot owners. It was determined that Satterfield Realty is still the legal owner of the lots. Mr. Quayle added that the City of Pocatello has the equipment to suitably take care of runoff and maintenance for stormwater areas.

Mr. Moore stated he feels that the adoption of stormwater plans must be consistent among all subdivisions throughout the city. He stated if the City assumes the water issue because the HOA wasn't formed, developers and citizens may expect the City to assume all issues, including weeds and other maintenance matters.

Mike Jaglowski, Public Works Director, clarified that yearly maintenance costs are approximately $2,500.00 per acre, depending upon the maintenance needs.

Mr. Quayle stated three separate ponds are on the two lots, with each pond covering approximately 1 ½ acres.

Mr. Quayle clarified that according to the Council Decision for the subdivision, one of the conditions stated that a Homeowners' Association would be formed.

Mr. Bray stated he feels this is a serious issue that should be studied further to address possible solutions.

A motion was made by Mr. Bray, seconded by Ms. Adamson, to deny the request from Ryan Satterfield of Satterfield Realty and Development, regarding an amendment to the Partridge Ridge Subdivision 6th Addition as outlined in Agenda Item No. 9(a) and 9(b).

Mr. Brown stated he feels that it should be studied to find suitable solutions and investigate what other cities have done in similar circumstances.

Mr. Bray's motion was voted upon at this time. Upon roll call, those voting in favor were Bray, Adamson, Brown, Moore and Orr.

AGENDA ITEM NO. 10: FINAL PLAT -JUNIPER RESERVE, DIVISION NO. ONE

Billy Satterfield of Juniper Land Corp. (mailing address: 2980 Clearwater Street, Pocatello, ID 83201), represented by Rocky Mountain Engineering and Surveying (mailing address: 600 East Oak Street, Pocatello, ID 83201), has submitted a request to subdivide approximately 9.59 acres into 16 residential lots. The subdivision, Juniper Reserve, Division No. 1, is located southeast of Stoneridge Drive, on an extension of Shadowpines Way.

The Planning and Zoning Commission reviewed the preliminary plat at their meeting on April 27, 2016 and recommended approval with conditions.

Matthew Lewis, Planning Division Manager, gave an overview of the proposed request to subdivide approximately 9.59 acres into 16 residential lots. He stated the Planning and Zoning Commission reviewed the preliminary plat and recommended approval with the following conditions: 1) all conditions set out in the Public Works Department Memorandum from Merril Quayle, P.E. dated October 18, 2016 shall be met; 2) all requirements of Pocatello Municipal Code listed shall be adhered to, specifically: a) Section 16.24.080 "Recording the Final Plat"; b) Section 16.24.100 "Structures, Improvements and Building Permits"; c) Section 16.24.110 "Subdivision Surety Bond and Warranty Bond"; and d) Section 17.05.140 "Site and Building Development Guidelines"; 3) any proposed Subdivision Covenants, Conditions and Restrictions (CCR's) shall be submitted to the City for review and approval by the Legal Department prior to recording; 4) all corrections to the preliminary plat which were noted by City Staff shall be made prior to submittal of the final plat; and 5) all other standards and conditions of Municipal Code not herein discussed but applicable to residential development shall apply.

In response to questions from Council, Mr. Lewis clarified that potential stormwater and drainage issues are separate from the request to subdivide the land into residential lots. He added that the plat has met all requirements for subdivision regarding lot size and road configurations. Mr. Lewis stated the Planning and Zoning Commission recommended approval of the plat with conditions as listed.

In response to questions from Council, Merril Quayle, Development Engineer, stated that approval or denial of the request would not affect drainage issues. He added that maintenance of the areas would be the responsibility of Satterfield Realty and Development, until an alternative, such as an HOA was formed. Mr. Quayle stated the plat is satisfactory and ready for acceptance.

Mitch Greer, Rocky Mountain Engineering and Surveying, gave an overview of the history on the property. He stated the original plat was recorded approximately 10 years ago, and a Homeowners' Association was not formed at that time. Mr. Greer explained that having multiple property owners responsible for maintenance and proper drainage can lead to potential problems. He stressed that failure of a retention pond impacts properties downstream. Mr. Greer added that earlier drainage plans did not meet the City's specifications for acceptance. He explained that an HOA was not being proposed at this time, as water naturally flows into the nearby gully. However, accessibility improvements for maintenance are being proposed.

Mr. Moore expressed his concern about remaining consistent among all property developments.

Mayor Blad stated the Council is now aware that the stormwater process for developments must be improved. He urged the Council to focus on the Juniper Reserve Division 1 subdivision and the final plat request at hand.

A motion was made by Mr. Moore, seconded by Mr. Bray, to approve a request by Billy Satterfield of Juniper Land Corp., represented by Rocky Mountain Engineering and Surveying, to subdivide approximately 9.59 acres into 16 residential lots and that the subdivision, Juniper Reserve, Division No. 1, shall be located southeast of Stoneridge Drive, on an extension of Shadowpines Way subject to conditions as outlined and that the decision be set out in appropriate Council Decision format. Upon roll call, those voting in favor were Moore, Bray, Adamson, Brown and Moore.

AGENDA ITEM NO. 11: PIGGYBACK BID –SANITATION DEPARTMENT		Council was asked to accept the following recommendations of staff regarding the purchase of two (2) commercial collection trucks using a piggy-back bid awarded to the City of Pocatello from Northwest Equipment on December 17, 2015.
PURCHASE OF TWO 2018 MACK CAB/CHASSIS	a)	Purchase two (2) 2018 Mack cab/chassis with Heil 5000 packer body in the amount of $212,218.00 per truck for a total bid price of $424,436.00; and if accepted
AUTHORIZE MAYOR'S SIGNATURE	b)	Authorize the Mayor to sign the necessary documents, subject to Legal Department review.

Funds for the truck purchases are available in the Sanitation Department's Fiscal Year 2017 budget.

A motion was made by Mr. Orr, seconded by Mr. Brown, to accept the recommendations of staff regarding the purchase of two (2) commercial collection trucks using a piggy-back bid awarded to the City of Pocatello from Northwest Equipment on December 17, 2015 and a) approve the purchase of two (2) 2018 Mack cab/chassis with Heil 5000 packer body in the amount of $212,218.00 per truck for a total bid price of $424,436.00; and b) authorize the Mayor to sign the necessary documents, subject to Legal Department review. Upon roll call, those voting in favor were Orr, Brown, Adamson, Bray and Moore.

AGENDA ITEM NO. 12: DISPUTE REVIEW BOARD THREE PARTY AGREEMENT-WPCF PHOSPHORUS IMPROVEMENT PROJECT		Council was asked to authorize the Mayor's signature on a Dispute Review Board Three Party Agreement, subject to Legal Department review, to establish the operation of a Dispute Review Board to assist the City and the Contractor, RSCI, in resolving disputes pertaining to the construction of the Phosphorus Improvement project at the City's Wastewater Pollution Control Facility (WPCF).

A motion was made by Mr. Moore, seconded by Mr. Bray, to authorize the Mayor's signature on a Dispute Review Board Three Party Agreement, subject to Legal Department review, to establish the operation of a Dispute Review Board to assist the City and the Contractor, RSCI, in resolving disputes pertaining to the construction of the Phosphorus Improvement project at the City's Wastewater Pollution Control Facility (WPCF). Upon roll call, those voting in favor were Moore, Bray, Adamson, Brown and Orr.

ATTEST:

_____
RUTH E. WHITWORTH, CMC, CITY CLERK

PREPARED BY:

_____
KONNI R. KENDELL, DEPUTY CLERK

3(a)

CITY OF POCATELLO, IDAHO
CITY COUNCIL AGENDA
CLARIFICATION MEETING AND
REGULAR CITY COUNCIL MEETING
OCTOBER 20, 2016

CLARIFICATION MEETING — The City Council Agenda Meeting was called to order at 5:30 p.m. by Mayor Brian Blad. Council members present were Heidi Adamson, Roger Bray, Steve Brown, Jim Johnston, Gary Moore and Michael L. Orr. No motions, resolutions, orders, or ordinances were proposed. No vote was taken.

REGULAR CITY COUNCIL MEETING

AGENDA ITEM NO. 1: ROLL CALL AND PLEDGE OF ALLEGIANCE — The Regular City Council meeting was called to order at 6:01 p.m. by Mayor Brian Blad. Council members present were Heidi Adamson, Roger Bray, Steve Brown, Jim Johnston, Gary Moore and Michael L. Orr.

Mayor Blad led the audience in the pledge of allegiance.

AGENDA ITEM NO. 2: INVOCATION — The invocation was offered by Mohammed Safdar, President, Islamic Society of Southeast Idaho.

Mr. Johnston recused himself from voting on the consent agenda because he has a personal conflict with Agenda item No. 3 (e).

AGENDA ITEM NO. 3: CONSENT AGENDA — Council was asked to consider the following business items:

-MINUTES (a) — Waive the oral reading of the minutes and approve the minutes from the Clarification and Regular Council meetings of September 15, 2016 and October 6, 2016.

-TREASURER'S REPORT (b) — Consider the Treasurer's Report for September 2016 showing cash and investments as of September 30, 2016 in the amount of $39,641,540.74.

-GOLF ADVISORY COMMITTEE APPOINTMENTS (c) — Confirm the Mayor's appointments of Thomas Liddil and Billy Satterfield to serve as members of the Golf Advisory Committee, replacing Ronald Dunn and Glen Lattin whose terms expired. Both terms will begin October 21, 2016 and will expire October 21, 2019.

-JAPANESE SISTER CITIES SUBCOMMITTEE APPOINTMENT (d) — Confirm the Mayor's appointment of Dannis Adamson to serve as a member of the Japanese Sister Cities Subcommittee, filling a long-term vacancy. Mr. Adamson's term will begin October 21, 2016 and will expire October 21, 2020.

-RATIFICATION –AGREEMENT TO PURCHASE PROPERTY AND WATER RIGHTS (e) — Ratify the Council's informal approval to enter into an Agreement to purchase a total of 106.6 acres of real property together with approximately 330 acre feet of water, subject to Legal Department review. Said purchase will be made from the Water Revenue Bond monies approved by voters on November 7, 2006.

A motion was made by Mr. Moore, seconded by Mr. Orr, to approve the items within the consent agenda and ratify the informal approval to enter into an Agreement to purchase a total of 106.6 acres of real property together with approximately 330 acre feet of water, subject to Legal Department review, subject to the conditions listed in the Real Estate Purchase and Sale Agreement, the associated Counteroffer and a favorable Phase 1 Environmental Assessment. Upon roll call, those voting in favor were Moore, Orr, Adamson, Bray and Brown.

AGENDA ITEM NO. 4: COMMUNICATIONS AND PROCLAMATIONS

Mayor Blad announced there were no proclamations. He welcomed Boy Scouts from Troop No. 147.

AGENDA ITEM NO. 5: CALENDAR REVIEW

Mayor Blad reminded the Council of the November 3rd Regular City Council meeting at 6:00 p.m.; and announced that the November 10th Study Session had been canceled.

Mayor Blad announced the annual "Zoo Boo" at Zoo Idaho will take place on October 29th from 10:00 a.m. to 3:00 p.m. The theme for the event is "Creatures of the Night" – nocturnal animals; a cyber security class is being offered at Marshall Public Library, Tuesdays at 7:00 p.m. during the month of October; early in-person voting continues at the new Bannock County Elections Office, 141 North 6th Avenue (Old Jail). Voting hours are Monday through Friday 9:00 a.m. to 4:30 p.m. The last day to vote early is November 4th; Election day is November 8th; the annual leaf collection is scheduled to take place November 14th through December 2nd. Leaves must be in compostable bags, not boxes or plastic bags. Leaves will be taken to the Bannock County Landfill composting center; a City survey is open until November 17th regarding the creation of a business registry/license for city businesses and is encouraging business owners to participate in the survey. Contact Planning and Zoning for more information; submissions for the City's new flag design will be accepted until December 2nd. Visit the website at flag.pocatello.us for more information; and Saturday, October 22nd will be the last trail run at the Nordic Center and will be a fundraiser for the Nordic Center.

AGENDA ITEM NO. 6: PUBLIC HEARING -URBAN SERVICE BOUNDARY EXPANSION

This time was set aside for the Council to hear comments from the public concerning the request to expand the Urban Service Boundary (USB) north and east of Satterfield Drive and East Chubbuck Road. Staff estimates the USB will be expanded by approximately 4,220 acres beyond its current boundary. As part of the expansion, land use designations must be given on the Comprehensive Plan Map and staff's recommendation is a designation of "Mixed Use."

At their public hearing on September 28, 2016 the Planning and Zoning Commission recommended approval of the expansion.

Mayor Blad opened the public hearing.

Mayor Blad announced there had been no ex parte communication by Council members.

Terri Neu, Assistant Planner, gave an overview of the request and stated the request would expand the Urban Service Boundary (USB) approximately 4,220 acres and that the land use designation on the Comprehensive Plan Land Use map would be "Mixed Use." In response to a question from Council, Ms. Neu clarified that the step to expand the USB is the first step towards an expanded Area of City Impact, possible annexation and the potential for urban development.

Mayor Blad announced no written comments had been received regarding the expansion.

Mr. Brown reminded citizens that comments from the public should be relevant to the agenda item at hand.

Mike Seibert, 1665 Pocatello Creek Road, spoke in support of the proposal. He feels the proactive approach is positive for growth and encouraged the Council to approve the plan.

Lon Crowell, 819 North Wayne, spoke in favor of the application. He feels this proposal would be very beneficial to Pocatello. Mr. Crowell shared that taking the appropriate steps to develop the area will benefit the City and its citizens. He stated he has witnessed development in other communities that didn't follow a strategic plan and that the developments and cities suffered.

There being no further public comments, Mayor Blad closed the public hearing.

A motion was made by Mr. Brown, seconded by Mr. Orr, to approve a request to expand the Urban Service Boundary (USB) north and east of Satterfield Drive and East Chubbuck Road by approximately 4,220 acres beyond its current boundary and that the land use designation on the Comprehensive Plan Map will be designated "Mixed Use" and that the decision be set out in appropriate Council Decision format. Upon roll call, those voting in favor were Brown, Orr, Adamson, Bray, Johnston and Moore.

AGENDA ITEM NO. 7: UTILITY CONNECTION –HARGRAVES COMMERCIAL SUBDIVISION

Council was asked to approve a request from Dan Hargraves represented by Rocky Mountain Engineering and Surveying (mailing address: 600 East Oak Street, Pocatello, ID 83201) for property outside the City limits, to be known as Hargraves Commercial Subdivision located on South 5th Avenue, to be connected to City water and sewer. Mr. Hargraves has completed the Utility Connection Annexation Covenant and if the utility connections are approved, will be required to pay outside City utility rates and associated connecting fees until the property is annexed.

A motion was made by Mr. Moore, seconded by Mr. Bray, to approve a request from Dan Hargraves represented by Rocky Mountain Engineering and Surveying for property outside the City limits, to be known as Hargraves Commercial Subdivision located on South 5th Avenue, to be connected to City water and sewer services and complete the Utility Connection Annexation Covenant and that Mr. Hargraves will be required to pay outside City utility rates and associated connecting fees until the property is annexed. Upon roll call, those voting in favor were Moore, Bray, Adamson, Brown, Johnston and Orr.

AGENDA ITEM NO. 8: SPECIAL EVENT WAIVER REQUESTS -AID FOR FRIENDS ANNUAL ENCAMPMENT

Council was asked to consider two requests from Aid For Friends. The group wishes to conduct their 10th Annual Encampment special fundraising event at Caldwell Park beginning the evening of December 2, 2016 and concluding on December 4, 2016 at 10:00 a.m. Therefore, they will need permission to have people in the park during the evenings of December 2nd and December 3rd. They are also requesting that parking on that portion of East Center Street, adjacent to the park, be limited to vehicles associated with the event from 10:00 a.m. on December 3rd to 10:00 a.m. on December 4th.

In response to a question from Council, BJ Stensland, Aid For Friends Executive Director, explained that participants in the Annual Encampment solicit contributions from businesses and individuals to raise funds for Aid For Friends. She added that 30 to 40 individuals spend the night in cardboard shelters at Caldwell Park to bring about community awareness regarding the services provided by Aid For Friends. Ms. Stensland stated participants also receive education regarding winter survival techniques.

A motion was made by Mr. Bray, seconded by Mrs. Adamson, to approve two requests from Aid For Friends and grant permission to allow people in Caldwell Park during the evening of December 2nd and December 3rd for the 10th Annual Encampment special fundraising event beginning the evening of December 2, 2016 and concluding on December 4, 2016 at 10:00 a.m. and that parking on that portion of East Center Street, adjacent to the park, be limited to vehicles associated with the event from 10:00 a.m. on December 3rd to 10:00 a.m. on December 4th. Upon roll call, those voting in favor were Bray, Adamson, Brown, Johnston, Moore and Orr.

AGENDA ITEM NO. 9: AGREEMENT WITH MERCER -HUMAN RESOURCES

Council was asked to renew the Agreement with Mercer, the City's employee benefits consultant, for Fiscal Year 2017. Mercer assists Human Resource staff with major insurance contracts and day-to-day compliance questions and issues.

A motion was made by Mr. Johnston, seconded by Mr. Bray, to renew the Agreement with Mercer, the City's employee benefits consultant, for Fiscal Year 2017 to assist Human Resource staff with major insurance contracts and day-to-day compliance questions and issues. Upon roll call, those voting in favor were Johnston, Bray, Adamson, Brown, Moore and Orr.

AGENDA ITEM NO. 10: AIRPORT LEASE AMENDMENT -AVCENTER, INC.

Council was asked to approve, and authorize the Mayor to sign, an amendment to the lease agreement between the City and AvCenter, Inc. dated March 3, 1994, for property at the Pocatello Regional Airport. The amendment will allow for an abatement of AvCenter's lease payments in return for AvCenter contracting and paying for concrete and asphalt repairs to the ramp approaches in front of airport hangars one (1) and three (3). The estimated cost of repair and abatement is $25,160.00. The amendment is subject to Legal Department review.

A motion was made by Mr. Johnston, seconded by Mr. Orr, to approve, and authorize the Mayor to sign, subject to Legal Department review, an amendment to the lease agreement between the City and AvCenter, Inc. dated March 3, 1994, for property at the Pocatello Regional Airport to allow for an abatement of AvCenter's lease payments in return for AvCenter contracting and paying for concrete and asphalt repairs to the ramp approaches in front of airport hangars on (1) and three (3) and that the estimated cost of repair and abatement will be $25,160.00. Upon roll call, those voting in favor were Johnston, Orr, Adamson, Bray, Brown and Moore.

AGENDA ITEM NO. 11: AGREEMENT TO PURCHASE WATER RIGHTS

Council was asked to authorize the Mayor's signature on contract documents to purchase a total of 129.5 acre feet of water, subject to Legal Department review. Said purchase shall be made from the Water Revenue Bond monies approved by voters on November 7, 2006.

A motion was made by Mr. Bray, seconded by Mr. Johnston, to authorize the Mayor's signature on contract documents to purchase a total of 129.5 acre feet of water, subject to Legal Department review, using Water Revenue Bond monies as approved by voters on November 7, 2006. Upon roll call, those voting in favor were Bray, Johnston, Adamson, Brown, Moore and Orr.

AGENDA ITEM NO. 12: BID/AGREEMENT -750 GALLON SURGE TANK FOR JOHNNY CREEK BOOSTER STATION		Council was asked to consider the recommendations of staff for the following requests regarding the purchase of a 750 gallon hydropneumatic bladder-type surge tank:
ACCEPT BID -PULSCO, INC.	a)	Accept the bid received from Pulsco, Inc. who submitted a bid in the amount of $48,300.00, and if the bid is accepted;
AUTHORIZE AGREEMENT -PULSCO, INC.	b)	Authorize the execution of an agreement between the City of Pocatello and Pulsco, Inc. in the amount of $48,300.00, subject to Legal Department review.

Funds for the purchase are available in the Water Department's Fiscal Year 2017 budget.

A motion was made by Mr. Moore, seconded by Mr. Johnston, to accept the recommendations of staff regarding the purchase of a 750 gallon hydropneumatic bladder-type surge tank and a) accept the bid received from Pulsco, Inc. who submitted a bid in the amount of $48,300.00, and b) authorize the execution of an agreement between the City of Pocatello and Pulsco, Inc. in the amount of $48,300.00, subject to Legal Department review. Upon roll call, those voting in favor were Moore, Johnston, Adamson, Bray, Brown and Orr.

AGENDA ITEM NO. 13 ADDENDUM TO STATE/LOCAL AGREEMENT(PROJECT DEVELOPMENT) –INTERSECTION OF ALAMEDA ROAD AND JEFFERSON AVENUE		Council was asked to authorize execution of an addendum to an agreement between the State of Idaho and City of Pocatello for the Intersection of Alameda Road and Jefferson Project, subject to Legal Department review. This addendum allows for City staff to complete engineering designs of the federal aid project. Construction of safety improvements for the intersection is anticipated to begin in Fiscal Year 2017.

Previously paid cash contributions and force account engineering design will offset the local match. This addendum will not cost the City additional funds.

A motion was made by Ms. Adamson, seconded by Mr. Orr, to authorize execution of an addendum to an agreement between the State of Idaho and City of Pocatello for the Intersection of Alameda Road and Jefferson Project, subject to Legal Department review allowing for City staff to complete engineering designs of the federal aid project. Upon roll call, those voting in favor were Adamson, Orr, Bray, Brown, Johnston and Moore.

AGENDA ITEM NO. 14 DISCUSSION ITEMS		Idaho Lorax, Pocatello resident, shared his concerns regarding possible environmental contaminants and radioactive detection equipment. He feels the equipment would be beneficial for various individuals.

There being no further business, Mayor Blad adjourned the meeting at 6:39 p.m.

APPROVED:

_____
BRIAN C. BLAD, MAYOR

ATTEST:

_____
RUTH E. WHITWORTH, CMC, CITY CLERK

PREPARED BY:

_____
KONNI R. KENDELL, DEPUTY CLERK

3(e)

CITY COUNCIL DECISION
FINAL PLAT APPROVAL
MARTINEZ ESTATES SUBDIVISION

Martin Martinez, as the sole vested Owner and Developer, and represented by Summit Land Surveying, submitted a proposal to subdivide approximately .94 acres (more or less) into two (2) residential lots which are zoned Residential Medium Density Single Family (RMS) density. The proposed subdivision is east of Gathe Road and both lots will have frontage access from Aspen Lane.

This matter came before City Council at its regularly scheduled meeting on October 6, 2016, where the City Council approved the plat for the Martinez Estates Subdivision and authorized City staff to sign the plat, subject to the following conditions:

1. All conditions set out in the Public Works Department Memorandum from Merril Quayle, P.E. dated, September 22, 2016, attached hereto and incorporated herein, as Exhibit "A" shall be met.

2. Any proposed Subdivision Covenants, Conditions and Restrictions (CCR's) shall be submitted to the City for review and approval by the Legal Department prior to recording.

3. All corrections to the preliminary plat which were noted by City Staff shall be made prior to submittal of the final plat.

4. All other standards and conditions of Municipal Code not herein discussed but applicable to residential development shall apply.

Notice is hereby given that applicant has the right to challenge this Decision and request a regulatory taking analysis pursuant to Idaho Code Section 67-8003 within 28 days after this Decision.

DATED this 17th day of November, 2016.

CITY OF POCATELLO, a municipal corporation of Idaho

_____
BRIAN C. BLAD, Mayor

ATTEST:

_____
RUTH E. WHITWORTH, City Clerk

STATE OF IDAHO)
ss:
County of Bannock)

On this _____ day of November, 2016, before me, the undersigned, a Notary Public for the State, personally appeared Brian C. Blad and Ruth E. Whitworth, known to me to be the Mayor and City Clerk, respectively, of the City of Pocatello, and acknowledged to me that they executed the foregoing instrument for and on behalf of said municipal corporation and that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the date and year in this certificate first above written.

(SEAL)

_____
NOTARY PUBLIC FOR IDAHO
Residing in: _____
My commission expires: _____

Engineering Department
911 North 7th Avenue P.O. Box 4169
Pocatello, ID 83205-4169
Phone (208) 234-6225 Fax (208) 234-6151

EXHIBIT
A

Memorandum

To: Dave Foster, Associate Planner

From: Merril Quayle P.E. Public Works/Development Engineer MQ

Date: September 22, 2016

Re: Martinez Subdivision (City Council 10-6-16 Agenda)

The Public Works Department has reviewed the plat for the above mentioned project and submits that the following changes or corrections shall be made.

1. **Plat**
   a. Prior to recording the Plat a more inclusive and comprehensive review shall be done, coordinate all plat correction through Mark Jensen, City of Pocatello City Surveyor.
   b. Subdivision plat shall conform to all state and local laws and ordinances.
   c. Notes on the plat shall be approved by the City of Pocatello City Surveyor and Legal Department prior to recording.
   d. Clarify if there is any CCR's associated with this plat. If there are CCR's they need to be submitted for review by the City Legal Department.
   e. Provide adjoining property owners recorded deeds, a copy of all recorded easements and document(s) which grants the signatory to sign the plat on the behalf of the owner(s) to the City Surveyor for final review.
   f. The plat shall be black opaque ink, no gray scale or color.
   g. The plat shall be reproducible on an 8.5x11 sheet of paper per Bannock County instructions.

2. **Infrastructure Comments**
   a. There will be no right-of-way dedication associated with this plat.
   b. Developer to sign a Real Covenant pertaining to curb, gutter, sidewalk and asphalt patch back placement at a future date or the Developer may choose to place the curb, gutter, sidewalk and asphalt patch back at the time of the home construction on both proposed lots. If constructed, will need engineering design and plans for improvements.
   c. Provide written documentation from the Oaktree Manor Home Owners Association allowing connection to the private line.
   d. Water main exists in right-of-way. Will require water service to new home to be constructed at the time of home construction.

3(f)

CITY COUNCIL DECISION
FINAL PLAT APPROVAL
JUNIPER RESERVE DIVISION 1

Juniper Land Corporation, as the sole vested Owner and Developer, and represented by Rocky Mountain Engineering & Surveying, submitted a proposal to subdivide approximately 9.3 acres (more or less) into sixteen (16) residential lots which are zoned Residential Low Density. The proposed subdivision is east of Stoneridge Drive and has access via Shadowpines Way.

The Planning and Zoning Commission (P&Z) reviewed the plat at its meeting held April 27, 2016, and thereafter recommended approval of the plat subject to a number of conditions. City staff also recommended approval of the plat subject to conditions.

This matter came before City Council at its regularly scheduled meeting on November 3, 2016, where the City Council approved the plat for the Juniper Reserve Division 1 Subdivision and authorized City staff to sign the plat, subject to the following conditions:

1. All conditions set out in the Public Works Department Memorandum from Merril Quayle, P.E. dated, October 18, 2016, attached hereto and incorporated herein, as Exhibit "A" shall be met.

2. All requirements of Pocatello Municipal Code listed below shall be adhered to, specifically:

A. Section 16.24.080 "Recording the Final Plat";
B. Section 16.24.100 "Structures, Improvements and Building Permits";
C. Section 16.24.110 "Subdivision Surety Bond and Warranty Bond"; and
D. Section 17.05.140 "Site and Building Development Guidelines".

3. Any proposed Subdivision Covenants, Conditions and Restrictions (CCR's) shall be submitted to the City for review and approval by the Legal Department prior to recording.

4. All corrections to the preliminary plat which were noted by City Staff shall be made prior to submittal of the final plat.

5. All other standards and conditions of Municipal Code not herein discussed but applicable to residential development shall apply.

Notice is hereby given that applicant has the right to challenge this Decision and request a regulatory taking analysis pursuant to Idaho Code Section 67-8003 within 28 days after this Decision.

DATED this 17th day of November, 2016.

CITY OF POCATELLO, a municipal corporation of Idaho

_____
BRIAN C. BLAD, Mayor

ATTEST:

_____
RUTH E. WHITWORTH, City Clerk

STATE OF IDAHO)
ss:
County of Bannock)

On this _____ day of November, 2016, before me, the undersigned, a Notary Public for the State, personally appeared Brian C. Blad and Ruth E. Whitworth, known to me to be the Mayor and City Clerk, respectively, of the City of Pocatello, and acknowledged to me that they executed the foregoing instrument for and on behalf of said municipal corporation and that said municipal corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the date and year in this certificate first above written.

(SEAL)

_____
NOTARY PUBLIC FOR IDAHO
Residing in: _____
My commission expires: _____

Public Works
911 North 7th Avenue P.O. Box 4169
Pocatello, ID 83205-4169
Phone (208) 234-6225 Fax (208) 234-6151

EXHIBIT
A

Memorandum

To: Matt Lewis, Planning Division Manager

From: Merril Quayle PE, Public Works/Development Engineer MB

Date: October 18, 2016

Re: Juniper Reserve Division 1 – City Council Final Plat 11/03/2016

The Public Works Departments have reviewed the final plat/construction drawings application for the above mentioned project and submits that the following changes and items shall be addressed prior to beginning construction.

1. **Plat**
   a. Prior to recording the Plat a more inclusive and comprehensive review shall be done, coordinate all plat correction through Mark Jensen, City of Pocatello City Surveyor.
   b. Subdivision plat shall conform to all state and local laws and ordinances.
   c. Notes on the plat shall be approved by the City of Pocatello City Surveyor and Legal Department prior to recording.
   d. Replace note 2 Easements not depicted:
   All lots in this subdivision are subject to a drainage easement equal to the primary structure setback line along all lot lines. Lots must be graded and maintained so as to minimize drainage to adjoining properties.
   e. The City of Pocatello certificate to read: The plat on which this certificate appears is hereby approved and the dedications are hereby accepted by the City of Pocatello…
   f. Change the Suffix on Stacy from Circle to such as Place, Court.
   g. The boundary of the subdivision shall be marked with 5/8" rebar and stamped 2" aluminum cap.
   h. CCR"s shall be submitted to the City for review and approval prior to recording.
   i. Provide adjoining property owners recorded deeds, a copy of all recorded easements and document(s) which grants the signatory to sign the plat on the behalf of the owner(s) to the City Surveyor for final review.
   j. The plat shall be black opaque ink, no gray scale or color.
   k. The plat shall be reproducible on an 8.5x11 sheet of paper per Bannock County instructions.

2. **Construction Plans/Infrastructure**
   a. Sheet C-5.2 add rock check dam locations (access road drainage) along with where to find the detail 1006-D. With the extension of this subdivision there needs to be access to the lower pond found on Lot 4 Block 4 Partridge Ridge Subdivision 6th Addition. Temporary turnarounds need minimum 12.5 foot radii or 35 foot width.
   b. Sheet C-5.3 Hammerhead should be 4% maximum grade and temporary turnarounds need minimum 12.5 foot radii or 35 foot width.
   c. Sheet C-6.1 remove the word Profile from the title box.

d. Sheet C-6.2 Pavement joint to extend full width of the roadway between subdivisions. Pipe anchors are required on new 24 inch stormwater line with 602-H1 inlet structure. Outlet structure 602-H2 not 602-A. There will need to be an easement placed on the plat for the access road pond located on Lot 1 Block 3.
e. Sheet C-6.3 ADA ramp at Lot 4 Block 3 shall not be in conflict with future driveway there shall be a minimum of 10 feet separation measured from top of wings. Mail box unit to be moved to the west near the PC and not on the midpoint of curb.

f. Sheet C-6.4 install sewer main at 90 degrees or show design supporting alignment for future roadway.
g. Sheet C-6.6 the placement of the proposed fire hydrant appears it may be in conflict with future lot frontage, may look at moving it more to the southeast.
h. Sheet C-7.1 thru C-7.4 text size is too small cannot read.
i. Sheet C-7.4 Special fill & compaction requirements shall be established under the outlet structure. Insure a flexible connection at outlet structure and MH.
j. Sheet C-9.0 Driveways for Lot 4 & 6 Block 2 are acceptable as shown, Lot 5 Block 2 will be the only driveway allowed in the hammerhead. There will be no parking allowed in the hammerhead.
k. See attached ITD drawing 614-3; add detail showing flowline Profile Detail and add a note to pivot throat of ADA at midpoint.
l. Stormwater Drainage report needs to verify that Basin A (Partridge Ridge Subdivision 7th Addition) was part of the overall calculations. And submit the findings or corrected report.
m. In the typical street sections add a section for the pond access roads meeting the Portneuf Valley Stormwater Manual and ISPWC. Roadway drainage shall be addressed. Also on sheet D-1.1 look at typical cross section mark-ups.
n. There appears to be several sections of PVC pipe drawn with horizontal and vertical curves. Pipe fittings shall be used to make horizontal and/or vertical curve adjustments that will exceed one degree per pipe joint in PVC pipe. Deflection within the PVC pipe sections shall not be accepted.
o. The 1997 uniform building code appendix chapter 33 section 3309 "excavation and grading" shall be followed. For example if grading is in excess of 5,000 cubic yards then a soils engineering report and engineering geology report shall be required at the time of final application.
p. Filing of a notice of intent (NOI) and a formal Storm Water Pollution Prevention Plan (SWPPP) in accordance with the Environmental Protection Agency (EPA) Construction General Permit (CGP) shall be submitted if the project requires, if required then a copy shall be submitted to the City.
q. At the time of construction the sediment and erosion control plan must bear the signature and certification number of the individual who has successfully completed an approved training course and who has demonstrated competence, through education, training, and knowledge of the applicable laws and regulations in erosion and sediment. The sediment and erosion control plan shall meet the requirements of the federal construction general permit.
r. Stormwater design and construction shall meet the core elements in the Portneuf Valley Stormwater Design Manual such as but not limited to; on site retention of the 95% storm, treatment Design (volume, flow, and bypass), site passage of upland flow and site runoff, Operation and Maintenance Manual, access to pond and structures.
s. As-Built Drawings shall be submitted on Arch D (24" x 36").
t. A "will serve" letter from each serving utilities is required to be submitted to the City.
u. Utility and street light approval is required by the City.
v. US Mail box units required and location approved by the Post Master and the City of Pocatello.
w. Provide a copy of the bid schedule of the infrastructure for the City's year end reporting.

6

AGENDA ITEM NO. _____

EXECUTIVE SUMMARY
2901 TRAPPER COURT – REVOCABLE USE LICENSE

TO: Mayor Blad and City Council Members
FROM: Merril Quayle, P.E., Public Works/Development Engineer MQ
DATE: Meeting Date – November 17, 2016
SUBJECT: 2901 Trapper Court – Revocable Use License

REQUEST

Tiago Rodriguez (mailing address: 2901 Trapper Ct Pocatello, Idaho 83201) request a use license to plant grass, minimal landscaping and irrigation on a 20 foot wide easement adjacent to his property and located on Lot 19 Block 2 High Country Subdivision belonging to the City of Pocatello. Mr. Rodriguez will improve this area at his expense.

Back Ground
Lot 19 Block 2 High Country Subdivision was dedicated to the City of Pocatello and recorded as instrument number 94012095 at Bannock County July 1, 1994. There is a twenty (20) foot wide easement behind and adjacent to Lot 3 Block 2 (2901 Trapper Ct.) for public utilities, roadway slopes, and drainage and to date has not been used for such. Mr. Rodriguez would like to extend his grass and irrigation to increase the buffer between the juniper trees, gully and his house.

STAFF RECOMMENDATION

Staff evaluated the request and recommends allowing the revocable use license with the following conditions;

1. The Grantee shall plant, cultivate, irrigate and maintain the property in a manner which will deter the accumulation of trash and weeds upon the property in accordance with applicable Pocatello Municipal Code provisions.

2. Prior to any planting, Dig Line shall be contacted for the location of existing utilities.
3. In the event Grantee grades the City's property in the process of landscaping Grantee shall submit a plan for review and approval by the City, which plan shall include provisions for sediment, storm water, and erosion control.
4. The Grantee shall provide public liability insurance coverage in the amount of Idaho Tort Liability Limits (currently $500,000.00) to indemnify the City from any claims which might arise out of the Grantee's use of the City's property. Proof of such coverage must be provided annually; failure to do so will result in termination of this License. Grantee agrees to hold the City harmless from any and all claims or damages arising from the use of the City's property.
5. All improvements made and maintenance required on said property shall be at Grantee's expense.
6. Grantee agrees and understands that the use under this License is limited to landscaping improvements and that no temporary or permanent structure of any kind may be placed on the property without prior written permission by the City.
7. This License is revocable and shall be terminated upon sixty (60) days written notice if it is determined by the Grantor that it is in the City's best interests that said License should be revoked. Grantee may terminate this License upon sixty (60) days written notice to the City.

Sanitation Department
1121 South 2nd Avenue
Pocatello, Idaho 83201
208.234.6192
208.234-6193
Fax 208.234.6155

MEMORANDUM

TO: Mayor Blad and City Council members

FROM: Arlyn Rasmussen, Sanitation Superintendent

DATE: October 26, 2016

RE: Request to piggyback bid

I have two (2) automated collection trucks scheduled for replacement in the FY'17 budget. I`ve contacted Jackson Group Peterbilt and Solid Waste Systems to see if they would allow us to piggyback the competitive bid made by the City of Idaho Falls in February 2015. The Sanitation Department piggybacked this bid for the purchase of two (2) automated trucks in FY16 and both parties have agreed to honor that bid again.
Per truck bid price is $272,455.47 for a 2018 Peterbilt 320 cab/chassis and a Labrie Automizer packer body.
The total cost for (2) $544,910.94

Typically the new model years will increase by 2%, piggybacking this bid would allow the department to purchase 2018 trucks at the 2016 price, saving 4% or an estimated $21,700.00 in increases associated with the new model year.

I am requesting Mayor and Council to authorize me to piggyback the purchase of **two (2) 2018** automated collection trucks from that bid.

Funds for the purchase are in the Sanitation FY17 budget.

MEMORANDUM

TO: Brian C. Blad, Mayor; Members of the City Council
FROM: Rich Diehl, Deputy City Attorney
RE: Sanitation Department's Automated Collection Truck Bid Award (Piggyback)
DATE: November 1, 2016

I have reviewed the documents which pertain to the Sanitation Department's Bid Award for two (2) Automated Collection Truck Bid and they are in order. This truck will be purchased via a "piggyback" on a City of Idaho Falls award in February 2015. This practice is in conformance with the Idaho Code.

It is appropriate to follow the recommendations of Arlyn Rasmussen, Superintendent of Sanitation. If you have any questions, please feel free to contact me.

October 26, 2016

Pocatello City Sanitation Dept.
Attn: Arlyn Rasmussen
1121 South 2nd Ave.
Pocatello, ID 83201

Dear Arlyn,

Jackson Group Peterbilt will allow Pocatello City to "Piggyback" last year's purchase of two new Peterbilt 320's for the same purchase price of $272,455.47 each. If you have any questions please don't hesitate to give me a call. Thanks!

Thank you,

Doug

Doug Jarvis

Jackson Group Peterbilt

1910 S. 5500 W.

Salt Lake City, UT 84104

801-486-8781

City of Idaho Falls

P. O. BOX 50220
IDAHO FALLS, IDAHO 83405
PHONE: (208) 612-8433
FAX: (208) 612-8536

Office of Purchasing Agent

Opening Date: February 12, 2015

TABULATION BID IF-15-06

Two (2) New 2015 or Newer Automated Side Load Refuse Container Body, Minimum 31 Cubic Yard Mounted on Two (2) New 2015 or Newer Cab and Chassis (CIF Units #7028 and #7029)

BIDDER	1) Western Systems Spokane Valley, WA	2A) Idaho Falls Peterbilt Idaho Falls, ID	2B) Idaho Falls Peterbilt Idaho Falls, ID	3A) Schow's Truck Center Idaho Falls, ID	3B) Schow's Truck Center Idaho Falls, ID
REFUSE CONTAINER BODY	**NO BID**				
Manufacturer		Labrie	Kann	Labrie	Labrie
Model		Automizer	28 Yard SLA	Automizer	Automizer
Year		2015	2015	2015	2015
CAB AND CHASSIS					
Manufacturer		Peterbilt	Peterbilt	Crane Carrier	Crane Carrier
Model		320	320	LET2-46	LET2-46
Year		2016	2016	2015	2015
Delivery Time of Complete Unit		150 to 180 Days ARO	150 to 180 Days ARO	225 Days ARO	225 Days ARO
Price Per Each Without Trade-Ins		$272,455.47	$244,660.00	$318,420.00	$312,420.00
Extended Price Without Trade-ins		$544,910.94	$489,320.00	$636,840.00	$624,840.00
Trade-in Allowance #7036		$12,000.00	$12,000.00	$9,500.00	$9,500.00
Trade-in Allowance #7038		$12,000.00	$12,000.00	$9,500.00	$9,500.00
TOTAL PRICE WITH TRADE-INS		**$520,910.94**	**$465,320.00**	**$617,840.00**	**$605,840.00**

8

MEMORANDUM

TO: Brian C. Blad, Mayor; Members of the City Council
FROM: Rich Diehl, Deputy City Attorney
RE: Police Department purchase/trade of Firearms with Salt Lake Wholesale
DATE: November 8, 2016

I have reviewed the documents which pertain to the PPD's proposed purchase/trade of certain firearms and they are in order. The City of Pocatello has done this practice before with Salt Lake Wholesale. It is my recommendation that the Council authorize the purchase/trade of the fifteen (15). The monies for this purchase have been previously budgeted. If you have any questions, please feel free to contact me.

SALT LAKE WHOLESALE SPORTS

3331 S. 300 West Salt Lake City, UT 84115
(801) 485-4867 / (800) 248-4867 Fax: (801) 485-7873
slw@qwest.net www.saltlakewholesalesports.com

MASTER LAW ENFORCEMENT DISTRIBUTOR

QUOTATION FOR PRODUCTS / SERVICES

Pocatello City PD
Attn: Russell Gunter
(208) 234-6100
rgunter@pocatello.us

Ship to: Pocatello City PD
Attn: Russell Gunter
911 North 7th Avenue
Pocatello, ID 83201

Billing: Standard Net 30 day Terms

Shipping: See below.

Mr. Gunter,

Please take a look at the pricing requested below. Let me know if you have any questions. Thank you very much for your business.

Item #	Description	Rds / Case	# of units	Pricing ea.	TOTAL
	RETURN FOR CREDIT				
Glock 21 N/S Gen3 USED	Glock 45 auto full-size pistol, Short Frame with Night Sights, 3 magazines, and a case.	---	15	($300.00)	($4,500.00)
	FOR PURCHASE				
Glock 21 GNS Gen4	Glock 45 auto full-size pistol, Glock Night Sights, 3 magazines, case	---	15	$474.00	$7,110.00
Shipping	Not Included		1	TBD	
TOTAL					**$2,610.00**

Respectfully,

Jordan Mitchell, Northern Territory Manager
Salt Lake Wholesale Sports

Thursday, November 03, 2016

PORTNEUF RIVER

VISION STUDY DRAFT

November 2016

Our vision is to restore the Portneuf River corridor in order to revitalize environmental, recreational, and economic opportunities while increasing community pride, connectivity, and quality of life.

Purpose and Scope

The Portneuf River originates in the northern portion of the Portneuf Range, within the Fort Hall Indian Reservation, home to the Shoshone-Bannock Tribes. Meandering for 124 miles through Bingham, Caribou, Bannock, and Power Counties, its watershed drains around 1,300 square miles of land in southeastern Idaho and provides important habitat for fish and wildlife species, recreational opportunities, and irrigation for farming. However, heavy alterations to the river corridor over time have compromised the health of this ecosystem and reduced the benefits and services it provides .

The Portneuf River Vision Study integrates existing policies, plans, and innovative ideas into a single vision, outlining goals and recommendations for improved river corridor management, and identifying opportunities for improvements and restoration. Its recommendations are based on the community's ecosystem health, recreation, access, community engagement, and economic development goals.

Working in concert with other planning efforts within the watershed, the Vision Study describes a shared community vision and should be used to inform future planning and project implementation.

Recommendations are strictly voluntary, and are non-binding on landowners and land managers. Implementation is contingent on these voluntary actions, future rule-making, planning, and available funding through various governmental agencies, non-profit organizations, and public-private partnership entities.

The Vision Study is intended to be a living plan, responsive to evolving scientific understanding and changes in community attitudes and preferences.

The geographic scope of the Vision Study extends along the Portneuf River corridor from the Portneuf Gap to the Fort Hall Indian Reservation boundary upstream of Siphon Road, and includes the tributary streams. Within this boundary, the River runs through the City of Pocatello and parts of Bannock and Power Counties, and includes the congressionally-authorized Portneuf Flood Reduction Project constructed by the US Army Corps of Engineers (Corps) in the 1960s. For the purposes of this Vision Study, the River has been divided into four separate river reaches.

Doug Lindley, Idaho State Journal | Concrete Channel

Study Reaches

The geographic scope of the Vision Study is the Portneuf River corridor, extending from the Portneuf Gap (Fort Hall Mine Road) to the Fort Hall Indian Reservation boundary upstream of Siphon Rd.

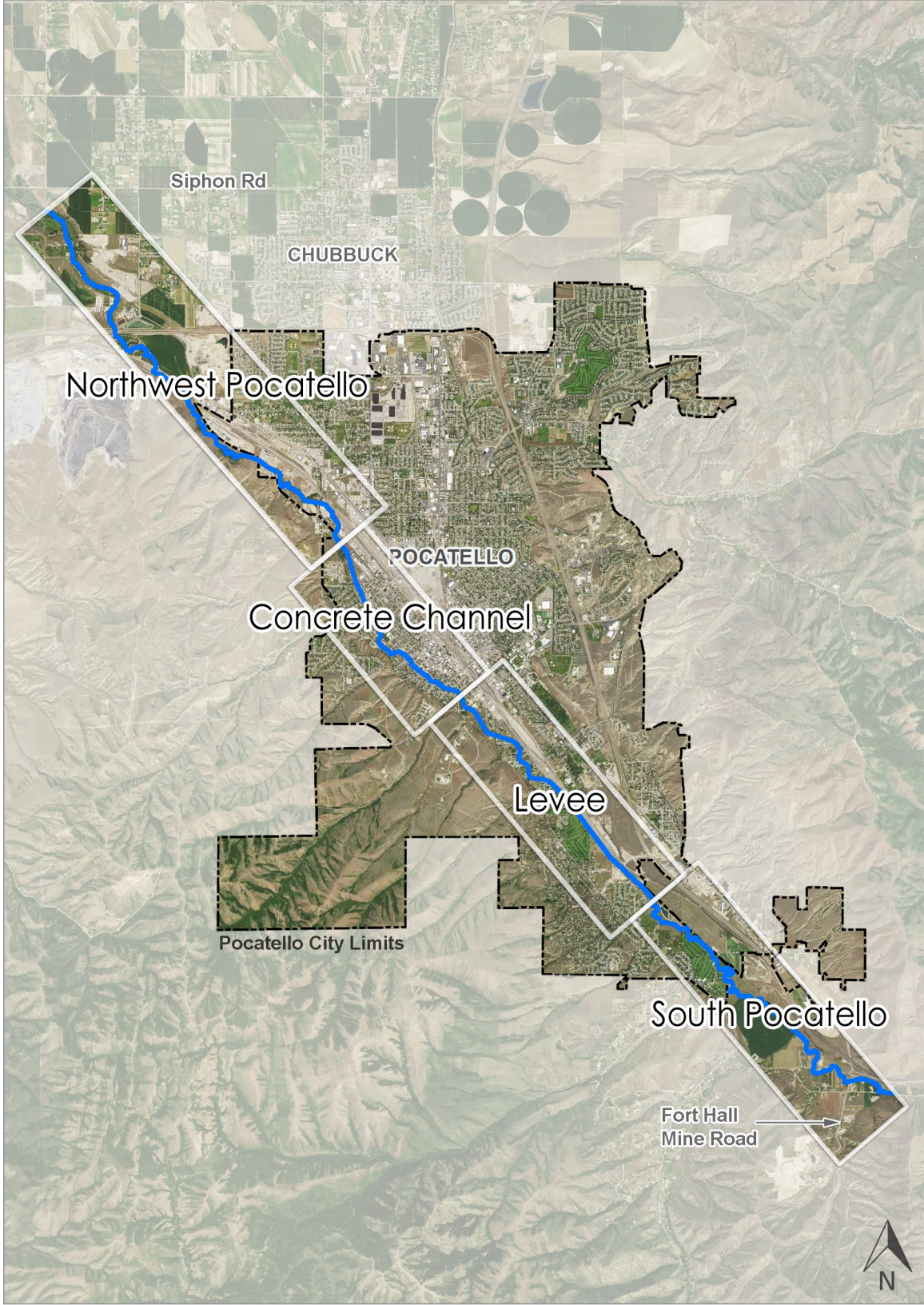
South

Approximately 7.5 miles in length, this reach runs north from the Portneuf Gap to Edson Fichter Nature Area (Bannock Highway and Cheyenne Avenue) through a mix of agricultural and suburban development. Mink, Gibson Jack, and Johnny Creek flow into this reach of the Portneuf.

Prior to construction of the railroad in the late 1800s, the Portneuf River meandered across the valley throughout this reach, bounded only by the lava cliffs to the east and the toe of the foothills to the west. Today the River is constricted into a much narrower band, and meanders between the railroad tracks and the toe of the west bench.

Edson Fichter Nature Area, Juniper Hills Golf Course, and an isolated stretch of the Greenway provide recreational opportunities within this River reach.

Ralph Maughan | Upstream From Edson Fichter Nature Area



Study Reaches, Continued...

Levees

The levee reach is comprised of riprap channel and earthen levees that run about 4.7 miles from Edson Fichter Nature Area to Halliday Street, where the concrete channel begins.

Following construction of the federal flood control project in 1968, the land along this reach was transformed from agricultural to residential use, and is now removed from the 100-year floodplain. Historically, this section of the River flooded every few years during spring runoff.

The trapezoidal levees removed several river meanders and are limited in vegetation due to levee safety standards. These factors contribute to elevated water temperatures, reduced riparian habitat and sedimentation.

Edson Fichter Nature Area, Centennial/Rainey Park, Riverside Golf Course, and a section of Greenway provide recreation to the area.

Concrete Channel

This reach, approximately 1.5 miles in length, flows north from Halliday Street to Sacajawea Park. Development near Raymond Park and Irving Middle School encroached on the floodplain resulting in occasional but significant flooding most recently in 1962 and 1963.

In response to the flooding, in 1968 the Corps constructed a concrete flood control channel and associated levees to hold a flood up to 6,000 cfs.

Lacking vegetation, the straight, deep concrete channel provides no habitat for fish, wildlife, or other species.

Currently no access is granted to the public in this reach due to life safety risks.

Both Raymond Park and Memorial Park are within this reach, as are two sections of the Greenway (from Raymond Park to Sacajawea Park, and from Old Town to City Creek). City Creek enters the Portneuf at the upstream portion of this reach.

Northwest

Approximately 8 miles long, this reach encompasses Sacajawea Park (at Gathe and Oakwood Drive) to the boundary of the Fort Hall Indian Reservation. Development along this portion of the Portneuf River is a mixture of natural areas interspersed with industry, agriculture, and a few older residential homes.

Historically, a large section of this reach supported a cottonwood forest. Upstream water use, which reduces summer flows in the Portneuf by about 75% in the Pocatello area, has severely impacted the forest. Today, significant bank erosion occurs due to channelization upstream and within the reach.

Sacajawea Park, as well as Greenway trails from Sacajawea Park to the Pacific Recycling Trailhead and from the Abraszewski Trailhead to Simplot provide recreation in the area. Batiste Bridge is also a popular place to fish, due to the influx of cool spring water in this area.

Corps| Levee

City of Pocatello | Concrete Channel

City of Pocatello | Sacajawea Park Bridge

Planning Process

The Vision Study was a collaborative planning process led by the US Army Corps of Engineers (Corps) and the City of Pocatello. Significant public input made this collective vision for the Portneuf River possible.

Corps | Working Group Meeting

Efforts to engage the public in the visioning process were diverse, numerous, and successful.

To better understand existing River conditions, public perceptions and current challenges within the Study area, stakeholder assessments and existing condition surveys were conducted. Residents engaged with and commented on this information through photos and interactive maps on the Vision Study website. Numerous presentations to residents provided additional opportunities for sharing and learning.

A Working Group of local landowners along the River, community leaders, scientists, engineers, and planners, synthesized public input gathered in winter 2016 to develop Goals and Recommendations, as well as a list of Potential Projects that would meet the community's desires for the River. The Potential Project list was refined and prioritized in spring 2016, following additional community input.

By engaging the public throughout the process, the Vision Study Working Group was able to identify issues important to the public and develop recommendations likely to succeed. Overall the Working Group strived to create a vision that accurately describes the community's needs and inspires its support.

Public Involvement

Extensive efforts were made to involve the public throughout the duration of the visioning process. Thousands of community members participated and provided valuable input and insights about the Portneuf River's history, current conditions, and possibilities for the future.

Summary of public engagements

Presentations Given (over 600 attendees):

- Bannock Civitans
- Pocatello City Council
- Centennial Rotary Club
- City staff
- Gate City Rotary Club
- Idaho Museum of Natural History (2)
- Levee residents
- MILES Adventure Learning teachers
- NeighborWorks Board
- New Knowledge Adventures (2)
- Old Town residents (2)
- Parks and Recreation Advisory Board
- Pocatello Rotary Club
- Sagebrush Steppe Land Trust Board
- Valley Pride

Events (over 500 people engaged):

- Welcome Back Orange and Black
- Portneuf Valley Environmental Fair
- Irving Middle School Science Fair

Open Houses (over 150 attendees):

- February 2016
- May 2016
- October 2016

Online Surveys (over 1000 participants)

- February 2016
- May 2016

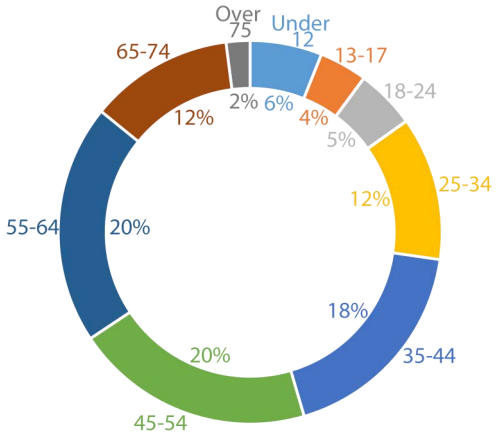
Press and Additional Outreach:

- Stakeholder Assessment
- Working Group of stakeholders
- Website and interactive map development
- 2000 flyers hung on Old Town resident doors for the 1st two Open Houses
- Letters mailed to levee residents
- Newspaper ads for each Open House
- TV ad for the 1st Open House
- Local newspaper, TV and radio coverage
- Email and social media engagement
- River Gathering and temporary art installations
- One-on-one conversations

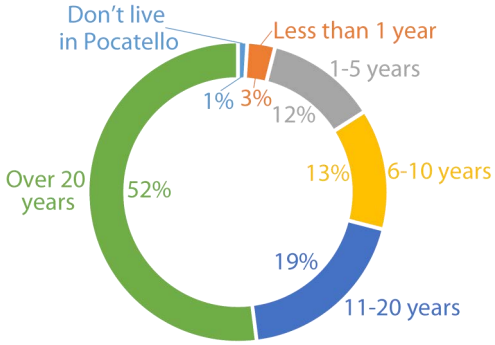
City of Pocatello | Environmental Fair

Visual Preference Survey Demographics

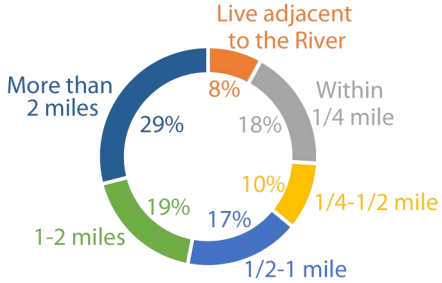
How Old Are You?



How Long Have you Lived in Pocatello?



How close do you live to the Portneuf River?



Desired Future

Consistently throughout the visioning process, residents of the Lower Portneuf Valley prioritized a future for the Portneuf River that improves water quality and ecosystem health and enhances recreation and access to the Portneuf.

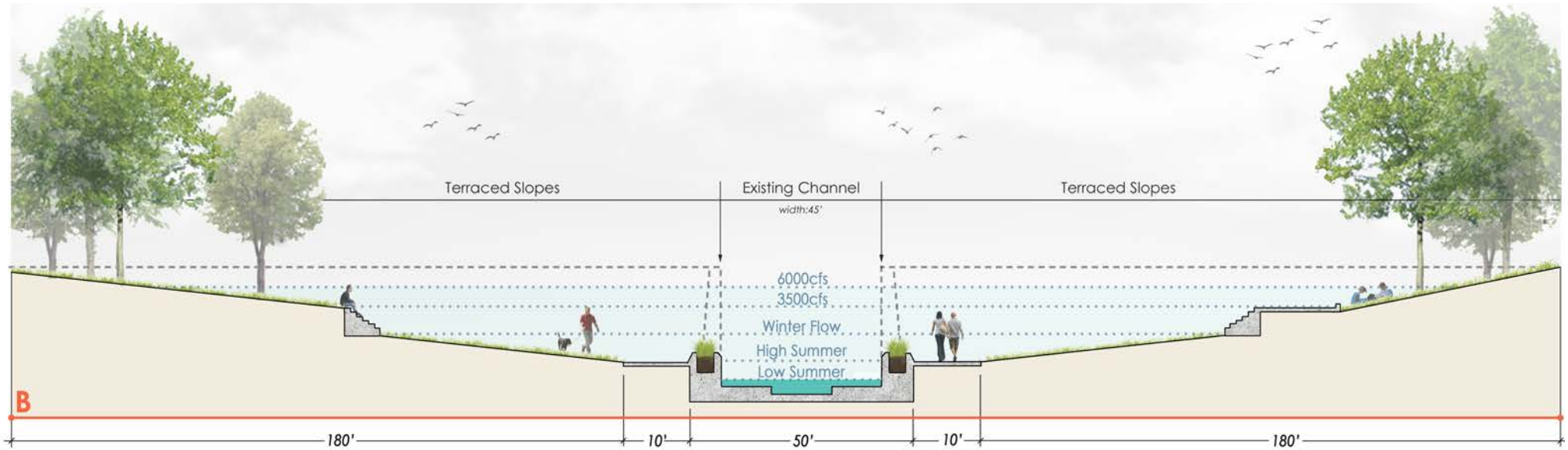
Local residents want a healthy river and riparian ecosystem, with diverse recreational opportunities. Residents want trails for walking and biking as well as natural areas for viewing wildlife. Other important values include flood control, safety, and planning and development. While perceptions and rankings of various Potential Projects showed some variation between community members, there was significant consistency regarding future direction.

Specifically, community members feel that the City should improve the health of the Portneuf River ecosystem and increase river access and recreation opportunities, while taking care to ensure that implemented projects are feasible and fit with local community and ecosystem conditions, including winter flood events, low-water summer flows, water quality concerns, and financial and landownership constraints.

Top Community Priorities:

1. *Water Quality and Ecosystem Health*
2. *Recreation and Access*

Raymond Park Concept Cross Section, looking downstream

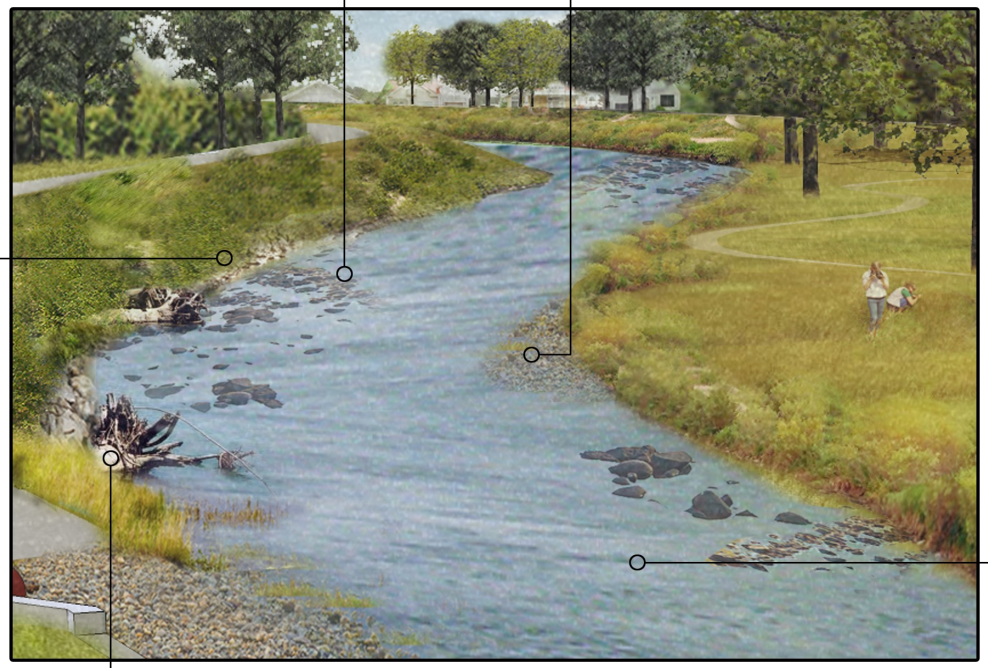


Ecosystem Health

The future Vision of the Portneuf River is to restore a functioning River corridor that provides sustainable habitats, increases the amount of floodplain, improves water quality, and connects users with the River. In order for the Vision to be realized, natural river functions must be restored.

Riffles—Area of elevation change with swift currents that provide oxygen, critical fish spawning habitat, and aquatic insects for fish to eat.

Point Bars—Occur on the inside of meanders formed by the deposition of sand and gravel. Point bars offer access to the River and spots to land canoes and kayaks.



Bioengineered Banks—Dense plantings of native grasses, shrubs, and trees used to stabilize streambanks.

Deep Pools—Deeper areas of the stream that offer refuge for fish during warm weather periods and make ideal fishing spots.

Large Woody Debris—Helps stabilize riverbanks and provide important habitat for fish and aquatic insects.

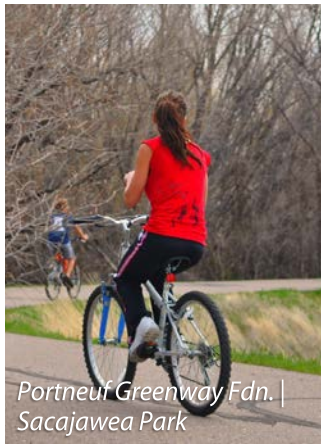
Recreation and Access

Residents re-envisioned the future of the Portneuf River as a vibrant and valuable regional resource for all citizens to enjoy.

Popular activities include:

- **Wildlife and nature viewing**
- **Wading**
- **Fishing**
- **Floating/tubing/kayaking/SUPing**
- **Biking**
- **Walking**
- **Picnicking**
- **Playing with family and friends**
- **Relaxing**

Rebecca O'Neill | Double Crested Cormorant



Portneuf Greenway Fdn. | Sacajawea Park

Rebecca O'Neill | Muskrat

Will Belcher | Mill River Park CT

Doug Lindley, Idaho State Journal | Lava Hot Springs

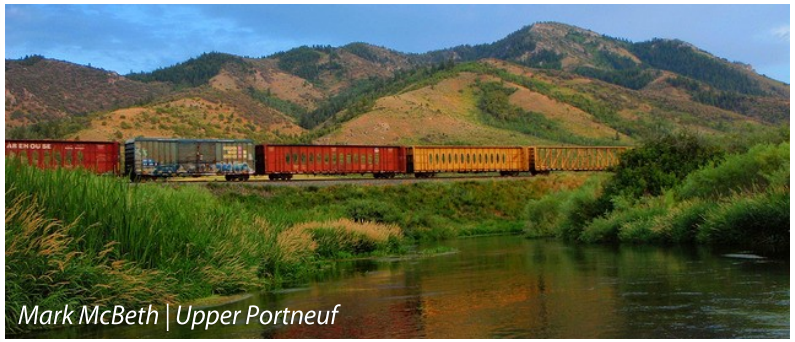
City of Pocatello | Raymond Park

Guiding Principles

In accordance with community preferences, the Vision Study is based on four overarching guiding principles: ***1)*** *ecosystem health;* ***2)*** *access and recreation;* ***3)*** *community engagement; and* ***4)*** *economic development.*

Guiding Principle 1: Ecosystem Health

As a long-term goal, the River's ecological and hydrological functions can be restored through restoration of the riparian corridor and floodplain, including removal/modification of the concrete channel through Pocatello, where feasible. Alternatives for flood risk management would be necessary to protect and maintain urban development, but removing the concrete channel would provide long-term benefits to the entire River corridor. Additionally, improvements to urban runoff and upstream water quantity and quality are critical for improving ecosystem health and associated recreational opportunities within the Vision Study area.



Mark McBeth | Upper Portneuf

Ernest Keeley | Yellowstone Cutthroat

Guiding Principle 2: Access and Recreation

Creating and extending safe public access to the Portneuf River would benefit the entire Portneuf River Valley. This includes a continuous greenway linking a series of non-motorized paths to the River, public open space, residential areas and downtown. Signage, bridges, and other such elements could help revitalize the community's perceptions of the River. Key components include visual, walking, and boating access to the river itself.

Hannah Harris | Edson Fichter Nature Area

Brandon Morrison | Concrete Channel Fishing

Guiding Principle 3: Community Engagement

As recommendations are adopted and implementation begins, residents should participate in the community planning process to identify land uses (e.g., recreation, commercial development, or open spaces) appropriate and compatible to specific project areas.

Idaho Adventure | Beaver Dam

City of Pocatello | Storm drain Marking

Guiding Principle 4: Economic Development

Vision Study recommendations should improve the quality of life for valley residents, enhance the attractiveness of Pocatello as a place to live and work, and increase economic prosperity.

Core elements of this idea include community empowerment by encouraging participation and consensus-building; creating opportunities for sustainable economic reinvestment; and adding value and providing an equitable distribution of opportunities to underserved neighborhoods along the Portneuf River.

Sasaki Associates Inc. | Wilkes-Barre, PA

Goals and Recommendations

Guiding Principle 1: Ecosystem Health

Goal 1.1 Appropriate Flood Risk Management

- The City, in partnership with the Corps, will not permit improvements that compromise existing flood risk management.
- Pursue non-structural measures such as increasing floodplain acreage upstream of the City, and implement land management practices that reduce winter runoff.
- Onsite stormwater management through natural landscape features and green stormwater infrastructure (e.g. infiltration swales, gravel trenches and permeable pavement). Effectively managing stormwater onsite involves capturing, filtering, and slowly infiltrating stormwater into the ground.
- The City and the Working Group recommend a reassessment of current flood control requirements along the Federal flood control channel.

Goal 1.2 Restore and Protect the Portneuf River Ecosystem

- Protect and increase River channel complexity and cover, including the establishment of riffles, pools, runs, and/or a natural stream bottom, wherever feasible.
- Reduce stream width and establish low-flow channels where possible.
- Protect and increase the floodplain and wetland and riparian habitat areas, including setting back levee and channel walls and/or re-establishing stream meanders.
- Remove exotic and invasive vegetation. Plant native species to promote healthy stream function and improve the aesthetic nature of the River corridor.
- The City and Working Group recommend pursuing a levee vegetation variance from the Corps to allow more flexibility with the type of vegetation that can be planted along levee sections of the Federal flood control project. Currently, vegetation is limited along the levees, as required by Federal law.

Levee Setback Concept for Rainey-Centennial Park

City of Pocatello | Confluence of Marsh Creek with the Portneuf River

Goal 1.3 Improve Water Quality and Flow

- Implement urban and agricultural land management practices to reduce the amount of sediment and other pollutants in runoff water.
- Filter fine sediments and other pollutants from stormwater and agricultural runoff with infiltration swales, constructed wetlands, and other measures.
- Reduce stream temperature by enhancing vegetative stream cover. Restoring vegetation within the federal flood control project will require additional flood capacity unless the current 6,000-cfs flow requirement is reduced. Introducing vegetation in the River bottom, for example, will require an expanded channel capacity.
- Increase in-stream flows to improve water quality and support beneficial uses of the River, including ecological systems, in-stream recreation, and aesthetics.
- Increase beaver populations, where suitable. Beavers regulate water flow and help create wetland environments for other wildlife. Wetlands are considered nature's "kidneys."

Goal 1.4 Integrate Stormwater and Groundwater Management With the Vision

- Plan for aquifer recharge in select locations.
- Plan for regional and/or localized stormwater treatment and infiltration along the River corridor.

City of Pocatello | MLK Stormwater Swale

Learn more
river.pocatello.us

At Pocatello [the Portneuf] averages about 30 feet wide, 6 inches deep and flows about 1½ feet per second. There are many deep holes or pools with sand bottom, while in the shallower reaches the bottom is of gravel and the current is more swift. The water is rather clear and cool. There appeared to be very little algae or other water vegetation in this stream. The banks were covered with a dense growth of willows, while back from the stream a short distance on either side are sagebrush plains.

The Portneuf River at the mouth of Mink Creek is a clear, cool stream with gravel and lime-deposit bottom in the shallower parts and mud and sand where deeper and more quiet

(Bulletin of the United States Fish Commission, 1894).

Guiding Principle 2: Access and Recreation

Goal 2.1 Extend and Connect Greenway Trails and Open Space Along the River

- Explore and implement creative solutions for non-motorized Greenway trails within and along the River, where feasible. The Vision Study strongly supports completion of the Portneuf River Greenway to connect downtown Pocatello with parks along the River.

Goal 2.2 Connect Neighborhoods, Shopping Areas, and Trail Systems to the Portneuf River

- Implement road, sidewalk, trail, park, landscaping, and signage recommendations from the Portneuf Valley Bicycle Plan and the Old Town Revitalization Plan.
- Improve existing and add additional pedestrian and bicycle bridges across the River and railroad in suitable locations.
- Provide consistent directional signage to, and along, the Portneuf River.

Goal 2.3 Enable Safe Public Access

- Create River access at public parks adjacent to the River. Appropriate measures may include endorsing common design standards for channel modifications (e.g., stepped or terraced access, ramp intervals, and safety fencing). This will allow people to reach the water's edge and easily exit in the event of a flood.
- Install launch and take-out facilities for various boating and floating watercraft along the River. These facilities will be developed with safe, flexible, functional, and ADA-compliant designs that meet user needs at various flow levels.
- Within the concrete channel, provide safe entry and exit points where feasible.
- Establish a flood warning system in the event of high flow conditions.
- Ensure ADA-compliant accessibility to the River.
- Ensure existing flood risk management capability is maintained.

Water Trail Access Concept For Raymond Park

Goal 2.4 Increase Recreational Opportunities

- Modify select riverfront property to create a variety of public spaces, including natural areas, grassy parks, and recreational facilities. Recreational facilities should respond to specific neighborhood needs, but fit with River habitat restoration plans. Riverfront parks should seek to improve water quality by using best management practices and treating stormwater onsite.
- Establish a water trail for tubing, canoeing, etc., with multiple boat launches and take-outs. Discontinuous trail segments, fractured by hazards and the lack of launches and take-outs within the River, currently prevent users from enjoying a continuous trip on the Portneuf River.
- Establish swimming areas, fishing holes, and kayak/stand up paddle board parks.

City of Pocatello | Middle Portneuf

Goal 2.5 Incorporate Educational Resources

- Install interpretive signage, incorporating natural or cultural information.
- Modify select riverfront property to support use as an outdoor classroom for student engagement with the Portneuf River. Several schools are within close walking distance, and this offers the potential to create joint-use parks and outdoor classrooms to provide the schools with space for ecological class- and fieldwork (e.g., water quality monitoring).
- Improve transportation options, including non-motorized paths, between the Portneuf River (and its tributaries) and local schools. All cross-connections between the community and the River should ensure safe accommodations of multiple modes (motorized traffic, pedestrians, and cyclists, etc.).

Goal 2.6 Incorporate Public Art and Signage to Celebrate the Natural and Cultural Heritage of the Portneuf River

- Heighten awareness of the River corridor by using signature elements (e.g., signage, gateways, and innovative bridges).
- Facilitate public art projects along the River corridor that celebrate the Portneuf River, create a sense of place, and integrate with the surrounding environment. The identity and awareness of the River within the community can be improved by encouraging, supporting, and maintaining art that improves the beauty of the River setting and inspires people.

Eli Lucero | Logan River Utah Public Art Installation

Our vision is to restore the Portneuf River corridor in order to revitalize environmental, recreational, and economic opportunities while increasing community pride, connectivity, and quality of life.

Raymond Park Concept, looking downstream

Guiding Principle 3: Community Engagement

Goal 3.1 Make the Portneuf River a Focus of Activity

- Design riverfront space for multipurpose use that will support diverse community events and activities. River parks and spaces should be designed to improve the River corridor. When possible, park land adjacent to the River should be used to expand the River's floodplain. Recreation facilities should respond to specific neighborhood needs, balanced with water quality and the restoration of wildlife habitat.
- Support events and activities that bring residents in contact with the Portneuf River. Event programming can help improve public perception of the River. Both regional and local event planning can enliven the community and provide new visibility and attention to the River.

Goal 3.2 Engage Residents in Project Planning and Implementation

- Capture community River history and values at the beginning of the planning process.
- Engage with riverfront residents in their neighborhoods and in partnership with neighborhood organizations.
- Provide multiple opportunities and levels for residents to engage in project planning and implementation.
- Prioritize engagement efforts with citizens from neighborhoods near the River.

Learn more
river.pocatello.us

Guiding Principle 4: Economic Development

Goal 4.1 Improve Public Health and Quality of Life

- Develop events and programs that encourage physical activity along the River corridor.
- Design riverfront space to facilitate walking and biking for recreation and transportation. Neighborhood walking and biking loops can assist with making the River a continuous route safely connecting users to recreational opportunities.

Portneuf Greenway Foundation | Roger's Reach

Goal 4.2 Increase Employment, Housing, and Retail Space Opportunities

- Incentivize development projects that increase pedestrian activity, reduce crime, and increase property values.

Goal 4.3 Promote Public and Private Riverfront Development and Open Space Acquisition in Suitable Areas

- Identify parcels suitable for open space acquisition or development. The Greenway should expand by acquiring new open spaces that, where feasible, can be restored. Areas outside of the River corridor should be explored by protecting, reclaiming, and restoring them as parks and open space that connect wildlife habitats.
- Develop and implement standards for streamside buffers based on land use and streamside conditions. Buffers should be applied to all new open space or park lands created along the River. Buffers provide multiple benefits, including recreation and water quality improvements.
- Incentivize mixed-use development opportunities (industrial, retail, residential) in suitable areas (e.g., density bonuses, expedited approvals, or relocation requirements and benefits, etc.).
- Develop and implement complementary and sustainable design standards for riverfront neighborhoods. Improving standards near the River will benefit the City through improved River health and quality of life. Good development practices can mitigate impacts on habitat and water quality in both existing communities and new development areas.
- Retain and celebrate neighborhoods and community history through context sensitive development.

Goal 4.4 Focus Attention on Affordable Neighborhoods Along the River

- Prioritize projects that improve linkages between housing, transportation, and parks along the River.
- Plan and implement projects in a socially, culturally, and geographically equitable manner.
- During project planning, ensure areas with lower-income populations receive opportunities and amenities consistent with higher-income areas.

Sasaki Associates Inc. | Wilkes-Barre Riverfront, PA

Potential Projects

During the planning phase of the Vision Study, many potential projects were identified and prioritized by the community.

Achieving the long-term goal of restoring the Portneuf River riparian corridor and ecological function may take generations to achieve. In the meantime, the Vision Study recommends identifying and phasing improvements for the short-term in order to maintain momentum and demonstrate ecological and public-access benefits of long-term restoration.

Short-Term Projects - are defined as those that could be designed, developed, and executed within 5 years following completion and adoption of the Vision Study. Short-term projects are typically those with fewer legal or real estate constraints and are less costly to construct, operate, and maintain than long-term projects.

1. Portneuf River Water Trail and River Clean-Up
3. Portneuf River Streambank Restoration
4. Tributary Stream Restoration
10. Rainey-Centennial Parks
16. Sacajawea Park
19. West Side Parks
20. Simplot Trailhead
22. Install Signage and Wayfinding to the Portneuf River and Access Points
23. Concrete Channel Art and Seating

Long-Term Projects - are those requiring greater planning, design, and development to complete. They are anticipated to take anywhere from 5 to more than 20 years to implement. Long-term projects are those with greater legal or real estate constraints, and more costly to construct, operate, and maintain than proposed short-term projects.

2. Greenway Extension
5. Church Farm
6. Historic Meanders
7. Country Club
8. Levee Setbacks
9. Ross Park
11. Concrete Channel Streambank Restoration and Greenway
12. Concrete Channel Greenway Trail Extension (street level)
13. Center Street Riverfront Shopping Area
14. Memorial Park
15. Raymond Park
17. Pacific Recycling Trailhead
18. Zweigart Park
21. Add Pedestrian/Bicycle Bridges across Railroad and River

Additional Projects - In addition to the short-and long-term projects, several additional projects were proposed. These projects support the Guiding Principles and Goals, and consist of additional planning studies, policy creation, continued actions, and determinations from federal agencies. They should be considered as time and funding allows. Some of these projects are already in progress.

24. Seek Levee Vegetation Variance
25. Develop a Portneuf River Zoning Overlay District
26. Reassess Current Flood Control Project Capacity Requirements
27. Reduce Volume of Urban Runoff Water Flowing into the Portneuf River
28. Increase In-Stream Flows Using Water Bond Funds
29. Identify and Purchase Greenway Easements and Flood-Prone Homes from Willing Sellers
30. Improve Upstream Water Quality

Rebecca O'Neill | Yellow Warbler

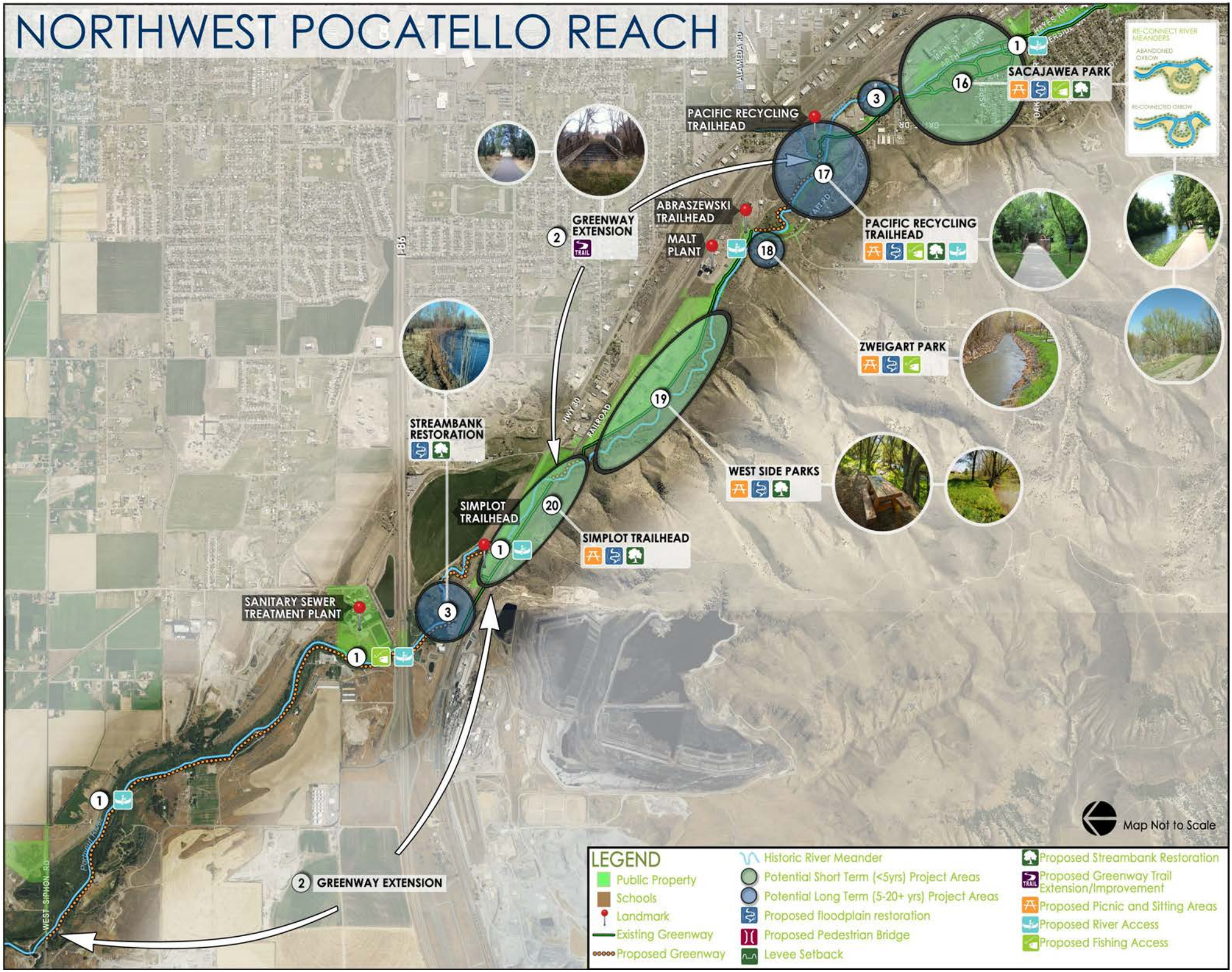
The Portneuf Vision Study is intended to be a living plan, responsive, to evolving scientific understanding and changes in community attitudes and preferences.

WENK | Steamboat Springs

City of Pocatello | Ammon Park

Rebecca O'Neill | Coyote

NORTHWEST POCATELLO REACH

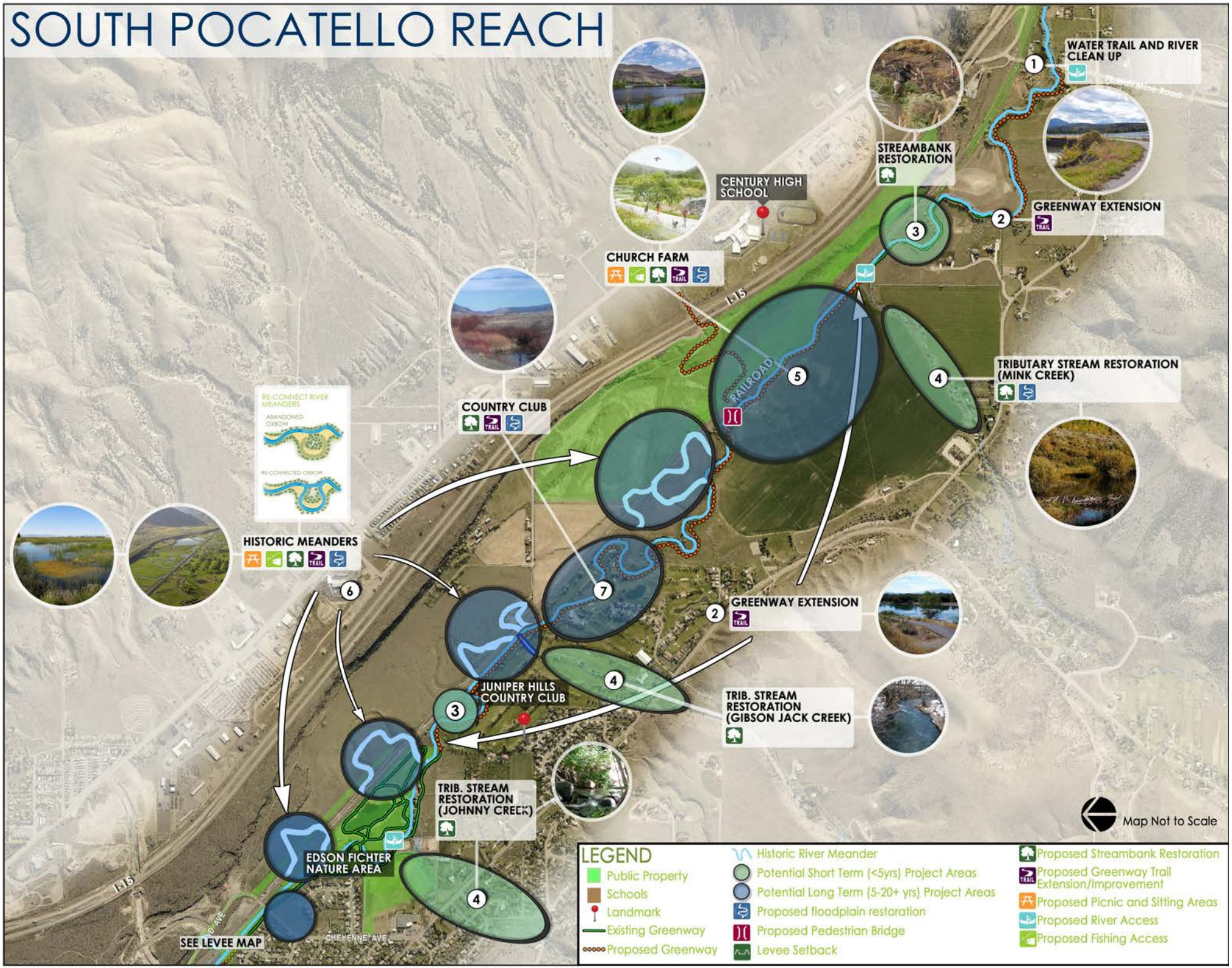


CONCRETE CHANNEL REACH

LEVEE REACH

LEVEE SETBACK (CONNECTOR PARK)
LEVEE SETBACK (CHEYENNE AVE PARK)
CHEYENNE AVE
SOUTH VALLEY RD
ROSS PARK
GREENWAY EXTENSION
RAILROAD
2ND AVE
LEVEE SETBACK (TECH FARM)
RIVERSIDE GOLF COURSE
BANNOCK HWY
LEVEE SETBACK (RIVERSIDE GOLF COURSE)
I-15
IDAHO STATE UNIVERSITY
RAINEY-CENTENNIAL PARK
TAYSOM ROTARY PARK
LEVEE VEGETATION
LEVEE SETBACK CONCEPT
GREENWAY EXTENSION
1ST AVE
POCATELLO COMMUNITY CHARTER SCHOOL
RAINEY PARK
CENTENNIAL PARK
TRIB. STREAM RESTORATION (CUSICK CREEK)
Cusick Creek
RAILROAD DEPOT
CITY CREEK TRAILHEAD
Map Not to Scale
LEGEND
Public Property
Schools
Landmark
Existing Greenway
Proposed Greenway
Historic River Meander
Potential Short Term (<5yrs) Project Areas
Potential Long Term (5-20+ yrs) Project Areas
Proposed floodplain restoration
Proposed Pedestrian Bridge
Levee Setback
Proposed Streambank Restoration
Proposed Greenway Trail Extension/Improvement
Proposed Picnic and Sitting Areas
Proposed River Access
Proposed Fishing Access

SOUTH POCATELLO REACH



Priority Projects

Following identification of 30 potential projects, the public was invited to vote for projects they considered top priorities. After the public voting, the Working Group analyzed how well each potential project aligned with the Guiding Principles, Goals, and Recommendations of the Vision Study. The following projects rose to the top:

Marjanna Hulet | Portneuf River Cleanup

Short-Term Projects

1. Portneuf River Water Trail and River Clean-Up—Develop a water trail for canoes/kayaks and other non-motorized watercraft with a series of accessible put-ins, take-outs, and other necessary infrastructure (parking lots, restrooms, etc.) from Fort Hall Mine Road to Siphon Road. This would include the removal of debris jams, trash, fallen logs, and other obstructions that currently create hazards and impede travel along the Portneuf River.

3. Portneuf River Streambank Restoration—Restore eroded streambanks and plant native vegetation along degraded areas of the Portneuf River in the Study area. Efforts should be made to survey the River and develop a phased approach to removing invasive vegetation and restoring degraded streambanks.

10. Rainey-Centennial Parks—Setback levees to create room for water trail access, fishing, riparian habitat and floodplain restoration, a seasonal wetland, Greenway trail extension, neighborhood connections, interpretive and educational signage, and picnic area development.

16. Sacajawea Park—Create canoe and tubing access points, reconnect the River with historic meanders at the north end of the park, and restore eroding streambanks. Improve parking, picnic areas, signage, and neighborhood connections.

22. Install Signage and Wayfinding to the Portneuf River and Access Points—Develop and install wayfinding and signage, including maps and directional markers to introduce, educate, and guide users to the Portneuf River and its associated amenities.

Land Planning and Design Assoc. | Downing Farm Canoe Launch

Long-Term Projects

2. Greenway Extension—Develop a continuous Greenway from Fort Hall Mine Road to Siphon Road. Development of the Greenway must be sensitive in its alignment and design in order to avoid any adverse impacts to the natural environment and the privacy and property rights of homeowners along the River. Along the levees and concrete channel, trails could be at street level, on top of levees, or within the levees and concrete channel where feasible.

6. Historic Meanders—Return the river to its historic channel east of the railroad tracks in the southern part of the valley, north of the old Highway Pond. Prior to construction of the railroad, these meanders of the Portneuf River provided valuable riparian and aquatic habitat as well as floodplain access. Installing culverts to pipe the River under the railroad tracks (and back) and into the historic meanders would give the River access to the floodplain and would create valuable fish and wildlife habitat.

8. Levee Setbacks—Relocate the levees back from the River's edge to encourage natural floodplain processes (e.g., floodplain storage, river meandering, and riparian habitat establishment). Several locations along the existing levees have potential for levee setbacks, including from the South Valley Connector to Tech Farm Roa,d, through Riverside Golf Course, and along Riverside Drive.

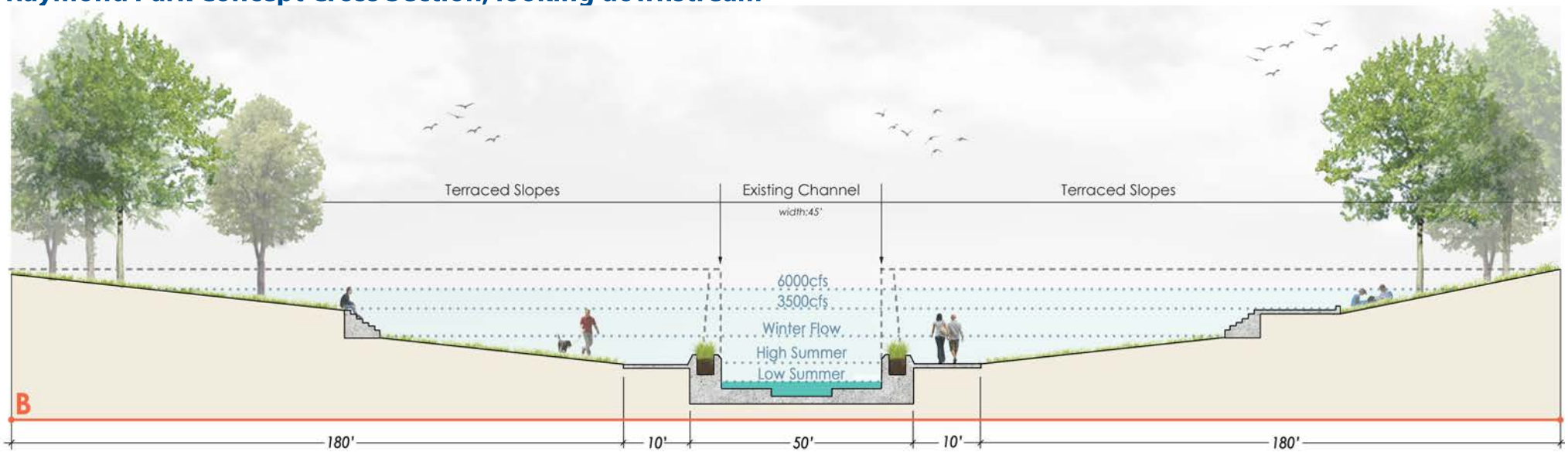
11. Concrete Channel Streambank Restoration and Greenway— Construct a meandering low flow channel, with natural stream characteristics (e.g., riffles, runs, pools), within the concrete channel. Install riparian plantings on wide overbanks and add containerized plantings. Create a recreation trail along the River's edge that may be closed for safety reasons during high flow events.

13. Center Street Riverfront Shopping Area— Develop a mixed-use district with gathering spaces and outdoor café tables facing the River near Center Street. Connect the Portneuf River to Old Town Pocatello with a pedestrian mall or similar feature.

14. Memorial Park—Modify the concrete channel and existing park to accommodate an amphitheater, picnic areas, water trail and River access, and an extension of the Greenway. The park and its associated features may be closed for safety reasons during high flow events.

15. Raymond Park— Modify the concrete channel and Raymond Park to provide access to the Portneuf River. Create an amphitheater, picnic areas, splash pad, water trail, and River access points. Extend the Greenway trail along the River edge.

Raymond Park Concept Cross Section, looking downstream



Additional Projects

24. Seek Levee Vegetation Variance—Apply for a levee vegetation variance from the Corps. Currently, the City is required to remove vegetation from the levee portion of the flood control project. If a variance is approved, the City would be allowed to grow specific types of riparian vegetation on the levees. Additional existing levees could be modified to allow vegetation to be planted on the landward side of the levee, in accordance with Corps levee vegetation regulations.

25. Develop a Portneuf River Zoning Overlay District—Enact zoning regulations along the river that support implementation of the Vision Study goals.

26. Reassess Current Flood Control Project Capacity Requirements— Request the Corps to reassess flood risk and capacity requirements to determine if the current level of protection required is still appropriate. Currently, the City of Pocatello is required to maintain the flood control project to safely convey flood flows of 6,000 cfs. According to the Annual Peak Discharge Frequency Curve developed by the Corps, the 6,000-cfs is a 500-year event for the Portneuf River at Pocatello, while a 3,300-cfs flood event is equivalent to the 100-year flood.

27. Reduce Volume of Urban Runoff Water Flowing into the Portneuf River—Seek opportunities to keep urban runoff (stormwater) out of the Portneuf River wherever possible, and to improve its quality.

28. Increase In-Stream Flows—Continue to actively purchase available water rights. Pursue all available mechanisms to keep water within the Portneuf River to support fish and other aquatic species, and to improve recreation opportunities.

29. Identify and Purchase Greenway Easements and Flood-Prone Homes from Willing Sellers— As willing sellers are found, purchase homes and property prone to frequent flooding. Additionally, work with willing sellers to purchase Greenway trail easements.

30. Improve Upstream Water Quality— Continue collaboration and support of environmental improvements along Marsh Creek and other tributaries to reduce sediment load and pollutants from being deposited into the Portneuf River upstream of Pocatello.

Mark McBeth | Upper Portneuf

Implementing the Vision

Ongoing engagement and support from landowners, government agencies, and many community members and organizations will be required if the Vision Study's recommendations are to come to fruition.

Implementation of the Vision Study's recommendations is intended to occur over time as funding and opportunities arise. It is anticipated that many interested and invested parties will work together to help implement the recommendations. Additionally, environmental review, documentation, and permits will be required. For example, projects that seek to alter the original flood control project will require extensive coordination with the Corps.

Funding for projects listed within this study document is likely to come from many different sources. It is unlikely that any one entity can bear responsibility for even a single project.

Essential steps for implementation are straightforward

- Develop a Vision;
- Draft an Implementation Plan;
- Identify necessary human and financial resources;
- Implement through ongoing community involvement and support.

Pre-Conditions for Implementation

- Support and leadership from the City of Pocatello's Mayor, City Council, and leadership staff;
- A project manager and organizational entity (governmental or non-governmental) to coordinate necessary planning, engineering, community engagement, fundraising, construction, etc.;
- Technical support from a Mayor's advisory committee and/or non-profit organization;
- Continued community support, including volunteerism;
- Concept plans and engineering designs (with community input), grant writing, any necessary land acquisition, and construction;
- Funding and land;
- Continued comprehensive planning for the Portneuf River, including tributaries, water quality, and certain land use planning and policy-making to establish long-term improvements that move the community toward an integrated watershed approach.

Implementation Recommendations

Bannock County Commissioners

- Adopt the Portneuf River Vision Study via resolution.

Pocatello City Council

- Adopt the Portneuf River Vision Study via resolution;
- Declare its intent to have the City of Pocatello lead implementation of the Vision Study's goals and recommendations, as funding and other resources allow;
- Direct the Mayor to allocate sufficient staff resources for project management of the implementation of the Vision Study;
- Ensure City staff leadership understands and supports the Portneuf River Vision Study, and ensure other City operations/activities are not in conflict with the Vision Study's recommendations;
- Create an advisory committee to provide technical assistance with activities such as assist project planning, design, and outreach. Committee members, appointed by the Mayor, should include balanced representation from groups with interests in environmental, recreational, and development opportunities. The committee should include scientists, conservationists, recreational advocates, community leaders, planners, economic development specialists/business owners, and neighborhood representatives.

Existing non-profits:

- Identify projects where they can take the lead, solicit funds and volunteers, purchase land and easements and/or advocate;
- Identify how they can best work with the City and evaluate the need for a dedicated 'Friends of the River' non-profit.

Acknowledgements

The Portneuf River Vision Study was completed by the US Army Corps of Engineers for the City of Pocatello, ID under Section 22 of the Water Resources Development Act of 1974 (Public Law 93-251), as amended.

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View the Portneuf River Vision Study and its supporting documents at: http://river.pocatello.us

PORTNEUF RIVER

VISION STUDY

November 2016

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Introduction

In March 2014, the City of Pocatello, Idaho, requested assistance from the US Army Corps of Engineers, Walla Walla District (Corps), under Section 22 of the Water Resource Development Act of 1974, as amended. This assistance was provided to develop a master plan for the Portneuf River corridor within the Portneuf River Valley in eastern Idaho. The Portneuf River Vision Study (Vision Study) is a public and collaborative conceptual plan for the future of the Portneuf River. It is a living document, and will be updated as information and/or needs change within the Portneuf River Basin.

The Vision Study provides rationale for restoring the ecological function of the Portneuf River and transforming it into a valuable resource for Pocatello residents and visitors. It is not meant to be a comprehensive guide for all Portneuf River issues. The Vision Study taps into the collective history and imagination of residents throughout the Portneuf River Basin by helping them describe and share the important environmental, social, and economic roles the Portneuf River plays in and around Pocatello. The Vision Study is a conglomeration of recommendations and short- and long-term future potential projects, as well as a framework for potentially revitalizing the Portneuf River and environs in the coming years.

Authority

The Portneuf Vision Study is being done under the authority of Section 22 of the Water Resources Development Act (WRDA) of 1974, as amended. This authority gives the Corps the ability to assist states, local governments, Native American tribes, and other non-Federal entities in the preparation of comprehensive plans for the development and conservation of water and related land resources.

Background/History of the Project Area

The Portneuf River flows from the northern portion of the Portneuf Range and through the Fort Hall Indian Reservation, current home to the Shoshone-Bannock Tribes. While primarily located within Bannock County, the River meanders through Caribou, Power, and Bingham Counties; its watershed (also called a drainage or catchment basin) drains around 1,300 square miles of land in southeastern Idaho. This land provides important habitat for fish and wildlife species, recreational opportunities, and irrigation for farming. Over time, however, the river has been heavily altered.

The cultural and social geography of the Portneuf River is shaped by a complex history of human usage, River management, and shifting environmental perceptions. Prior to European settlement in the region, Native Americans from the Bannock and Shoshone Tribes lived in seasonal settlements and hunted together (Madsen, 1958). They wintered among the willows, chokecherries, and cottonwoods along the Portneuf River. Within the Portneuf Watershed, they set up camps along the Portneuf River, as well as on the adjacent sagebrush-covered valley

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floor, from Lava Hot Springs to the Portneuf River's confluence with the Snake River (Holmer, unpublished).

The Portneuf River also served as a route for nineteenth-century migrants along the Oregon and California trails as well as miners headed to search for gold in the Clearwater and Salmon Rivers. The Utah and Northern Railway, the first railroad in Idaho, began construction in 1878 and used the River as a route through the Portneuf and Bannock mountain ranges. In some locations, the River channel was altered by the placement of rail lines.

Railroad development and a growing population of settlers and railroad workers (and associated trespassing by settlers onto tribal lands) resulted in the establishment of the Pocatello townsite in 1888, following the Fort Bridger Treaty in 1869 and the establishment of the Fort Hall Indian Reservation. As was common practice at the time, the townsite was laid out with streets running parallel and perpendicular to the railroad tracks, regardless of topography. House lots and streets crisscrossed the Portneuf River, with no land dedicated as open space for floodplain or floodway. As Pocatello grew, development encroached on the Portneuf River floodplain, bringing inevitable damages from flooding. Runoff was exacerbated by land use changes, including the rapid conversion of much of the watershed's highly erodible sagebrush slopes to tilled ground (particularly following World War II). Flood events along the Portneuf River (usually the result of spring runoff, with the occasional winter rain on frozen ground event) were a common occurrence upstream from Pocatello during the first half of the 20th century, and increasingly threatened property as the floodplain upstream of Pocatello was developed.

A series of spring runoff floods in the 1940s (along with the Flood Control Act of 1936 and the subsequent Columbia River Subbasin study) sparked demands for intensive management of the Portneuf River, and prompted the City of Pocatello to request Federal support for flood damage reduction along the River.

On June 12, 1945, the Pocatello Board of County Commissioners sent a telegram to the Corps' Colonel Ralph Tudor for immediate assistance due to flood conditions. Following this communication, the Corps conducted studies and laid out a proposal to force the Portneuf River into a deeper, reinforced channel through the city to contain flood-level flows. A public meeting was held at which general support for the project was shown, with only scattered concerns. However, lack of public support over funding and project specifics prevented final agreement and implementation of the project at that time.

Over the next decade, Pocatello began to experience significant growth due to phosphate mining, dairy production, and the expansion of railroad transportation throughout the northwest. The devastating winter floods of 1962 and 1963 caused significant damage to residences, agriculture, and industry; and drew public attention to the need for flood protection to the city. The February 1962 flood peaked at 2,990 cubic feet per second (cfs), with damages estimated at $10 million. The February 1963 flood peaked at 2,470 cfs. Following these two devastating floods, public opinion changed in favor of raising tax revenues

to cost-share flood control costs to protect private properties and the city's commercial and industrial assets. This investment was designed to have its economic benefits (i.e. reduced property damages during flood event) realized in 50 years (modified to 75 years due to increased construction costs).

Construction of the Federal project began in July 1966 and was completed in November 1968, at a total cost of $7 million, of which $500,000 was local match. The project is 6.2 miles long and consists of a 1.5-mile-long rectangular concrete channel and 4.7 miles of levees both upstream and downstream of the concrete channel through the City of Pocatello. The side walls of the concrete channel vary in height from 10 to 16 feet, and the channel is 40 feet wide. Levee slopes are constructed at 2H:1V and are armored with riprap. The project is designed to handle flows up to 6,000 cfs, with 3 feet of freeboard on the levees and 2 feet of freeboard in the concrete channel.

With the establishment of railroads, agriculture, residential and commercial development, industrial uses, and construction of the flood project, the River has become (both literally and figuratively) disconnected from the community over time. The flood control channel has protected Pocatello from flood damage for over nearly 50 years. However, city residents, as well as citizens throughout the Portneuf River Basin, do not have access to one of their most valuable assets. Additionally, economic development has not been realized along the concrete channel.

The Portneuf River Basin supports a wide range of needs, from recreation and agriculture to fish and wildlife habitat. The River is key to the regional economy. After the flooding in the early 1960s, residents of Pocatello were eager to accept the Corps' recommendation for a concrete channel as a solution to flood events. Many current residents, while appreciative of the flood protection afforded by the channel, would like to "reconnect" with their River, accessing it often and in many different ways. Residents also value a healthy river ecosystem. The Vision Study recommends actions aimed at promoting ecosystem restoration, recreation, and community development goals.

Purpose and Scope

The Portneuf River Vision Study was designed to assist the community by integrating existing policies, plans, and innovative ideas into a single plan; outlining goals and recommendations for improved River corridor management; and identifying opportunities for environmental improvement and restoration. The recommendations outlined in the Vision Study are designed to work in concert with other planning efforts currently ongoing within the watershed. A few of these ongoing efforts are shown in Table 1.

The Vision Study seeks to describe a shared community vision that can inform future planning and project implementation. The recommendations of the Vision Study are meant to identify opportunities to manage the River and its adjacent lands to meet ecosystem health, recreation, access, community engagement, and economic development goals. Recommendations are

strictly voluntary, and are non-binding on landowners and land managers. The implementation of recommendations is contingent on voluntary actions, future rulemaking, planning, and available funding through various governmental agencies, non-profit organizations, and public-private partnership entities.

Table 1. Ongoing Restoration Projects within the Portneuf River Basin

Project	Proponent	Description
City Creek	City of Pocatello	Trail, bridge, and road improvements with grants from Idaho Parks and Recreation.
Marsh Creek	Idaho Association of Conservation Districts	Streambank restoration
Upper Portneuf River	Idaho Fish & Game, Cariboo Conservancy, volunteers	Riparian fencing projects

The geographic scope of the Vision Study is the Portneuf River corridor, extending from the Portneuf Gap (Fort Hall Mine Road) to Siphon Road near the Fort Hall Indian Reservation boundary, and includes tributary streams. Within this study boundary, the River runs through the City of Pocatello, and includes the congressionally-authorized Portneuf Flood Control Project constructed by the Corps in the 1960s.

The Portneuf River Watershed

A watershed is an area within which natural drainage patterns convey surface water flows to a low-point destination. The Portneuf River watershed encompasses approximately 1300 square miles in Bannock, Bingham, Caribou, and Power Counties in southeast Idaho (Figure 1). The River is fed by 576 miles of perennial streams, 902 miles of intermittent streams, and approximately 140 miles of excavated canals. Agriculture is the dominant land use. Range and agricultural land comprises 48% and 33% of land use in the watershed, respectively, while forest and urban lands cover only 13% and 3% of total lands within the Portneuf River Basin (Krajewski 2002). Because Pocatello is situated at the low point of the watershed, any changes to the River channel, including restoration activities, habitat improvements, and water quality treatments, are influenced by upstream activity in the watershed.

The Portneuf River originates on the Fort Hall Indian Reservation, and is fed by high mountain streams. At the reservation boundary, the River flows into Chesterfield Reservoir, which regulates irrigation water flow in Marsh Valley. Near the reservoir, most tributaries to the Portneuf are fully diverted for irrigation. As a result, the lower portions of many tributaries dry up completely. During the irrigation season, all flow from Chesterfield Reservoir is diverted to Downey Canal (Figure 2) for 8 miles, causing the historic Portneuf River channel to run dry for several miles.

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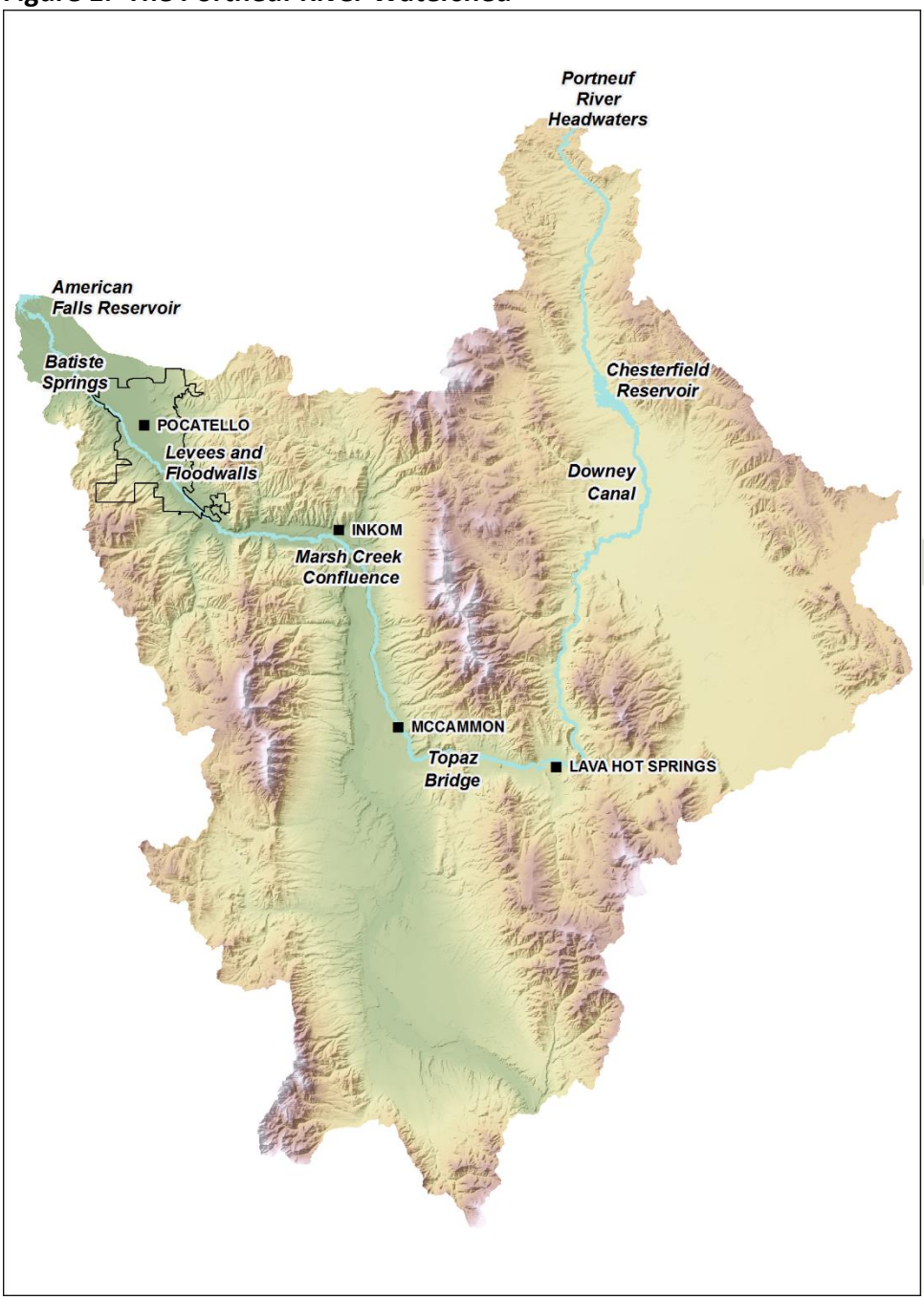
Figure 1. The Portneuf River Watershed



Between Chesterfield Reservoir and Lava Hot Springs, the Portneuf River used to be considered a blue ribbon cutthroat trout fishery. Discharges of excessive sediment from Chesterfield Reservoir, eroded stream banks, and channelized stream sections created unfavorable conditions for fish by the 1970s and 1980s. Restoration work performed by volunteers and agencies, in cooperation with local landowners, is resulting in the recovery of Yellowstone cutthroat trout populations.

Figure 2. Downey Canal. Note how straight the canal is compared to the historic Portneuf River channel, which meanders across the valley floor.

From Lava Hot Springs downstream to McCammon, over 10 miles of stream channel was altered by railroad construction, Highway 30, and agricultural uses. Straightening the River course caused erosion in this reach of the River, leaving cut banks over 10 feet high in some locations.

At Topaz Bridge (Highway 30 and Old Oregon Trail Road), Marsh Valley Canal diverts nearly 80% of the Portneuf River for irrigation water to Marsh Valley. Any excess water and irrigation return flows return to Marsh Creek. Marsh Creek is the largest tributary to the Portneuf River, draining nearly one-third of the watershed. Marsh Creek joins the Portneuf River near the town of Inkom, where it returns some diverted irrigation (from Marsh Valley Canal) along with a large amount of sediment and phosphorus. Multiple segments of Marsh Creek have been listed as impaired for sediment, pathogens, bacteria, and nutrients (IDEA 2005; ISU unpublished). Some of this sediment is deposited along levees within the study area, but the majority of it remains within the River until downstream of Pocatello. Landowners along Marsh Creek, in partnership with Federal, state, and local agencies, are working to reduce this sediment load through fencing and streambank restoration projects.

The overall watershed has a dramatic impact on the way the Portneuf River functions within the study area, as it is the main collector for the watershed. While recommended actions cannot adequately address challenges throughout the watershed on their own merit, the Vision Study seeks to leverage ecological function across the watershed by repairing key components in the connectivity of systems and natural processes within the study area. The plan will be coordinated with existing and future efforts by others to improve and protect water quality and restore aquatic resources throughout the Portneuf River Watershed.

Vision Study Reach Descriptions

For purposes of this Vision Study, the River has been divided into four separate river reaches. Each individual reach has certain concerns, and these are so noted in the description of each reach.

South Reach

The South Reach is approximately 7.5 miles in length, and is located immediately upstream, or south, of the Pocatello Flood Control Project (Figure 3). It flows north from Fort Hall Mine Road through a mix of agricultural and suburban development. Some of the development lies within the floodplain.

Prior to construction of the railroad in the late 1800s, the Portneuf River meandered across the valley throughout this reach, bounded only by the lava cliffs to the east and the toe of the west bench to the west. Today the River is constricted by development, and meanders between the railroad tracks and the toe of the west bench.

Riparian vegetation is mixed throughout the reach, with a few healthy stands of willows and small native trees along the banks, some noxious weeds, and other areas with little riparian vegetation (primarily adjacent to lands in agricultural use). The fine silt that makes up the banks of the Portneuf River is easily eroded when vegetation is removed.
A hundred years ago, the Portneuf River was a blue-ribbon cutthroat trout stream, lined with willows and filled with beaver dams. A description from the August 1894 Bulletin of the United States Fish Commission states:

> *At Pocatello [the Portneuf] averages about 30 feet wide, 6 inches deep and flows about 1½ feet per second. There are many deep holes or pools with sand bottom, while in the shallower reaches the bottom is of gravel and the current is more swift. The water is rather clear and cool. There appeared to be very little algae or other water vegetation in this stream. The banks were covered with a dense growth of willows, while back from the stream a short distance on either side are sagebrush plains.*

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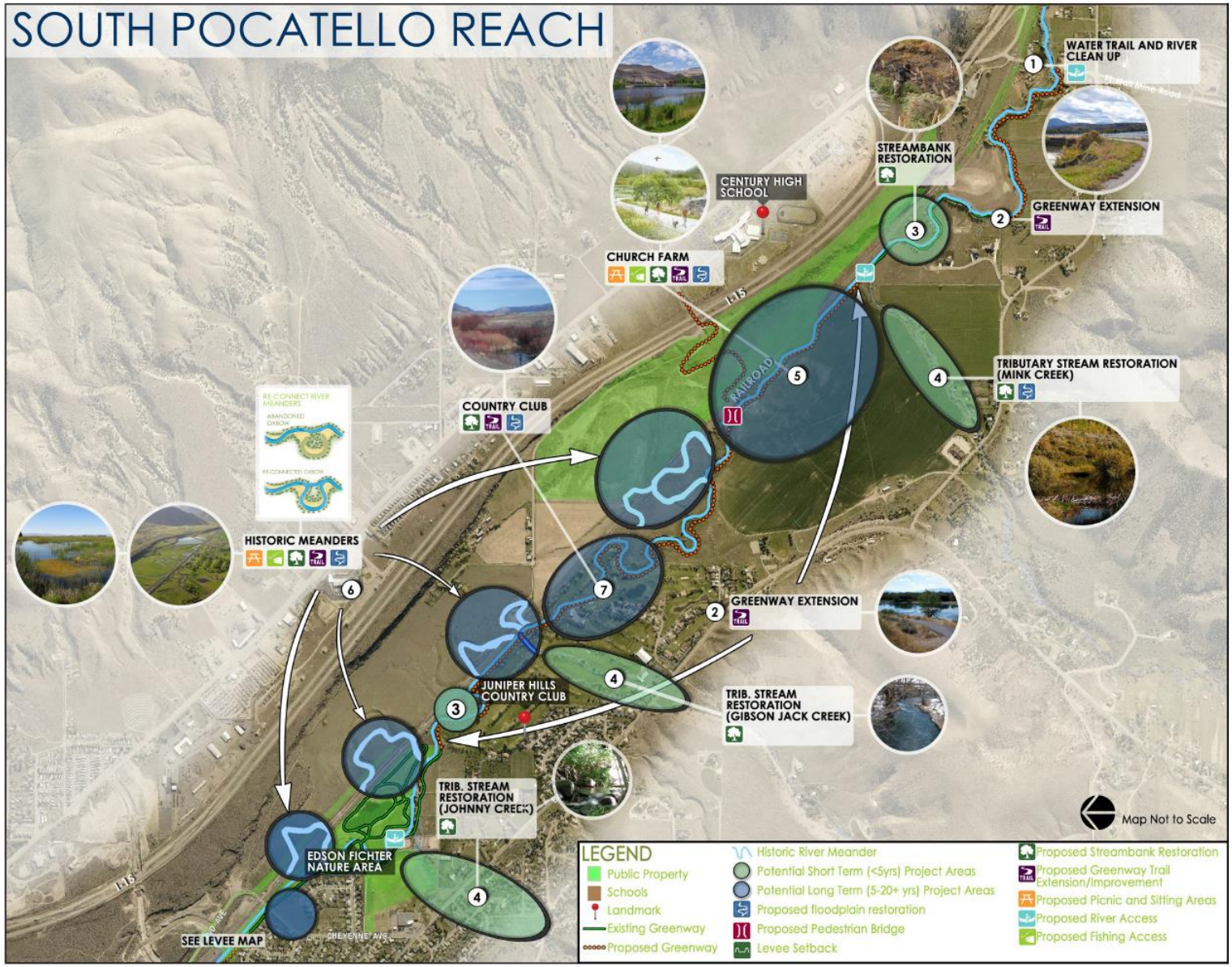
Figure 3. South Reach



> *The Port Neuf River at the mouth of Mink Creek is a clear, cool stream with gravel and lime-deposit bottom in the shallower parts and mud and sand where deeper and more quiet* (Bulletin of the United States Fish Commission, 1894).

The present lack of consistent riparian vegetation also contributes to high temperatures measured at Edson Fichter Nature Area, which is located at the downstream end of this reach. During the summer, water temperatures measured at Edson Fichter are often dangerously high for trout and other coldwater fish.

Three generally healthy perennial streams (Mink Creek, Gibson Jack Creek, and Johnny Creek) enter the Portneuf River in this reach. Gibson Jack Creek and Mink Creek provide spawning habitat for cutthroat trout and other fish. These tributary streams have all been impacted by channelization, the use of undersized culverts, and vegetation management in the riparian zone and upland.

Recreational use in the reach occurs primarily in three areas: 1) Edson Fichter Nature Area, where Greenway Trails run upstream along both banks of the River, and a rope swing is provided at one swimming hole access point; 2) Juniper Hills Country Club, whose fairways cross the Portneuf River in some areas; and 3) along a small isolated stretch of the Greenway that runs behind a small housing development near the upstream end of the reach.

Transportation along the South Reach is via South Bannock Highway, a single arterial road along the valley floor that runs parallel to the River. There is also an east/west connection at both ends of the reach. Another arterial (South Fifth Avenue) and the Interstate highway are located on the lava cliffs above the River. These arterials are popular biking routes, but are generally considered unsafe for novice riders because of the lack of bike lanes (except on one east/west crossing). City of Pocatello planning documents call for additional bike facilities in this area.

Levee Reach

About 4.7 miles in length, the Levee Reach (Figure 4) includes the Portneuf River Flood Control Project intermittent riprap channel and earthen levees. It runs from Edson Fichter Nature Area, at the upstream end of the Federal flood control channel, to Halliday Street, the upstream end of the Concrete Channel Reach. Residential development and railroad tracks line this reach of the Portneuf River.

The land along this reach was historically used for agriculture. However, following levee construction in 1968, the land along this reach was developed, and is disconnected and blocked from the floodplain. This section of the River flooded every few years during spring runoff, and numerous small levees were placed along the River banks by irrigators and landowners to keep floodwaters at bay.

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The levee is now about 15% full of fine sediment, creating a mini-floodplain within the River banks. The silt is deposited on the levee banks and kept in place by willows, trees, and other volunteer vegetation.

The trapezoidal levees run fairly straight. They were designed to be maintained with no vegetation over 6 inches in height, as required by the Corps. Willows typically grow on the silt between the River banks, and an occasional tree grows on the levee below the riprap. More trees line the western levee banks that merge into the natural grade coming off the west bench.

Existing vegetation does not cool the stream enough for trout and other coldwater fish. In addition, the straightened channel provides little aquatic habitat, particularly when compared to naturally meandering streams.

Buck Creek and Cusick Creek, two somewhat healthy streams in terms of flow and vegetation, enter the Portneuf River in this reach. Since they flow into the Portneuf River through flap gates, (Figure 5) which open only because of water pressure from these two creeks, there are limited upstream migration opportunities for fish and other aquatic organisms into these tributaries. Both tributary streams have been impacted by development through some channelization, including the use of undersized culverts, and vegetation management both in the riparian zone and upland.

Recreational use in this reach primarily occurs in multiple areas:

- Edson Fichter Nature Area. Greenway trails run upstream along both sides of the River, and there is a fishing dock and access point
- Greenway (from Cheyenne Avenue to Tech Farm Road, and from Taysom Rotary Park to Halliday Street)
- Riverside Golf Course, where the fairways run up to the levees
- Centennial/Rainey Park, which straddles the levees and the Portneuf River

Bannock Highway and South 2nd Avenue provide north/south transportation along the valley floor, with the Portneuf River and the railroad tracks between them. The only east/west crossings are at either end of this reach (at the Benton Street Bridge and at the South Valley Connector). These roads are popular biking routes, but are considered unsafe for novice riders because there are few bike lanes or separated facilities. City planning documents call for additional bike facilities along this reach. The downstream (north) end of this reach merges into Old Town Pocatello, with its many shopping and dining opportunities.

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Figure 4. Levee Reach

Figure 5. Flap Gates at Buck Creek

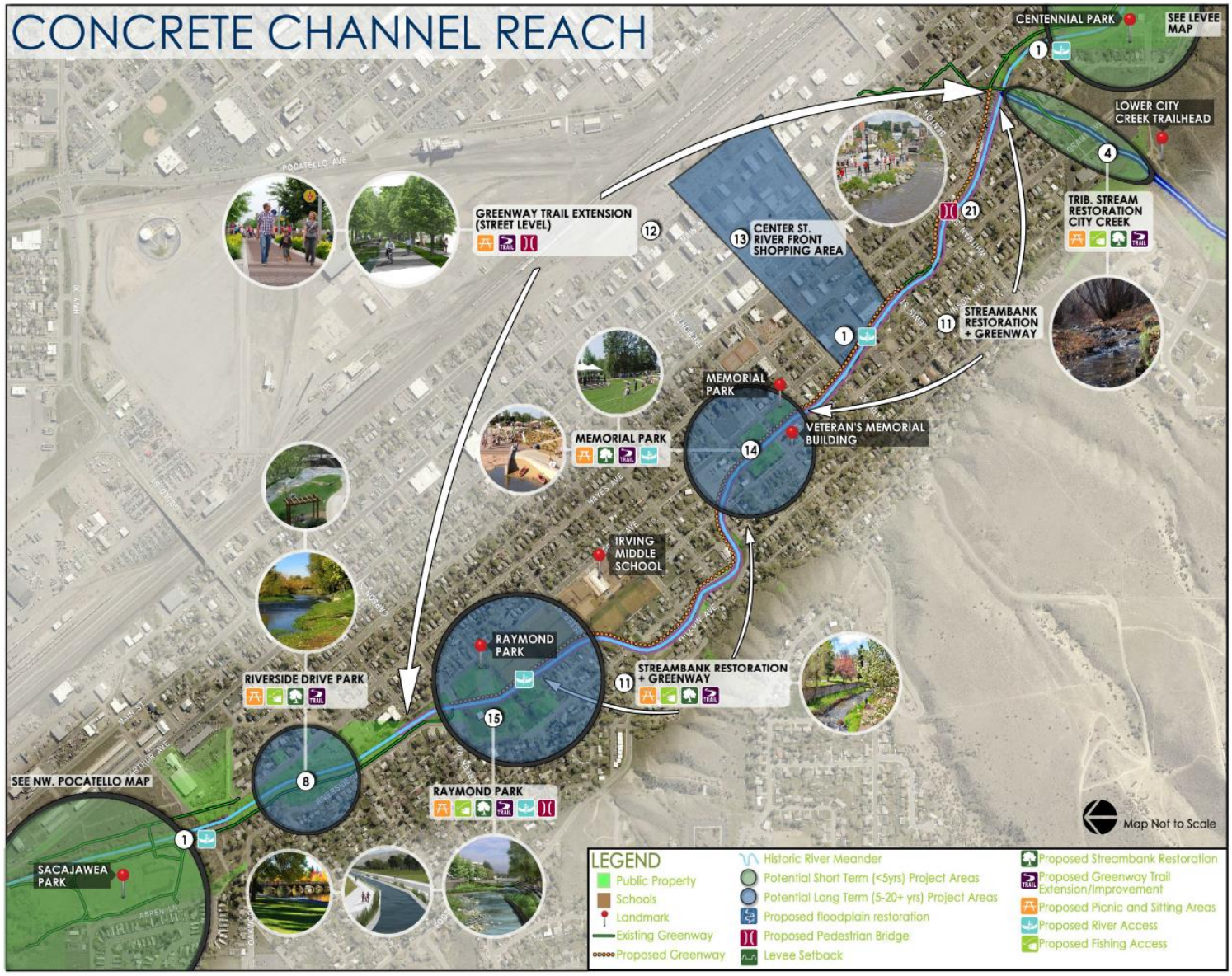
Concrete Channel Reach

The Concrete Channel Reach is approximately 1.5 miles in length, and incorporates the Portneuf Flood Control Project concrete channel (Figure 6). It flows north from Halliday Street, at the downstream end of the Levee Reach, to Sacajawea Park, at the downstream end of the Federal flood control project.

The concrete channel was designed as part of the 1968 Federal flood control project, which was authorized under the Flood Control Act of 1950 (Public Law 51-516). The floods in 1962 and 1963 were over 2,200 cfs, which was the project size recommended by the Corps in a 1953 study. The 1964 study recommended protection up to 4,500 cfs at a minimum. Cost benefit ratios were then performed on discharges from 4,500 cfs to 7,000 cfs.

The final project was based on the benefit-to-cost ratio and ease of construction. A rectangular channel was chosen over a trapezoidal shape because the channel fit under existing bridges and right-of-way issues were less than with other solutions. It is typically 40 feet wide and 15 feet deep, and sized to hold flows of up to 6,000 cfs with 2 feet of freeboard.

Figure 6. Concrete Channel Reach



Dense single-family homes line the Concrete Channel Reach of the Portneuf River. Land in this section was originally platted in the late 1800s to lie along the railroad yard, but with no regard for the Portneuf River or east and west benches. This resulted in floodplain development and subsequent frequent flooding of homes, particularly near what is now Irving Middle School and Raymond Park. Following construction of the flood control channel in 1968, a few additional homes and outbuildings filled in the spaces along the concrete channel.

Despite the lack of vegetation, the straight, deep concrete channel shades the Portneuf River during summer months, but not enough to meet the temperature requirements of trout and other coldwater fish. In addition, the vertical sides of the channel provide no nesting or resting spots for fish and other aquatic life. Because it is approximately 40 feet wide, the depth in the channel is often less than 12 inches in the summer, providing little cover for fish.

City Creek, a generally healthy stream, enters the Portneuf River in this reach. The mouth of City Creek can be more than 5 feet above the level of the Portneuf, making upstream migration into this tributary challenging for fish and other aquatic organisms. City Creek is primarily impacted by significant recreational pressures, resulting in high levels of sediment from nearby trails and roads. *E. coli* bacteria is also present. The source is unconfirmed, but is assumed to be from dog waste.

Recreational use in this reach primarily occurs in multiple areas:

- Greenway Trail River from Old Town to City Creek
- Memorial Park
- Raymond Park
- Greenway Trail running downstream from Raymond Park to Sacajawea Park

Transportation along the concrete channel occurs via Old Town residential streets, with a few bridges across the Portneuf. While many of these roads are low volume and safe for both vehicles and cars, the lack of a clearly marked non-motorized pathway to the river and along it is a significant barrier to greater recreational use of the area. City planning documents call for additional bike facilities along this reach.

Northwest Reach

The Northwest Reach is approximately 8 miles in length. It flows northwest from Sacajawea Park, at the downstream end of the concrete channel; to Laughran Road, on the Fort Hall Indian Reservation boundary (Figure 7). Development along this portion of the Portneuf River is a mixture of natural areas interspersed with industry, agriculture, and few older residential homes.

The section of the River adjacent to Sacajawea Park was straightened as part of the flood control project, although the area is not within the current flood risk management boundary. Two meanders were removed in this section, but the meander at the southern end of the park has been reconstructed as a stormwater wetland and channel. Aerial photography of the reach

shows that one other significant meander was removed for agricultural use. Other than those cut-off meanders, this reach of the Portneuf River follows its historic channel.

Pocatello Creek is the only perennial stream entering the Portneuf River within this reach. It enters the Portneuf River at the upstream end of Kraft Road. The Creek primarily contains return irrigation flows from the Blackfoot River during summer months. It is extremely degraded as a result of this agricultural input and urban development. It is channelized and buried under much of the City of Pocatello.

Historically, a large section of this reach supported a cottonwood forest, and small willows lined its banks. Upstream water use, which reduces summer flows in the Portneuf by about 75% in the Pocatello area, decimated the cottonwood forest by limiting regeneration. Today, a mature black willow forest provides canopy over the River, but the area is characterized by significant bank erosion due to channelization upstream and within the reach.

The River bed in this reach contains small boulders and gravel deposits. This, along with significant amounts of wood debris, provides habitat for fish and other aquatic life. The River is braided in some places downstream of Kraft Road.

The downstream portion of this reach is vastly different from the upstream reaches. Batiste Springs flows into the Portneuf River just below Batiste Road, providing significant and consistent cold water flow throughout the year. This clear water dilutes the sediment, however it also brings a significant load of phosphorous from the nearby fertilizer plant, which contributes to increased amounts of algae and low oxygen levels.

Recreational use in this reach occurs in multiple areas:

- Sacajawea Park
- Greenway Trails from Sacajawea Park to the Pacific Recycling Trailhead at Kraft Road
- Greenway Trails from the Abraszewski Trailhead to Simplot
- Fishing at Batiste Bridge

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Figure 7. Northwest Pocatello Reach

The Vision Statement

The Vision Statement, drafted collaboratively by the Vision Study Working Group and based on community input, provides a simple, yet eloquent and all-inclusive framework for the Vision Study.

> *Our vision is to restore the Portneuf River corridor in order to revitalize environmental, recreational, and economic opportunities while increasing community pride, connectivity, and quality of life.*

Guiding Principles and Goals

In accordance with community preferences and the Vision statement, the Vision Study is based on four overarching guiding principles: 1) ecosystem health; 2) access and recreation; 3) community engagement; and 4) economic development.

Guiding Principle 1: Ecosystem Health

The Vision Study provides opportunities to address a renewal of the Portneuf River's environmental qualities within the study area. As a long-term goal, the River's ecological and hydrological functions can be restored by creating a riparian corridor and removing or modifying the concrete channel and levees through Pocatello, where feasible. Alternatives for flood risk management would be necessary to protect and maintain urban development, but removing the concrete channel would provide long-term benefits to the entire River corridor. Additionally, improvements to urban runoff and upstream water quantity and quality are critical for improving ecosystem health and associated recreational opportunities within the Vision Study area.

Goals for revitalizing the River include the following:

- Appropriate flood risk management
- Restore and protect the Portneuf River ecosystem
- Improve water quality and flow
- Integrate stormwater and groundwater management with plans for the River

Guiding Principle 2: Access and Recreation

Creating and extending safe public access to the Portneuf River would benefit the entire Portneuf River Valley. This includes a continuous greenway linking a series of non-motorized paths to the River, public open space, residential areas and downtown. Signage, bridges, and other such elements could help revitalize the community's perceptions of the River. Key components include visual, walking, and boating access to the river itself.

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Goals for providing access and recreational opportunities include the following:

- Connect and extend Greenway trails and open space along the River
- Connect neighborhoods, shopping areas, and trail systems to River trails
- Enable safe public access to the River
- Increase recreational opportunities focused on and around the River
- Incorporate educational resources (e.g., school programs) along the River
- Incorporate public art and signage to celebrate the natural and cultural heritage of the River and the community

Guiding Principle 3: Community Engagement

As recommendations are adopted and implementation begins, residents should participate in the community planning process to identify land uses (e.g., recreation, commercial development, or open spaces) appropriate and compatible to specific project areas. Community engagement will ensure the following goals are met:

- Make the River a focus of activity
- Engage residents in project planning and implementation

Guiding Principle 4: Economic Development

Vision Study recommendations should improve the quality of life for valley residents, enhance the attractiveness of Pocatello as a place to live and work, and increase economic prosperity.

Core elements of this idea include community empowerment by encouraging participation and consensus-building, creating opportunities for sustainable economic reinvestment, and adding value and providing an equitable distribution of opportunities to underserved neighborhoods along the Portneuf River. Working for stronger economic development in the Portneuf River valley will meet the following goals:

- Improve public health and quality of life
- Increase employment, housing, and retail space opportunities
- Promote public and private riverfront development/open space acquisition in suitable areas
- Focus attention on affordable neighborhoods

Planning Process Overview

Over the course of 18 months, the Vision Study for the Portneuf River was developed by the Vision Study Working Group through a collaborative planning process led by the Corps and the City of PocatelloKey components of this process included:

- Stakeholder Assessment and Working Group Development — Summer 2015
- Existing Conditions Inventory — Summer/Fall 2015
- Working Group Meetings — Fall 2015 to Fall 2016
- Public Outreach and Information Gathering — Winter 2015 to Summer 2016
- Vision Study Completion and City Council Presentation — Fall 2016

Stakeholder Assessment

As part of this Vision Study, the Corps' Conflict Resolution and Public Participation Center of Expertise (CPCX) was charged with assessing community interests and developing a plan for the public and stakeholder engagement process. A summary of the Stakeholder Assessment is contained in the following paragraphs. Further detail can be found in *Appendix A – Stakeholder Assessment.*

In August of 2015, the CPCX conducted a stakeholder assessment to initiate development of the public engagement plan. This was done through facilitated dialogues with organizations and individuals active in improvement activities or just interested in the River and its future. The purpose of this assessment was: 1) to build a more complete base of information regarding community awareness of existing conditions on the Portneuf River and interest in improving conditions; 2) to help the Corps design the most effective public workshops during development of the Portneuf River Vision plan; 3) to identify information gaps needing to be addressed in the Vision Study; and 4) to identify engagement strategies for other key citizens to ensure creation of a plan representative of the entire community, including those socially-vulnerable populations potentially less likely to participate in workshops and meetings.

Stakeholder interviews focused on interests and concerns about the Portneuf River, both from organizational and individual perspectives.

Stakeholders from the following groups were interviewed:

- Portneuf Valley Pride
- Pocatello/Chubbuck School District #25
- Pocatello Community Charter School
- Portneuf Greenway Foundation
- Bannock Transportation Planning Organization
- Portneuf Health Trust
- NeighborWorks Pocatello
- Old Town Pocatello
- Portneuf Watershed Partnership
- City of Pocatello Mayor and staff
- Pocatello City Council
- Idaho Bureau of Homeland Security (IBHS)

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- Idaho State University scientists (ISU)
- Idaho Department of Environmental Quality
- Landowners along the Portneuf River

Several major themes arose during the stakeholder assessment. These themes and other information obtained during the interviews helped develop a series of workshops and open houses, and guided the selection of working group members. The major themes identified during the Stakeholder Assessment are:

- **Perceptions of the River (Aesthetics)**

  Because of the Portneuf River's physical appearance, many stakeholders perceive the River as a negative asset to the city. Water color and quality, low flows, and the concrete channel all contribute to this negative view. The biggest concern was the concrete channel, which prevents access and creates the illusion that the River is unapproachable and uninviting. Because of this, residents do not feel connected with the River. Most people do not even think of it as "the River" and, when they think of it all, they generally see an eyesore and a wasted resource.

  However, the stakeholders do see great potential for improving River reaches, and feel that enhancements could make the Portneuf River more attractive and inviting. These stakeholders believe that improving River aesthetics and water quality would lead to an overall improvement in the look and feel of the City of Pocatello.

- **Water Quality**

  Poor water quality was a concern for many stakeholders. Observation-based concerns included the distasteful color of the Portneuf River, as well as the observed discharge of stormwater and other pollutants into the River. Scientists from ISU and Idaho Department of Environmental Quality (IDEQ) discussed the relationship between low flows and warm temperatures and how they prevent fish and other aquatic life forms from surviving in the concrete channel.

  Agricultural byproduct and siltation from pollution attributed to the confluence with Marsh Creek, about 7 miles upstream from the study area, is another concern. A representative from IDEQ noted that "water quantity begets water quality." The general sentiment expressed is that people will not use the River if it is not cleaned up, restored, and relatively free of pollutants and debris.

- **Access and Recreation**

  Of utmost important to many stakeholders is recreational access to the River and the connectivity of trails along the River. A "greenway" path bordering the concrete

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channel was a key topic and, though generally viewed positively, remains a concern for homeowners with property in the vicinity. Some homeowners would have their property, and their privacy, significantly impacted by substantial channel and trail alteration and increased usage.

Many viewpoints were expressed regarding construction of a greenway and continuous trails throughout the city. The majority of stakeholders understand that complete access is not possible. Prior attempts to use eminent domain to create trails along the River left bitter feelings and resulted in a law disallowing the use of eminent domain for greenway development (House Bill 555, 2006). Land acquisition is an important consideration for trail development and other future projects.

In terms of River access for the purposes of recreation, school representatives articulated their interest in students using the Portneuf River as part of their curriculum. Several ISU students and other community members also indicated their desire to swim, kayak, and float the River.

- **Channel and Modifications**

As expected, much of the discussion centered on the concrete flood protection channel through the City of Pocatello. Stakeholders are concerned about maintaining an adequate level of flood protection, but many would prefer to remove or significantly alter as much of the concrete channel as possible. The channel is seen as a detriment to water quality, recreation, and access; and was deemed dangerous by some. Emergency officials noted that the current channel design makes human and animal rescue from the channel challenging and difficult.

- **Property Acquisitions along the Channel**

Potential actions taken in support of the Portneuf River Vision should use only land acquired from willing landowners. In 2009 and 2010, the Greenway Foundation caused major conflict by threatening to use eminent domain to create a greenway. As a result, new Greenway leadership is focused on working with willing landowners.

Revitalizing areas of the city with low-quality housing is seen as very positive to many members of the community. However, opposition from landowners or an inability to identify willing sellers could make it difficult to acquire the property needed to support implementation of some actions.

Potential barriers to land acquisition and the need for compromise were noted by the Vision Study Working Group. The suggestion was made that this effort would need to be made over the long-term. The city can “slowly buy out homes over the next 50 years.” Not every house along the concrete channel would have to be moved/removed. Investment companies own and rent out a significant portion of

the properties along the concrete channel through the City of Pocatello, and these property owners must be engaged and invited to actively participate in the Portneuf River Vision process. NeighborWorks Pocatello and others in Old Town might be in the best position to involve landlords and homeowners to help the plan remain realistic regarding property acquisition.

- **Flooding**

  Flood risk management must remain a consideration in any plans to modify the concrete channel. The channel has protected the city since its construction, and it is imperative that any changes to the channel maintain a level of flood protection that assures all community members they are still protected during flood events.

  Two very different points of view emerged during the stakeholder analysis regarding flood protection. One view expressed is that, if the Vision Study does not adequately reassure the community that an adequate level of flood protection will be maintained, individuals may be less likely to become involved and/or support the visioning process. On the other end of the spectrum are those individuals who feel that the science used to determine flood risk when the channel was designed does not reflect current risk, and these individuals are concerned Corps standards will limit modifications that can be made to the channel.

The next step in the planning process was to form a committee that could develop and articulate a shared vision, guide the planning process, and make recommendations for the future of the River. This committee would have to adequately represent the collective voice of the community. Individuals were identified by the City of Pocatello and the Corps, and were formally invited by Mayor Brian Blad to participate in the Working Group. 2016 to develop a vision for the Portneuf River and steer the planning process. During this period, the Vision Study Working Group labored to create a plan that accurately describes the needs and values of the community.

Working Group

Sad Following the Stakeholder Assessment and Existing Conditions Inventory, a Working Group was designated to develop and articulate a shared vision, guide the planning process, and make recommendations for the future of the river. This committee was designed to adequately represent the collective voice of the community. Individuals were identified by the City of Pocatello and the Corps, and were formally invited by Mayor Brian Blad to participate in the Working Group. The variety of groups and agencies involved in the Vision Study Working Group is broad, and includes local, state, and Federal agencies; non-profit organizations; and other local stakeholders. The Vision Study Working Group provided insights, ideas, and feedback

reflecting community values, as well as a balanced and open forum for discussion and decision-making. This dynamic team met five times between November 2015 and September

Working Group Members:

Bannock County - Devin Hillam/Jeremy Welch (alternate)
Bannock Transportation and Planning Organization - Mori Byington
City Creek Neighborhood - Sarah Mead/Julie Hafen (alternate)
City of Pocatello (Engineering) - Deirdre Castillo/Michael Jaglowski (alternate)
City of Pocatello (Environmental) - Hannah Sanger
City of Pocatello (Parks) - John Banks
City of Pocatello (Planning) - Matthew Lewis/Lon Crowell & Melanie Gygli (alternates)
USACE (Planning) - Ben Swaner
USACE (Planning) - Karen Kelly
USACE (Biology) - Ben Tice
USACE (Geotech) - Nathan Pierson
USACE (Geospatial) - Sean Redar
USACE (Hydrology & Hydraulics) Darrell Eidson, Joseph Groetsch
USACE (Institute for Water Resources) -Seth Cohen, Andrea Carson
Foothill Neighborhood - Lee Dille
Historic Old Town Pocatello Neighborhood - Joel Mingura
Idaho Department of Environmental Quality - Hannah Harris/Jennifer Cornell (alternate)
Idaho Fish & Game - Jim Mende
Idaho Power - Mark Lupo
Idaho State University MILES - Colden Baxter & Donna Lybecker
Idaho Transportation Department - Alissa Salmore
Levee Area - Randy Smith
NeighborWorks Pocatello - Lisa Smith
Old Town Pocatello - Stephanie Palagi/Jerry Myers (alternate)
Pocatello Community Charter School - Michael Mendive
Pocatello Planning & Zoning Commission - Jack Brennan
Portneuf Greenway Foundation - Rory Erchul
Portneuf Health Trust - Shaun Menchaca
Riverview Neighborhood - Andrea Kayser
School District 25 - Bart Reed/Shelley Allen (alternate)
Simplot - Jeanene Lowry
Valley Pride - Jay Colonel/George Lloyd (alternate)
Veteran's Memorial Building - Jeff Axford

Existing Conditions Inventory

In the summer of 2015, the Corps technical staff gathered and reviewed existing datasets and reports of the study area compiled and developed by ISU researchers, the City of Pocatello, Portneuf Watershed Partnership, Portneuf Greenway Foundation, and others. A series of literature reviews were produced during this effort, and results are located in *Appendix B – Existing Conditions Literature Review*. These literature reviews, which contain relevant

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information on existing conditions, challenges, and potential opportunities for improvements to the River
, should be updated as new information becomes available. Key topics discussed in the literature reviews include flood risk management, hydrology and hydraulics, land use, cultural resources, fish and wildlife, and water quality.

Public Involvement/Engagement

Involving the public in a study such as the Portneuf Vision Study is imperative. Public involvement in the decision-making process encourages the public to exchange ideas and understand the process that shapes the recommendations, ensuring they are meaningful, useful, and have potential for success. Balancing the protection and health of the River system and providing community-oriented health, economic, and recreational opportunities for all is a challenge. If the public "buys into" the visioning process, it becomes easier for the project sponsors to create a corridor that reflects community values and has the political support necessary for implementation. Public involvement can also aid in reducing the number of alternatives and, throughout the process, the public gains an understanding regarding tradeoffs and compromises inherent in project development. This ensures many more sectors of the community are ultimately satisfied with the project outcome. In addition, the public is an endless source of passion and creative thoughts that may ultimately lead to the best solutions.

The City of Pocatello and the Corps facilitated the public process for the Vision Study. Through strong public engagement throughout the study process, the Working Group identified a variety of concerns and developed recommendations with the greatest chance for success.

- **Challenges and Opportunities Maps -** One of the first tasks undertaken was the development of maps highlighting Challenges and Opportunities for the Portneuf River within the Vision Study Area. Based on input from the Existing Conditions Literature Review, the Working Group and City staff, Corps staff designed Challenge and Opportunity maps to assist the public in understanding what we know (and don't know) about the river. These maps ultimately served as a springboard for many public comments about the river's history and what needed to happen and where.

- **Website Development -** Information from the literature review was compiled by the City and ISU and presented to the community on the River Study website (river.pocatello.us) beginning in January 2016. This included historic photo-timelines of the Portneuf River in Pocatello, as well as photo tours of the Portneuf throughout the watershed and corresponding information about water quality and recreational use. A history of flooding and the construction of the federal Flood Control Project also engaged community members. Swipe tools using historic aerial photography from before the flood control project was constructed and present day helped educated community members about changes to the landscape.

A 3-D model of Memorial Park today, before the concrete channel, and as it could be in the future engaged community members with the visioning process. Photo tours of restored rivers in other communities (with and without concrete channels), were presented on this website as well.

The website also included an interactive map with layers that could be turned on and off, including existing greenway trails, public property along the river, historic river meanders, and floodplain. The website also contained maps of the Vision Study area highlighting opportunities and challenges identified by the Working Group.

Finally the website provided means for community members to communicate their ideas, concerns and vision back to the Working Group. Community members could join email lists and get more involved, as well as directly submit comments (including by commenting directly on the interactive map). Comments received were then posted on the website to improve communication and understanding.

- **Community Participation (winter 2016) -** The publication of the website at the beginning of January 2016 coincided with a massive public outreach effort. Over the course of the year over 600 community members attended presentations regarding the River visioning effort, most of whom were reached in early January and February 2016. Hundreds of additional community members engaged in the process through one-on-one conversations, while thousands were reached through media coverage (television, newspapers, etc.). A TV ad in January 2016 showcased the historic Portneuf, as well as restoration efforts in other communities. The TV ad encouraged community members to provide input on the visioning effort online or at an upcoming Open House.

  Participating community members provided comments about challenges and opportunities they saw. The did this by commenting directly on the Working Group's Challenges and Opportunities maps, by commenting online onto the interactive map of the River Study area, and by submitting emailed, handwritten and in-person comments to the City.

  Additionally over 600 community members completed an online visual preference survey conducted by the City of Pocatello during winter 2016. This survey asked community members about their Visual Preferences for the Portneuf River (see Appendix F). Demographic information collected through this process indicated a widespread sampling of the community including a significant number of residents who lived along the river.

- ***Development of Project Goals, Recommendations and Potential Projects* -** Based on community input during winter 2016, the Working Group met two times to draft and revise a set of guiding principles, goals, recommendations, and list of potential

projects. The original challenges and opportunities maps were re-configured with locations of potential projects. Identified challenges and opportunities were incorporated into these potential project descriptions and into the Vision Study's goals and recommendations. The potential projects were sorted into short-term (<5 years) and long-term (5 to 25+ years) projects

- **Community Participation (spring 2016) -** In the spring of 2016, the Working Group conducted a follow-up open house and online survey Community members were invited to vote on their top two favorite short- and long-term projects (See Appendix G). Approximately 400 residents took the survey at this time. Ongoing presentations during the spring incorporated the community input received to date, and helped facilitate this community conversation about the Portneuf and Pocatello's vision for it.

  A final public open house will be held October 12, 2016, to showcase the final Vision and recommendations.

  In April 2016, the City of Pocatello and ISU hosted a River as part of the Vision Study. This River walk was a 2.5-mile walk, led by Basia Irland, an internationally-acclaimed artist who works with river ecologies. The event was billed as a "Gathering of Waters," and participants were urged to share stories or memories about the Portneuf River. Water samples were gathered by participants, and the River was celebrated for what it once was, what it is currently, and what it could be in the future. A number community members also contributed by installing temporary art along the river, primarily using natural materials. Basia Irland created a website following her "Gathering of Waters." Her story and pictures can be found at *http://voices.nationalgeographic.com/ 2016/07/17/what-the-river-knows-portneuf-river-pocatello-idaho/*.

- **Survey Analysis -** *Visual Preference Survey*. The Visual Preference Survey gathered input from a broad spectrum of individuals that live, work, and/or recreate in the area regarding preferences for future development, maintenance, and restoration activities along the River. It became clear that local residents value a healthy River and riparian ecosystem. They indicated a preference for diverse recreational opportunities, walking and biking trails, and natural areas for viewing wildlife. Other important elements include flood control, safety, and planning and development.

  With only minor variation among community responses, there was overall consistency regarding a desired future direction. Water quality and ecosystem, health is the top concern for survey respondents, followed closely by increasing access and public use. In general, residents feel the City should take action to improve the ecosystem health of the Portneuf River. This is consistent with the results of a random public survey conducted by ISU in 2015.

An increase in River access and recreational opportunities also appear important, although this is tempered with concern that projects considered for implementation be feasible and mesh with local community and River conditions (e.g., winter flood events, low summer water levels, water quality, financial and land ownership constraints, etc.).

Residents want to interact with the River on many levels, from water-related sports to wildlife viewing, walking, and biking. The top priorities for public space are non-motorized trails and wildlife viewing. These would include natural riparian vegetation and vegetation buffers between the River/trails and development.

Residents preferred "clean" options. They liked concepts that were free of weeds, included trees and green spaces, and buffered development from the River. Any recommended concept should mesh well with the surrounding landscape.

Priority Projects Survey. In the spring of 2016, the Working Group again invited public input. Based on the community's Visual Preference Survey results, a list of potential short-term (<5 years) and long-term (5 to 25+ years) projects was generated, and the public was asked to vote on the top two favorites from each category. Table 2 identifies those top priority projects chosen by survey participants, along with a brief description. Further details regarding each project can be found later in this document.

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Table 2. Priority Projects

Project	Description
Short-Term (<5 years)	
Rainey/Centennial Park	Setback levee walls, greenway trail extension, picnic area development
Sacajawea Park	River access, reconnect River with meanders, restore eroding streambanks
Portneuf River Water Trail and River Clean-Up	Construct water trail, remove obstructions
Portneuf River Streambank Restoration	Restore eroded streambanks, plant native vegetation
Long-Term (5 to 25+ years)	
Raymond Park	Modify channel walls; create amphitheater, picnic areas, etc.; extend greenway
Center Street Riverfront Shopping Area	Develop shopping and restaurants, pedestrian trail
Concrete Channel Streambank Restoration and Greenway	Create meandering low-flow channel, greenway path
Memorial Park	Create amphitheater, picnic areas, River access, extend greenway
Historic Meanders	Reconnect historic meanders east of Edson Fichter Nature Area

Key Issues

Flood Control Project

Between 1966 and 1968, the Corps constructed a flood control project along a 6.2-mile reach of the Portneuf River through the City of Pocatello. The project includes a 1.5-mile rectangular concrete channel and 4.7 miles of levee upstream and downstream of the concrete channel. The existing concrete channel and levees have effectively contained floodwaters for close to 50 years along the Portneuf River.

Prior to construction of the flood control project, aerial photos and surveys showed extensive meandering of the Portneuf River. Significant environmental impacts, including reduction in River meandering and subsequent channel erosion and reduction of fish and wildlife habitat, were incurred as a direct result of project construction. The upstream levee reach included seven major meanders and former cutoff meanders before project construction. The reach of the Portneuf River currently channeled by concrete through the center of Old Town Pocatello

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and the downstream levee area each supported one major meander. A total of nine meanders were removed as part of the project, although the majority of them were removed for agricultural and industrial use.

Fish species present in the pre-project River habitats are still occasionally present in the study area, although high sediment loads and upstream pollution point sources reduced habitat quality. The habitat further declined because of concrete channelization and the removal of River meanders containing numerous micro-habitat components. This removal of streamside shading also decreased habitat suitability. Low summer flows within the 40-foot-wide concrete channel are not conducive to fish passage, which limits the travel of fish up and down the River, effectively separating fish from better habitat conditions both up and downstream of the flood control project. Depths of as little as 12 inches occur during summer months, and provide no cover for fish.

Construction of the flood control project created several fish passage barriers that inhibit or block fish passage throughout the River system. For example, prior to project construction, fish species used City Creek for spawning. The mouth of City Creek, located along the concrete channel, is blocked by a 4-foot drop structure.

The flood control project has been a significant physical barrier to River access and recreation, as it effectively prevents public access to the River or, at the very least, makes access challenging and dangerous. Because of the flood control project's design the River is underutilized by the community.

In summary, the major issues affecting the River because of the flood control project are:

- *Access to the River is difficult or prohibited.* City residents cannot access the River within the concrete channel for safety reasons. Access along the levees is limited because of the levee slope and the large riprap (rock) banks, which are difficult to negotiate.
- *Channel straightening and loss of meanders.* Beneficial River services are diminished because of the flood control project. Natural river processes (e.g., the formation of point bars required for cottonwood establishment) no longer occur within the bounds of the flood control project.
- *Loss of fish, wildlife, riparian, wetland, and aquatic habitat*. Habitat quality is impaired due to the flood control project and its associated removal of River meanders containing numerous habitat components.
- *Fish passage barriers.* No listed species or species of concern exist in the Portneuf River within the City of Pocatello. However, fish passage is limited for the majority of fish species in the River. High temperatures and low flows during summer months, and high velocities at other times of the year, create passage barriers for most fish within the Portneuf River.

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Aquatic Invertebrates

Aquatic invertebrates are good indicators of riverine habitat quality, because they require many variables that are directly linked to their habitat requirements. The Portneuf River has aquatic insect indices reflective of poor habitat conditions. In a study on ecosystem structure and function of the Portneuf River (Hopkins et al. 2010), invertebrate community structure did not reflect large differences in water quality among sample sites. The macroinvertebrate community was more responsive to hydrology, in the form of stabilizing groundwater springs, than to large differences in nutrient concentrations. The largest overall percentage of aquatic invertebrates was the invasive New Zealand mudsnail. Based on macroinvertebrate metrics, the Portneuf River was most degraded downstream of Pocatello in areas with higher nutrient levels than in upstream areas with lower nutrient levels. However, differing land uses does not explain variations in macroinvertebrate percentages (IDEQ 2008).

Hydrology and Geomorphology

Prior to modification of the River channel, spring peak flows routinely inundated the floodplain. Uncontrolled spring runoff established and maintained water tables and flood channels throughout the River corridor, contributing to the complex set of factors that allows a riverine ecosystem to function properly. Following the construction of walls, levees, and bank armoring, the floodplain was no longer accessible to floodwaters. This altered the natural characteristics and habitat value of the River corridor within the Portneuf Valley. In its present condition, the River lacks the channel complexity that historically provided habitat for fish and other aquatic organisms. Channelization increased downstream flooding and stream erosion, decreased the natural ability of the Portneuf River to clean polluted water, and removed habitat for fish, birds, beaver, and other wildlife. Although there are conditions affecting the entire River, each reach has specific conditions that must be evaluated individually.

Since the project was constructed, the 1.5-mile concrete channel has effectively eliminated any connection between ground and surface water systems. The remainder of the project may have increased interaction between the systems by lowering the River bed and removing fine material that could act as a barrier to flow between the ground and surface water systems. Shortening the River channel by 2 miles also reduced water loss due to evaporation and plant consumptive use, although this effect is minimal from a basin-wide hydrologic perspective.

Chesterfield reservoir regulates River flow above the project with a storage capacity of approximately 23,695 acre-feet (AF). This stored water is primarily reserved for irrigation up Marsh Creek, with close to 80% of Portneuf River flows diverted at Topaz Bridge. Some of this diverted water returns to the Portneuf via Marsh Creek. A preliminary analysis of water right claims completed by CH2M Hill in 1994 indicated that approximately 60% to 70% of claimed Portneuf River water rights were for irrigation, or irrigation in conjunction with another use (e.g., stock water or domestic use).

To summarize, the major issues affecting the hydrology and geomorphology of the Portneuf River include the following:

- *Channel straightening and simplification.* Development, agriculture, transportation infrastructure, and flood control measures reducing geomorphic functions have all encroached on the floodplain.
- *Altered flow.* Current flows differ in duration, magnitude, and timing from the natural hydrology that formed the River channel and floodplain.

Water Quality

Clean water is a necessity. It is required for human consumption and recreation; and supports healthy fisheries, wildlife habitats, and ecosystem function. Urban and agricultural runoff negatively affect water quality in the Portneuf. Channelization and flow alteration to accommodate development and water supply also diminish water quality. The time of year, source of pollutants, and water volume can influence the concentration and loads of pollutants within the River.

Within the study area, water quality in the Portneuf River is often quite poor. Tables 3 and 4 show impaired streams and sampling data for IDEQ's 303d-listed streams within the Portneuf River Basin that have water quality issues. The primary pollutants/issues of interest for the Portneuf River are bacteria [*Escherichia coli* (*E. coli*)], low levels of dissolved oxygen, phosphorus, temperature, and sediment. Above Batiste Road, there is too much sediment in the River, which clouds the water. High levels of nutrients and bacteria are attached to this sediment. Below Batiste Road, an influx of spring water dilutes the sediment within the Vision Study area. Extremely high phosphorus loads are delivered to the River via the influx of groundwater from the J.R. Simplot Company. In April 2008, IDEQ and Simplot signed a Voluntary Consent Order, and outlined steps needed to reduce phosphorus discharge to the Portneuf River in the study area. These remedial actions should attain water quality goals and result in improved dissolved oxygen conditions.

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Table 3. Portneuf River Basin Impaired Streams between the Portneuf Gap and the Reservation Boundary [Hydrologic Unit Code (HUC) 17040208] in the 2012 Integrated Report

Stream Name	Accounting Unit (AU) of HUC 17040208	Categories in 2012 Integrated Report	Total Maximum Daily Loads (TMDLs)	303d Listing Cause
City Creek	SK002_02	5		*E. coli*
South Fork Mink Creek	SK004_02c	4A, 5	2001 TMDL, TN, TP, sediment	*E. coli*
Mink Creek – South Fork to East Fork	SK004_03a	4A, 5	2001 TMDL, TN, TP, sediment	*E.coli*
Mink Creek	SK004_04a	4A, 5	2001 TMDL, TN, TP, sediment	*E. coli*
Portneuf River	SK016_05	4A, 4C, 5	2001 TMDL fecal coliform, TN, oil, and grease, TP, sediment	Temperature
North Fork Pocatello Creek	SK026_02a	5		*E. coli*

Recreation activities can impact water quality, species richness, and substrate conditions in the Portneuf River Basin (Cornell 2013). Compared to Gibson Jack Creek, City Creek (which has a higher level of recreation) has more fine sediment; lower macroinvertebrate species richness, abundance, and aquatic insect abundance, and biomass; higher dissolved organic carbon; and higher total phosphorus (Cornell 2013).

River flow is reduced by as much as 70% by irrigation in the summer compared to unregulated flow (Marcarelli et al. 2010). The River and its tributaries also receive irrigation return flows and non-point source discharges that can be laden with bacteria, excessive nutrients, and sediment [Idaho Association of Soil Conservation Districts (IASCD) 2005; IDEQ 2010]. High nutrient levels in the lower Portneuf River can lead to excessive aquatic plant growth (IDEQ 2010). Lower dissolved oxygen levels are often not adequate for cold-water aquatic organisms, and water temperatures are higher than historic conditions. Stormwater runoff carries oil and grease, high nutrients, bacteria, and sediment; and is often a problem in developed areas (IDEQ 1999).

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Table 4. Most Recent Bacterial Sampling Data for Impaired Streams in the Portneuf River Basin

Stream Name	AU of HUC 17040208	Collection Data (Most recent available)	*E. coli* Results (colony forming unit/ 100 milliliters)
City Creek	SK002_02	5/5/2015	1120
		5/14/2015	364
		5/18/2015	84
		5/26/2015	2419
		6/2/2015	613
		Geometric mean	551
South Fork Mink Creek	SK004_026	7/21/2014	602
		7/25/2014	580.5
		7/31/2014	524
		8/6/2014	348
		8/12/2015	65.5
		Geometric mean	334
Mink Creek – South Fork to East Fork	SK004_03a	7/21/2014	921
		7/25/2014	548
		7/31/2014	921
		8/6/2014	613
		8/12/2014	161
		Geometric mean	540
Mink Creek	SK004_04a	7/18/2014	108
		7/21/2014	635
		8/11/2015	365
		8/18/2015	770
		8/24/2015	411
		Geometric mean (not completed)	344
North Fork Pocatello Creek	SK026_02a	8/14/2007	1203
		8/20/2007	727
		8/23/2007	613
		8/27/2007	>2419
		8/31/2007	>2419
		Geometric mean	1257

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Issues affecting water quality in the Portneuf River are summarized below:

- *Dissolved oxygen.* Dissolved oxygen is required by fish and other aquatic organisms, and dissolved oxygen levels of at least 6 parts per million (ppm) are optimal for cold-water fish. When dissolved oxygen levels fall below 6 ppm, fish and other aquatic organisms can undergo stress and/or die. Low dissolved oxygen levels can result from high temperatures and/or excessive algae growth caused by phosphorus. As water temperature increases late in the afternoon, water cannot hold as much dissolved oxygen. Excess nutrients can exacerbate this process by allowing more algae and bacteria than normal to grow in the River.
- *Phosphorus.* High phosphorus levels can result in excess algae and aquatic plant growth which, in turn, reduces the amount of dissolved oxygen in the River and reduces insect diversity and fish numbers. Discharge from municipal wastewater treatment facilities, discharges from phosphate fertilizer plants, over application of fertilizer and agricultural runoff, animal manure, and natural decay of vegetation can all contain phosphorus. Recent monitoring shows high phosphorus levels from Marsh Creek to American Falls.
- *Excess fine sediment.* Excess fine sediment can negatively affect aquatic organisms. Water pollution problems, resulting from sediment loading into the Portneuf River, have been observed since the early 1900s. Much of the excess sediment in the Portneuf River is derived from non-point sources such as range and crop lands (IDEQ 2010). High levels of fine sediment also enter the Portneuf River within the concrete channel from stormwater runoff. Fine sediment levels are also a problem in the Portneuf River (IDEQ 1999), especially between Marsh Creek downstream to Batiste Road (where spring water dilutes the sediment in the Portneuf River). Many fish species can endure high suspended sediment levels for a short time (e.g., during spring runoff), but longer periods of exposure can be harmful. Sediment is one of the most common water quality pollutants (EPA 2009), and is the leading cause of benthic stress in Idaho (Rowe et al. 2003). Sediment loading to the lower Portneuf River exceeds the flushing capabilities of the River, resulting in River bottom sedimentation and impacts to benthic invertebrates, trout spawning, and egg incubation success.
- *Bacteria.* The presence of the *E. coli* bacteria in water can indicate the presence of pathogenic microorganisms harmful to human health. Recent monitoring shows high bacteria levels in the summer months below the concrete channel in Pocatello. Potential sources of *E. coli* in Pocatello include pigeons living under bridges; runoff from agriculture and livestock upstream; over-application of fertilizer; and dog waste in stormwater runoff. No sanitary sewer lines dump directly into the Portneuf River in Pocatello.
- *Reduced stream length.* Straightened channels are very efficient at moving flood flows. At the same time, a straightened channel disrupts many natural processes (connectivity to groundwater, natural channel dynamics of settling and filtration), and hampers biological diversity.

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Fisheries and Aquatic Habitat

Fish, aquatic insects, and other aquatic organisms are widely used to evaluate the ecological health of rivers (Zaroban et al. 1999; Resh 2008). Such organisms are good indicators of aquatic habitat quality, because they require many variables representing different spatial and temporal scales directly linked to their habitat requirements (Jungwirth et al. 2000). Even though trout exist in the Portneuf River, aquatic insect indices in the upper River reflect poor conditions (IDEQ 2010). Water quality, irrigation diversions, elevated temperatures, and sediment levels impair fisheries and other aquatic habitat within the River.

Eleven native and four non-native fish species currently reside in the Portneuf River (Feldman and Peterson). Table 5 lists these species. Poor water quality and altered River characteristics likely limit the total number of fish populations present in the River within Pocatello.

Table 5. Fish Species in the Portneuf River[1]

Common Name	Scientific Name
Native Species	
Utah Sucker	*Catostomus ardens*
Bluehead Sucker	*Catostomus discobolus*
Mountain Sucker	*Catostomus platyrhynchus*
Mottled Sculpin	*Cottus bairdii*
Paiute Sculpin	*Cottus beldingii*
Utah Chub	*Gila atraria*
Longnose Dace	*Rhinichthys cataractae*
Speckled Dace	*Rhinichthys osculus*
Redside Shiner	*Richardsonius baleatus*
Cutthroat Trout	*Oncorhynchus clarkii*
Mountain Whitefish	*Prosopium williamsoni*
Non-Native Species	
Common Carp	*Cyprinus carpio*
Rainbow Trout	*Oncorhynchus mykiss*
Brown Trout	*Salmo trutta*
Brook Trout	*Salvelinus frontinalis*

[1]Feldman and Peterson

No aquatic species listed under the Endangered Species Act (ESA) are currently found in the Portneuf River. Yellowstone cutthroat trout (*Oncorhynchus clarkii bouvien*), a subspecies of cutthroat trout, has been listed as sensitive or imperiled by the US Forest Service (USFS), the US Bureau of Land Management (BLM), and Idaho Department of Fish and Game (IDFG) (IDEQ 2010, Appendix F – Biological Assessment).

High sediment loads and poor water quality from upstream pollution point sources have reduced fish and aquatic habitat quality. Concrete channelization and the removal of River

meanders have further decreased habitat quality. The removal of streamside vegetation, offering shade, has also diminished habitat suitability. If these issues are not addressed, the long-term health of the River ecosystem will continue to degrade.

In summary, the following issues affect fisheries and aquatic habitat:

- *Channel straightening and simplification.* The Portneuf River lacks instream cover and habitat complexity. Riparian vegetation within the study area needs to be restored.

- *Altered flow*. Flows differ in duration, magnitude, and timing from the natural hydrology that formed the River channel and floodplain over time. This affects the transport of sediment within the River.

- *Water quality.* Poor water quality, elevated temperatures from a lack of streamside vegetation, sediment load, and pollutants reduce fish habitat quality and limit the total number of fish present within the River in the study area.

- *Fish passage*. The concrete channel can block fish passage due to low flows.

Wetland and Riparian Communities

Riparian vegetation provides habitat for wildlife, helps stabilize streambanks and reduce erosion, and provides instream wood critical to forming and maintaining productive habitat, overhead cover, and shade for fish. Wetland and riparian habitat present in the project area is of limited quality and extent. Historically, the River area supported a diverse and well-developed riparian community with associated wetland cover types. Floodplain forests were a mix of narrowleaf cottonwoods (*Populous angustifolia*), willows (*Salix* spp.), and other riparian shrubs. Aerial photos taken prior to construction of the flood control project indicate extensive River meanders and healthy riparian vegetation and wetlands along both banks. Land alteration, development within the floodplain, channelization, etc., have all contributed to the relatively limited riparian and wetland communities within the study area. Restoring a functional riparian corridor will improve the ecological integrity of the River system.

Prior to construction of the Federal flood control project, the upstream leveed portion of the River included seven major meanders. At least two of the major meanders and two or three of the cutoff meanders supported extensive riparian (and possibly wetland) vegetation. The reach of the Portneuf River currently channeled by concrete was also well vegetated. The downstream levee reach only supported one major meander with its associated riparian and wetland vegetation, but the riparian vegetation along the banks was generally well-developed.

All vegetation within the footprint of the flood control project was removed at the time of construction. The loss of mature trees eliminated nest sites for hawks, owls, cavity nesters, and many other wildlife species. Species requiring relatively large habitat blocks have also been

eliminated, as have most (or all) wetland-dependent species. Generally, the wildlife community that occurs in the project area is significantly less diverse and less abundant than that found in unaltered segments of the River prior to the flood control project.

Vegetation has returned along portions of the levees, but is routinely removed to remain compliant with the Corps levee maintenance program. Few large trees remain, leaving primarily shrubs, which provide little shade to the stream or cover for fish.

Most riparian areas outside of the Federal flood control project footprint are comprised of willows. The extent of the riparian/wetland zone along the River, in terms of both width and area, is considerably reduced from what it once was. As a result, wildlife use is limited to the more common species typically associated with edge habitat and/or disturbed areas. Species requiring relatively large habitat blocks, as well as most or all wetland-dependent species, are not supported by current habitat conditions. Generally, the wildlife community living along the Federal flood control project is limited in diversity and abundance when compared to unaltered segments of the River within the study area. Another factor adversely affecting wildlife along the River is the continued encroachment caused by urban development.

Very few small wetlands exist in the study area. Wetlands generally support a limited diversity of emergent species of sedges (*Carex* spp.), rushes (*Juncus* spp.), and other herbaceous plants. Wetlands also support amphibian species, which are now generally absent from most of the Vision Study area. Construction of the flood control channel resulted in the loss of approximately 4 miles of natural River channel and associated wetlands, as natural meandering and more than 100 acres of riparian habitat were removed (Corps 1992, as cited in IDEQ 2010).

To summarize, the following issues affect wetland and riparian habitat in the study area:

- *Wetland and riparian areas are reduced and lost*. Irrigation diversion, channel straightening, transportation infrastructure, and other forms of development have severely diminished riparian and plant communities.
- *Spread of invasive species*. Non-native species are established along the River banks, limiting the function and value of existing riparian habitats.
- *Lack of native plant reproduction.* Altered River flows, and the confined channel and floodplain, have limited the ability for native riparian and wetland vegetation to grow and reproduce naturally.

Recreation and Public River Access

Numerous recreational opportunities are available within the study area. A number of developed parks lie adjacent to the River, where activities such as golfing, picnicking, ball games, playground use, and wading occur. These facilities do not provide or encourage river-based recreation and access, however. Lack of River access was repeatedly identified as an issue by the public and the Study Working Group throughout the visioning process.

At present, public access to the Portneuf River within the Federal flood control channel is limited for safety and liability reasons. When the River was channelized, the concrete portion was fenced to prevent people from falling into the channel or being swept away during flood flows. Once inside, there is no ready escape route to exit the channel. Levee sections of the River are steep and treacherous to navigate, which also discourage use of the River in this area. Recreation is limited by land use and ownership, but includes biking, walking, and bird watching. Private lands and the lack of public access throughout the remainder of the study area limit the use of the River as a whole. There is also limited access available for individuals protected by the Americans with Disabilities Act of 1990 (ADA). Encouraging more beneficial use, while ensuring public health and safety, could make the Portneuf River an amenity for Pocatello residents and others from the surrounding area.

The Edson Fichter Nature Area, located at the south end of the levee section, provides River access. This park has a walking bridge across the Portneuf River where users can access a natural trail and fish for trout in a pond constructed and stocked by IDFG. An informal swimming hole at Edson Fichter is equipped with a rope swing. However, this stretch of the Portneuf River typically exceeds recreationally safe limits for the *E. coli* bacteria, particularly in the summer months. The bacteria are primarily delivered to the River in animal and human fecal wastes, and can enter the human body if small amounts of River water are ingested.

A series of bike and pedestrian pathways follow the River. The Portneuf Greenway Foundation plans to extend these trails along the channel throughout the study area, connecting to trails in other parts of the Lower Portneuf River Valley. Currently, the Greenway trail connects Taysom Rotary, Rainey, and Centennial Parks. The pathway is connected through Old Town Pocatello, but pathways north and south of town are incomplete.

Several parks and trailheads are located north (downstream) of the concrete channel, but are underutilized for several reasons. Within the River, trash and river debris in this area block users from participating in water-based recreation (e.g., canoeing and kayaking), and make River travel hazardous. Parking, bathroom facilities, access, and signage to these areas also limit usage.

Issues affecting recreation and access are summarized in the following:

- *Access to the River is difficult or prohibited*. City residents are unable to access the River within the concrete channel for safety reasons. Access along the levee sections is limited because of the levee slopes and large riprap (rock) banks. Elsewhere, current river access is limited and not designed for universal ADA accessibility. Additionally, trails near the River are fragmented, making continuous travel along the River corridor challenging for recreation users.

- *Existing parks do not encourage river recreation.* Limited signage and facilities to support River recreation (e.g., bathrooms and parking lots) reduce the amount of River use at the present time.

- *Poor water quality.* The water quality within the Portneuf River currently creates health risks for those using the River for recreation during certain portions of the year. Additionally, portions of the river are clogged with trash and debris that make river travel hazardous.

Recommendations

The Vision Study suggests a wide range of potential benefits and opportunities for community improvement that can be obtained through River revitalization. After a plan is adopted, the City can begin to determine how the guiding principles, goals, and proposed projects can best be implemented to fit local needs.

The following paragraphs detail the four guiding principles of the Vision Study and its goals and recommendations. The next section contains potential projects to achieve these recommendations.

It must be noted that any potential project that would alter or interfere with the Federal project would require extensive coordination with the Corps. Work could possibly be done under the authority of 33 USC 408 (commonly known as Section 408), which allows an entity to alter a Corps civil works project provided the activity will not be injurious to the public interest or impair the project function and usefulness.

Guiding Principle 1: Ecosystem Health

The Portneuf River Vision Study provides a vehicle to address the enhancement of environmental qualities within the study area. The Portneuf River is a key element of the Portneuf Watershed, and provides flood control, habitat, and aesthetic amenities to the community. This Vision Study encourages appropriate flood risk management, while still providing riparian and aquatic habitat, clean water, and recreational opportunities.

The River's ecological and hydrological functions could be restored in the long-term by re-creating the riparian corridor and removing or modifying the concrete channel and levees, wherever possible. Guiding Principle 1 includes a wide range of environmental goals for improving hydrologic functions; protecting and increasing the floodplain, wetland, and riparian habitat areas; and improving water quality.

- **Goal 1.1 – Appropriate flood risk management**
  - The need to maintain existing flood risk management is the biggest influence on the planning process. Residents who experienced the floods in the 1960s need reassurance that any proposed changes to the concrete channel will not result in increased flood hazard. The City, in partnership with the Corps, will not permit improvements that will compromise existing flood risk management in the City.

- Flood risk could potentially be reduced through non-structural measures. Such measures may include increasing the amount of floodplain acreage upstream of the City, purchasing and removing flood prone structures, and implementing land management practices that reduce winter runoff.
- Onsite infiltration and retention in new developments can be increased to limit shallow flooding from stormwater. Stormwater can be managed onsite through natural landscape features and green stormwater infrastructure [e.g., bio swales (trenches) and bio retention areas (depressions)]. Effectively managing stormwater onsite involves capturing, filtering, and slowly releasing stormwater back into the system.
- Both the City and the Vision Study Working Group recommend a reassessment of current flood control requirements along the Federal flood control channel. Currently, the Annual Peak Discharge Frequency Curve produced by the Corps identifies the 6,000 cubic feet per second (cfs) flood event for which the concrete channel is designed as a 500-year event for the Portneuf River at Pocatello (0.2 percent exceedance). A 3,300-cfs flood event is the equivalent of a 100-year flood.

- **Goal 1.2 – Restore and protect the Portneuf River ecosystem**
  - Protect and increase River channel complexity and cover, including the establishment of riffles, pools, runs, and/or a natural stream bottom, wherever feasible.
  - Reduce stream width and establish low-flow channels in the concrete channel, where possible.
  - Protect and increase the floodplain and wetland and riparian habitat areas, including setting back levee and channel walls and/or re-establishing stream meanders.
  - Remove exotic and invasive vegetation. Plant native species to promote health stream function and improve the aesthetic nature of the River corridor.
  - The City and Study Working Group recommend pursuing a levee vegetation variance from the Corps to allow more flexibility with the type of vegetation that can be planted along levee sections of the Federal flood control project. Currently, vegetation is limited along the levees, as required by Federal law.

- **Goal 1.3 – Improve water quality and flow**
  - Implement urban and agricultural land management practices to reduce the amount of sediment and other pollutants in runoff water.
  - Filter fine sediments and other pollutants from stormwater and agricultural runoff with infiltration swales, constructed wetlands, and other measures.
  - Reduce stream temperature by enhancing vegetative stream cover. Restoring vegetation within the Federal flood control project will require additional flood capacity unless the current 6,000-cfs flow requirement is reduced. Introducing

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vegetation in the River bottom, for example, will require an expanded channel capacity.
  - Increase in-stream flows to improve water quality and support beneficial uses of the River, including ecological systems, in-stream recreation, and aesthetics.
  - Increase beaver populations, where suitable. Beavers regulate water flow and help create wetland environments for other wildlife. Wetlands are considered nature's "kidneys."

- **Goal 1.4 – Integrate stormwater and groundwater management with the Vision for the Portneuf River**
  - Plan for aquifer recharge in select locations.
  - Plan for regional and/or localized stormwater treatment and infiltration along the River corridor.

Guiding Principle 2: Access and Recreation

Guiding Principle 2 focuses on creating and extending access to and along the Portneuf River throughout the entire valley. It is important for the River to be connected to neighborhoods and the overall community and accessible to everyone. A range of transportation improvements will make traveling to and accessing the River easier. These improvements include development of a continuous greenway to link a series of non-motorized paths to the River and other public open spaces and parks.

Implementation of the Vision Study will also improve the River's infrastructure and provide recreation, bringing visibility to the Portneuf River and promoting it as an amenity for the community. Creating designated River access points and removing hazards will make River travel more enjoyable and attractive to River users.

- **Goal 2.1 – Connect and extend Greenway trails and open space along the River**
  - Explore and implement creative solutions for non-motorized Greenway trails within and along the River, where feasible. The Study Working Group strongly supports completion of the Portneuf River Greenway to connect downtown Pocatello with parks along the River.

- **Goal 2.2 – Connect neighborhoods, shopping areas, and trail systems to the Portneuf River**
  - Implement road, sidewalk, trail, park, landscaping, and signage recommendations from the Portneuf Valley Bicycle Plan and the Old Town Revitalization Plan.
  - Improve existing and add additional pedestrian and bicycle bridges across the River and railroad in suitable locations.
  - Provide consistent directional signage to, and along, the Portneuf River.

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- **Goal 2.3 – Enable safe public access**
  - Create River access at public parks adjacent to the River. The Vision Study considers public safety a critical priority. Jurisdictional partners (Pocatello, Bannock County, and the Corps) must work together to develop strategies and design standards for safe access to the River. Appropriate measures may include endorsing common design standards for channel modifications (e.g., stepped or terraced access, ramp intervals, and safety fencing). This will allow people to reach the water's edge and easily exit in the event of a flood.
  - Install launch and take-out facilities for various boating and floating watercraft along the River. These facilities will be developed with safe, flexible, functional, and ADA-compliant designs that meet user needs at various flow levels.
  - Within the concrete channel, provide safe entry and exit points.
  - Establish a flood warning system in the event of high flow conditions.
  - Ensure ADA-compliant accessibility to the River.
  - Ensure existing flood risk management capability is maintained.

- **Goal 2.4 – Increase recreational opportunities**
  - Modify select riverfront property to create a variety of public spaces, including natural areas, grassy parks, and recreational facilities. Recreational facilities should respond to specific neighborhood needs, but remain consistent with river habitat restoration plans. River parks should seek to improve water quality by using best management practices and treating stormwater onsite.
  - Establish a water trail for tubing, canoeing, etc., with multiple boat launches and take-outs. Discontinuous trail segments, fractured by hazards and the lack of launches and take-outs within the River currently prevent users from enjoying a continuous trip on the Portneuf River.
  - Establish swimming areas, fishing holes, and kayak/stand-up paddle board parks.

- **Goal 2.5 – Incorporate educational resources**
  - Install interpretive signage, incorporating natural or cultural information.
  - Modify select riverfront property to support use as an outdoor classroom for student engagement with the Portneuf River. Several schools are within close walking distance, and this offers the potential to create joint-use parks and outdoor classrooms to provide the schools with space for ecological class and fieldwork (e.g., water quality monitoring).
  - Improve transportation options, including non-motorized paths, between the Portneuf River (and its tributaries) and local schools. All cross-connections between the community and the River should ensure safe accommodations of multiple modes (motorized traffic, pedestrians, and cyclists, etc.).

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- **Goal 2.6 – Incorporate public art and signage to celebrate the natural and cultural heritage of the Portneuf River**
  - Heighten awareness of the River corridor by using signature elements (e.g., signage, gateways, and innovative bridges).
  - Facilitate public art projects along the River corridor that celebrate the Portneuf River, create a sense of place, and integrate with the surrounding environment. The identity and awareness of the River within the community can be improved by encouraging, supporting, and maintaining art that improves the beauty of the River setting and inspires people.

Guiding Principle 3: Community Engagement

As implementation of study recommendations begins, residents should participate in the community planning process to identify types of land, recreation, and open space uses that re-appropriate the spaces and are compatible with the study area and individual neighborhoods.

- **Goal 3.1 – Make the Portneuf River a focus of activity**
  - Design riverfront space for multipurpose use that will support diverse community events and activities. River parks and spaces should be designed to improve the River corridor. When possible, park land adjacent to the River should be used to expand the River footprint. Recreation facilities should respond to specific neighborhood needs, balanced with water quality improvement and the restoration of wildlife habitat.
  - Support events and activities that bring residents in contact with the Portneuf River. Event programming can help improve public perception of the River. Both regional and local event planning can enliven the community and provide new visibility and attention to the River.

- **Goal 3.2 – Engage residents in project planning and implementation**
  - Capture community River history and values at the beginning of the planning process.
  - Engage with riverfront residents in their neighborhoods and in partnership with neighborhood organizations.
  - Provide multiple opportunities and levels for residents to engage in project planning and implementation.
  - Prioritize engagement efforts with citizens from neighborhoods near the River

Guiding Principle 4: Economic Development

In addition to improving the environment, the Vision Study also includes intangible values such as improving the quality of life for residents, increasing the attractiveness of Pocatello as a place to live and work, and increasing economic prosperity within the region.

A core element of this concept is empowerment of the community. This is accomplished by encouraging participation and consensus building; creating opportunities for sustainable, economic reinvestment; and adding value and providing an equitable distribution of opportunities to underserved neighborhoods along the Portneuf River.

- **Goal 4.1 – Improve public health and quality of life**
  - Facilitate events and programs that encourage physical activity along the River corridor
  - Design riverfront space to facilitate walking and biking for recreation and transportation. Neighborhood walking and biking loops can make the River a continuous route that safely connects users to recreational opportunities.

- **Goal 4.2 – Increase employment, housing, and retail space opportunities**
  - Incentivize development projects that increase pedestrian activity, reduce crime, and increase property values.

- **Goal 4.3 – Promote public and private riverfront development and open space acquisition in suitable areas**
  - Identify parcels suitable for open space acquisition or the development. The Greenway should expand by acquiring new open spaces that, where feasible, can be restored to improve fish and wildlife habitat. Areas outside of the River corridor should be explored by protecting, reclaiming, and restoring them as parks and open space that connect wildlife habitats.
  - Develop and implement standards for streamside buffers based on land use and streamside conditions. Buffers should be applied to all new open space or park lands created along the River. Buffers provide multiple benefits, including recreation and water quality improvements.
  - Incentivize mixed-use development opportunities (industrial, retail, residential) in suitable areas (e.g., density bonuses, expedited approvals or relocation requirements and benefits, etc.).
  - Develop and implement complementary and sustainable design standards for riverfront neighborhoods. Improving standards near the River will benefit the City through improved River health and quality of life. Good development practices can mitigate impacts on habitat and water quality in both existing communities and new development areas.
  - Retain and celebrate neighborhoods and community history through context and sensitive development.

- **Goal 4.4 – Focus attention on affordable neighborhoods**
  - Prioritize projects that improve linkages between housing, transportation, and parks in underserved areas.
  - Plan and implement projects in a socially, culturally, and geographically equitable manner.

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- During project planning, ensure areas with lower-income populations receive opportunities and amenities consistent with higher-income areas.

Potential Projects

This section describes 30 potential projects proposed to restore the Portneuf River (Table 6). The long-term vision for the River is a continuous functioning riparian ecosystem along the River corridor within the study area. This involves restoring riparian vegetation to support birds and mammals, and provides improved aquatic restoration for fish and other aquatic organisms. Potential projects that alter flood risk management would require extensive coordination with the Corps.

Achieving the long-term goal of restoring the Portneuf River riparian corridor and ecological function may take generations to achieve. In the meantime, the study recommends identifying and phasing improvements for the short-term in order to maintain momentum and demonstrate ecological and public-access benefits of long-term restoration.

To ensure improvements can be made in the near-term, the Vision Study proposes several projects that can be introduced with less change to the existing channel configuration. Over the long-term, as funding is made available, further modification may be required to introduce a functional riparian corridor within the concrete channel.

The proposed projects are both short- and long-term, and are listed in Table 5. Descriptions of the potential projects follow the table. It should be noted that several proposed projects involve access into the flood control channel. In order to minimize life safety risks, any project providing access to the concrete channel may have restricted use during high-flow events.

Short-term projects are defined as those that could be designed, developed, and executed within 5 years following completion and adoption of the Vision Study. Short-term projects are typically those with fewer legal or real-estate constraints; and are less costly to construct, operate, and maintain than long-term projects.

Long-term projects are projects requiring greater planning, design, and development to complete. They are anticipated to take anywhere from 5 to more than 20 years to implement. Long-term projects are those with greater legal or real estate constraints; and are more costly to construct, operate, and maintain than proposed potential short-term projects.

In addition to the proposed short- and long-term projects, several additional projects were proposed. These projects support the Guiding Principles and Goals, and consist of additional planning studies, policy creation, continued actions, and determinations from Federal agencies. They should be considered as time and funding allows. Some of these projects are already in progress.

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Table 6. Potential Projects for Revitalizing the Portneuf River

Project Number	Project Name	Short-Term, Long-Term, or Additional?
1	Portneuf River Water Trail and River Clean-Up	Short
2	Greenway Extension	Long
3	Portneuf River Streambank Restoration	Short
4	Tributary Stream Restoration	Short
5	Church Farm	Long
6	Historic Meanders	Long
7	Country Club	Long
8	Levee Setbacks	Long
9	Ross Park	Long
10	Rainey/Centennial Parks	Short
11	Concrete Channel Streambank Restoration and Greenway	Long
12	Concrete Channel Greenway Trail Extension	Long
13	Center Street Riverfront Shopping Area	Long
14	Memorial Park	Long
15	Raymond Park	Long
16	Sacajawea Park	Short
17	Pacific Recycling Trailhead	Long
18	Zweigart Park	Long
19	West Side Parks	Short
20	Simplot Trailhead	Short
21	Add Pedestrian/Bicycle Bridges across Railroad and River	Long
22	Install Signage and Wayfinding to the Portneuf River and Access Points	Short
23	Concrete Channel Art and Seating	Short
24	Seek a Levee Vegetation Variance	Additional
25	Develop a Portneuf River Zoning Overlay District	Additional
26	Reassess Current Flood Control Project Capacity Requirements	Additional
27	Reduce Volume of Urban Runoff Water Flowing into the Portneuf River	Additional
28	Increase In-Stream Flows	Additional
29	Identify and Purchase Greenway Easements and Flood-Prone Homes from Willing Sellers	Additional
30	Improve Upstream Water Quality	Additional

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Short-Term Projects

- **Project 1 – Portneuf River Water Trail and River Clean-Up.** Develop a water trail for canoes/kayaks and other non-motorized watercraft with a series of accessible put-ins, take-outs, and other necessary infrastructure (parking lots, restrooms, etc.) from Fort Hall Mine road to Laughran Road (Northwest, Levee, and South Reaches). Constructing the water trail would include the removal of debris jams, trash, fallen logs, and other obstructions that currently create hazards and impede travel along the Portneuf River.
- **Project 3 – Portneuf River Streambank Restoration.** Restore eroded streambanks and plant native vegetation along sections of the Portneuf River in the study area. Efforts should be made to survey the River and develop a phased approach to removing invasive vegetation and restoring degraded streambanks.
- **Project 4 – Tributary Stream Restoration.** Mink, Gibson Jack, Johnny, Cusick, City, and Pocatello Creeks all feed into the Portneuf River within the Vision Study boundary. Fish passage barriers, channelization, dewatering, and bank erosion are all found within these tributary streams. Based on their various conditions, the Vision Plan recommends completion of an inventory and assessment of each stream to prioritize restoration work.
- **Project 10 – Rainey/Centennial Parks.** Setback levee to create room for water trail access, fishing, riparian habitat and floodplain restoration, a seasonal wetland, Greenway trail extension, neighborhood connections, interpretive and educational signage, and picnic area development.
- **Project 16 – Sacajawea Park.** Create canoe and tubing access points, reconnect the River with historic meanders at the north end of the park, and restore eroding streambanks. Improve parking, picnic areas, signage, and neighborhood connections.
- **Project 19 – West Side Parks**. Restore eroded streambanks and the historic floodplain. Develop picnic areas and water trail access points, and extend the existing Greenway trail.
- **Project 20 – Simplot Trailhead**. Create canoe and tubing access, fishing access, and picnic areas. Restore eroded streambanks.
- **Project 22 – Install Signage and Wayfinding to the Portneuf River and Access Points.** Develop and install wayfinding and signage, including maps and directional markers to introduce, educate, and guide users to the Portneuf River and its associated amenities.
- **Project 23 – Concrete Channel Art and Seating.** Encourage appropriate art to enhance the experience of visiting and learning about the River.

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Long-Term Projects

- **Project 2 – Greenway Extension.** Currently, the Greenway extends along certain portions of the Portneuf River. The Vision Study recommends a continuous Greenway from the Gap to the Fort Hall Indian Reservation boundary. Development of the Greenway must be sensitive to its alignment and design in order to avoid any adverse impacts to the natural environment and the privacy of homeowners along the River. Along the levees and concrete sections of the Federal flood control project, trails could be at street level, on top of levees, or within the levee and the concrete channel where feasible. The Greenway's non-motorized paths should connect the River to parks, trails, open space, neighborhoods, and businesses. River
- **Project 5 – Church Farm.** This large parcel of land would provide opportunity for riparian, wetland, and upland restoration for use as fish and wildlife habitat. Fishing and floating fishing access, picnic areas, and nature viewing areas are all possible components of this potential project. Opportunities for a lake or sediment basin should also be assessed.
- **Project 6 – Historic Meanders.** Located between Interstate 15 and the railroad tracks south and east of Edson Fichter Nature Area are several disconnected River meanders. Prior to construction of the railroad, these meanders provided valuable riparian and aquatic habitat as well as floodplain access. The proposed project would include the installation of culverts to pipe the River under the railroad tracks (and back) and into the historic meanders, giving the River access to the floodplain and providing valuable fish and wildlife habitat.
- **Project 7 – Country Club.** Along Juniper Hills Country Club, the Portneuf River is constrained between the railroad the golf course. This project would restore the channelized River running through the golf course, stabilize streambanks, improve riparian and aquatic vegetation, increase River access to the historic floodplain, and extend the Greenway trail along the River.
- **Project 8 – Levee Setbacks.** Several locations along the earthen levee portion of the Federal flood control project have potential for levee setbacks. These locations include Cheyenne Avenue Park, Connector Park, Tech Farm, Riverside Golf Course, and Riverside Drive. Levee setback projects include the relocation of the current levee alignment to encourage natural floodplain processes (e.g., floodplain storage, River meandering, and riparian habitat establishment). The current flood capacity would still be maintained.
- **Project 9 – Ross Park.** Connect the Portneuf River to Ross Park. Restore historic meanders and the floodplain east of the railroad tracks (north of Cheyenne Avenue). Install culverts to pipe the River under the railroad tracks (and back). Install fishing access, and create picnic areas and a Greenway trail.
- **Project 11 – Concrete Channel Streambank Restoration and Greenway.** Construct a meandering low flow channel, with natural stream characteristics (e.g., riffles, runs, pools), within the concrete channel. Make riparian plantings on wide overbanks and

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add containerized plantings. Create a recreation trail along the River's edge that can be closed for safety reasons during high flow events.

- **Project 12 – Concrete Channel Greenway Trail Extension.** Extend the Greenway trail along the concrete channel at street level, either next to the concrete channel or along existing streets.
- **Project 13 – Center Street Riverfront Shopping Area.** Develop a mixed-use district with gathering spaces and outdoor café tables facing the River near Center Street. Connect the Portneuf River to Old Town Pocatello with a pedestrian mall or similar feature.
- **Project 14 – Memorial Park.** Modify the concrete channel and existing park to accommodate an amphitheater, picnic areas, water trail and River access, and an extension of the Greenway. The park and its associated features may be closed for safety reasons during high flow events.
- **Project 15 – Raymond Park.** Modify the concrete channel and Raymond Park to provide access to the Portneuf River. Create an amphitheater, picnic areas, splash pad, water trail, and River access points. Extend the Greenway trail along the River edge.
- **Project 17 – Pacific Recycling Trailhead.** Restore eroded streambanks and the historic floodplain. Create fishing and water trail access points, and improve picnic areas and parking.
- **Project 18 – Zweigart Park.** Restore the historic floodplain, and create fishing access and a picnic area.
- **Project 21 – Add Pedestrian/Bicycle Bridges across Railroad and River.** Implement recommendations outlined in the Portneuf Greenway Master Plan (2009) for pedestrian/bicycle bridges. In order to reconnect communities and neighborhoods, and link users to the larger network of trails and public resources, additional pedestrian/bicycle bridges should be built.

Additional Projects

- **Project 24 – Seek a Levee Vegetation Variance.** Apply for a levee vegetation variance from the Corps. Currently, the City is required to remove vegetation from the levee portion of the flood control project. If a variance is approved, the City would be allowed to grow specific types of riparian vegetation on the levees. Modify existing levees to allow vegetation to be planted on the landward side of the levee, in accordance with Corps levee vegetation regulations.
- **Project 25 – Develop a Portneuf River Zoning Overlay District.** Consider restrictions that should be placed on development along the River.
- **Project 26 – Reassess Current Flood Control Project Capacity Requirements.** Currently, the City of Pocatello is required to maintain the flood control project to safely convey flood flows of 6,000 cfs. According to the Annual Peak Discharge Frequency Curve developed by the Corps, the 6,000-cfs is a 500-year event for the Portneuf River at Pocatello, while a 3,300-cfs flood event is equivalent to the 100-

year flood. This project would request the Corps to reassess flood risk and capacity requirements to determine if the current level of protection required is still appropriate.

- **Project 27 – Reduce Volume of Urban Runoff Water Flowing into the Portneuf River.** Seek opportunities to keep urban runoff out of the Portneuf River wherever possible.
- **Project 28 – Increase In-Stream Flows.** Continue to actively purchase available water rights using water bond funds. Pursue all other mechanisms available to keep water within the Portneuf River to support fish and other aquatic species.
- **Project 29 – Identify and Purchase Greenway Easements and Flood-Prone Homes from Willing Sellers.** As willing sellers are found, purchase homes prone to frequent flooding. In addition, purchase additional easements whenever possible that will aid in extending the Greenway trails.
- **Project 30 – Improve Upstream Water Quality.** Continue collaboration and support of environmental improvements along Marsh Creek and other tributaries to reduce sediment and other pollutants from being deposited into the Portneuf River.

Selecting Priority Projects

When the 30 potential projects were outlined, the public was invited to vote on projects they consider the top priorities. Table 7 shows the top 5 results of public voting (listed by project number).

Table 7. Public Priority Project Selection

Short-Term Projects		Long-Term Projects	
Project Number	**Project Name**	**Project Number**	**Project Name**
1	Portneuf River Water Trail and River Clean-Up	6	Historic Meanders
4	Tributary Stream Restoration	11	Concrete Channel Streambank Restoration and Greenway
16	Sacajawea Park	13	Center Street Riverfront Shopping Area
10	Rainey/Centennial Park	14	Memorial Park
3	Portneuf River Streambank Restoration	15	Raymond Park

After public input and voting was complete, the study team (consisting of Pocatello and Corps hydrologists, biologists, geotechnical engineers, and landscape architects) completed a screening exercise to analyze how well each potential project aligned with the principles and goals of the Vision Study. In order to complete this exercise, the study team developed the following criteria:

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Benefits Criteria

- **Improve River/Riparian Ecosystem and Water Quality.** Areas should be capable of maintaining or improving flood protection, improve water quality, and restore the aquatic and riparian ecosystem.
- **Create/Expand Parks, Trails, and River Access.** Areas should be able to create, expand, and/or connect wildlife habitat, parks, recreation, and open space. In addition, any modifications should improve the aesthetics and visibility of the Portneuf River.
- **Create Community Benefits and Opportunities for Economic Development.** Areas should be able to create multiple community benefits and economic reinvestment opportunities, and provide environmental equity.

Feasibility Criteria

- **Cost of Implementation.** What is the relative cost of this potential project?
- **Legal/Real Estate Constraints.** Are there any known legal or real estate constraints? What is the current real estate status of land associated with this project?
- **Cost to Operate and Maintain.** What are operation and maintenance responsibilities and costs for this project?

Once criteria was established, the study team analyzed each of the 30 potential projects identified. The team relied on best professional judgment and available information to determine how well each potential project met the Vision Study principles and goals. Tables 8 and 9 show results of the screening process for potential short- and long-term projects.

After potential projects were screened by the study team, the results were presented to the Vision Study Working Group for review, input, and adoption. The Working Group was requested to compare the results of the priority projects identified by the public and the results of the technical team screening process. From this comparison, a final list of priority projects was developed. This list contains potential projects that meet the goals of the Vision Study and represent the voice of the public. These projects should not be the only projects considered and may not be the first ones to be implemented. However, they were selected for their potential to contribute to the revitalization of the Portneuf River. These priority projects are presented in Table 10, and will be adopted as part of the Vision Study.

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Table 8. Short-Term Potential Project Screening Results

Short-Term Projects	Benefits Criteria			Feasibility Criteria			
	Improve River/ Riparian Ecosystem and Water Quality	Create/ Expand Parks, Trails, and River Access	Create Other Community Benefits and Opportunities for Economic Development	Cost to Implement	Legal/Real Estate Constraints	Cost to Operate and Maintain	Scoring Totals
*1 – Portneuf River water trail and river clean-up	2	1	1	3	3	3	**13**
20 – Simplot Trailhead	2	1	1	3	3	3	**13**
*16 – Sacajawea Park	1	3	1	1	3	1	**10**
*22 – Install signage and wayfinding to the Portneuf River and access points	2	2	1	3	3	3	**14**
*10 – Rainey/ Centennial Park	1	3	3	2	1	1	**11**
23 – Concrete channel art and seating	2	1	1	3	3	1	**11**
*3 – Portneuf River streambank restoration	3	2	2	1	1	3	**12**
19 – West Side Parks	1	1	2	1	1	3	**9**
4 – Tributary stream restoration	1	2	2	1	1	3	**10**

*Project has been identified as a priority project.
1 – Little or no opportunity to achieve criteria
2 – Medium opportunity to achieve criteria
3 – High opportunity to achieve criteria

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Table 9. Long-Term Potential Project Screening Results

Long-Term Projects	Benefits Criteria			Feasibility Criteria			
	Improve River/ Riparian Ecosystem and Water Quality	Create/ Expand Parks, Trails, and River Access	Create Other Community Benefits and Opportunities for Economic Development	Cost to Implement	Legal/Real Estate Constraints	Cost to Operate and Maintain	Score Totals
17 – Pacific Recycling Trailhead	1	1	1	1	3	3	**10**
18 – Zweigart Park	1	1	1	1	1	3	**8**
12 – Concrete channel Greenway trail extension (street level)	2	3	1	1	2	3	**12**
5 – Church Farm	3	1	1	2	1	1	**9**
7 – Country Club	3	1	1	1	2	1	**9**
*6 – Historic Meanders	3	2	1	2	2	3	**13**
*11 – Concrete channel streambank restoration and greenway	1	3	3	2	2	2	**13**
*13 – Center Street riverfront shopping area	2	3	3	2	2	1	**13**
*14 – Memorial Park	2	3	3	2	2	1	**13**
*15 – Raymond Park	2	3	3	2	1	2	**13**
*2 – Greenway extension	2	3	1	1	2	1	**10**
*8 – Levee setbacks	1	1	1	1	2	1	**7**
21 – Add pedestrian/ bicycle bridges across railroad and River	2	1	3	2	2	1	**11**
9 – Ross Park	1	1	1	2	2	1	**8**

*Project has been identified as a priority project.
1 – Little or no opportunity to achieve criteria
2 – Medium opportunity to achieve criteria
3 – High opportunity to achieve criteria

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Table 10. Final Array of Priority Projects

Project Number	Project
Short-Term Projects	
1	Portneuf River Water Trail and River Clean-Up
16	Sacajawea Park
22	Install Signage and Wayfinding to the Portneuf River and Access Points
10	Rainey/Centennial Park
3	Portneuf River Streambank Restoration
Long-Term Projects	
6	Historic Meanders
11	Concrete Channel Streambank Restoration and Greenway
13	Center Street Riverfront Shopping Area
14	Memorial Park
15	Raymond Park
2	Greenway Extension
8	Levee Setbacks
Additional Projects	
24	Seek a Levee Vegetation Variance
25	Develop a Portneuf River Zoning Overlay District
26	Reassess Current Flood Control Project Capacity Requirements (Corps)
27	Reduce Volume of Urban Runoff Water Flowing into the Portneuf River
28	Increase In-Stream Flows
29	Identify and Purchase Greenway Easements and Flood Prone Homes From Willing Sellers
30	Improve Upstream Water Quality

Hydraulic Analysis

Hydraulic analysis was completed for three of the original proposed potential projects. The analysis was done using HEC-RAS, software developed to model one-dimensional steady and 1- or 2-dimensional unsteady flows, sediment transport, and water quality. The three projects modeled were Project 10 – Rainey/Centennial Park; Project 15 – Raymond Park; and Project 11 – Concrete Channel Streambank Restoration and Greenway. A brief summary of the results of this hydraulic analysis can be found in the following paragraphs. Details can be found in *Appendix C – Hydraulic Analysis*.

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Project 10 – Rainey/Centennial Park

The proposed levee setback would allow land between the levee and the River to be inundated during flood events greater than the 2-year flood (50% probability). Modeling indicates partial inundation of the low area during a 5-year event (20% probability) and full inundation during a 20-year event (5% probability).

Project 15 – Raymond Park

At Raymond Park, an approximately 1,100-foot section of the concrete channel bisects the park. Residents would like River access from both sides of the channel, which would impact an existing tennis court and ball field on the right bank and, potentially, a shade structure and play area on the left bank.

Due to the complexity of the hydraulic environment in this area, it is recommended that three-dimensional modeling be performed at this site prior to any design activity.

Project 11 – Concrete Channel Streambank Restoration and Greenway

The proposed low flow channel would be built below the bottom of the existing channel to preserve conveyance capacity in the concrete channel. It is assumed the low flow channel bottom would be roughened to appear natural. However, if the goal of the low flow channel is biological connectivity, it is unlikely that goal can be met. It is impossible to excavate a low flow section in the lower portion of the concrete channel unless the channel downstream of the concrete channel is also modified. This must occur so the low flow channel can catch the natural River grade. Without a low flow channel in the final section of the concrete channel, that portion will act as a barrier to some fish and other aquatic organisms.

Coordination Roles, Responsibilities, and Implementation

Ongoing engagement and support from landowners, government agencies, and many community members and organizations will be required if the Vision Study's recommendations are to come to fruition. The Vision Study focused on gathering public input regarding how the Portneuf River should be revitalized (if at all). This input was used to develop a long-term vision for the River. This Vision Study contains concepts that can be implemented at select locations, and can be implemented both in the short-term and the long-term.

Implementation of the Vision Study's recommendations is intended to occur over time as funding and opportunities arise. It is anticipated that many interested and invested parties will work together to help implement the recommendations. Additionally, environmental review, documentation, and permits will be required. For example, projects that seek to alter the original flood control project will require extensive coordination with the Corps.

Funding for projects listed within this study document is likely to come from many different sources. It is unlikely that any one entity can bear responsibility for even a single project. To that end, Table 11 contains a matrix of potential funding sources.

Essential steps for implementation are straightforward:

- Develop a Vision
- Draft an Implementation Plan
- Identify necessary human and financial resources
- Implement through ongoing community involvement and support

Pre-Conditions for Implementation

- Support and leadership from the City of Pocatello's Mayor, City Council, and leadership staff
- A project manager and organizational entity (governmental or non-governmental) to coordinate necessary planning, engineering, community engagement, fundraising, construction, etc.
- Technical support from a Mayor's advisory committee and/or non-profit organization
- Continued community support, including volunteerism
- Concept plans and engineering designs (with community input), grant writing, any necessary land acquisition, and construction
- Funding and land
- Continued comprehensive planning for the Portneuf River, including tributaries, water quality, and certain land use planning and policy-making to establish long-term improvements that move the community toward an integrated watershed approach
- Continued community support, including volunteerism

Bannock County Commissioners (via resolution):

- Adopt the Portneuf River Vision Study

Pocatello City Council (via resolution):

- Adopt the Portneuf River Vision Study
- Designate the City as coordinating entity for implementation
- Designate a City department to provide sufficient staff resources for project management of the implementation of the Vision Study
- Ensure City staff leadership understands and supports the Portneuf River Vision Study, and ensure other City operations/activities are not in conflict with the Vision Study's recommendations.

- Create a Mayor's advisory committee to provide technical assistance with activities such as assist project planning, design, and outreach. Committee members, appointed by the Mayor, should include balanced representation from groups with interests in environmental, recreational, and development opportunities. The committee should include scientists, conservationists, recreational advocates, community leaders, planners, economic development specialists/business owners, and neighborhood representatives.

Existing non-profits:

- Identify projects where they can take the lead, solicit funds and volunteers, purchase land and easements and/or advocate.
- Identify how they can best work with the City and Mayor's Advisory Group and evaluate the need for a dedicated 'Friends of the River' non-profit.

Roles and Responsibilities

- City Department/Staff Member
  - Project Manager
  - Draft implementation plan
  - Act as "Keeper of the Vision Study"
  - Act as liaison with other departments and government entities
  - Facilitate advisory group meetings and send out meeting invitations
  - Keep the spirit of the Vision Study alive
  - Coordinate public relations, and ensure webpage is relevant and up-to-date
  - Write grants
  - Contractor coordination/management
- Mayor's Advisory Committee
  - Update Mayor and City Council at least annually
  - Interact with and support the City Department/Staff Member
  - Provide technical expertise
  - Assess and evaluate project success
  - Periodically review the list of proposed projects
  - Review the Vision Study's goals and recommendations at least every 10 years to ensure continued relevancy
  - Assemble project-specific groups with technical expertise, as necessary
  - Identify project opportunities and challenges
  - Encourage community involvement
  - Assist City Department/Staff Member with implementation plan development, updates to the Vision Study, and project prioritization (based partly on current community interests and funding opportunities)
  - Community outreach

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  - Identify needs, potential projects, and funding opportunities
- Non-Profit Organizations
  - Raise funds for projects identified by the City and Advisory Board
  - Acquire land when necessary
  - Hold land and manage funds
  - Write and manage grants
  - Champion the vision through public outreach and engagement
  - Recruit and mobilize volunteers when needed
  - Sit on the Mayor's Advisory Board
  - Assist with project implementation

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Table 11. Funding Source Inventory

Funding Source	*Funding Program*	*Flood Risk Management*	*Habitat Restoration*	*Parks*	*Greenways, Bridges & Public Transit*	*Public Art*
Federal Sources						
U.S. Department of Agriculture, Natural Resources Conservation Service	Emergency Watershed Protection Program (Bank stabilization, vegetation restoration)	X	X			
U.S. Army Corps of Engineers	Continuing Authorities Program - New Projects (Flood Control, Sections 208, 14)	X				
	Continuing Authorities Program, Project modification for Environmental Improvement (Section 1135 and Section 206)		X			
	Congressionally mandated studies (Construction costs will exceed $5 million, only authorized by Congress)	X	X		X	
U.S. Department of the Interior, National Park Service	Land and Water Conservation Fund (Matching grants for acquisition and development of public outdoor recreation areas and facilities)			X		
	Urban Park and Recreation Recovery Program (Matching grants to economically distressed urban communities for rehabilitation of recreation facilities)			X		
U.S. Environmental Protection Agency	319 Program and Wetland Program Development Grants (Monitoring and assessment of water quality mitigation programs, improving effectiveness of compensatory mitigation, refining wetland protection strategies)		X			
U.S. Department of Transportation	SAFETEA (TEA-21 Reauthorization), provides funding for multiple use paths, trails and related projects.				X	
Federal Highway Administration	Federal Highway Administration Bridge Replacement/Rehabilitation (HBRR) project (reauthorized under SAFETEA, FHA pays 75 percent of replacement and modifications)				X	
National Endowment for the Arts	Our Town (Arts/culture-driven community development, place based investments); Art Works (Creation, Engagement, Learning, Livability projects); Challenge America (Extend reach of arts to underserved communities)					X
State Sources						
Idaho Transportation Department	Transportation Alternatives Program (TAP), Idaho Transportation Improvement Plan (ITIP) -Bridge, Federal Aid Bridge Program (LHTAC)Public Transportation Program				X	
Private Sector						
Trust for Public Land	Assistance in acquisition of open lands and potential parklands			X	X	
The Conservation Fund	Assistance in acquisition of open lands and potential parklands		X			
National Fish and Wildlife Foundation	Funds for restoration of riverine habitats		X	X		

DRAFT

Portneuf River Visioning Plan Stakeholder Assessment

August 10-13, 2015
Pocatello, ID
(Conducted by Seth Cohen and Andrea Carson,
Institute for Water Resources, on behalf of Walla Walla District,
USACE)

As part of the Planning Assistance to States (Water Resources Development Act of 1974, Section 22, as amended) cost share program between Walla Walla District and the City of Pocatello to develop a community "visioning" document that will serve as a conceptual master plan for environmental improvements to the Portneuf River, the Conflict Resolution and Public Participation Center of Expertise (CPCX), a part of the Walla Walla District PDT, was charged with assessing community interests and developing a plan for the project's stakeholder engagement process.

To initiate development of the engagement plan, in August of 2015, CPCX conducted a stakeholder assessment through facilitated dialogues with organizations and individuals active in Portneuf River improvement activities or that have an interest in the river. The purpose of the assessment was to: (1) to build a more complete foundation of information about community members' awareness of existing Portneuf River conditions and their interests in improving future conditions, (2) to help USACE design the most effective set of workshops to develop the Portneuf River vision plan, (3) to identify information gaps that will help inform the study, and (4) to identify engagement strategies for other key citizens to ensure creation of a vision plan representative of all members of the community, including socially vulnerable populations[1] that might be less likely to participate in workshops and meetings.

Interviews focused primarily on stakeholders representing the following groups:

- Portneuf Valley Pride
- Pocatello/Chubbuck School District
- Pocatello Community Charter School
- Portneuf Greenway Foundation
- Bannock Transportation Planning Organization
- Portneuf Health Trust
- NeighborWorks Pocatello
- Old Town Pocatello
- Portneuf Watershed Partnership
- City of Pocatello Staff & Mayor
- City Council
- Idaho Bureau of Homeland Security
- Idaho State University (ISU)
- Landowners along the river

The information collected during the stakeholder assessment will be used in two ways. First, the information gleaned from the stakeholder assessment will be used to guide the USACE PDT, the City of Pocatello, and the CPCX team's development of a series of focused stakeholder

visioning workshops and will assure that "right-sized" public meetings are conducted to share workshop products and receive effective feedback. Second, the information collected during the assessment is to be incorporated into an initial draft of a master plan for the Portneuf River corridor, which will be presented and refined during the stakeholder visioning workshops. The outcome of this interactive process will be a community vision plan that reflects the community's values and desired future and diagrams opportunities for change.

The following sections provide a thematic overview of predominant narratives and specific examples of stakeholder interests and concerns.

Findings

Discussions with stakeholders focused on their interests and concerns about the Portneuf River from both organizational and individual perspectives. Thematic analysis is one way to understand some of the core interests and values of stakeholders. Many of the narrative themes presented below intersect with one another. It is therefore important to look for the interconnectivity of stakeholders' values, interests and concerns. For example, as people talk about the poor appearance of the Portneuf they may also talk about the need for water quality and increased quantity (flow).

Perceptions of the River (Aesthetics):

Many stakeholders currently view the Portneuf River as a "negative" asset to the city due to its physical appearance, which includes the color and quality of the water, low flows, and most predominantly the concrete channel which prevents access and looks unapproachable and uninviting. As a result, people do not feel connected with the river or "even think of it as a river," but rather see it as an eye sore and a wasted resource. At the same time, however, stakeholders generally see great potential for the improvement of river reaches that would make the Portneuf attractive and desirable for use. It is believed that improving the aesthetics of the river corridor, and the water quality (described below), will lead to an overall benefit for the look and feel of the city of Pocatello.

Specific suggestions from interviews of proposed solutions include:

- Modifying both sides of the river wherever possible to attract people that live nearby – and connect them (implying that the river is currently a divider).
- Looking to the river in the community of Lava as an example of appearance and usage opportunities for the Portneuf River in Pocatello (it was suggested that project leaders look at what has happened to the river over the years between Lava and Pocatello).
- Restore the lost oxbows and meanders in the study area.

Water Quality:

Stakeholder often spoke about the poor water quality. Observation-based concerns noted the River's distasteful color and the observed flow of stormwater and other pollutants running into the channel. Scientists from ISU and the State DEQ discussed how low flow and warm temperatures prevent fish and other life from surviving in the channel. Pollution associated with agricultural byproduct and siltation, attributed to the confluence with Marsh Creek 7 miles (as the crow flies) upstream of the study area, is another concern. A DEQ representative noted, "Water quantity begets water quality." The general sentiment was that people will not engage with the river if it's not cleaned up and perceived to be safe from pollutants and debris.

Specific suggestions from interviews of proposed solutions include:

- Educating community members on the water quality of the river. If the river is perceived or known to be healthy then people will want to spend time there.
- Reestablishing water movement and flow to a more natural system will restore the river. Reducing silt and improving flow is critical to making the system look "river-like" and appear natural.
- Purchasing water rights to increase flow (City is already considering this option).

Access and Recreation:

Increased access to the River for recreation and "connectivity" of trails along the River are key interests for many stakeholders. The idea of a "greenway" bordering the concrete channel was a central topic, yet it remains a concern for many homeowners whose private property, and privacy, would be impacted by any significant alteration of the channel and trail usage. Viewpoints vary on how a greenway might be constructed and how continuous trails and access might be developed throughout the city. There is acceptance by many that complete access won't be possible. Although eminent domain is no longer an option for greenway development due to changes in state laws, it should be noted that prior attempts to acquire property through the use of eminent domain for the creation of trails along the river left some bitter feelings that must be carefully considered with any future projects.

Given that some homeowners are likely to resist any changes to their property along the channel and levees, stakeholders proposed short-term and long-term solutions about how access to the river and a continuous recreational trail might still occur:

- The greenway may not always be directly on the river or might not be fully connected, but there could be ways to create pathways or bridges connecting sections.
- Consider creative designs for a greenway in the channel, such as covering the channel in parts or placing a "hanging" path over the river to avoid property infringement.
- Need to create mechanism to not only pay for the creation of the greenway but the maintenance as well. Otherwise, property owners are concerned that they will be the ones to bear the burden of keeping it clean and safe because city doesn't have resources.

In terms of access to the River for the purposes of recreation, school representatives articulated interest in their students using the River as part of their curriculum. ISU Students and other community members also indicated a desire to use the River for swimming, kayaking, and float trips.

Suggestions to improve river access for recreational uses include:

- Additional efforts to clean out the trees and other debris in the River.
- Increased flow to support floating and fishing.
- Access points along the channel to allow community members to climb in and out of the channel.

Channel and Modifications:

As expected, much of the discussion centered on the concrete flood protection channel. While stakeholders still want to maintain appropriate level of flood risk protection (see section below), many would prefer to remove or significantly modify as many sections of the channel as is feasible while maintaining an appropriate level of protection. The channel is seen as an impediment to good water quality, recreation, and access. It was also deemed as dangerous by some. Emergency Officials noted that its current design makes human and animal rescue challenging.

It is generally recognized that barriers to modify the channel exist from both an economic and property acquisition standpoint. Some of the proposed stakeholder suggestions include:

- Consider the removal or modification of the concrete bottom and walls if found to have significant impact on water temperature, habitat quality, etc.
- Open up the channel on existing public lands, such as parks, for increased river access (could be low-hanging fruit).
- Improving access and usage of the channel can have economic benefits to Old Town area and provide incentives for new businesses to locate along river or nearby.
- General concerns:
    - Increasing access to the channel may increase the likelihood of vandalism/graffiti.
    - Increasing access to the river may introduce other safety hazards.
    - Development (gentrification) means that the Old Town neighborhoods may no longer be affordable or welcoming to the current Old Town neighborhood residents.

Acquisitions along Channel:

As noted earlier, the Greenway Foundation's threat to use "Eminent Domain" caused major conflict in 2009/10. They have new leadership now and are taking a more sensitive approach to development proposals despite their desire for continuous recreational access along all reaches of the river. The possibility of revitalizing the areas of town with low-quality housing stock is seen as a boon to many members of the community. However, acquiring property will be difficult because the city cannot condemn houses for transportation uses and some homeowners along the River are reportedly opposed to the idea of leaving their property. However, some properties may be available for purchase because certain homeowners along the River are open to compensation for their property and/or some properties may be vacant. It should also be noted that a significant amount of property along the concrete channel is investment property being rented out.

Recognizing the barriers and need for compromises, it was suggested by some that this will need to be a long-term effort to "slowly buy out homes over the next 50 years" or that not every house needs to be moved. Landlords need to also be engaged and invited to be an active stakeholder in this process. NeighborWorks Pocatello and others in Old Town might have the best suggestions on involving landlords and homeowners in the visioning plan, so that the plan is realistic regarding property acquisition.

Flooding:

Flood risk is still a concern for people that experienced or heard about the floods in the early 60's. Therefore, if any changes to the channel are made, it is imperative that the community members are reassured of their protection against floods. If the visioning process doesn't address this concern and reassure them then they may "tune out" in the public involvement aspect of the study. Conversely, many stakeholders expressed concern that the science used to determine flood risk when the channel was built does not reflect current risk. They fear that USACE standards will limit adequate change to the channel.

Points for consideration during the visioning process are reflected below:

- This study needs to consider reassessing whether the 6000 cfs channel standard is an appropriate benchmark or an explanation needs to be provided to stakeholders explaining why this number cannot be changed.
- Create ways to avoid the freezing of ice and the damming of water in the river. This is an issue for flooding. The channel was built to mitigate winter rain on snow flood events. Ice booms were later installed in the channel to deal with subsequent ice buildup which was causing flooding without the rain on snow events.
- Flood- educational awareness is needed. Provide explanations for: 1) What are the current drivers of flooding? and 2) how does the channel contribute to flood risk reduction versus a modified channel? Need to bring stormwater flooding into this educational piece too.
- Solid flood-risk information was presented by Ken Fagnant from an EMS perspective.

Implementation of Plan/Taking Action:

Stakeholders often stated that this visioning process will only be considered successful and worthwhile if it leads to action and tangible results. Recognizing that change may take time, they would like to create a realistic plan that identifies opportunities for both short-term and long-term changes. They need some small wins along the way and hope the city and partners will make that a reality with economic investments to complete projects. Some noted that addressing Aesthetics & Functionality are the lower hanging fruit, "Design something that is appealing at a low flow but can handle a larger flow."

Some stakeholder questions that may need to be addressed during the visioning process include:

- What room for creativity exists when thinking about changes to the channel or other sections?

- How will the visioning document be used? If funding comes along, will the plan be used to implement the community's priorities? What are the associated costs for proposed projects?
- What kind of working relationship will we stakeholders have with the Corps?
    - Will the Corps support or block what the Pocatello community members want?
        - How does Congress work into this process?
- What is the funding potential from the City and the Corps for implementing this plan? Where is the commitment and potential for really making change?
    - Foundations and local business may be willing to pitch in to specific efforts

The Visioning Process:

When asked how the visioning plan process might best meet their needs and what suggestions stakeholders might have to make it successful and useful, some suggested that the process be guided, or driven, by Pocatello community members rather than the Corps. Additionally, everyone acknowledged that this process will only be successful if it includes, addresses, and considers the desires of both those who support and oppose proposed changes to the River. When seeking stakeholder engagement for working groups and public meetings it is key to articulate the value to the community from this cost-sharing effort – people will want to feel that city and federal money is being spent wisely.

Specific suggestions to strengthen the visioning process include:

- Build awareness of what the river could be by showing examples of other successful modification projects.
- Develop an Online Presence and options for online engagement (an alternative to workshop charettes)
    - People that come to workshops and public meetings may be the same folks that are typically engaged rather than a diverse, representative community group.
    - DOTs are using interactive communication, gamified processes (incentives, credit, reward)
    - Learn from ISU work
- Standard public meetings don't work well anymore – reach people where they are in smaller locations with smaller meetings
    - Special attention to neighborhood groups
    - Hold gatherings at a-typical meeting places (churches, etc)

Education/Outreach:

Many people in Pocatello do not trust government and may value independence, privacy, and private property rights over any interest or desire to contribute to the larger community improvement effort. Therefore, interviews also focused on how to produce effective outreach and education efforts that will lead to inclusive and active involvement in the visioning process:

- Consider the type of language different stakeholders will gravitate to and respond to when approached about the study Different narratives about the study, the visioning

process, and the river itself will have different impacts on the diverse stakeholders that live in the area (see interview with Donna Lybecker below).

Some suggestions for the outreach and education efforts' CONTENT include:

- Address flooding concerns - Honor the history of the floods in Pocatello. Allow community members to share their past experiences with flooding.
- Provide examples to show how the river can be an economic and quality of life asset. These examples should especially resonate with younger generations. Show the potential.
- Educate people about real existing conditions. Start with true, and accurate information to dispel anything the community members do not know. (i.e. current status of water quality; difference between stormwater and river water flooding; existing flow levels)
    - Visualization and interactivity will be key. Let people see and connect with pictures, maps, and graphics.
- Inform community members on the possibilities and limitations of this project.
    - What is feasible given technical, financial, and time limitations?
    - Set realistic expectations: What is this visioning project's expected outcome?

Building Trust/Damage Control:

Relationships between stakeholders, the City, and the Corps may need to be sensitively approached due to previous breaches of trust. Several stakeholders, including the City, brought up a lasting disappointment about the Corps' insistence on the removal of trees and other vegetation that occurred along the levees. The abrupt removal resulted in decreased privacy to homes and lack of shade for recreational trails and homes. It also has possible impact on the health of the river ecosystem. Fortunately, this current stakeholder engagement effort seemed to help create a different view of the Corps for some. People noted, including City Council members, that they appreciated this process of engagement/design.

Some actions might help build greater trust and faith in the process:

- Educate people about the levee clean-up, the role of the Corps and the City. Perhaps apologize for the way this occurred. People are still upset about this and did not find the Corps approach "collaborative." They noted that the way they were just "told" that this is the way it is, by the USACE representative, was not well received.
- Use a collaborative decision-making approach in this study

Public/Stakeholder Participation:

Lastly, stakeholders were asked who else should participate to make this an appropriately inclusive visioning process. Suggestions follow here and can be found under specific interview notes below. The Stakeholder Engagement Team will help create the path forward with the city and Corps PDT.

- Agricultural interest– surveys are city focused – didn't capture the agriculture sector
- Landlord community- organized and powerful, own a lot of the properties along the River
- Senior citizens- those who were here when town flooded - get their buy in before surface with campaign." "We need them to not put up united front about flood control."

- Engage what one landowner referred to as “Tangible Resource Stakeholders - property owners along river as opposed to Interest/Vision Stakeholders- those who may live here, and have a vision but are not directly affected by the changes to the channel/river. Both are important.”

All of the above interests and concerns distilled from the stakeholders interviews can help to inform the creation of the workshop content and the material within the first draft of the Visioning Document. Points above should also guide the selection of working group members and the ongoing outreach and education efforts that will accompany the visioning process.

Literature Review

Flood Risk Management

Portneuf River Literature Review
Flood Control Project

25 September 2015

PORTNEUF RIVER FLOOD CONTROL PROJECT

Overall Conditions and Issues

- The Portneuf River Flood Control Project (project) was authorized under the Columbia River Basin Plan by the Flood Control Act approved 17 May 1950, Public Law 516.
- The purpose of the project was to reduce flood risk to the City of Pocatello. Significant flood events occurred in 1962 and 1963 that caused significant damage to residents, agriculture, and industry. Estimated damage caused by the 1962 flood was $10 million.

Figure 1 - Flood of 1963

- The February 1962 flood peaked at 2,990 cfs and the February 1963 flood peaked at 2,470 cfs.
- After these two devastating floods, public opinion swayed to favor raising tax revenues to pay the local portion of flood control costs to protect its citizen's properties and the city's commercial and industrial assets.
- The 1962 and 1963 flood events also prompted the USACE to increase the design flood discharge from 2,200 cfs to 6,000 cfs. This changed certain design parameters of the project.
- Construction of the project occurred from July 1966 to November 1968.
- The project is along a 6.2-mile reach of the Portneuf River through the City of Pocatello. It consists of a 1.5-mile rectangular concrete channel and 4.7 miles of levee upstream and downstream of the concrete channel. The side walls of the concrete channel vary in height from 10 to 16 feet. The concrete channel width is 40 feet.
- Levee slopes are constructed at 2H:1V and armored with riprap.

- The project is designed to handle a flow of 6,000 cfs with 3 feet of freeboard on the levees and 2 feet of freeboard on the concrete channel. The estimated average exceedance interval at the time of design was 110 years (0.9-percent annual chance flood).
- A 4-foot high non-climbable fence on the channel side walls was installed during the original construction as a safety measure.
- Certain sections of the old river channel were filled with excess excavation material generated during construction activities.

Figure 2 - Concrete Channel Section

Figure 3 – Levee Section

<u>Overall Opportunities for Improvement/Solutions</u>

- Aerial photos taken prior to the project's construction indicate extensive meandering of the river existed before the project was constructed. Riparian vegetation and wetlands were evident along both banks.

- Significant environmental impacts, including reduction in river meandering and a subsequent reduction of fish and wildlife habitat, were incurred as a direct result of construction of this project.
- The river meanders supported extensive riparian and vegetation areas. A total of nine major meanders were removed with the project, which resulted in the loss of most of these riparian areas. The below as-constructed drawing depicts how these meanders were straightened during project implementation.

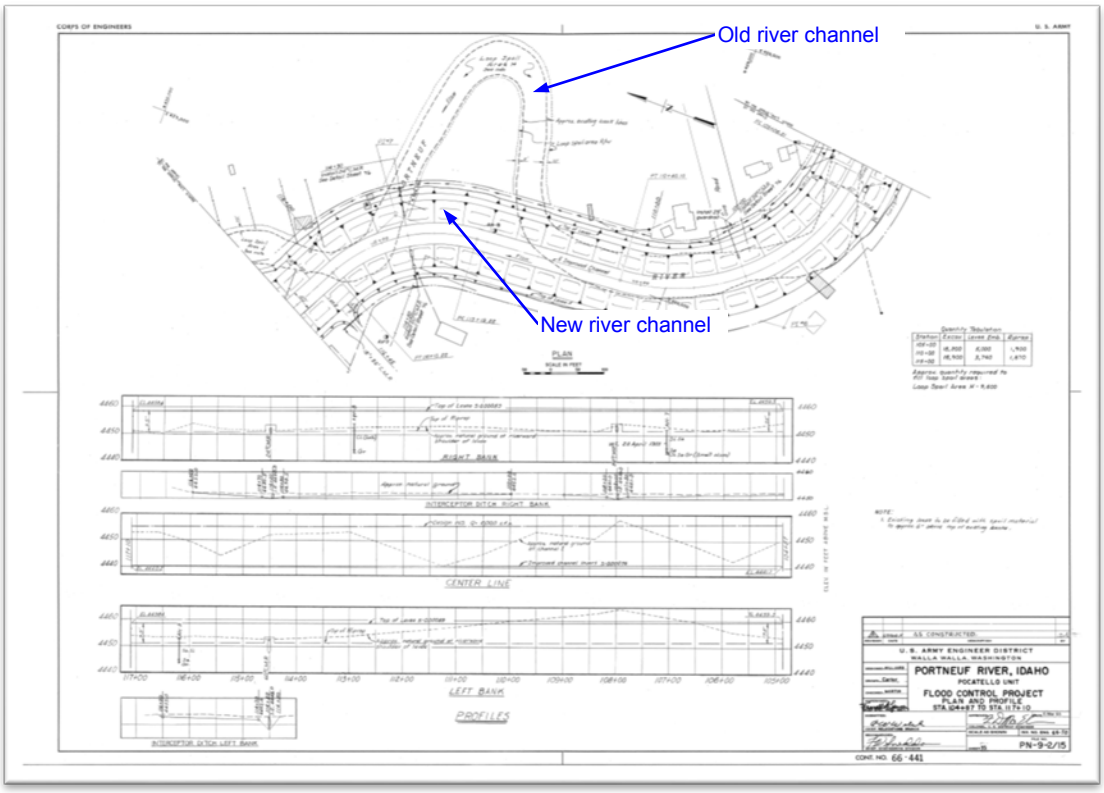


Figure 4 – River Meander

- Under current conditions, the project provides poor habitat for wildlife and fish. The degraded riparian corridor is confined to a narrow band and wetlands are absent from most of the project.
- The City of Pocatello's goal is to create a more natural and accessible river as it flows through the city. This would provide more green space and more recreational opportunities. Raymond Park has been one of the main focus areas for such a project.
- Several design concepts have been discussed and considered throughout the years that would involve modifications to the project. Some of these include:
  - Concrete channel wall modification: remove the concrete channel walls along a particular river section, and grade the earthen streambank to a flatter slope. This would create a more natural stream condition environment.
  - Restoration of river meanders: modify the channel wall or levee to allow the river to flow into the original river channel. Excavation of the original river channel would be required to accommodate this concept.

- Set-back levees: Relocate levee alignments to create a wider river corridor. Construct wetland habitat areas within this new river corridor.

Challenges

- Proposed project modifications would require engineering analysis during the planning and design phases to ensure they are feasible. A concept may prove impractical or unattainable upon further examination.
- The railroad embankment confined the river channel on the upstream end of the study reach, which disconnected river meanders and floodplain areas.
- Any project modification would require extensive USACE coordination/approval. (maybe Congressional authorization?)
- Project modifications would require additional real estate, i.e. more land would be needed. Land owned by the City of Pocatello is available in certain areas.
- The project's flood risk reduction capabilities (6,000 cfs flow conveyance with freeboard) would have to be maintained with any project modification.

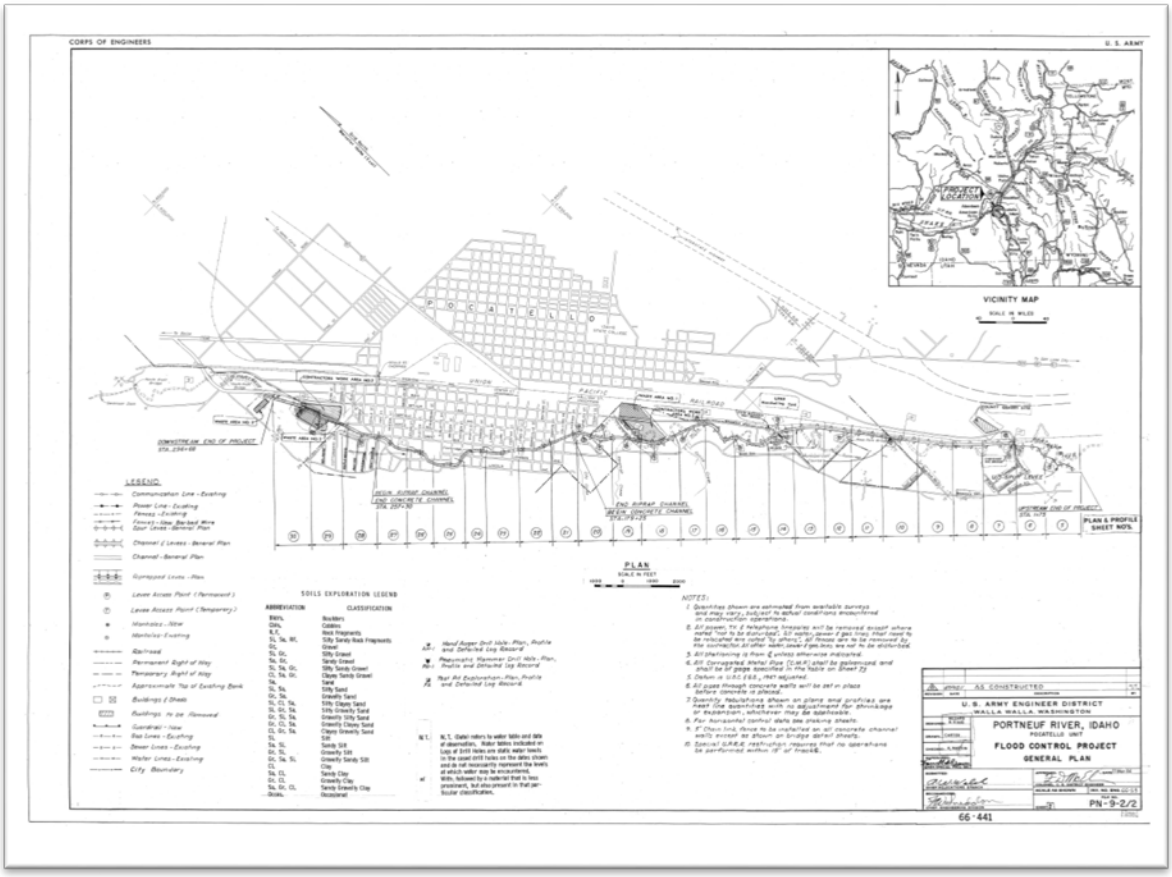


Figure 5 – Flood Control Project Site Plan (from design drawings)

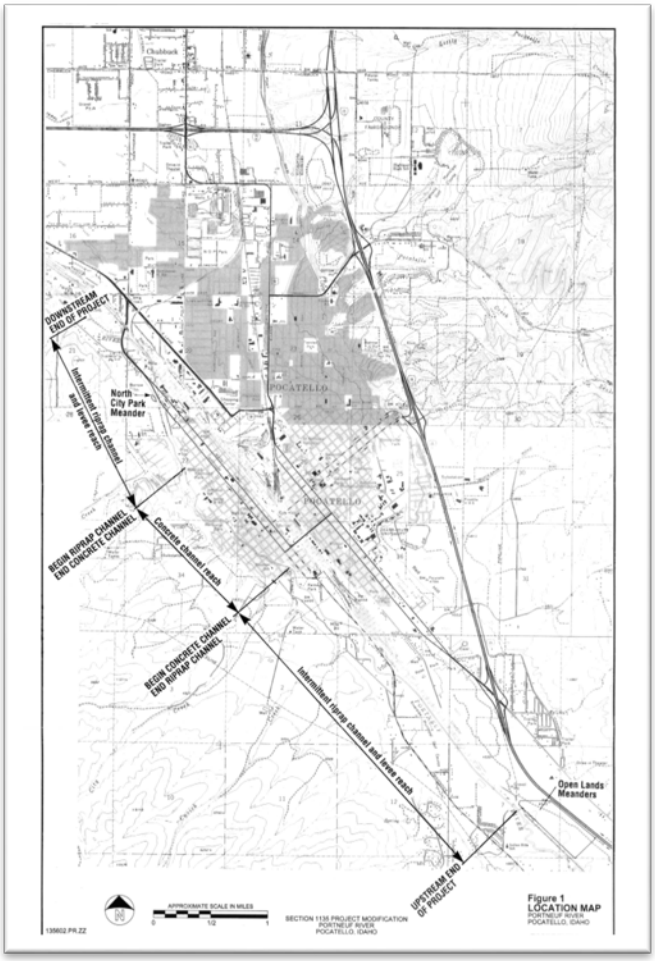


Figure 6 – Flood Control Project Site Plan (from 1135 report)

REFERENCES

- Portneuf River, Idaho, Flood Control Construction Plans, U.S. Army Engineer District, Walla Walla, 11 Feb 1969

- Portneuf River Section 1135: Channel Restoration Plan, Project Modification Report, January 1997

- MILES website, Exploring the Portneuf River, Pocatello Flooding History

- Notes from conversation with John Sigler, City of Pocatello, 23 May 2011

- Operation and Maintenance Manual, Portneuf River Flood Control Project, U.S. Army Engineer District, Walla Walla, 1968

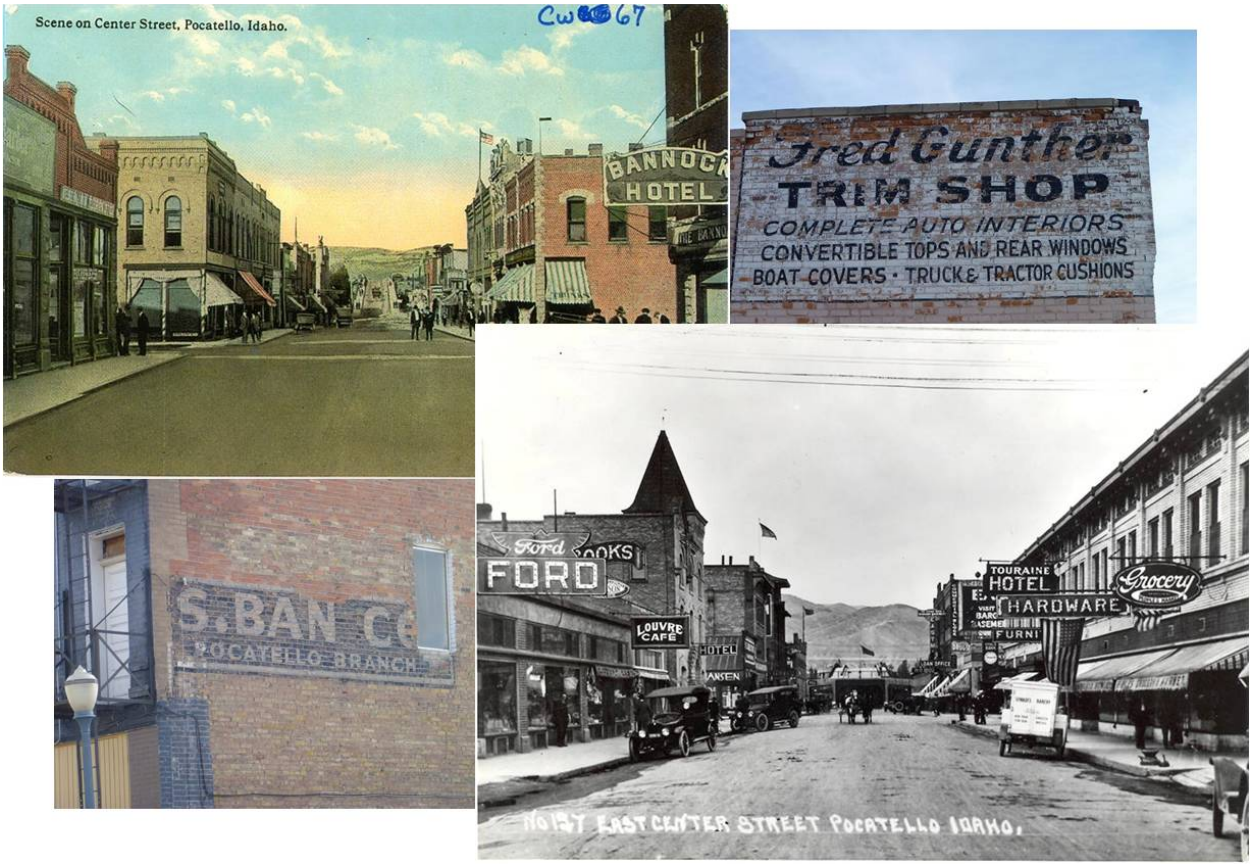
- General Design Memorandum, Flood Control Project, Portneuf River, Idaho, Pocatello Unit, U.S. Army Engineers District, Walla Walla, 22 July 1964

Literature Review

Cultural/Historic Resources

Born in Ontario, Canada in 1879, Frank G. Paradice, Jr. was an architect working in Pocatello from 1913 until his death in 1952. During Paradice's time in Pocatello he worked prolifically, designing many noteworthy buildings. Among them, the Bannock Hotel tower, Central Building, Valentine Building, Kasiska Building, the ISU Administration building, the Pocatello high school gymnasium, and a renovation of the high school building resulting in its current appearance. His buildings show strong thematic trends of the Renaissance Revival-style featuring terra cotta cornices, pilasters, string courses, and other ornamentation. Despite the passage of time, Paradice's designs still strongly influence the character and appeal of downtown Pocatello, and represent the single strongest design anchor for the National Register of Historic Places listed Pocatello Historic District.

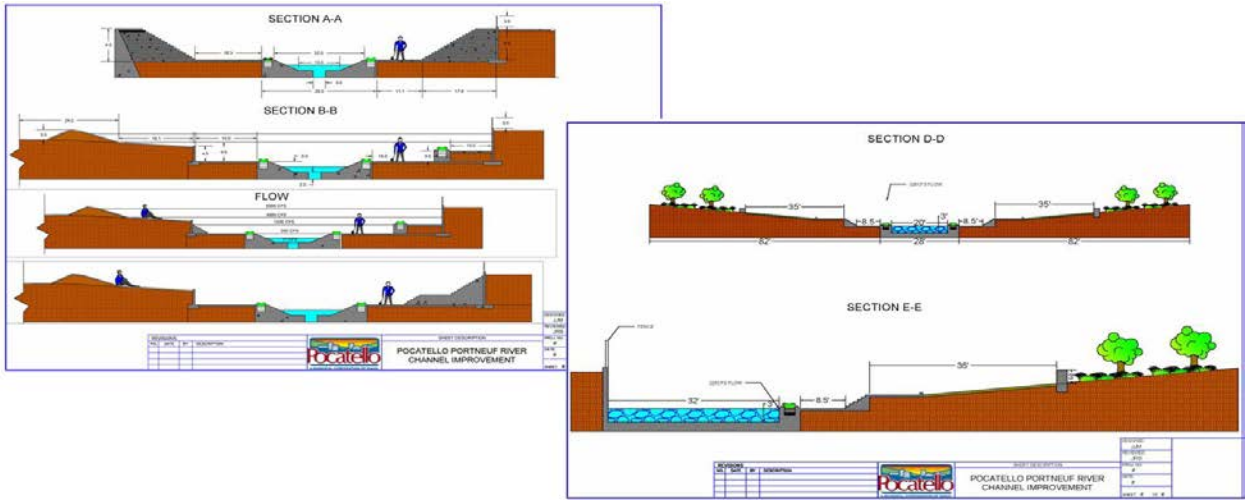
Other elements that help tie together the downtown historic district, and give it character, are the continued prevalence of awnings, and the remnant “ghost signs” that appear on the sides, fronts, and tops of buildings. Some of these signs are indicative of historic tenants of the various downtown buildings, and some have been redesigned to reflect the current tenants. These features are prominent in historic photos of downtown, and their continued existence is indicative of an appreciation and commitment to maintaining the historic character of the downtown.



Aside from the downtown, the city contains other National Register listed commercial, community and residential structures and districts, among them a trio of churches (the Trinity Episcopal Church, St. Joseph Church, and the Church of the Assumption), the Carnegie Library, the Federal Building; residential districts (ISU Neighborhood District, Lincoln-Johnson Residential District, West Side Residential District, and Old Town Residential Historic District) and individual houses (Hyde House, Rice-Packard House, Standrod House, Sullivan-Kinney House, and Hood House); and other commercial areas (The East Side Downtown and Warehouse Historic Districts). A search of listed properties on the National Parks Service's National Register indicates that Pocatello has the greatest number of listed properties in Bannock County, and one of the highest concentrations of listed structures of any community in the state of Idaho.

The city has already made strides in tying together the historic downtown with design elements that enhance the historic character of the community. In particular through the use of design elements such as brick buffered sidewalks and stylized street lamps.

The community of Pocatello has expressed an interest in renewing its connection to the Portneuf River. The city has produced designs for public spaces to facilitate this connection by creating public places that allow interaction and appreciation of the river.



One way to literally connect the community to the proposed improvements along the channel is to create street corridors that literally tie the community to these public spaces. Doing this opens the door for all sorts of community enhancement opportunities, both small and large. Working groups that bring together historic societies, students, community members and the public may provide opportunities to engage and benefit from local knowledge. Below is a list and brief description of a small fraction of these opportunities:

- Street Corridors: The city already has a start on this effort with curbside improvement. These improvements should be extended to corridors that allow a connection with the improved spaces. Incorporating historic areas of the city into these corridors will enhance and highlight the historic character of the community. Inserting design elements found downtown into these improvements will further enhance the historic character of the community.
- Educational Public Spaces: The idea of elements that tie together and enhance the historic character of the community presents the opportunity to interpret historic Pocatello. Kiosks and signage that highlight important events associated with the community could be educational, and provide another opportunity to integrate historically accurate design elements that would further enhance the improved public places.
- New Development: This historical connection between places may provide opportunities to encourage development into historic areas of Pocatello. In particular, a connection between historic downtown and the Warehouse District that includes beautification and specific design elements could encourage mixed-use development on the east side of downtown. This area seems like a real possibility for incubator type development that could retain the historic character of the area while providing spaces for start-up opportunities.

Literature Review

Existing Hydrologic and Hydraulic Conditions

Portneuf River Literature Review
Existing Hydrologic and Hydraulic Conditions

August 24, 2015

Purpose and Scope

The purpose of this report sub-section is to inventory and summarize important available information resources that will be of value in communicating existing conditions along the Portneuf River within the study reach, and to present limited field information gathered during a site visit in August 2015. Information presented here relates to a hydrologic and hydraulic perspective; information regarding other technical and resource perspectives may be found in other parts of the report. Ideally, this information will aid in identifying potential approaches for maintaining flood carrying capacity of within the existing floodplain while creating improvements to the environment that are of value to the community and the nation.

Previous Federal Studies

A number of USACE studies for the Portneuf River and tributaries near Pocatello have been undertaken by the Walla Walla District Army Engineer District (NWW) in the past. The majority of these were performed in association with what became the Pocatello Unit Flood Control Project, described below, though some were performed after completion of the project. The following lists the more important project documents located in the NWW Hydrology Section's library:

1. NWW, 1964 (22 July 1964). *General Design Memorandum, Flood Control Project, Portneuf River, Idaho, Pocatello Unit*..
2. NWW, 1968. *Detailed Project Report, Flood Control Project, Lava Hot Springs, Idaho, Portneuf River*.
3. Federal Emergency Management Agency (FEMA), 1996. *Flood Insurance Study, City of Pocatello, Idaho, Bannock County*.
4. NWW, 1970. *Flood Plain Information, Pocatello, Idaho and Vicinity, Portneuf River and Tributaries*.

Much of the information summarized in this appendix comes from the above reports, or other sources that will be identified later. In some cases, such as the U.S. Geological Survey (USGS) measurements and the frequency-discharges, the information has been updated. The more relevant hydrologic and hydraulic information is presented below.

Pocatello Unit Flood Control Project Description

A central component of the existing conditions of the Portneuf River in the study area is the flood control project constructed by the U. S. Army Corps of Engineers (USACE) on the Portneuf River within Pocatello, ID. The Flood Control Project was authorized by the Flood Control Act, Public Law No. 228, approved August 18, 1941, and as amended by the Flood Control Act of December 22, 1944. The project is located on the main stem of the Portneuf River (Figure 1). It was conceived to provide protection to the City of Pocatello in Southeast Idaho, and was constructed from July 1966 to November 1968. The projects extends along a 6.2-mile reach of the Portneuf River and consists of a 1.5-mile stretch of

rectangular concrete channel and 4.7 miles of revetted levee and channel reaches upstream and downstream of the concrete channel, and has a design capacity of 6,000 cfs.

Study Area Hydrology

Basin Description The Portneuf River basin contains approximately 1,290 square miles, covering most of Bannock County and parts of neighboring Bingham, Caribou, and Power Counties. The Blackfoot River basin borders it to the north and east, the Bear River basin is to the south, and the Bannock Mountain Range is to the west. The Basin is shown on Map1.

The river rises in the northern tip of the basin, flows due south for about 30 miles, and then travels northwesterly for about 50 miles to its confluence with the Snake River at the American Falls Reservoir. March Creek, the principal tributary, enters the Portneuf River from the south, has a flat slope of about 4.5 ft per mile, and drains about 30 percent of the total basin. Upstream of Pocatello, elevation ranges from about 9,280 to 4,440 ft with a mean basin elevation of 5,850ft.

Climate The climate of the basin is characterized by moderate to low precipitation and humidity, relatively windy springs, warm summers, and cool to cold winters. Normal annual precipitation in the Portneuf River Basin above Pocatello ranges from less than 12 inches to more than 22 inches and for the drainage area average 15.8 inches. Seasonal precipitation variations are quite small, with July, August, and September somewhat drier than other months. Rainfall intensities are generally low although high intensities sometimes occur during summer and fall thunderstorms. In the winter months, a large part of the precipitation occurs as snowfall. Average annual snowfall varies from about 35 inches in lower valleys to nearly 100 inches in the mountains.

The mean monthly temperatures recorded at Pocatello vary from 26 ^{O} F in January to 73 ^{O} F in July. Temperature high and low extremes were recorded at 106 ^{O} F in July and –24 ^{O} F in January. The mean annual high temperature is 59 ^{O} F and the mean annual low temperature is 33 ^{O} F.

Stream Flow Characteristics The U.S. Geological Survey (USGS 13075500) operates a river gaging station in the City of Pocatello. The longest record of stream flows for the Portneuf River is at Pocatello where an incomplete record was kept for the periods 1897-1899 and 1911-1917, and continuous records maintained since 1917. The gage is located on the left bank of the Portneuf River, immediately above the Fremont Street Bridge. The current average annual flow during the period of record is 295 cfs. The record instantaneous peak flow, 2,990cfs occurred on February 14, 1962. The current lowest daily mean flow 0.23cfs occurred on July 19, 1979 (USGS, 2105).

The original Portneuf River flood frequencies were computed for winter rain floods and spring snowmelt floods, and a composite curve was developed from these two event types. Table 1 briefly summarizes values from the three frequency curves developed at that time (NWW, 1964).

Figure 2 illustrates current USACE Portneuf river flood frequency curves (NWW, 2012).

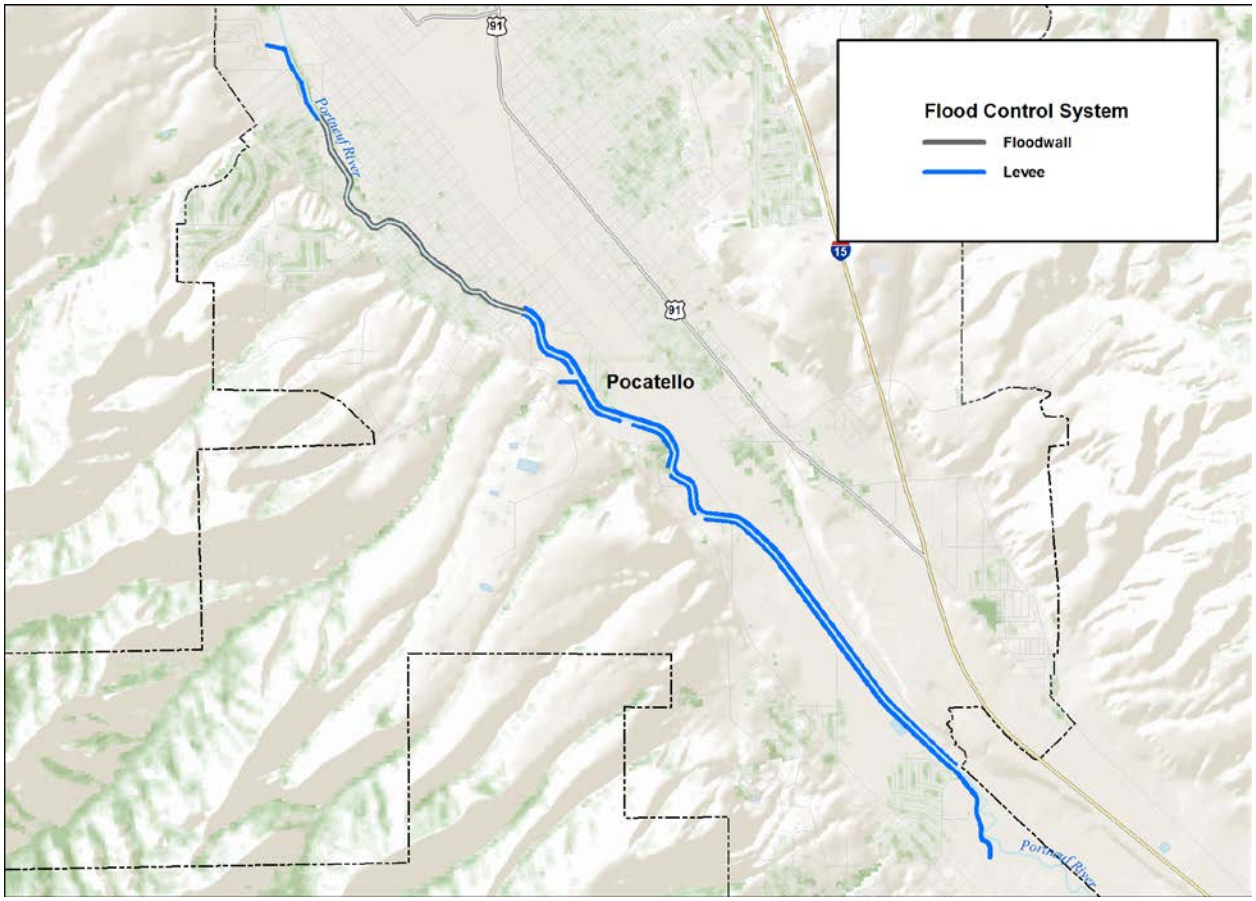
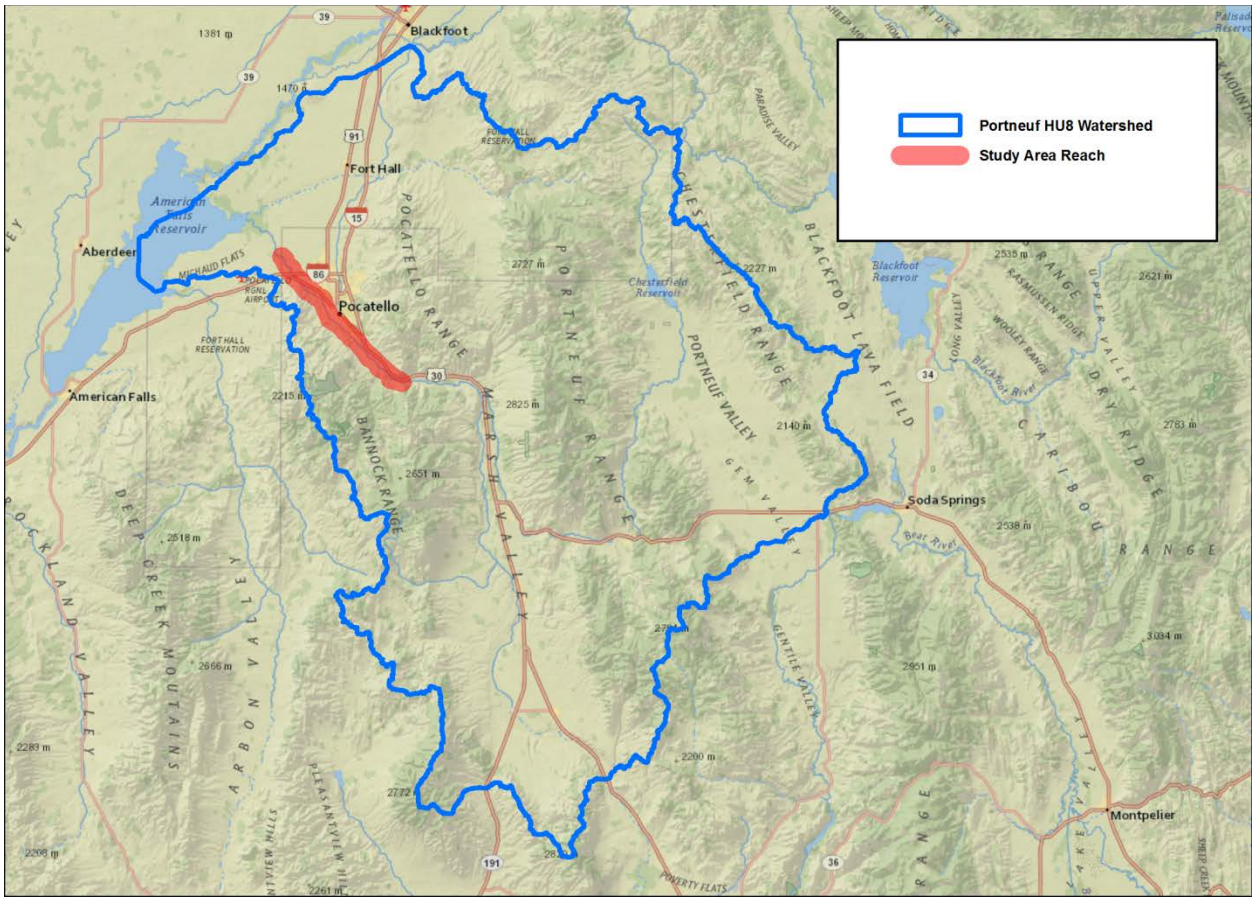


Figure 1. USACE Flood Control Project, Pocatello Unit.



Map 1. Portneuf River Watershed.

The runoff pattern of the Portneuf River at Pocatello is generally one of rising springtime flows, typically peaking from April to June, and receding to low flows by July. Flood peaks are generated by spring snowmelt, sometimes augmented by rainfall, and also by rain on frozen ground in the winter months. The highest three flood flows experienced at Pocatello when the GDM was prepared all occurred in February. Winter floods are of comparatively-lower duration and lesser-volume than spring snowmelt events, but are capable of generating higher peaks (NWW, 1964).

<u>Flood Frequency Revisions</u> Portneuf River flood frequencies were computed for winter rain floods and spring snowmelt floods and a composite curve was developed from these two curves for the General Design Memorandum (GDM). Table1 briefly summarizes values from the three frequency curves developed (NWW, 1964).

Table 1. 1964 GDM Probability-Discharges, Portneuf River at Pocatello, ID.

Exceedance Probability Percent (%)	Discharge (cfs)		
	Winter Rain	Spring Snowmelt	Composite
50	390	680	770
20	670	990	1,180
10	1,100	1,240	1,600
5	1,800	1,500	2,230
2	3,400	1,930	3,650
1	5,400	2,320	5,500

In 2012, the probability-discharge relationship was updated to capture the additional peak discharges that had been measured since the 1964 flood-frequency analysis. The updated analysis used a Log-Pierson Type III analysis, following the procedures outlined in Bulletin 17B (Interagency Committee on Water Data, 1981), and again developed relationships for winter rain events, spring snow melt events and a composite of the two. Table 2 summarizes the updated values from the three frequency curves developed, while Figure 2 shows the updated Portneuf River flood frequency curves(NWW, 2012).

Table 2. Updated Probability-Discharges, Portneuf River at Pocatello, ID (NWW, 2012)

Exceedance Probability Percent (%)	Discharge (cfs), with Expected Probability		
	Winter Rain	Spring Snowmelt	Composite
50	467	733	790
20	667	1,093	1,200
10	806	1,374	1,520
5	1,169	1,680	1,900
2	1,776	2,137	2,550
1	2,567	2,531	3,300

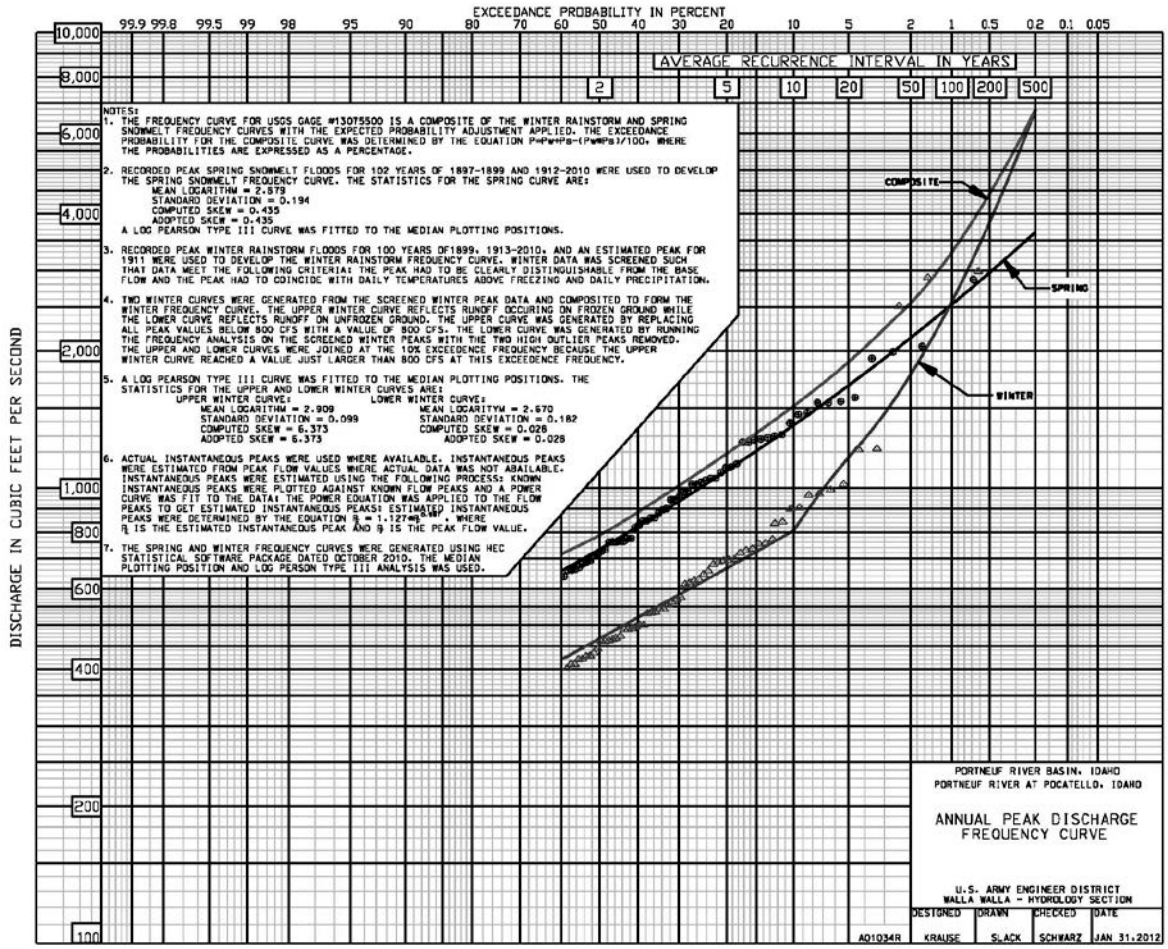


Figure 2. Portneuf River at Pocatello, ID Updated Frequency-Discharge Curves (NWW, 2012).

Flood frequency curve comparison figures were created to better illustrate changes seen in peak flows, following evaluation of additional years of record for the Portneuf River (Figures 3, 4, 5). Clearly, the biggest change came from the winter storm events evaluation.

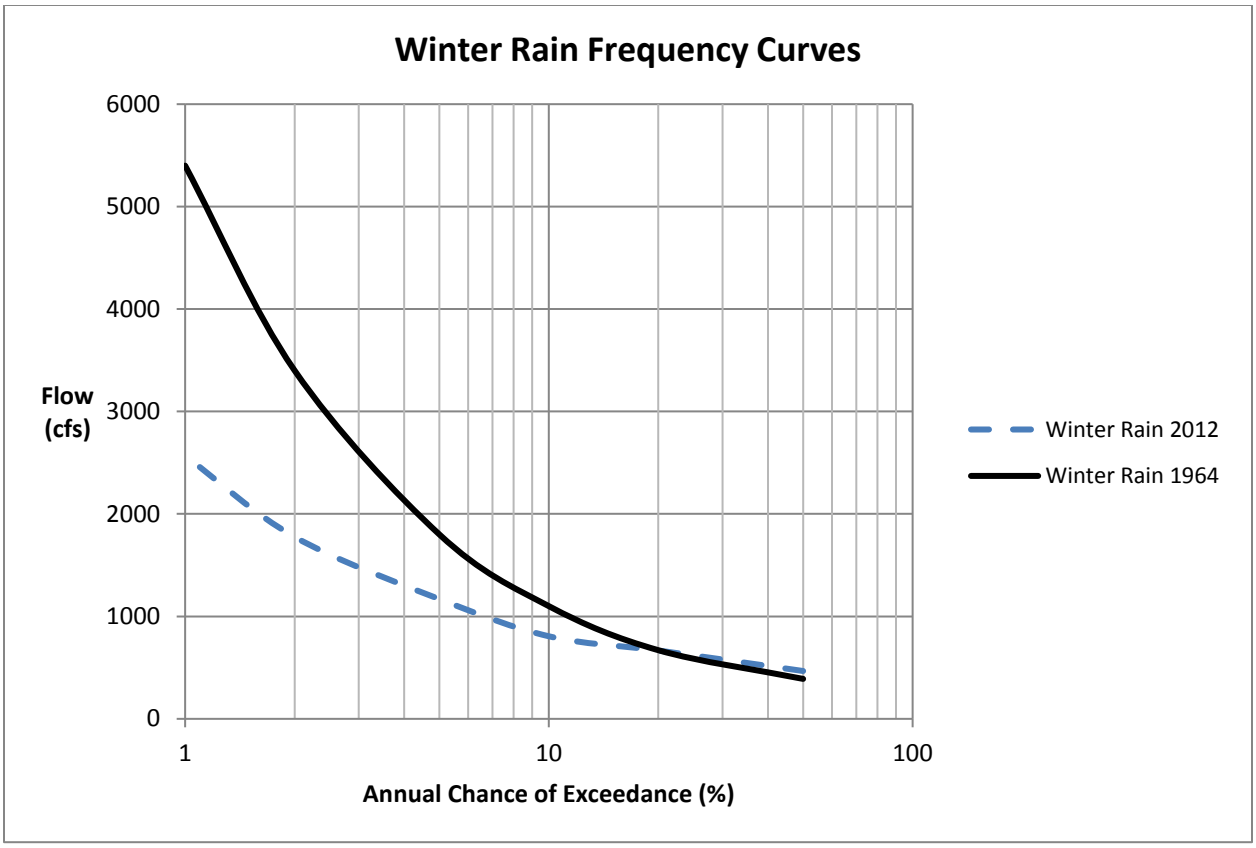


Figure 3. Winter Event Comparison.

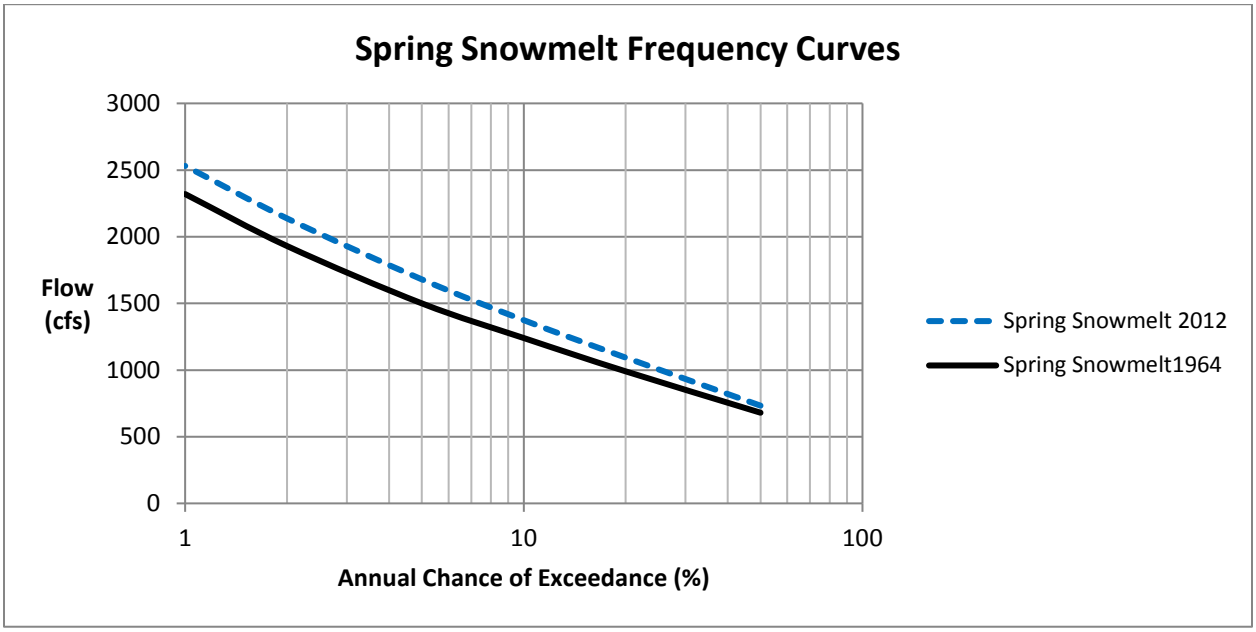


Figure 4. Spring Event Comparison.

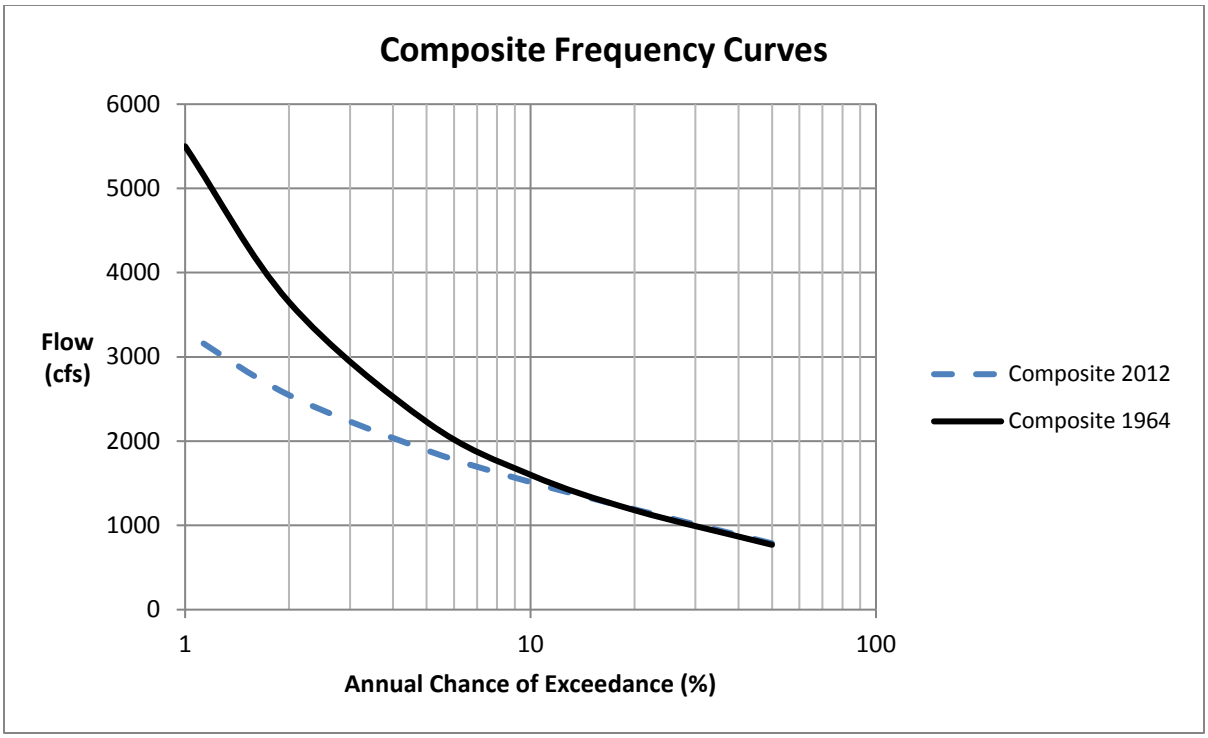


Figure 5. Composite Event Comparison.

Other Relevant Hydrologic Information The 1996 Flood Insurance Study (FIS) (FEMA) provides hydrologic information regarding the significant tributaries that enter the Portneuf River within the vicinity of Pocatello. These tributaries are the Trail Creek, City Creek, Pocatello Creek, Cusick Creek and Johnny Creek. The FIS also mentions that ice jams are a potential source of flooding in Pocatello (FEMA, 1996).

The 1970 floodplain study (NWW) provides hydrologic information regarding the significant tributaries that enter the Portneuf River upstream of Pocatello. These tributaries include Fort Hall Mine Creek, Mink Creek, Gibson Jack Creek, and Johnny Creek (NWW, 1970).

A cursory review of the 1968 DPM for Lava Hot Springs includes some discussion of the travertine deposits that control the bed of the Portneuf, a phenomenon that extends to the Pocatello area (NWW, 1968).

Additional relevant current hydrologic information is also available from the Idaho Department of Environmental Quality (IDEQ). In particular, the *Portneuf River TMDL Revision and Addendum* (IDEQ, 2010), which was recommended by numerous sources as pertinent to the study. The focus of the document is water quality, but it provides a good summary of the basin hydrology, and how it has changed recently, as well as significant information regarding sediment, one of the primary water pollutants discussed in the report. One of the more compelling illustrations of the report presents the decadal hydrographs, starting with 1910, of the Portneuf River at Pocatello (Figure 1.1 of the report). That figure shows a wide range in those decadal hydrographs, particularly in the spring runoff peaks (over a two-fold magnitude

difference) as well as peak timing. Of particular note is that the most recent decade is also the driest of the century presented (IDEQ, 2010). The current decade is expected to be even drier (Communication, 2015).

Flows of the Portneuf River are regulated upstream of Pocatello by Portneuf Dam, with a capacity of 23,965 acre-feet, and the smaller Chesterfield Dam, with 685 acre-feet capacity (USGS, 2015), and by smaller reservoirs and diversions (IDEQ, 2010). The TMDL report includes a general description of the basin geology, and describes the topsoils as predominantly very erodible loess. Section 2.5 of the report discusses data gaps, as well (IDEQ, 2010).

Sediment

The Portneuf River within what is now the concrete channel was observed to be turbid during fisheries studies at the site in 1967. A second river station about 2 miles downstream of the lower end of the project area was also observed to be turbid year round. Both observations appear to reflect the effects of sediment loading to the river that continues to occur throughout much of the drainage. Sediment loading to the lower Portneuf exceeds the flushing capabilities of the river, resulting in river bottom sedimentation due to low stream flows. Low velocities in the reach immediately above the Pocatello Unit project carries suspended sediment and flooding debris, which would generally be carried on through the project if reaching it. Side drainage in the project can deposit cobbles, gravel, and other sediment into the improved channel (NWW, 1967).

As mentioned previously, the 2010 TMDL document (IDEQ) contains considerable information regarding sediment within the Portneuf River near Pocatello. Of note is Table 2.1 from that report, which summarizes water quality status for numerous water bodies at three points in time – 1996, 1998, and the current period (i.e., 2010). A cursory review of the table suggests that there are periods of higher suspended sediment levels and accelerated bank erosion at numerous sites within the Pocatello area.

Hydraulics

A description of the Pocatello Unit Flood Control Project is summarized, below, from NWW, 1964.

<u>Channel Description</u> The project channel on the Portneuf River through Pocatello, ID, consists of three sections. At the upstream end of the project, an excavated channel starts at station 13+95 about 140 feet above the Cheyenne Avenue bridge southeast of Pocatello, and the downstream portion ends at station 179+65 above Halliday Street. The concrete channel is 7,635 feet long. It begins just upstream from Halliday Street at station 179+65 where it has a trapezoidal shape that matches the unlined channel upstream. This trapezoidal shape extends downstream five feet and then transitions into a 40-foot wide rectangular shape at station 180+00. The 40-foot rectangular channel extends 7,562.5 feet downstream to the exit transition where the bottom width is increased from 40 feet at station 255+62.5 to 55 feet at station 256+00. The concrete channel ends at station 256+00 by utilizing wing walls placed normal to the channel centerline.

Downstream, an excavated channel connects with the concrete channel at station 256+00, and ends at station 346+65. Both excavated channels are bounded by levees and riprap on channel sides. Riprap is placed to prevent bank erosion, including channel bends above and below bridges and at channel transitions. Excavated channels are trapezoidal in cross section with side slopes of 1 foot vertical to 2 feet horizontal.

Flow Conditions The earth channel is designed to carry the project design flow of 6,000 cfs with 3 feet of freeboard. The concrete channel is designed to carry the same design flow at subcritical velocities to station 239+00, at supercritical velocities from station 239+00 to the stilling basin at station 252+60, where a hydraulic jump will occur, and at subcritical velocities from the stilling basin to the end of the concrete reach.

The original 1964 GDM (NWW) for the Pocatello Unit Project on the Portneuf River carries a tabulation list of representative hydraulic data for project design flow for earth and concrete channel reaches at selected locations as follows (Table 3):

Table 3. Pocatello Unit Hydraulic Design Parameters (NWW, 1964).

Stations (ft)	Invert		Mean Sectional Velocities (ft/sec)	Depth (ft)
	Slope (ft/ft)	Width (ft)		
Earth Channel				
15+45 – 38+85	0.00184	40	7.1 - 7.4	21.8 – 12.5
39+35 – 52+87	0.00184	45	5.9 - 6.5	14.0 – 12.8
53+37 – 93+00	0.000750	50	5.4 – 5.5	14.3 – 14.0
93+50 – 127+10	0.00120	40	6.2 – 7.1	14.1 – 12.8
128+10 – 165+20	0.000694	60	5.1 – 5.4	13.0 – 13.6
165+70 – 179+65	0.000694	50	5.7 – 5.8	13.4 – 13.6
Concrete Channel				
256+00 – 262+76	0.00126	55	5.5 – 5.7	13.0 – 13.2
263+76 – 275+74	0.00126	60	4.8 – 5.1	13.4 – 14.1

Representative hydraulic data for the 6,000cfs design flow as estimated for bridges across the river are shown as in Table 4 (NWW, 1964):

Table 4. Hydraulic Parameters at Bridges (NWW, 1964).

Bridge	Station	Width (ft)	Design Water Surface (ft) (NGVD29)	Mean Velocity for Design Flow (ft/s)
Cheyenne Avenue	15+30	70	4464.7	7.8
Cottonwood foot	271+25	61	4431.9	7.2
Highway 30	304+69	90	4430.6	5.7
Highway 30	326+25	90	4430.0	5.2

For the 6,000cfs design flow, water would be expected to overbank at the two Highway 30 bridges; the bridge at station 304+69 would carry 5,800 cfs with only 200 cfs overbank, while the bridge at station 326+25 would carry only 3,800 cfs, with 2,200cfs overbank.

HEC-RAS Model

A relatively current HEC-RAS model was built for the concrete hydraulic design channel in 2009, and is available for use in the current study. Hydraulic results from the model for the concrete channel are shown in Table 5:

Table 5. HEC-RAS Model Output (NWW, 2009).

River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
211+60	PF 1	6000	4433.7	4443.96	4442.62	4447.28	0.001276	14.63	410.2	40.01	0.81
216+00	PF 1	6000	4433.3	4442.2	4442.2	4446.62	0.001926	16.86	355.92	40.01	1
216+50	PF 1	6000	4432.6	4440.11	4441.52	4446.31	0.003185	19.99	300.1	40.01	1.29
218+00	PF 1	6000	4432.2	4439.92	4441.12	4445.79	0.002935	19.45	308.48	40.01	1.23
220+40	PF 1	6000	4431.5	4439.24	4440.42	4445.08	0.002904	19.38	309.57	40.01	1.23
222+70	PF 1	6000	4430.8	4438.58	4439.7	4444.36	0.002866	19.3	310.95	40.01	1.22
239+62 Custer St.	PF 1	6000	4425.88	4433.7	4434.78	4439.42	0.00282	19.19	312.67	40.01	1.21
240+12 Custer St.	PF 1	6000	4425.74	4433.78	4434.66	4439.19	0.002602	18.67	321.3	40.01	1.16
240+66 Custer St.	PF 1	6000	4425.58	4433.65	4434.5	4439.02	0.002572	18.6	322.55	40.01	1.15
241+16 Custer St.	PF 1	6000	4425.43	4434.12	4434.35	4438.75	0.002069	17.27	347.35	40.01	1.03
241+27 Nr. Custer St.	PF 1	6000	4425.4	4434.12	4434.3	4438.72	0.002044	17.2	348.79	40.01	1.03
242+00 Nr. Custe	PF 1	6000	4422	4433.58		4436.19	0.000901	12.95	463.18	40.01	0.67
255+83 Begin Tra	PF 1	6000	4421.1	4431.93		4434.91	0.001091	13.85	433.21	40.01	0.74
257+30 End Concr	PF 1	6000	4421	4433.28		4434.17	0.000259	7.57	792.26	89.1	0.45
257+29 Start Rip	PF 1	6000	4421	4433.28		4434.17	0.001879	7.57	792.22	89.1	0.45
270+00 Nr. MAple	PF 1	6000	4418.6	4430.89	4426.38	4431.78	0.001873	7.56	793.18	89.14	0.45

Note: Blue shaded color reflects hydraulics transitions.

The concrete channel water surface profile with 6,000 cfs through it shows that a hydraulic jump would occur between stations 216+00 and 241+27. Subcritical flows would be expected at stations 211+60 and 241+27, respectively, above and below the segment where super critical regimes are formed. The transition in flows concurs with the theoretical results found in the 1964 Portneuf River GDM (NWW) described in this report. The water surface profile plot shown below (Figure 6) illustrates critical flow transition phenomena.

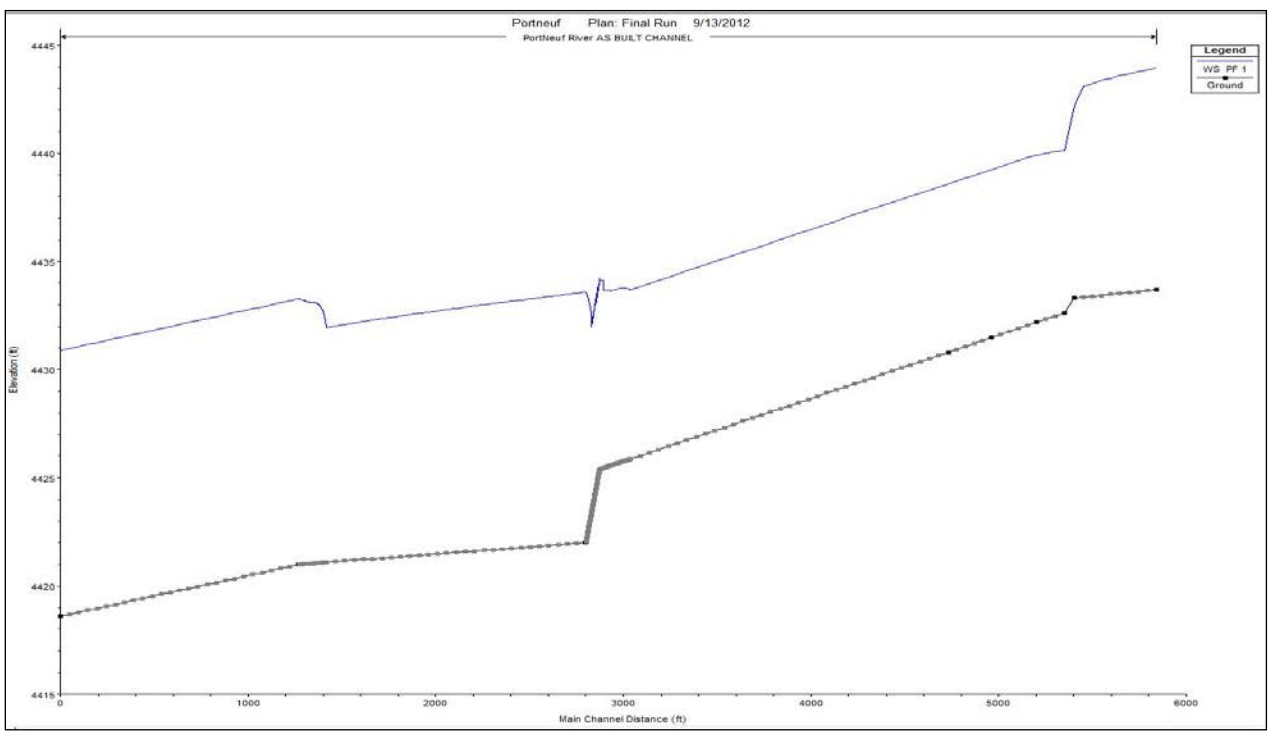


Figure 6. HEC-RAS 6,000 cfs Profile (NWW, 2009).

The 2009 HEC-RAS model indicates velocities that are greater than the velocities listed in the 1964 GDM (NWW). Concrete channel velocities range between 13.85 and 7.6 ft/sec during and after the hydraulic jump, compared to GDM values of 5.7 – 4.8 ft/sec.

Current Conditions Description

Key existing conditions associated with ecosystem values is also described in the June 1996 *Portneuf River Restoration Environmental Assessment Report* (CH2M Hill, 1996a), and indicate that construction of the concrete channel associated with the flood control project eliminated a major portion of the fish and wildlife habitat. Also, the flood control project levees, channel revetment, and concrete channel further reduced the river meanders, which impact habitats. Landowners have also altered and eliminated a number of meanders in the landscape. Limits to the riparian zone tend to prevent woody vegetation from expanding. Water supply would continue to be cut off from the meanders, adversely impacting associated wetland areas and riparian zones (CH2M Hill, 1996a).

Furthermore, recommendations were made in the June 1996 *Portneuf River Flood Control Project Modification Report* (CH2M Hill, 1996b), described in two locations, *North City Park* and *Open Lands Meanders*, located adjacent to the Portneuf River flood control project that have the potential for environmental improvement. Both areas at the time (1996) were unimproved lands that contain remnants of old river meanders. *North City Park* is at the downstream end of the project, while the *Open Lands Meanders* are located at the upstream end of the project (CH2M Hill, 1996b).

The meanders at *North City Park* have no flowing water but are vegetated with trees and bushes. The *Open Lands Meanders* include several ancient river meanders that lie along the right bank of the river. An existing railroad embankment prevents water flow to the meanders. The areas identified are shown on Map 2.

General Environment

The *Managing Idaho's Landscape for Ecosystem Services* (MILES, 2015) web pages include a great deal of information that may be of value for subsequent phases of this study. The *Pocatello* tab provides access to substantial resources on the Lower Portneuf River Watershed, along with the *Resources* tab. The *Explore the Portneuf* tab includes useful visualizations, such as the flooding history timeline and 1959 and 2013 Pocatello aerial imagery comparisons. The latter of these visualization tools is particularly useful in conveying the substantial changes in planform geometry associated with the flood control project, for example. The *Research* tab, as its name implies, provides links to research presentations on the Portneuf River.

Finally, the City of Pocatello and Bannock County have a number of online resources available that may be of use in subsequent phases of this study. Of particular interest, in terms of hydrologic and hydraulic applications, are the 1) City of Pocatello Comprehensive Plan -

2015 Update: Link to Plan sections: http://ourvalleyourvision.pocatello.us/, and its Maps appendix: http://ourvalleyourvision.pocatello.us/documents/ovov/24%20APPENDIX%20A%20MAPS%20Jan%202015.pdf The city has other online resources available, though several of these were not online during the time this review was assembled.

The Bannock County Comprehesive Plan (http://www.bannockcountyplanning.us/uploads/1/4/1/8/14185210/comp_plan.pdf) also includes information on the county that may be of subsequent value.

Conceptual plans for removal and replacement of the concrete channel were developed by an Idaho State University (ISU) design team. These are available at: http://pgf.seffect.com/sites/pgf.seffect.com/files/Channel%20Removal%20Alternative%20Analysis.pdf

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Bannock County Comprehensive Plan
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Literature Review

Land Use

Portneuf River Literature Review
Land Use

August 24, 2015

1) Planning Efforts

2008 – Bannock County Comprehensive Plan 2008

Bannock Transportation Plan Organization

- 2012 Portneuf Valley Bicycle Master Plan
- 2008 Portneuf Greenway Trail System Plan
- 2035 Metropolitan Transportation Plan

2015 – City of Pocatello Comprehensive Plan

2014 – Old Town Pocatello Revitalization Plan

Idaho State University MILES Project

2) Housing

<u>Conditions and Issues</u>

- The Portneuf River stretches north to south through the City and once was the core of a downtown neighborhood where housing and commerce flourished as part of the Original Townsite. In the last 45 years or so housing stock and businesses have aged and some citizens have voiced concern that the area, especially, adjacent the river have become somewhat blighted. Much of this was brought on by the community's decision in the late 1960's to have the U.S. Army Corp of Engineers (ACOE) install a flood control project. While the resulting concrete channel and earthen berm levees have minimized flood danger, they removed an important part of the community fabric. The area includes one of only two census tracts which lost housing units from 2000 to 2010.
- Care must be taken to ensure that any revitalization does not displace affordable housing from the area as home values rise.
- While Pocatello's older neighborhoods that are adjacent to the concrete channel are very walkable due to their grid layout, they suffer from a perceived lack of safety, as crime rates in this area are above most other City neighborhoods
- Following channelization of the River Corridor in the late 1960s, much of the City's low –moderate income housing was built next to the concrete channel, making use of inexpensive flat land that was already a platted grid style neighborhood with good access to the downtown shopping district. To date it

retains reasonable access to public transportation, neighborhood groceries, and the original Pocatello downtown shopping district (which now struggles to maintain its commercial presence).

Opportunities for Improvement /Solutions

- Neighborhood enhancements that result in increased pedestrian activity in this blighted area would decrease area crime, and increase the value of the riverfront neighborhoods and the community at large.
- There is a need to ensure that as the City implements projects to improve the livability of the River Corridor along the concrete channel (e.g. by removing sections of the concrete channel), that access to affordable housing isn't lost from this neighborhood.

3) Transportation (Auto and Bike)

Conditions and Issues

- At present, the area's goals (outlined in BTPO's 2035 Metropolitan Transportation Plan, 2003 Bicycle Plan, 2008 Pedestrian Plan, and 2009 Portneuf Greenway Master Plan) for sidewalk, bicycle and transit facility improvements are integrated into some but not all plans for housing development, street improvements for motor vehicles, and commercial development. A lack of publicly owned space along the Portneuf River has resulted in a piecemeal installation of non-motorized transportation facilities along the River Corridor, despite strong demand. Additionally, the roadways near the River Corridor were built in the early 1900's and are very narrow making bicycling difficult.
- In 2011 Pocatello Regional Transit (PRT) updated its fixed transit routes to better serve neighborhoods in the City core. However, more planning is needed to address bus routing concerns near the river.
- The Portneuf River is the largest natural barrier to bicycle travel.

Opportunities for Improvement /Solutions

- New trail developments should allow for pedestrian and cyclist use.

4) Recreation & Access

Conditions and Issues

- Increased access to the River for recreation and "connectivity" of trails along the River are key interests for many stakeholders.
- The idea of a "greenway" bordering the concrete channel is a central topic, yet it remains a concern for many homeowners whose private property, and privacy, would be impacted by any significant alteration of the channel and trail usage.

- Viewpoints vary on how a greenway might be constructed and how continuous trails and access might be through the city. There is acceptance by many that complete access won't be possible
- In terms of access to the River for the purposes of recreation, school representatives articulated the interest in their students using the River as part of their curriculum. ISU Students and other community members also indicated a desire to use the River for swimming, kayaking, and float trips.
- Results showed from surveys completed by ISU that 93% of stakeholders see the Portneuf River as an important place to walk and run for recreation.
- Results from that same survey showed that only 32% were satisfied with the river as a place to walk and run for recreation.
- The vision of the Portneuf Greenway Master Plan is to create a trail system. These corridors will link the Portneuf River to Old Town Pocatello, Idaho State University, public lands, and the hills which surround the valley. The primary goal of this plan is to link the community to the river and public lands.

River Corridor-Trail

The River Corridor contains 20.5 planned miles of trail. The corridor's ten sections all run near or next to the Portneuf River. The corridor is the backbone of the trail system. The planned corridor starts in northwest Pocatello near where US 30 crosses the Portneuf River and ends in the south at the Portneuf Gap. In many places along the corridor, trails are built or planned for trail on both sides of the river. These dual trails will require four to five additional bridges which would total eight or nine bridges on the entire corridor.

The most significant gap in the River Corridor is from Carson Street, where the existing trail ends, to Halliday Street where the Pre-History Trail begins. The section is currently served with on-street bicycle lanes and sidewalk connections through a densely developed older neighborhood. The river in this section is channelized and when the channel was built, homes were allowed to be constructed near or next to the new channel. There are limited opportunities to create a separated trail along the river. Some advocate for removal of the concrete channel and restoration of the river in this area; however, this would require numerous property acquisitions and a massive investment of public funds.

- BTPO's 2008 Pedestrian Plan defines a neighborhood's **walkability** as the "ability to walk from your home to shopping, restaurants, and recreation destinations." When Pocatello's target area for low- to moderate income housing is compared with the City's walkability index, it shows that most of the targeted areas are at least somewhat walkable (and within the River Corridor all of the targeted areas are at least somewhat walkable). There is a need to ensure that as the City implements projects to improve the livability of the River Corridor along the concrete channel (e.g. by removing sections of the concrete channel), that access to affordable housing isn't lost from this walkable neighborhood.

Opportunities for Improvement /Solutions

- Increased flow to support floating and fishing.
- Access points along the channel to allow community members to climb in and out of the channel.
- Modifications to the channel to provide more public access to the river
- The greenway may not always be directly on the river or might not be fully connected, but there could be ways to create pathways connecting sections.
- Consider creative designs for a greenway in the channel, such as covering the channel in parts or placing a “hanging” path over the river to avoid property infringement.

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Literature Review

Water Quality,
Riparian and Wetland Habitat,
Fish and Wildlife

Portneuf River Literature Review
Water Quality, Riparian and Wetland Habitat, Fish and Wildlife

March 14, 2016

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Overview

The Portneuf River drains approximately 1,360 square miles (870,400 acres) and is about 100 miles long (IASCD 2001). Land use in the Portneuf River drainage includes rangeland (63% of the total watershed), irrigated and fertilized cropland (23%), forest cover, (13%), and urban areas (1%) (Resh 2008).

Within the entire Portneuf watershed, landowners have straightened and removed dozens of miles of the river since the 1800s. Several miles of the lower Portneuf River in Pocatello, ID have been straightened and the banks armored. A concrete-walled channel approximately 1.5 miles long was constructed within the city as part of a U.S. Army Corps of Engineers flood damage reduction project completed in 1968 (IDEQ 2010). This channelization followed previous channelizing work by the railroad throughout the southern portion of the valley.

Prior to development of the area and the modification of the river channel, spring peak flows routinely inundated the floodplain. Uncontrolled spring runoff established and maintained flood channels throughout the riparian area and floodplain and contributed to the complex set of factors that make a riverine ecosystem function properly. Following construction of walls, levees, and bank armoring, the floodplain was no longer accessible to floodwaters. This altered the natural characteristics and habitat value of the river corridor within the Portneuf Valley. Channelization increases flooding downstream, increases stream erosion, decrease the ability of a stream to clean itself of polluted water, and removes habitat for fish, birds, beaver, and other wildlife.

Water Quality

Water quality in the Portneuf River is often poor. In 1972 wastes from processing phosphate ore, suspended solids and nutrients from tilled cropland, and organic wastes from cattle and municipal sewage contributed to the polluted nature of the river (Minshall and Andrews, 1973). In 2008 there were 30 water quality limited assessment units in the Portneuf River subbasin (IDEQ, 2010). Pollutants include *E. coli*/fecal coliform, temperature, dissolved oxygen, phosphorus, nitrogen, and sediment. In

addition, oil and grease has been a problem in the past (IDEQ, 2010). Above Batiste Road there is a sediment problem (and associated high levels of nutrients and bacteria); 2) below Bastiste there is a phosphorous problem due to influx of groundwater with extremely high phosphorous loads from Simplot and FMC. Exposure to elemental phosphorus and other contaminants at the levels found at the former FMC plant is dangerous to people, animals, and the environment. The former FMC phosphorus processing plant is located mostly on the Fort Hall Reservation near Pocatello, Idaho, and is within the Eastern Michaud Flats Superfund Site. FMC manufactured elemental phosphorus from 1940 until December 2001. While FMC was in operation, elemental phosphorus from spills and leaks during production, storage, and handling contaminated the property and polluted the water below which, in turn, has also polluted the Portneuf River. Elemental phosphorus now can be found down to 85 feet below the surface on FMC property. Elemental phosphorus can explode and burn uncontrollably when it is exposed to air. In addition, slag (a byproduct of processing phosphate ore), used as fill and stored in mountain-sized piles on site, emits dangerous gamma radiation.

A goal for the Portneuf River is to improve water quality and someday meet primary and secondary contact recreation beneficial uses. Primary contact recreation includes activities such as swimming. Secondary contact recreation includes activities like wading and fishing.

Water quality, species richness, and substrate conditions are also influenced by recreation activities on the fringes of Pocatello (Cornell 2013). A sub-watershed with a higher level of recreation was shown to have more fine sediment; lower macroinvertebrate species richness, abundance, and biomass; higher dissolved organic carbon and higher total phosphorus (Cornell 2013).

Irrigation has reduced the river flow as much as 70% during summer compared to unregulated flow (Marcarelli et. al. 2010). The river and its tributaries also receive irrigation return flows and non-point source discharges which can be laden with bacteria, excessive nutrients and sediment (IASCD 2005; IDEQ 2010). High nutrient levels in the lower Portneuf River can lead to excessive aquatic plant growth (IDEQ 2010). Often dissolved oxygen levels are not adequate for cold-water aquatic organisms. Water temperatures are likely higher than historic conditions. Stormwater runoff carrying oil and grease, high nutrients, bacteria and sediment has also been a problem in developed areas (IDEQ 1999).

The correct range of water temperature is essential to fish and other aquatic species. The type of aquatic community (warm-water, cool-water, or cold-water) is highly influenced by water temperature. Irrigation return flow, riparian vegetation alteration, channel alteration, and flow alteration can all affect water temperature. Water temperature in the lower Portneuf River in Pocatello during summer is often too high for cold-water fish. A thermal barrier to upstream fish passage can occur (IDEQ 2010).

Dissolved oxygen is required by aquatic organisms. Dissolved oxygen levels of at least six parts per million (ppm or mg/L) are optimal for cold-water fish. When dissolved oxygen levels are below six ppm, fish and other aquatic organisms can be stressed or die. Several factors impact the amount of dissolved oxygen in the water. Colder water has the potential to contain more dissolved oxygen than warmer water. Flow, nutrient loading, aquatic vegetation, and channel alteration also affect the dissolved oxygen level. As water temperature increases late in the afternoon, water is not able to hold as much dissolved oxygen. When the sun sets, photosynthesis which has been contributing to increased dissolved oxygen levels during daylight switches to plant respiration which consumes dissolved oxygen. Dissolved oxygen levels can drop below optimum levels for cold-water species. Elemental phosphorus can exacerbate this process by allowing more algae and bacteria than normal to grow in the river. The excess algae and bacteria leads to a higher respiration level which consumes more dissolved oxygen.

Excess fine sediment can have negative effects on aquatic organisms. High fine sediment levels are a problem in the Portneuf River (IDEQ 1999). Many fish species can endure high suspended sediment levels for a short time, such as during spring runoff, but longer periods of exposure can be harmful. Sediment is one of the highest water quality pollutants (EPA 2009) and is the leading cause of benthic stress in Idaho (Rowe et al. 2003).

Nutrients are also bound to sediment. Excess nutrients can contribute to poor water quality. Phosphorus is typically bound to sediment which can be a major source of this nutrient available to rooted aquatic plants. Much of the excess sediment in the Portneuf River is derived from non-point sources such as range and crop land (IDEQ 2010). High levels of fine sediment also enter the Portneuf within the concrete channel from stormwater runoff. Water with high levels of nutrients can have a lower concentration of dissolved oxygen due to the amount of oxygen required for organic matter decomposition and other chemical reactions.

Riparian and Wetland Habitat

Construction of the flood damage reduction channel resulted in the loss of approximately four miles of natural river channel and associated wetlands by removing natural meandering and more than 100 acres of riparian habitat (USACE 1992, as cited in IDEQ 2010). Also note loss of miles of channel and associated wetlands from UPRR straightening in the Portneuf Valley.

A healthy riparian corridor would … Discuss what a healthy riparian area would look like (perhaps see Boise river for examples), even without cottonwoods. Discuss impacts of riparian veg on maintaining perennial flow. Discuss benefits of debris within the stream channel.

Reach 1. natural river that has been straightened in some areas by the railroad. Not many trees here. Still some floodplain connection.

Reach 2 levee area. Some trees. No floodplain connection.

Reach 3 Concrete channel.

Reach 4 limited channelization. Healthy canopy, despite loss of cottonwoods due to flow regime alteration. Note the healthy population of black willows in the downstream reach (4).

Fish and Wildlife

Fish, aquatic insects, and other aquatic organisms are widely used to evaluate the ecological health of rivers (Zaroban et al. 1999, Resh 2008). These organisms are good indicators of aquatic habitat quality because they require many variables representing different spatial and temporal scales that are directly linked to their habitat requirements (Jungwirth et al. 2000). Even though trout exist in the Portneuf River, the upper river had aquatic insect indices reflective of poor conditions (IDEQ 2010).

Eleven native fish species and four non-native fish species reside in the Portneuf River (Feldman and Peterson). Table 1 lists these species. Poor water quality and altered river characteristics likely limit the total number of fish present in the river within Pocatello.

No Endangered Species Act-listed aquatic species are currently found in the Portneuf River. Yellowstone cutthroat trout (*Oncorhynchus clarkii bouvieri*), has been recognized by a number of agencies. They are listed as sensitive or imperiled by the U.S. Forest Service, the U.S. Bureau of Land Management, and the Idaho Department of Fish and Game (IDEQ 2010, Appendix F-Biological Assessment).

Table 1. Fish Species in the Portneuf River (Feldman and Peterson).

Native Species	**Scientific Name**
Utah Sucker	*Catostomus ardens*
Bluehead Sucker	*Catostomus discobolus*
Mountain Sucker	*Catostomus platyrhynchus*
Mottled Sculpin	*Cottus bairdii*
Paiute Sculpin	*Cottus beldingii*
Utah Chub	*Gila atraria*
Longnose Dace	*Rhinichthys cataractae*
Speckled Dace	*Rhinichthys osculus*
Redside Shiner	*Richardsonius baleatus*
Cutthroat Trout	*Oncorhynchus clarkii*
Mountain Whitefish	*Prosopium williamsoni*
Non-Native Species	**Scientific Name**
Common Carp	*Cyprinus carpio*
Rainbow Trout	*Oncorhynchus mykiss*
Brown Trout	*Salmo trutta*
Brook Trout	*Salvelinus fontinalis*

Five native species of amphibians have been recorded in the Lower Portneuf Drainage, three of which are still known to occur there. Relatively few recent records of amphibians exist for Pocatello. Most of the recent records (except for tiger salamanders) are from the Mink Creek area.

- Barred Tiger Salamanders (*Ambystoma mavortium*) appear to be persisting throughout the drainage, with fewer numbers of locations reported before and after 1968 (40 vs. 26).
- Western Toads (*Anaxyrus boreas*) no longer appear to occur in the Lower Portneuf Drainage (7 records, all from before 1968), which is a similar trend for most of Southeastern Idaho. This disappearance is probably due to disease.
- Great Basin Spadefoots (*Spea intermontana*) have only been recorded from 2 sites in the Lower Portneuf Drainage. The last record is from 1983 at a site which no longer is a wetland. Changes in irrigation practices and the loss of wetlands from flood control practices probably have resulted in the loss of appropriate breeding habitat.
- Boreal Chorus Frogs (*Pseudacris maculata*) still persist in the Mink Creek area south of Pocatello, but appear to have declined or disappeared from the Portneuf Valley in the Lower Portneuf Drainage (25 pre 1968 records vs 17 post 1968 records).
- Northern Leopard Frogs (*Lithobates pipiens*) have apparently disappeared from the Lower Portneuf Drainage (14 records, all from before 1968), but are known to persist further up river and to the north in the Fort Hall Bottoms. Habitat loss and disease are the probable causes of their decline.

Three species of lizards have been recorded for the Lower Portneuf Drainage, two of which still occur.

- Pygmy Short-horned Lizards (*Phrynosoma douglassii*) apparently no longer occur in the Lower Portneuf Drainage. They are known from only 2 records, both from before 1968. It probably disappeared from the Pocatello area as urban development resulted in the loss of appropriate habitat.
- Sagebrush Lizards (*Sceloporus graciosus*) persist in the drainage, but apparently at fewer locations (24 pre 1968 records vs. 6 post 1968 records), probably due to development and loss of habitat.
- Western Skinks (*Plestiodon skiltonianus*) also persist, but apparently at fewer locations (12 records total with only 1 since 1968), probably due to urban development and loss of habitat.

Nine species of snakes have been recorded from the Lower Portneuf Drainage, seven of which are known to still occur there.

- Northern Rubber Boas (*Charina bottae*) persist in the drainage and are probably more common than indicated (17 records) because they are difficult to sample due to their secretive nature.
- Racers (*Coluber constrictor*) are the most frequently recorded snake species (42 records) with more occurrences after 1968 than before.

- Striped Whipsnakes (*Coluber taeniatus*) show relatively few records (7), the last occurring in 1998. The apparent decrease or possible disappearance of this species in the drainage is probably related to loss of habitat due to development.
- Ringnecked Snakes (*Diadophis punctatus*) are rare (6 records), but continue to persist.
- Desert Night Snakes (*Hypsiglena chlorophaea*) are rare (5 records) with their occurrence only documented in 2 areas of the drainage. Most of the records are from the Ross Park area during the 1960s, an area that has experienced considerable development and habitat fragmentation.
- Gophersnakes (*Pituophis catenifer*) are relatively common (15 records) with the majority of occurrences since 1968. This is a species that does relatively well in human modified areas.
- Terrestrial Gartersnakes (*Thamnophis elegans*) are also relatively common (19 records) with the majority of occurrences since 1968. This is a species that does well in human modified areas.
- Common Gartersnakes (*Thamnophis sirtalis*) appear to have been rare in the Lower Portneuf Drainage and to no longer be present (3 records, all from before 1968). Their decline is likely due to the disappearance of Northern Leopard Frogs which are a very important part of their diet.
- Western Rattlesnakes (*Crotalus oreganus*) appear to be decreasing (22 records before 1968 vs. 6 records after 1968). Rattlesnake populations generally decline or disappear in areas with high human densities.

<u>Beaver (Data and estimates provided by Mr. Mike Settel, personal communication 2016).</u>
The number of beavers that existed in the Portneuf drainage in the years 1824-1834 was significant; 4,000 to 8,000 beaver. This estimate is based on the percentage of 1-2% gradient streams in the basin, trapping reports from the Hudson's Bay Company and estimates, from other trapping brigades.

Today, the story is different. <u>Now a large percentage of beaver are transitory. Stationary beaver now occupy less than 0.1% of suitable habitat.</u> There are essentially four primary areas which are likely to contain beaver in the Portneuf River basin today:

1- The main channel of the Portneuf and Marsh Creeks below Chesterfield
2- Numerous tributaries and streams on private lands
3- Tributaries on public lands, at higher elevations
4- The Portneuf River downstream of Pocatello to American Falls Reservoir

Group 1 beaver, main stem of the Portneuf River, has a limited beaver population, most likely migratory juveniles. This population is estimated to be 5 to 50 beavers between I-84 and Chesterfield Reservoir.

Group 2 beaver, private land, are populated by migrating beaver and are trapped and eliminated nearly as soon as they are discovered. This population is estimated to be 1 to 10 beaver.

Group 3 beaver, public lands, are found primarily in four, 2nd order streams: Mink, Rapid, Pebble, and Toponce. The number of beaver on all of these reaches is estimated to be 7-20. Under current trapping regulations, these likely will not stabilize to a significantly larger number.

Group 4 beaver, between I-84 and American Falls Reservoir, are stationary and migratory. Based upon anecdotal reports from tribal and other community members, there is likely a stable pool of migratory juveniles moving up the Portneuf from the bottoms. This population is indeterminant, but is estimated to be 5-20 beavers per year, with a static population of approximately 10-60. Both groups are reduced due to trapping, migration out of the basin, and other mortality factors.

Thus, for the entire drainage, American Falls up to Chesterfield Dam, there are estimated at:

Group 1	5-50
Group 2	1-10
Group 3	7-20
Group 4	10-60

TOTAL: 23-140, with the majority of those occurring on Tribal Lands. If tribal lands are excluded, the estimate is 11-90 individuals.

Birds

During late winter there are about 4-8 species in Sacajawea Park area, but in May through August there are 14-16 species. There are very few ground nesting species because of the presence of ferrel cats and other predators such as fox, coyote, mink, raccoon, and fox squirrels (Charles Trost, personal communication 2016). Birds are seldom seen in the concrete channel, except in the winter when the lower section freezes over. Then mallards visit the area to reach flowing water. Diversity is typically greater in the Edson Fichter area because of the pond and willows along the river, with 15-20 species common in the summer. A list of commonly observed birds is presented in Table 2.

Table 2. Common Birds near the lower Portneuf River, as observed by Charles Trost.

Common Name	Scientific Name
American Crow	*Corvus brachyrhynchos*
American Goldfinch	*Carduelis tristis*
American Robin	*Turdus migratorius*
Barn Swallow	*Hirundo rustica*
Belted Kingfisher	*Ceryle alcyon*
Black-billed Magpie	*Pica pica*
Black-capped Chickadee	*Poecile atricapillus*
Brewer's Blackbird	*Euphagus cyanocephalus*
California Gull	*Larus californicus*
Canada Goose	*Branta canadensis*
Dark-eyed Junco	*Junco hyemalis*
Eurasian Collared Dove	*Streptopelia decaocto*
European Starling	*Sturnus vulgaris*
House Finch	*Carpodacus mexicanus*
House Sparrow	*Passer domesticus*
House Wren	*Troglodytes aedon*
Killdeer	*Charadrius vociferus*
Mallard Duck	*Anas platyrhynchos*
Mourning Dove	*Zenaida macroura*
Northern Flicker	*Colaptes auratus*
Ring-billed Gull	*Larus delawarensis*
Rock Pigeon	*Columba livia*
Sharp-shinned Hawk	*Accipiter striatus*
Swainson's Hawk	*Buteo swainsoni*
Yellow-rumped Warbler	*Dendroica coronata*

Invasive New Zealand mudsnails are found in the Portneuf River and have the potential to alter the natural riverine ecosystem (Heinrich and Baxter 2015). Heinrich and Baxter (2015) found densities greater than 1 million individuals per m^2. However, they also found aquatic insect densities were higher in areas where mudsnail densities were high.

Environmental Improvement Opportunities

While aquatic and terrestrial habitat along the Portneuf River in Pocatello is generally poor, there are some areas with healthy riparian trees (e.g. Reach 4). Conservation and protection of riparian and wetland habitat is of high priority. Riparian trees provide many benefits to fish and wildlife. All native trees along the river should be retained and more planted where space is available. However, retaining trees in leveed reaches can compete with the Corps' policy of establishing a vegetation free zone on the levee crown and slopes down to the levee toe, plus an additional 15 feet beyond the toe (Engineer Manual (EM) 1110-2-1913 *Design and Construction of Levees,* dated 03 April 2000; and Engineering Technical Letter (ETL) 1110-2-583, *Engineering and Design:*

Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures, dated 30 April 2014).

If additional land becomes available, the floodplain and channel meanders could be reestablished in Reaches 1, 2, and 4. This would help restore woody riparian vegetation, improve fish and wildlife habitat, and reduce sediment and excess nutrients in the river.

To decrease input of degraded stormwater from the city to the river, oil/water separators could be installed within the city in all feasible locations to reduce the amount of oil and grease that make their way into the river.

Constructed wetlands, restored floodplains, or retention swales upstream from Pocatello could reduce the input of sediment and excess nutrients to the river.

Within the concrete channel, shallow water combined with low flows creates a passage barrier to fish. A low-flow channel could be constructed within the channel to provide deeper water. A meandering low-flow channel could also provide refuge from high velocities when flows are high.

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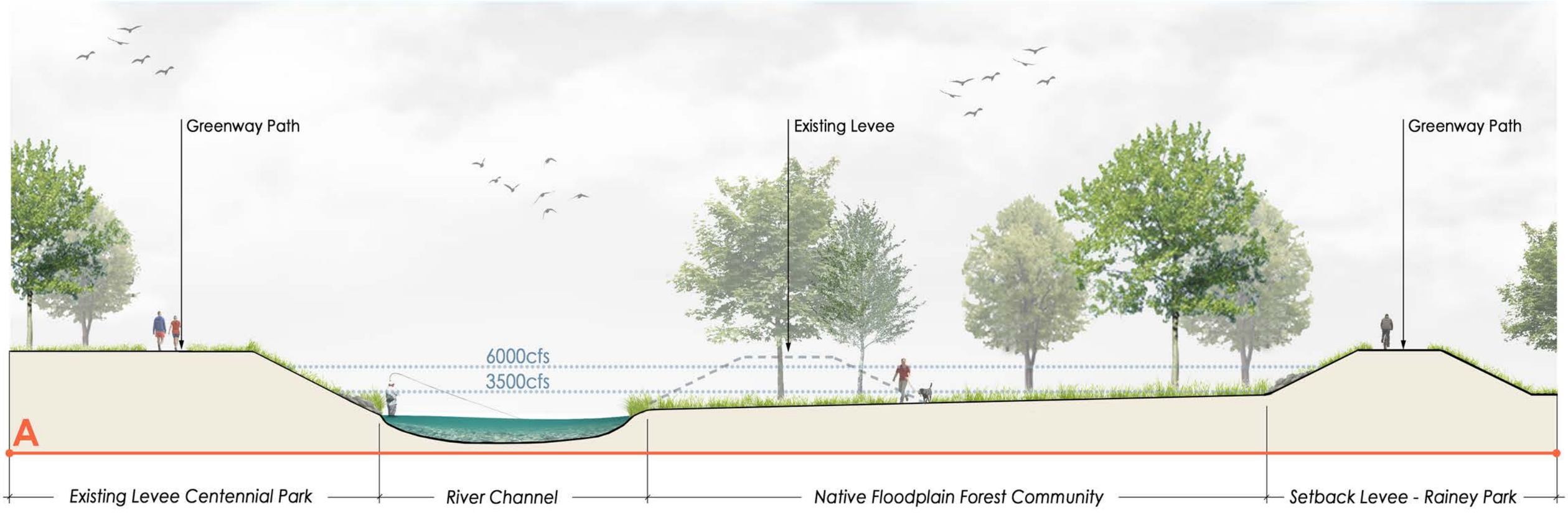
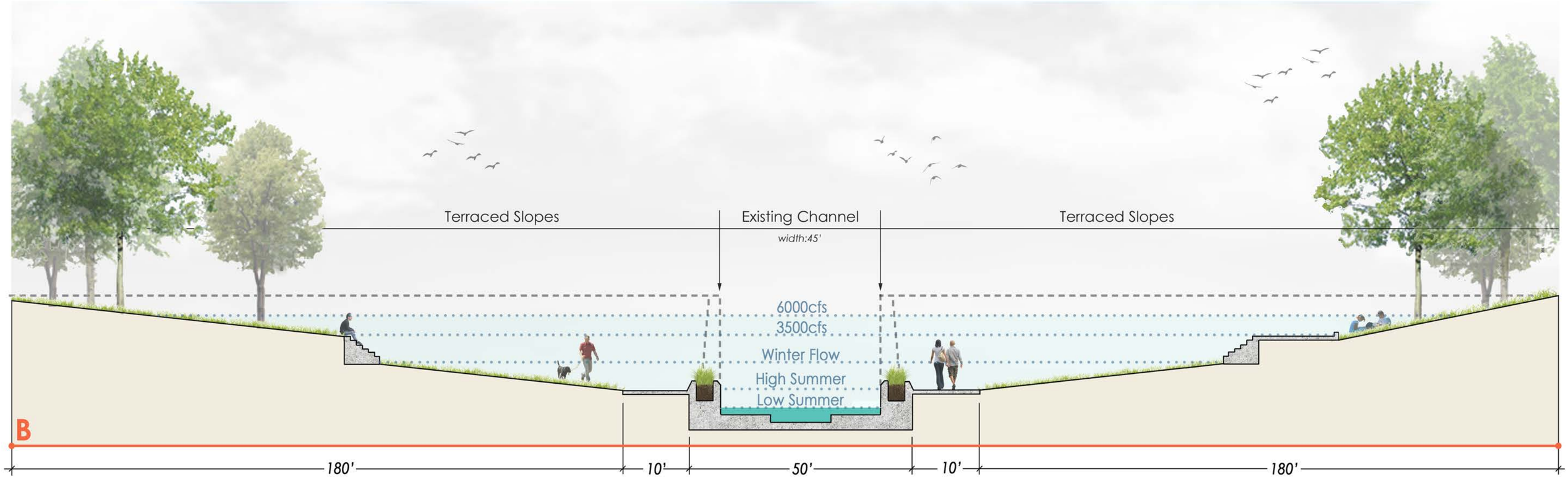
Rainey-Centennial Park Concept

RAINEY-CENTENNIAL PARK LEVEE SETBACK SECTION (CONCEPT ONLY)

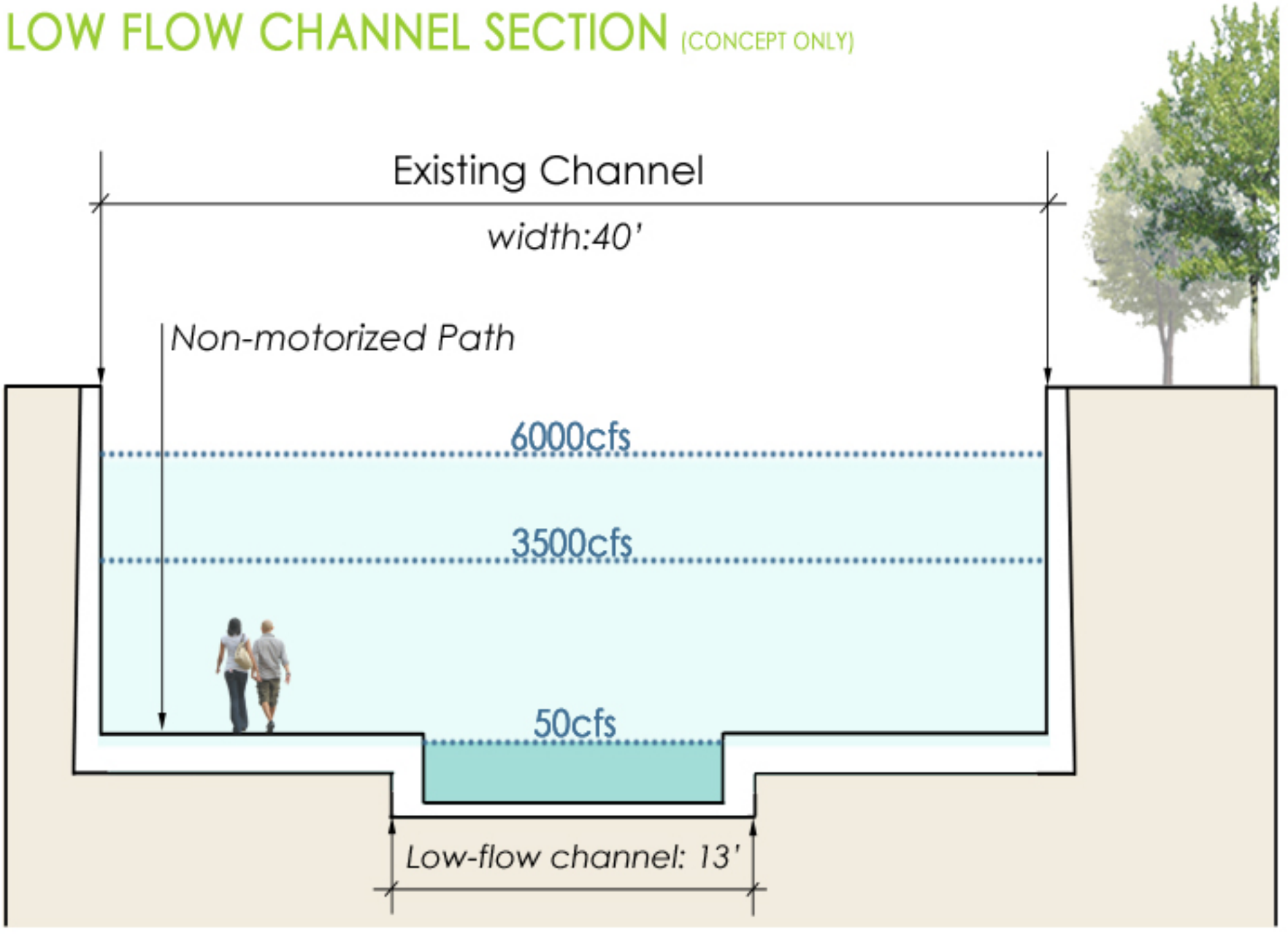


Raymond Park Concept

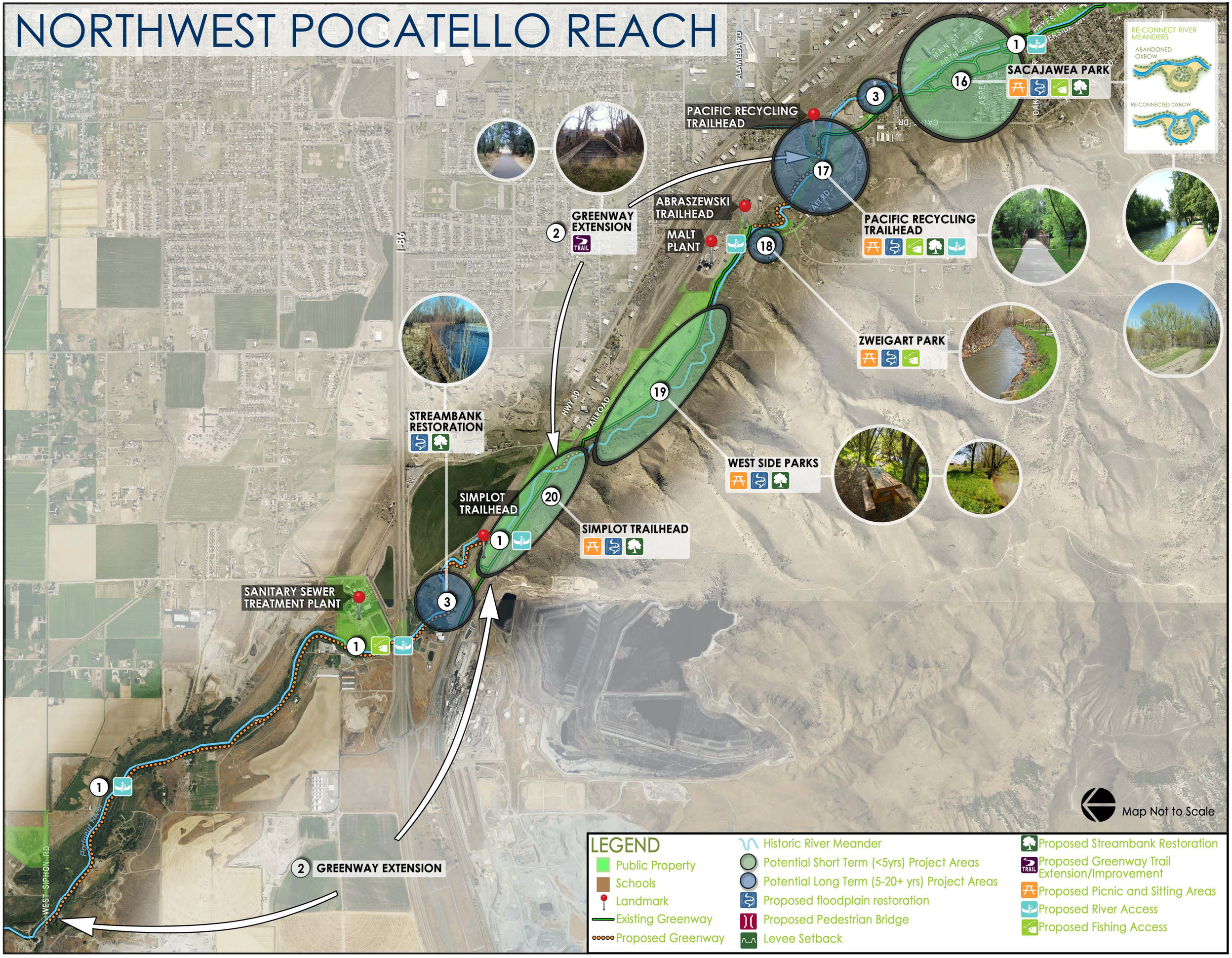
RAYMOND PARK CHANNEL SECTION (CONCEPT ONLY)



LOW FLOW CHANNEL SECTION (CONCEPT ONLY)



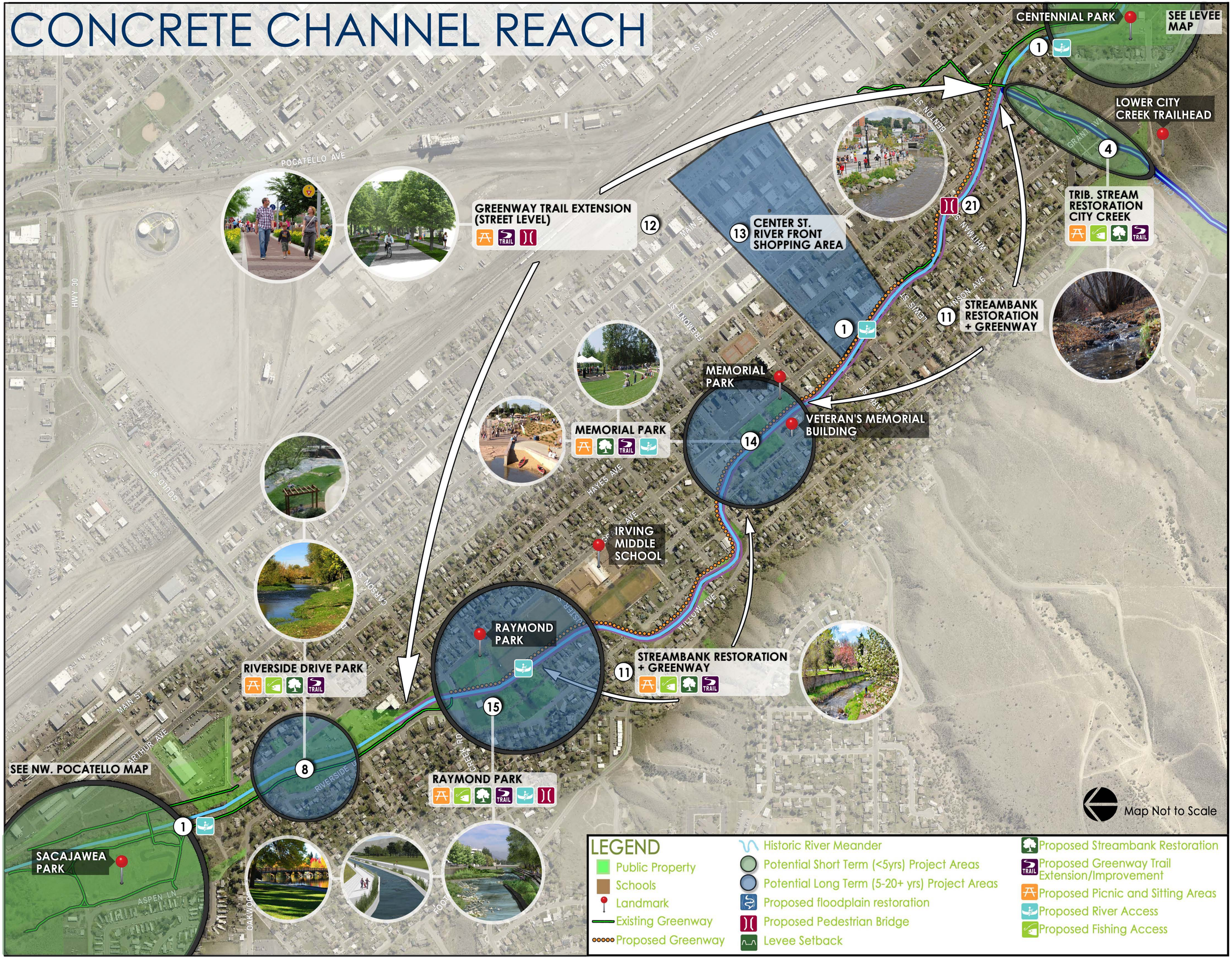
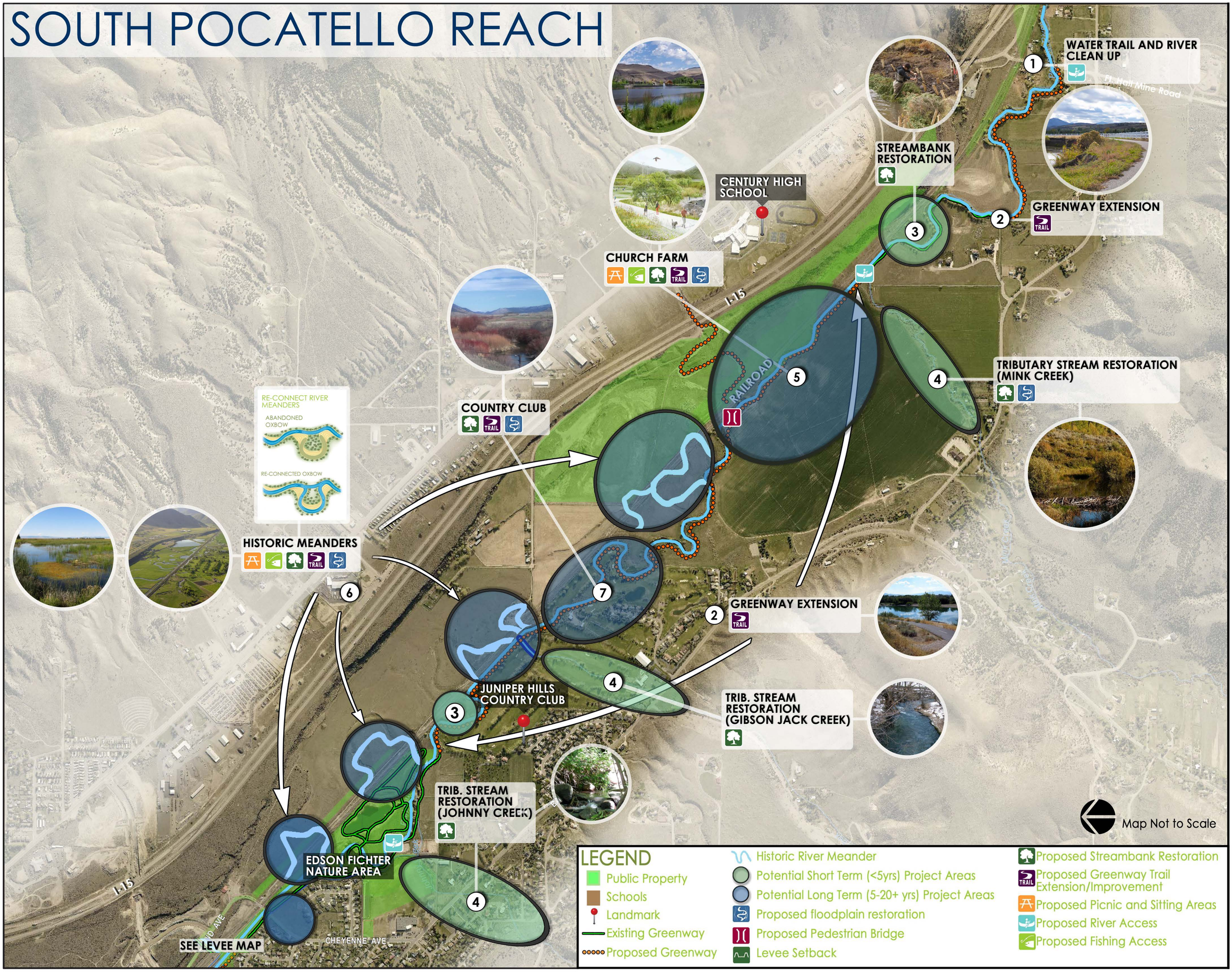
NORTHWEST POCATELLO REACH



LEVEE REACH

LEVEE SETBACK (CONNECTOR PARK)
LEVEE SETBACK (CHEYENNE AVE PARK)
CHEYENNE AVE
SOUTH VALLEY RD
ROSS PARK
GREENWAY EXTENSION
TRAIL
I-15
2ND AVE
RAILROAD
LEVEE SETBACK (TECH FARM)
RIVERSIDE GOLF COURSE
BANNOCK HWY
LEVEE SETBACK (RIVERSIDE GOLF COURSE)
IDAHO STATE UNIVERSITY
RAINEY-CENTENNIAL PARK
TAYSOM ROTARY PARK
LEVEE VEGETATION
LEVEE SETBACK CONCEPT
OLD LEVEE
RIVER CHANNEL
INCREASED HABITAT
GREENWAY EXTENSION
1ST AVE
POCATELLO COMMUNITY CHARTER SCHOOL
TRIB. STREAM RESTORATION (CUSICK CREEK)
Cusick Creek
RAINEY PARK
MAIN
CENTENNIAL PARK
BENTON ST
RAILROAD DEPOT
CITY CREEK TRAILHEAD
Map Not to Scale
LEGEND
Public Property
Schools
Landmark
Existing Greenway
Proposed Greenway
Historic River Meander
Potential Short Term (<5yrs) Project Areas
Potential Long Term (5-20+ yrs) Project Areas
Proposed floodplain restoration
Proposed Pedestrian Bridge
Levee Setback
Proposed Streambank Restoration
Proposed Greenway Trail Extension/Improvement
Proposed Picnic and Sitting Areas
Proposed River Access
Proposed Fishing Access

CONCRETE CHANNEL REACH



SOUTH POCATELLO REACH