

Project Review Plan
for
SANTA CLARA PUEBLO WATERSHED ASSESSMENT
SANTA CLARA PUEBLO, NEW MEXICO
TRIBAL PARTNERSHIP PROGRAM
(Section 203 of WRDA 2000, as amended)
Santa Clara, NM



U. S. Army Corps of Engineers
Albuquerque District

MSC Approval Date: Pending
Last Revision Date:



**US Army Corps
of Engineers**®
Albuquerque District

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**REVIEW PLAN
SANTA CLARA PUEBLO WATESHED ASSESSMENT
TRIBAL PARTNERSHIP PROGRAM
(Section 203 of WRDA 2000, as amended)**

Santa Clara, NM

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Review Plan for Santa Clara Pueblo Watershed Assessment

1. Purpose and Requirements.

a. Purpose. This Review Plan defines the scope and level of peer review for the Santa Clara Pueblo Watershed Assessment, Section 203 Tribal Partnership Program (TPP).

Section 203 of the Water Resources Development Act (WRDA) of 2000 (as amended by Section 2011 of WRDA 2007) (33 USC § 2269), is also known as the Tribal Partnership Program, which reads in part:

(b) PROGRAM.—

(1) IN GENERAL.—In cooperation with Indian tribes and the heads of other Federal agencies the Secretary may carry out water-related planning activities and study and determine the feasibility of carrying out water resources development projects that —

(A) will substantially benefit Indian tribes; and

(B) are located primarily within Indian country (as defined in section 1151 of title 18, United States Code) and including lands that are within the jurisdictional area of an Oklahoma Indian tribe, as determined by the Secretary of the Interior, and are recognized by the Secretary of the Interior as eligible for trust land status under part 151 of title 25, Code of Federal Regulations or in proximity to Alaska Native villages.

(2) MATTERS TO BE STUDIED.—A study conducted under paragraph (1) may address—

(A) projects for flood damage reduction, environmental restoration and protection, and preservation of cultural and natural resources;

(B) watershed assessments and planning activities; and

(C) such other projects as the Secretary, in cooperation with Indian tribes and the heads of other Federal agencies, determines to be appropriate.

Section 203(b)(1) of the Water Resources Development Act (WRDA) of 2000, Public Law [P.L.] 106-541 (114 Stat.2588-2589) and Section 2011 of WRDA 2007, P.L. 110-114 (121 Stat.1074).

Under Section 203 WRDA 2000, the U.S. Army Corps of Engineers may conduct a watershed assessment (WA) (feasibility phase), as stated in subsection (2)(B) above. A WA results in a watershed management plan (WMP) which makes recommendations for future study, rather than a project to be authorized for Corps construction, as is typical for Feasibility studies. The implementation guidance contained in CECW-P Memorandum for Commanders, Major Subordinate Commands dated 16 May 2008, Subject: Implementation Guidance for Section 2011 of the Water Resources Development Act (WRDA) of 2007, Tribal Partnership Program, directs that a Section 203 Assessment will follow the guidance covering WAs and planning activities pursuant to Section 729 of WRDA 1986, Study of Water Resources Needs of River Basins and Regions.

Additional guidance for watershed assessments can be found in Engineering Circular (EC) 1105-2-411 and Appendix H of Engineering Regulation (ER) 1105-2-100 Planning Guidance Notebook.

Products for review may include the Assessment Factsheet; a preliminary environmental and cultural assessment; cost estimate; economic analysis; hydraulic and hydrologic analysis; geotechnical analysis; real estate product.

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b. Applicability. This Review was developed in accordance with regulation and guidance listed below and in particular EC 1165-2-209 and EC 1105-2-411.

c. References:

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 January 2010.
- (2) Director of Civil Works' Policy Memorandum #1, CECW-P, dated 19 January 2011.
- (3) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2010.
- (4) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 September 2006.
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 November 2007.
- (6) EC 1105-2-411 Watershed Plans, 15 January 2010, Expires 15 January 2012
- (7) CECW-CP Memo for Distribution, "Peer Review Process", 30 March 2007
- (8) QMS 02500-SPD, Preparation and Approval of Review Plans
- (9) QMS 02500.1-SPD, Supplemental Review Plan Checklist
- (10) Santa Clara Watershed Assessment Management Plan

d. Requirements. This Review Plan was developed in accordance with EC 1165-2-209, the review requirements therein modified in accordance with Section 203 WRDA 2000 implementation guidance and EC 1105-2-411 to fit the unique nature of the TPP program as a small scale (in scope, schedule and budget) investigations authority that lacks construction authority. The review requirements laid out herein establish an appropriate, accountable, comprehensive review strategy by providing a seamless process for review of planning documents in the TPP. Four general levels of review are outlined below: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review commensurate with the level of detail authorized in the TPP.

2. Review Management Organization (RMO) Coordination.

The RMO is responsible for managing the overall peer review effort described in this Programmatic Review Plan. The RMO for Section 203 Tribal Partnership Program is the MSC. The MSC for the Albuquerque District (SPA) is the South Pacific Division (SPD). The MSC will coordinate and approve the review plan and manage the Agency Technical Review (ATR). SPA will post the approved review plan on its public website.

3. Project Information.

a. Decision Document. The Santa Clara Pueblo Watershed Assessment results in a Watershed Management Plan (WMP) which will undergo reviews as described in this plan. Since the WMP does not result in a project for implementation there is no requirement under NEPA or other environmental laws and there is not a single plan selected for implementation. As such the level of review is limited to the evaluation of existing and future without project conditions and an array of recommendations or potential solutions to issues within the watershed. Recommendations and solutions will be largely conceptual in nature requiring additional analysis or design before implementation. The SMP will be prepared in accordance with ER 1105-2-100, Appendix H and EC 1105-2-411. The approval level of the decision document is U. S. Army Corps of Engineers (USACE) headquarters.

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b. Study/Project Description The study area is located on the Santa Clara Pueblo, approximately 22 miles northwest of Santa Fe, in Rio Arriba, Sandoval and Santa Fe Counties, New Mexico (see Enclosure B). The study area includes the following tributaries, whose watersheds total approximately 86 square miles: Santa Clara Creek, Sawyer Creek, Arroyo Seco, Arroyo de Madrid, Arroyo de Barrancos, Arroyo de Guachupangue, Arroyo de la Mesilla, Santa Cruz River, and the Rio Grande (see Enclosure C). The Rio Grande flows north to south through the Española Valley while the remaining watersheds are tributaries on both sides of the Rio Grande. Several urbanized areas are located in the Española Valley including: Santa Clara Pueblo, Santa Cruz, Santa Niño, and La Mesilla. The Santa Clara Pueblo consists of approximately 55,000 acres. The limits of the Santa Clara Pueblo define the boundaries of the assessment area; however, the impacts upstream and downstream of any proposed management measures will be analyzed as part of the assessment.

West of the Rio Grande, Santa Clara Pueblo lands roughly mimic the 50-square-mile watershed of Santa Clara Creek. Pueblo lands also encompass a little over 6 miles of the Rio Grande and a large area extending 2 to 4 miles east of Rio Grande. At 10,000 feet, Santa Clara Creek originates on the rim of the caldera of the extinct volcano forming the Jemez Mountains. As it flows over 20 miles east to the Rio Grande, it descends 4,400 feet through the steep-sided Santa Clara Canyon. Within Santa Clara Canyon, several man-made lakes provide fishing opportunities, flood attenuation, sediment management, and water supply for the Pueblo. The Santa Clara watershed provides timber, pasture, traditional and recreational resources for the Pueblo.

Watersheds on the eastern side of Pueblo lands originate off Pueblo lands and flow west through commercial and residential areas to the Rio Grande. This development is within pueblo boundaries but largely made up of non-tribal members.

The non-Federal sponsor for the feasibility phase of the assessment is the Santa Clara Pueblo. The Santa Clara Pueblo is a Federally-recognized Indian tribe Native American Tribal Entity. The Tewa-speaking pueblo of Santa Clara was established around 1550 when a drought forced their ancestors to move into the fertile Río Grande Valley. Santa Clara Pueblo is noted for its pottery, such as redware, carved blackware, melon bowls, polychrome, and other artistic mediums.

The study area lies within the jurisdiction of New Mexico Congressional District 3; the office is held by Congressman Ben Ray Lujan (D).

A number of concerns have been identified during the course of the Initial Watershed Assessment through coordination with the Santa Clara Pueblo. Concerns that are related to the establishment of planning objectives and planning constraints are:

- (1) Lack of comprehensive, long-range watershed management plans for the Santa Clara Creek Canyon, as well as the Sawyer Creek watershed and those watersheds east of the Rio Grande draining onto Tribal lands.
- (2) Concerns over habitat degradation.
- (3) Concerns over sediment deposition/erosion.
- (4) Concerns over poor water quality and runoff of hazardous and potentially toxic materials from Los Alamos National Laboratory.
- (5) Concerns over impacts to traditional and culturally-sensitive religious sites and resources.
- (6) Concerns over long-term effects of the Cerro Grande and Oso Wildfires.

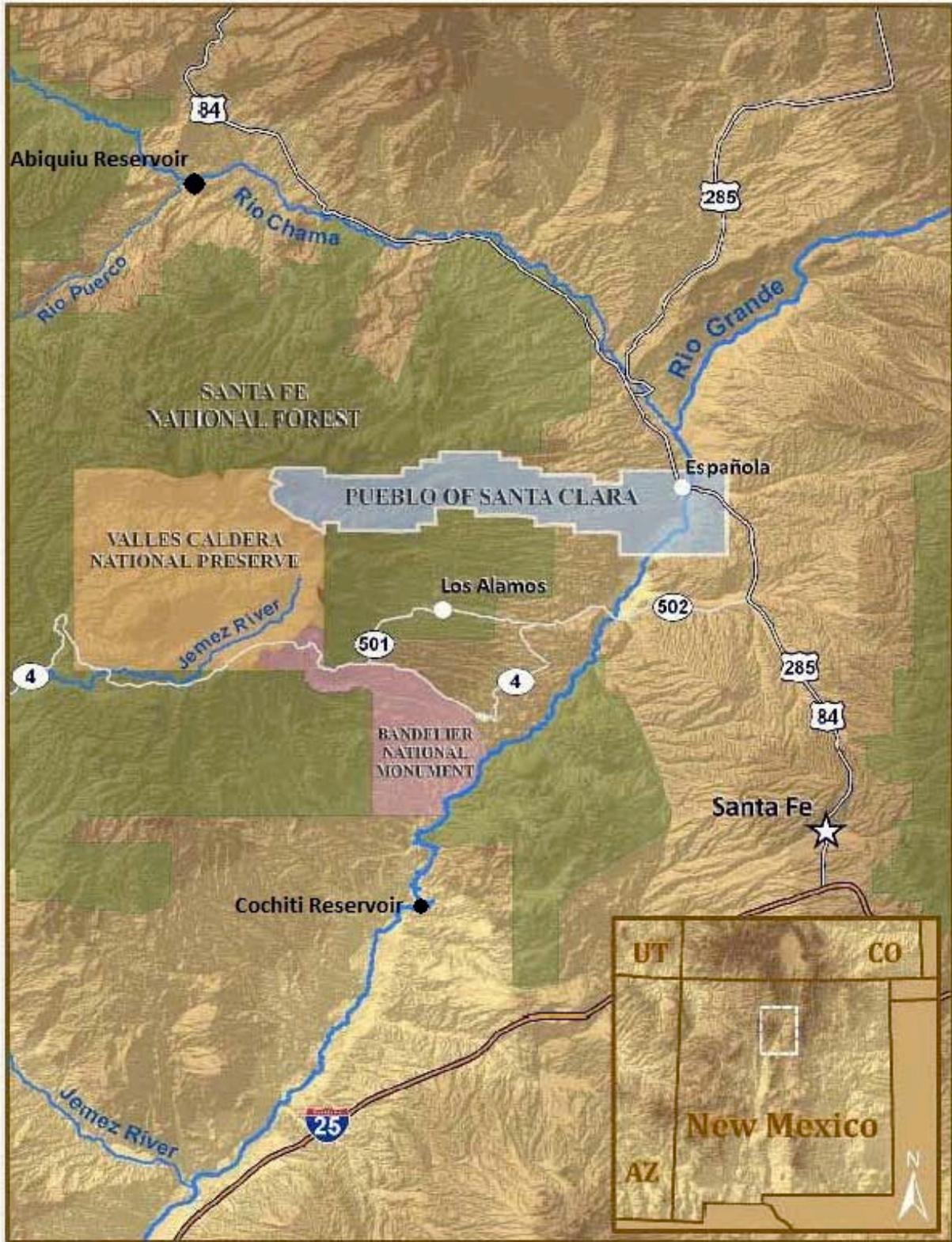
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- (7) Loss of floodplain vegetation and vegetation on surrounding, steep slopes of the Sawyer and Santa Clara Creek watersheds due to fires, vegetation diseases, and historic land management practices has caused increased surface runoff.

Development has encroached on these watercourses and had impacts to water quality through non-point source pollution and nutrient loading.

Wildfires have severely impacted Santa Clara Creek and adjacent watersheds, and continue to be a major threat to the study area. The Oso Complex Fire started June 20, 1998 and burned 5,185 acres in the Jemez Mountains, including more than 1,200 acres of Santa Clara Pueblo lands. On May 4, 2000, the Cerro Grande fire escaped from a prescribed burn and was declared a wildfire on May 5th burning nearly 50,000 acres across Bandelier National Monument, Santa Fe National Forest, Los Alamos National Lab, the city of Los Alamos and 7,000 acres of Santa Clara Pueblo lands. In 2011 Within the Santa Clara Pueblo, extensive damage occurred within Santa Clara and adjacent canyon watersheds including the historic and pre-historic Puye cliff dwellings. The fire resulted in significant hydrologic changes within the watershed that greatly affect the flow conditions and geomorphology of watercourses within the Santa Clara Pueblo. These changes resulted in flood and erosion damage, increased sedimentation, and the potential for hazardous runoff from the Los Alamos National Laboratory that could impact the Pueblo, the Rio Grande, and Cochiti Reservoir—a U.S. Army Corps of Engineers project about 20 miles downstream from the Santa Clara Pueblo. For these reasons, completion of a comprehensive watershed assessment is a high priority for the Pueblo.

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Santa Clara Watershed Assessment location.

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c. Factors Affecting the Scope and Level of Review.

The conceptual nature of solutions or recommendation resulting from the watershed assessment do not involve significant threat to human life/safety or involve significant public dispute as to the size, nature, or effects of a project since they require additional analysis prior to implementation. The Watershed Plan resulting from the watershed assessment has a much lesser scope and level of review than the traditional study since it does not provide detailed design or cost estimation or conduct selection of one alternative over others. The assessment will only conduct a screening level economic comparison among strategies to prioritize recommended actions. Hydrology and Hydraulics analysis is limited to the existing and future conditions to define the problem and inform potential solutions, however, no modeling is likely for solution scenarios. For these reasons environmental compliance documentation is not required nor is IEPR. DQC and ATR will be restricted to verifying existing conditions and the screening level alternative formulation.

The watershed assessment may or may not involve novel methods, techniques or models in the analysis of existing problems in the watershed. However, this analysis is not used to present specific conclusions resulting in an investment decision, activity or undertaking without further analysis of alternatives and economic or environmental effects. In large, the assessment will integrate existing research with some data collection restricted to gaps in the existing conditions. No novel methods are proposed for the data collection or data interpretation.

Project challenges include watershed planning and forecasting of future conditions in the rapidly adjusting, post wildfire conditions. Hydrologic, geomorphic and habitat changes following very large wildfires are not well known and have been so infrequent that long term environmental adjustments have not been widely reported. Short and long term climate conditions compile the challenges of forecasting future conditions in the watershed.

Coordination with multiple agencies and entities within the watershed such as the U. S. Forest Service, City and County of Espanola will also be a challenge. While scheduling and coordination of data and actions may be challenging the collaboration will strengthen the resulting watershed management plan. Leveraging of expertise from other agencies and the pueblo will provide a stronger evaluation of aspects not standard to USACE operations or studies. These aspects include forest management, water quality and groundwater movement.

Overall there are not too many challenges to the Santa Clara Watershed Assessment. The conceptual nature of recommendations without a specific project for implementation is the main driver for the scope of the review of the Watershed Management Plan and the expertise needed from the reviewers. Since there is no project for implementation participation by cost engineering, Real Estate and economic analysis will be minimal and on a qualitative basis.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to District Quality Control (DQC) and ATR, similar to any products developed by USACE. Remote sensing survey data have been provided by the non-Federal sponsor to date. Meeting attendance, administrative work related to the assessment, water quality sampling, and analysis are other in-kind services anticipated from the Santa Clara Pueblo.

4. District Quality Control (DQC).

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC prior to ATR. DQC is an internal review process of basic science and engineering

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work products focused on fulfilling the project quality requirements defined in the Watershed Assessment Project Management Plan (WA-PMP) and SPD Quality Management Plan. SPA shall manage DQC in accordance with the MSC (RMO) and district Quality Management Plan. DQC reviewers will consist of similar disciplines to those that contribute to the assessment. Any discrepancies between a reviewer and a Project Delivery Team (PDT) member will be resolved face-to-face. If a concern cannot be satisfactorily resolved between the DQC team and the PDT, it will be elevated to the section supervisor for further resolution

- a. Documentation of DQC.** In accordance the SPA Quality Management Plan the DQC comments, responses and back-check will be documented in standard format or in designated software such as Dr Checks. This documentation will be placed in the project folder but not forwarded if future submittal packages to the RMO. A DQC certification signed by the planning section and branch chief will be included in all submittal packages outside the district.
- b. Products to Undergo DQC.** The Watershed Management Plan is the primary product of the watershed assessment to undergo review. Supporting documents and studies such and technical appendices, models studies specific to the assessment and that support conclusions made in the assessment including those conducted by sponsor or other entity will also undergo DQC.
- c. Required DQC Expertise.**
The following expertise is anticipated for the Watershed Assessment.

DQC Team Members/Disciplines	Expertise Required
Planning	The reviewer should have recent experience in reviewing Plan Formulation processes for watershed studies and be able to draw on “lessons learned” in advising the PDT of best practices.
Economics	The reviewer should be familiar with the processes used in evaluation of watershed studies and have recent experience in preparing screening level economic figures used to discriminate or prioritize measures and recommendations.
Ecological Resources	The reviewer should have a solid background in the habitat types to be found in the arid southwestern United States, and understand the factors that influence the reestablishment of native species of plants and animals.
Cultural Resources	The reviewer should have extensive Corps’ experience regarding cultural resources on public and tribal lands. They need to be familiar with Department of Defense as well as USACE policies and procedures as they pertain to Corps studies and projects. http://www.usace.army.mil/CECW/Pages/cultural.aspx
Hydrology	The reviewer should have extensive knowledge of hydrology of the Rio Grande basin including high energy mountain tributaries.
Hydraulic Engineering	The reviewer should have extensive knowledge of HEC-RAS modeling including the use of GIS (ARC-INFO) inputs to the model. The reviewer should also have a solid understanding of the geomorphology of alluvial rivers.
Geotechnical Engineering	The reviewer should carry a Professional Engineer’s license and have recent experience in investigating existing subsurface conditions and materials; determining their physical/mechanical and chemical properties that are relevant to the project considered, assessing risks posed by site conditions as

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	they effect runoff or subsurface flows.
Cost Engineering	The reviewer should have extensive Corps' experience in the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling.
Environmental Engineering	The reviewer should have experience in the application of scientific principles and techniques to evaluate water, air and soil quality relative to human and wildlife uses, fishery impacts, EPA and ASTM standards.

5. Agency Technical Review (ATR).

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.); however, ATR should be scaled according to the complexity of the study. ATR shall be documented and discussed at the Watershed Alternative Formulation Briefing (WAFB) milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside SPA that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior personnel within USACE including from the home MSC. The ATR team lead will not be within the home MSC and approved by the RMO.

a. Products to Undergo ATR. ATR will be performed throughout the project in accordance with the District and the MSC (RMO) Quality Management Plans. Consistent with the scope of the Tribal Partnership Program, the scope of the ATR should be scaled to meet the intent of EC 1165-2-209 while avoiding undue burden in the study process.

Products to undergo ATR include:

- Draft Watershed Assessment including supporting documentation;
- Final Watershed Assessment including supporting documentation;
- Technical products that support subsequent analyses to include:
 - hydrology & hydraulics,
 - geotechnical investigations if applicable,

b. Required ATR Team Expertise. The appropriate RMO, in cooperation with the PDT, vertical team, and other appropriate centers of expertise, will determine the final make-up of the ATR team. The following table provides the types of disciplines anticipated to be included on the ATR team and descriptions of the expertise required.

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ATR Team Members/Disciplines	<i>Expertise Required</i>
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section 203 WRDA Feasibility studies and watershed assessments and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). The ATR Lead shall be reside outside of SPD.
Planning	The reviewer should have recent experience in reviewing Plan Formulation processes for watershed studies and be able to draw on “lessons learned” in advising the PDT of best practices.
Economics	The reviewer should be familiar with the processes used in evaluation of watershed studies and have recent experience in preparing screening level economic figures used to discriminate or prioritize measures and recommendations.
Ecological Resources	The reviewer should have a solid background in the habitat types to be found in the arid southwestern United States, and understand the factors that influence the reestablishment of native species of plants and animals.
Cultural Resources	The reviewer should have extensive Corps’ experience regarding cultural resources on public and tribal lands. They need to be familiar with Department of Defense as well as USACE policies and procedures as they pertain to Corps studies and projects. http://www.usace.army.mil/CECW/Pages/cultural.aspx
Hydrology	The reviewer should have extensive knowledge of hydrology of the Rio Grande basin including high energy mountain tributaries.
Hydraulic Engineering	The reviewer should have extensive knowledge of HEC-RAS modeling including the use of GIS (ARC-INFO) inputs to the model. The reviewer should also have a solid understanding of the geomorphology of alluvial rivers.
Geotechnical Engineering	The reviewer should carry a Professional Engineer’s license and have recent experience in investigating existing subsurface conditions and materials; determining their physical/mechanical and chemical properties that are relevant to the project considered, assessing risks posed by site conditions as they effect runoff or subsurface flows.
Cost Engineering	The reviewer should have extensive Corps’ experience in the application of scientific principles and techniques to problems of cost estimating, cost control, business planning and management science, profitability analysis, project management, and planning and scheduling.
Environmental Engineering	The reviewer should have experience in the application of scientific principles and techniques to evaluate water, air and soil quality relative to human and wildlife uses, fishery impacts, EPA and ASTM standards.

c. Documentation of ATR. DrChecks review software will be used to document all substantive ATR comments, responses and associated resolutions accomplished throughout the review process. Comments will be provided in the four-part comment structure and should be limited to those that are required to ensure adequacy of the product. Any editorial comments should be provided informally by email to the PDT. The four part comment structure will include:

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- (1) The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
- (3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
- (4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed based on each review for the draft and final Watershed Management Plans. A sample Statement of Technical Review is included in Attachment 2.

6. Independent External Peer Review (IEPR).

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IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. There are two types of IEPR:

- **Type I IEPR.** Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study.
- **Type II IEPR.** Type II IEPR involves the review of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. For Section 203 watershed assessments, Type II IEPR is not applicable since the assessment does not result in detailed design or implementation.

The decision on whether the above criteria are met (and a Type I IEPR exclusion is appropriate) is the responsibility of the RMO/MSA Commander. A Type I IEPR exclusion is appropriate for this assessment subject to approval by the MSA Commander.

As described in section 3. c. the conceptual nature of alternative measures or recommendations contained in the Watershed Assessment typically do not trigger the need for IEPR as described in EC 1165-2-209 and presented below. A risk-informed decision, as described in EC 1165-2-209, is made as to whether IEPR is appropriate. In the case of the Santa Clara Watershed Assessment, IEPR exclusion is appropriate since the following statements are true:

- Federal action is not justified by life safety or failure of the project would not pose a significant threat to human life;
- Life safety consequences and risk of non-performance of a project are not greater than under existing conditions;
- There is no request by the Governor of an affected state for a peer review by independent experts;
- The project does not require an EIS;
- The project/study is not likely to involve significant public dispute as to the size, nature, or effects of the project;
- The project/study is not likely to involve significant public dispute as to the economic or environmental cost or benefit of the project;
- The information in the decision document or anticipated project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices;
- The project design is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule; and
- There are no other circumstances where the Chief of Engineers or Director of Civil Works determines Type I IEPR is warranted.

b. Products to Undergo Type I IEPR. Not applicable

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- c. **Required Type I IEPR Panel Expertise.** Not applicable
- d. **Documentation of Type I IEPR.** Not applicable

7. Policy and Legal Compliance Review.

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Commander, South Pacific Division. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

8. Cost Engineering Directory of Expertise (DX) Review and Certification.

For Section 203 Tribal Partnership Program feasibility studies or watershed assessments, ATR of the costs may be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost DX. The list of pre-certified cost personnel has been established and is maintained by the Cost DX at <https://kme.usace.army.mil/EC/cost/CostAtr/default.aspx>. The cost ATR member will coordinate with the Cost DX for execution of cost ATR and cost certification. The Cost DX will be responsible for final cost certification and may be delegated at the discretion of the Cost DX.

9. Model Certification and Approval.

The approval of planning models under EC 1105-2-412 is not required for Section 203 projects. MSC Commanders are responsible for assuring models for all planning activities are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. ATR will be used to ensure that models and analyses are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports. The use of existing certified/approved planning models is highly recommended should be used whenever appropriate; however, the use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR (if required).

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- d. Planning Models.** No planning models are anticipated to be used in the development of the Santa Clara Pueblo Watershed Assessment.
- e. Engineering Models.** The following engineering models are anticipated or could be used if necessary in the development of the Watershed Assessment.

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
HEC-RAS 4.0 (River Analysis System)	HEC-RAS provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used for steady flow analysis to evaluate the future without- and with-project conditions along the Rio Grande and its tributaries.	HH&C CoP Preferred Model
Flo- 2D	It is used by the Corps Flood Plain Management Group and includes graphics and reporting. This model was used for hydrologic routing for with and without project floodplains and flood stages.	Approved for flood routing and floodplain mapping.
Post Fire Debris Flow Assessment	Empirical models are used to estimate the probability, volume, and combined relative hazard ranking of a debris flow from individual drainage basins in response to a given storm event in the Jemez Mountains of north-central New Mexico. The model for predicting debris-flow probability was developed by Cannon and others (2009) using logistic multiple-regression analyses of data from 388 basins in 15 burned areas in the intermountain western United States.	Not approved by USACE

10. Review Schedules and Costs.

The Project Manager will work with the ATRT Leader to ensure that adequate funding is available and is commensurate with the level of review disciplines outlined in 5. b. above. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring. The ATRT leader shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes. Reviewers shall monitor individual labor code balances and alert the ATRT Leader to any possible funding shortages.

In addition to the review of products listed above, the ATR lead participation will be required at IPR with the vertical team corresponding to the completion of draft watershed management plan and again once the final management plan is submitted for policy compliance review. The ATR Lead and PM will determine if ATR technical specialties will participate for each IPR. The ATR team will review any substantive changes to either document as a result of policy compliance reviews to ensure consistency and technical suitability of the revisions.

ATR review and assistance is estimated to be between \$75,000 and \$100,000 for the study.

The project schedule and anticipated dates for DQC and ATR are shows in the table below. Schedule dates are contingent on funding and resource availability.

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Review Milestone	Anticipated Date
DQC draft Watershed Management Plan (WMP)	19 June-20 August, 2013
ATR draft WMP	21 August- 23 October, 2013
SPD.HQ review draft WMP	24 October- 12 December, 2013
Alternatives Milestone IPR	12 December, 2013
DQC Final WMP	6 June-6 August, 2014
ATR draft WMP	7 August- 7 October, 2014
SPD/HQ review Final WMP	8 October - 1 December, 2014
Final WMP approval	3 February 2013

11. Public Participation.

Public involvement is anticipated throughout the Feasibility Study. The sponsor as independent governmental entity has determined that Corps PDT presentations / workshops given at their tribal council meetings meet the requirements of public involvement. A Public meeting will be held at eth pueblo prior to submittal of the Final Watershed Management Plan to the MSC to present the findings of the management plan and solicit input.

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Neighboring land managers such as the Santa Fe National Forest, the City of Espanola and Rio Arriba County may be asked to participate in all or part of the watershed assessment. Other entities with technical expertise will be closely coordinated with if not part of the assessment team. These entities include the Nation Park Service, Los Alamos National Labs, the Nature Conservancy, Bureau of Reclamation, Bureau of Indian Affairs and the Environmental Protection Agency.

12. Review Plan Approval and Updates.

The MSC Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. SPA is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on SPA's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

13. Review Plan Points of Contact.

Public questions and/or comments on this review plan can be directed to the following points of contact:

- Project Manager: 505-342-3635
- RIT Lead, SPD: 415-503-6558

Review Plan for Santa Clara Pueblo Watershed Assessment

- PCX Director, (415-503-6852)

DRAFT

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Attachment 1: Team Rosters

PDT Members

Name	Discipline	Phone Number
	Project Management	505-342-3635
	Plan Formulation	505-342-3204
	Cost Engineering	505-342-3411
	Hydrology, Hydraulics & Sedimentation [H&H]	505-342-3680
	Economics	505-342-3366
	Ecological Resources	505-342-3264
	Cultural Resources	505-342-3687
	Geotechnical	505-342-3427
	Environmental Engineering	505-342-3138
	Civil Engineering	505-342-3419
	Geospatial	505-342-3664
	Real Estate	505-342-3229
	Tribal Liaison	505-342-3355

ATR Team Members (TBD)

<u>Name</u>	<u>Discipline</u>	<u>District</u>	<u>Phone</u>

Vertical Team Members

<u>Name</u>	<u>Discipline</u>	<u>Location</u>	<u>Phone</u>
	Ecological Resources	Eco-PCX	(206) 764-7205
	Economics	HQ	(202) 761-5534
	Environmental	HQ	(202) 761-1380
	Planning & Policy	HQ	(202) 761-7770
	Civil Engineer	HQ/RIT	(202) 761-4085
	Planning and Policy	SPD	(415) 503-6590
	Watershed Planning	SPD	(415)503-6591

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Attachment 2: Sample Statement of Technical Review for Decision Documents

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209 and Director of Civil Works' Policy Memorandum #1. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Architect Engineer Project Manager¹

Company, location

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date

¹ Only needed if some portion of the ATR was contracted

Review Plan for Santa Clara Pueblo Watershed Assessment

Attachment 3: Review Plan Revisions

Revision Date	Description of Change	Page/Paragraph Number

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Attachment 4: Acronyms and Abbreviations

<u>Term</u>	<u>Definition</u>	<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CAP	Continuing Authorities Program	O&M	Operation and maintenance
CSDR	Coastal Storm Damage Reduction	OMB	Office and Management and Budget
DPR	Detailed Project Report	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DQC	District Quality Control/Quality Assurance	OEO	Outside Eligible Organization
DX	Directory of Expertise	OSE	Other Social Effects
EA	Environmental Assessment	PCX	Planning Center of Expertise
EC	Engineer Circular	PDT	Project Delivery Team
EIS	Environmental Impact Statement	PAC	Post Authorization Change
EO	Executive Order	PMP	Project Management Plan
ER	Ecosystem Restoration	PL	Public Law
FDR	Flood Damage Reduction	QMP	Quality Management Plan
FEMA	Federal Emergency Management Agency	QA	Quality Assurance
FRM	Flood Risk Management	QC	Quality Control
FSM	Feasibility Scoping Meeting	RED	Regional Economic Development
GRR	General Reevaluation Report	RMC	Risk Management Center
Home District/MSD	The District or MSD responsible for the preparation of the decision document	RMO	Review Management Organization
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RTS	Regional Technical Specialist
IEPR	Independent External Peer Review	SAR	Safety Assurance Review
ITR	Independent Technical Review	USACE	U.S. Army Corps of Engineers
LRR	Limited Reevaluation Report	WRDA	Water Resources Development Act
MSC	Major Subordinate Command		