

Table S-2. Conservation Strategy Implementation Schedule

| Conservation Objectives, Strategies, and Actions | Window for Completion | | Year(s) Actually Completed | Responsible Parties | Projected Cost | Funding Source |
|----------------------------------------------------------------------------------------------------------------|-----------------------|----------|----------------------------|-----------------------|----------------|------------------------|
| | YRS 1-5 | YRS 1-10 | | | | |
| Objective 1. Determine the Overall Distribution of Columbia Spotted Frogs. | T | | | NDOW, USFS, BLM | | |
| Strategy 1. Adopt and implement a standard protocol for inventory of Columbia spotted frogs. | | | | | | |
| Action 1. Develop a standard protocol for presence or absence surveys. | T | | Prior to 1 | BRRRC ¹ | | |
| Action 2. Implement a standard protocol for presence or absence surveys. | T | | | NDOW, USFS, BLM | 20K(yr) | USFS, USFWS, BLM, NDOW |
| Strategy 2. Determine the distribution of Columbia spotted frogs on Federal land. | | | | | | |
| Action 1. Assess the presence or absence of Columbia spotted frogs at all known historic sites. | T | | | NDOW, USFS, BLM | | |
| Action 2. Develop a method for identifying potential sites. | T | | | NDOW, USFS, BLM | | |
| Action 3. Assess the presence or absence of Columbia spotted frogs at potential sites. | T | | | NDOW, USFS, BLM | | |
| Action 4. Verify and delineate conservation units. | T | | | NDOW, USFS, BLM | | |
| Action 5. Create a detailed map of historic and potential sites using GPS and GIS. | T | | | NDOW, USFS, BLM, NNHP | | |
| Action 6. Maintain a detailed map of historic and potential sites using GPS and GIS. | | T | | NNHP | | |
| Strategy 3. Determine the distribution of Columbia spotted frogs on non-federal land. | | | | | | |
| Action 1. Identify known and potential Columbia spotted frog sites from existing information. | T | | | NDOW, USFS, BLM | | |
| Action 2. Secure permission from willing non-federal landowners or controlling authorities to access property. | T | | | NDOW, USFS, BLM | | |
| Action 3. Assess the presence or absence of Columbia spotted frogs at all accessible sites. | T | | | NDOW, USFS, BLM | | |
| Action 4. Verify and delineate conservation units. | T | | | NDOW, USFS, BLM | | |

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| Action 5. Create a detailed map of these sites using GPS and GIS. | T | | | NDOW, USFS, BLM, NNHP | | |
| Action 6. Maintain a detailed map of these sites using GPS and GIS. | | T | | NNHP | | |
| Action 7. Evaluate the significance of Columbia spotted frog population units and habitat on non-federal lands to the conservation of Columbia spotted frogs. | T | | | All | | |
| Strategy 4. Prevent the spread of frog diseases and pathogens between populations. | | | | | | |
| Action 1. Adopt a disease and pathogen protocol for aquatic field crews to prevent the spread of frog diseases and pathogens between populations. | T | | 1 | NDOW, USFS, BLM | | |
| Action 2. Require state and federal aquatic field crews to implement adopted disease and pathogen protocol for the Columbia spotted frog and other aquatic species inventory and monitoring activities. | T | T | | NDOW, USFS, BLM | | |
| Action 3. Incorporate disease and pathogen protocols into research and collection permits issued under state and federal agency authorities. | T | | | NDOW, USFWS | | |
| Objective 2. Assess the Abundance of Columbia Spotted Frogs, Habitat Conditions, and Existing and Potential Threats at Occupied Sites. | | T | | NDOW, USFS, BLM | | |
| Strategy 1. Monitor occupied sites on accessible lands to assess abundance of Columbia spotted frogs. | | | | | | |
| Action 1. Develop a process for prioritizing sites and monitor them on a cyclic basis to develop long-term trend data. | T | | | All | | |
| Action 2. Monitor occupied sites using developed prioritization protocol for long-term trend data collection. | | | | NDOW, USFS, BLM | | |
| Action 3. Establish sentinel sites and conduct annual monitoring to collect long-term trend data. | | T | | NDOW, USFS, BLM | 10K(yr) | USFWS, USFS, BLM, NDOW |
| Strategy 2. Assess and evaluate habitat conditions at potential and occupied sites on accessible lands. | | | | | | |

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| Action 1. Prioritize potential and occupied sites and develop a process for assessing, evaluating, and categorizing habitat conditions at each site on a cyclic basis. | T | | | All | | |
| Action 2. Incorporate standardized habitat monitoring protocols into animal survey and monitoring activities identified under Objectives 1 and 2. | | | | NDOW, USFS, BLM | | |
| Action 3. Identify the range of habitat conditions which are optimum to allow Columbia spotted frog persistence. | T | | | All | | |
| Strategy 3. Identify and assess the existing and potential threats at each occupied site. | | | | | | |
| Action 1. Identify the threats at each occupied site on a cyclic basis. | | T | | All | | |
| Action 2. Assess the degree and imminency of each threat at each site. | | T | | All | | |
| Strategy 4. Create and maintain a database for the storage of data and other information collected. | | | | | | |
| Action 1. Create a database for the storage of data and other information collected. | T | | | NDOW, USFS, BLM, NNHP | | |
| Action 2. Maintain a database for data and other information collected. | | T | | NNHP | | |
| Objective 3. Ensure that Viable Populations and Their Habitats Are Managed and Enhanced to Ensure the Continued Existence of Columbia Spotted Frogs Throughout Their Historic Range. | | T | | NDOW, USFS, BLM | | |
| Strategy 1. Identify, prioritize and implement site-specific actions to reduce the existing and potential threats to Columbia spotted frogs on Federal lands as identified in Objective 2. | | | | | | |
| Action 1. Prioritize conservation units for conservation actions. | | T | | All | | |
| Action 2. Develop a detailed monitoring plan for Columbia spotted frog populations and habitats. | | | | NDOW, USFS, BLM | | |
| Action 3. Develop a Columbia Spotted Frog Species Management Plan. | | | | NDOW | | |

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| | YRS 1-5 | YRS 1-10 | | | | |
| Action 4. Manage, restore, and/or enhance existing riparian and spring ecosystems to sustainable condition to benefit all life stages of Columbia spotted frogs. | | T | | USFS, BLM | | |
| Action 5. Identify, restore, and/or enhance and manage areas of historic unoccupied and potential Columbia spotted frog habitat within the presumed historic range of the species to benefit all life stages of Columbia spotted frogs. | | T | | USFS, BLM | | |
| Action 6. Identify and manage dispersal corridors, including terrestrial upland habitats important to Columbia spotted frogs, to maximize ecological connectivity between occupied/restored frog habitats. | | T | | USFS, BLM | | |
| Action 7. Implement activities identified in Actions 1 through 5 on an annual basis as defined in the Annual Action Plans developed by the CSFTT (Objective 6, Strategy 1, Action 6). | | | | All | | |
| Strategy 2. Encourage non-federal landowners to conserve viable populations of Columbia spotted frogs and their habitats. | | | | | | |
| Action 1. Identify potential locations and cooperators for conservation efforts on non-federal lands. | | T | | All | | |
| Action 2. Provide technical assistance to willing landowners to develop Candidate Conservation Agreements with Assurances. | | T | | USFWS, NDOW | | |
| Action 3. Work with landowners to use available incentive programs such as the Partners for Fish and Wildlife Program and the Conservation Reserve Program to protect and restore Columbia spotted frog habitat. | | T | | USFWS, NDOW | | |
| Objective 4. Conduct Research that Directly Supports Conservation and Management of Columbia Spotted Frogs and Their Habitat. | | T | | NDOW, USFS, BLM, USFWS | | |
| Strategy 1. Identify and recommend projects to address known research needs and incorporate data into the Conservation Strategy through the adaptive management process. | | | | | | |
| Action 1. Incorporate identified research needs into CSFTT annual action plan commitments (Objective 6, Strategy 1, Action 6). | | | | All | | |

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| Action 2. Utilize research findings in annual program assessments and adaptive management reviews of the Strategy. | | | | All | | |
| Strategy 2. Implement and maintain a process for identifying future research needs and incorporating research projects into the Strategy. | | | | | | |
| Action 1. Assess research needs on an ongoing basis. | | T | | All | | |
| Action 2. Develop a prioritized list of research needs. | T | | | All | | |
| Action 3. Maintain a prioritized list of research needs. | | T | | All | | |
| Action 4. Incorporate research needs into the Strategy by identifying lead entity(s), budget and time schedule. | | | | All | | |
| Action 5. Implement proposed research actions as approved by the CSFTT. | | | | NDOW, USFS, BLM | | |
| Action 6. Incorporate data findings into the Strategy through the adaptive management process to ensure that goals and objectives are ultimately met. | | | | All | | |
| Objective 5. Implement through Administrative Procedures CAS and Incorporate Provisions of the Strategy into Agency Planning Documents and Budgets to Ensure the Conservation Goals and Objectives Are Met in a Consistent Manner. | | T | | All | | |
| Strategy 1. Enforce existing policies, laws and regulations. | | | | | | |
| Action 1. Review existing policies, laws and regulations at least biennially and assess their adequacy to protect Columbia spotted frogs and their habitat. | T | | | All | | |
| Action 2. Maintain the Columbia spotted frog on protected or sensitive species lists of cooperator agencies. | | | | NDOW, USFS, BLM | | |
| Action 3. Conduct section 7 consultation under ESA for Columbia spotted frog projects that may affect federally listed species. | | T | | USFWS, USFS, BLM | | |
| Action 4. Periodically evaluate species status under section 4 of ESA. | | T | | USFWS | | |

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| Strategy 2. Identify and implement non-site specific actions, policies, and procedures to reduce existing and potential threats to population units of Columbia spotted frogs as identified in Objective 3. | | | | | | |
| Action 1. Identify non-site specific actions, policies, and procedures to reduce the existing and potential threats to Columbia spotted frogs. | | T | | All | | |
| Action 2. Implement non-site specific actions, policies, and procedures to reduce the existing and potential threats to Columbia spotted frogs. | | T | | All | | |
| Strategy 3. Review forest, land, and resource management plans to determine if plan objectives are in conformance with spotted frog conservation goals, objectives, strategies, and actions. | | | | | | |
| Action 1. Consider and incorporate CAS conservation goals, objectives, strategies, and actions that would require an amendment to the Humboldt/Toiyabe Land and Resource Management Plan during the forest plan revision process scheduled for completion in 2006/2007. | | | | | | |
| Action 2. Consider and incorporate amendments to BLM management plan documents as appropriate and necessary to implement any of the CAS conservation goals, objectives, strategies, and actions, as those plan documents are scheduled for review and revision. | | | | | | |
| Action 3. Maximize retention of Federal lands supporting Columbia spotted frogs or potential frog habitat. | | T | | USFS, BLM | | |
| Strategy 4. Incorporate conservation goals, objectives, strategies, and actions of CAS into agency budget requests and based on funding, revise Strategy as necessary, to update implementation schedule. | | | | | | |
| Action 1. Conduct annual workload analysis to determine the budgetary and biological staffing needs to accomplish conservation actions identified in the implementation schedule. | USFS | T BLM, | | All | | |
| Action 2. Provide CSFTT members' respective managers with annual conservation action proposals for funding the following year. | | T | | All | | |

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| Action 3. Pursue alternative funding strategies and partnerships to supplement agency work programs as opportunities are identified and available. | | T | | All | | |
| Strategy 5. Ensure implementation of the CAS through the CSFTT partnership process. | | | | | | |
| Action 1. Implement team responsibilities as defined in the CAS implementation strategy. | | | | All | | |
| Objective 6. Develop and Implement an Interagency Adaptive Management Framework Partnership. | | T | | All | | |
| Strategy 1. Develop and implement an interagency adaptive framework process that ensures adaptive management is incorporated into the implementation of the Strategy. | | | | | | |
| Action 1. Review Strategy progress and implement any changes through an adaptive management process as needed. | | T | | All | | |
| Action 2. Monitor the effectiveness of each action on a set schedule to determine if the expected results are being attained within the given time frame. | | T | | All | | |
| Action 3. If actions are not effective, modify the strategy to implement alternative measures to ensure that goals and objectives are ultimately met. | | T | | All | | |
| Action 4. Ensure that data from inventory, monitoring, and research efforts are incorporated into the Strategy through the adaptive management framework. | | T | | All | | |
| Action 5. Modify and/or update the implementation schedule yearly. | | T | | All | | |
| Action 6. Develop an annual action plan of site-specific management commitments by cooperator, which are keyed to conservation objectives of the Strategy and Species Management Plan, research findings, and adaptive management review. | | T | | All | | |
| Objective 7. Support the CAS by Increasing Public Awareness and Appreciation for Columbia Spotted Frogs and Their Habitat, and by Making Data and Information Available to Interested Parties and Decision Makers. | | T | | All | | |

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| Strategy 1. Encourage citizen and landowner participation in CAS implementation. | | | | | | |
| Action 1. Develop brochures and other materials on Columbia spotted frogs and their management needs for dissemination to the public for education purposes. | T | | | All | | |
| Action 2. Distribute informational materials as developed to the general public, recreational users, private landowners and to other customers who may be involved in actions affecting Columbia spotted frogs and their habitat. | | T | | All | | |
| Action 3. Develop educational and informational materials on Columbia spotted frogs and their habitat/management needs for distribution through other media sources including newspapers and television. | | T | | USFWS, USFS, BLM, NDOW, NNHP | | |
| Action 4. Develop a program to encourage volunteer public and private land conservation efforts. | T | | | USFWS, USFS, BLM, NDOW | | |
| Strategy 2. Develop a process for collecting and maintaining data and information for distribution to stakeholders and decision makers. | | | | | | |
| Action 1. Create a depository for storage of data from inventory, monitoring, and research efforts. | T | | | NNHP | | |
| Action 2. Maintain the depository. | | T | | NNHP | | |
| Action 3. Data and information developed through actions of this Strategy will be available to and shared among cooperators. | | T | | All | | |

1 BRRC = Biological Resources Research Center (BRRC), University of Nevada, Reno, Nevada