

## Prescott National Forest Research Natural Area Evaluation Process Summary Report

### Purpose of Research Natural Areas

- Create a spectrum of representative high quality natural communities that are part of a national network of ecological areas for research, education, and maintenance of biological diversity.
- Preserve and maintain genetic diversity.
- Protect against human-caused environmental disruptions.
- Serve as reference areas for the study of natural ecological processes including disturbance (e.g., fire, insects, and wind).
- Provide onsite and extension educational activities.
- Serve as baseline areas for measuring long-term ecological changes.
- Serve as control areas for comparing results from manipulative research.
- Monitor effects of resource management techniques and practices.

### Introduction

As part of the forest plan revision process, the Forest Service is evaluating areas of the Prescott National Forest for their potential as new Research Natural Areas (RNAs). This includes interim management guidance to protect recommended RNAs, until a decision regarding their establishment is reached. The process to establish new RNAs is documented in Forest Service Manual (FSM) 4063, and it is outlined below:

#### Overview of the RNA Establishment Process (FSM 4063 as Amended on 11/4/2005)

- **Establish a committee** - A regional RNA committee (established by the Regional Forester) identifies the need for RNAs on National Forest System (NFS) lands, based on inventory of existing RNAs and under-represented biophysical settings (e.g., potential natural vegetation types, or PNVTs, and aquatic habitats). The committee distributes regional RNA inventory to each national forest.
- **Identify and recommend potential RNAs** - Each national forest identifies potential RNAs and interim management direction. Interim management for recommended RNAs is included within the proposed revised Forest Plan as plan components (e.g., desired conditions, guidelines, standards).
- **Approve the Forest Plan** – The Regional Forester approves the revised Forest Plan.
- **Prepare an establishment record** - After approval of the revised Forest Plan, the Regional RNA Committee recommends the establishment of RNAs and prepares an establishment record for each RNA.
- **Analyze and amend** - RNA-specific NEPA analysis is conducted and the Forest Plan is amended based on the NEPA analysis and associated decision for the RNA.
- **Manage RNAs** - Forest Supervisors administer, manage, and protect RNAs according to approved RNA management plans.

This report summarizes the steps each national forest takes to make recommendations to the Regional Forester concerning potential new RNAs (#2 above). Areas that are under-represented in the Southwestern Region and occur on the Prescott National Forest were assessed for their potential as RNAs.

## Steps to Recommend Potential RNAs

### Step 1. Review Existing Information

**Purpose:** Review data provided by the regional office (Southwestern Region RNA PNVT assessment spreadsheets and associated RNA PNVT maps, list of eight aquatic habitats) to determine if any PNVTs or aquatic habitats that are considered “under-represented” (ranked as 2 or 3) occur on the Prescott National Forest (PNF).

**Status:** Evaluations were completed in February 2010 using Southwestern Region datasets and PNF-based Geographic Information System (GIS) data.

**Details:** The following are PNVTs and aquatic habitats on the national forests in the Southwestern Region. The highlighted PNVTs and aquatic habitats are those that occur on the PNF and are considered under-represented.

Prescott National Forest RNA Evaluation		March 2010		
	Need for Additional RNA*	Found on PNF	Total PNF Acres**	% of PNF
<b>PNVTs in the Southwestern Region</b>				
Alpine and Tundra	3			
Colorado Plateau / Great Basin Grassland (Cold)	1			
Colorado Plateau / Great Basin Grassland (Mild)	1	X	38,470	3%
Cottonwood Willow Riparian Forest	2	X	12,400	1%
Desert Communities (HS)	1	X	5,920	<1
Desert Communities (LS)	1			
Gallery Coniferous Riparian Forest	2			
Gambel Oak Shrubland	2			
Interior Chaparral	1	X	315,620	25%
Juniper Grassland	3	X	137,450	11%
Madrean Encinal Woodland	2	X	5,580	<1
Madrean Pine-Oak Woodland	1			
Mixed Broadleaf Deciduous Riparian Forest	1	X	12,400	<1
Mixed Conifer - Frequent Fire	1	X	6,670	<1
Mixed Conifer w/ Aspen (Cold)	1			
Mixed Conifer w/ Aspen (Mild)	1			
Montane / Subalpine Grassland	1			
Montane Willow Riparian Forest	2			
Mountain Mahogany Shrubland	3			
PJ Evergreen Shrub	2	X	460,660	37%
PJ Sagebrush	1			
PJ Woodland (persistent)	2	X	39,580	3%
Ponderosa Pine - Evergreen Oak	1	X	63,540	5%
Ponderosa Pine Forest	2	X	42,440	3%
Sagebrush Shrubland	2			
Sandsage	3			
Semi-Desert Grassland	2	X	125,760	10%
Shortgrass Prairie	3			
Spruce Fir Forest	1			

Wetland/Cienega (Cold)	2			
Wetland/Cienega (Mild)	2			
Prescott National Forest RNA Evaluation		March 2010		
<b>Aquatic Habitats</b>	<b>Need for Additional RNA*</b>	<b>Found on PNF</b>	<b>Total on PNF**</b>	
1st - 4th Order Perennial Streams	2	X	79 mi.	
Marsh/Cienega	2			
Springs/Seeps	2	X	563 ea	
Wet Meadows	2			
Playa	2			
Natural Lake	3			

\* Need for additional RNA lands ranked on a scale of 1 to 3, where 3 reflects the greatest degree of need according to those criteria of representativeness used for the Southwestern Region (AZ & NM) RNA assessment. Includes Aquatic Habits identified from the Arizona and New Mexico State Comprehensive Wildlife Plans.

\*\* From PNF Ecological Sustainability Report (2009).

## Step 2. Determine RNA Quality of Ecologically Under-Represented Areas

**Purpose:** For the under-represented PNVTs and aquatic habitats identified in Step 1, determine if they have the necessary conditions to qualify as potential RNAs. There are eight conditions to consider based on guidance in FSM 4063.02 (Objectives) and FSM 4063.3 (Protection and Management Direction):

- The area represents a specific vegetation type or ecosystem as identified by the regional ecological RNA evaluation.
- The area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.
- The area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.
- The area serves as a control area for comparing results from manipulative research.
- The area's boundaries are large enough to provide essentially unmodified conditions within the interior, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.
- The area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing, and other uses have not had affected area beyond its ability to recover. There is no evidence of timber cutting in the past 50 years.
- The area reflects its original, near-pristine condition *as closely as possible*.
- The area is the best available, qualified area to choose. In certain geographic regions and natural community types, however, it may be impossible to find candidate areas that do not contain exotic plant or animal life.

For each potential RNA, document the assessment of conditions in a table and include findings in a summary report.

**Status:** Assessments were completed in April 2010. One area was identified as a potential RNA (Grapevine Springs Botanical Area). Draft plan components (e.g., desired conditions, guidelines, and standards) were compiled for inclusion in the draft revised Forest Plan. Proposed management direction is based on prior NEPA documents (EA/DN/FONSI) for the Grapevine Springs Botanical Area (1997) and associated Forest Plan Amendment #10 (1997).

**Details:** See Appendix A: Review of Representative Ecological Conditions (9 tables).

### Step 3. RNA Recommended as Special Area

**Purpose:** Those RNAs that qualify are put forth by the responsible official (Forest Supervisor) as preliminary administrative recommendations in the revised Forest Plan. Each RNA is supported by desired conditions and other plan components in the revised Forest Plan.

**Status:** Determination reached in July 2010. The Forest Supervisor has elected **not** to recommend the Grapevine Botanical Area for establishment as a RNA.

The Grapevine Springs Botanical Area was selected by the Arizona Game and Fish Department as a reserve area for certain Threatened and Endangered fish species, such as Gila trout. This was done to provide a refugia where native fish could inhabit and be used to restock other areas where these species may be impacted by severe wildfires.

While the Arizona Game and Fish Department places fish species in the Grapevine Springs Botanical Area which are native to Arizona, they are not necessarily native to that specific ecosystem. Consequently, the Grapevine Springs Botanical Area is not being recommended as a RNA because this circumstance reduces the area's ability to provide unmodified conditions for research and its value as a baseline or reference for study of long-term ecological processes. Instead, it will continue to be managed as a special botanical area, including as a refugia for native fish species.

. Plan components (e.g., desired conditions, guidelines, and standards) for managing the Grapevine Springs Botanical Area as originally outlined in Forest Plan Amendment #10 (1997), have been included in the revised Forest Plan.

### Step 4. Post-Forest Plan Revision NEPA and RNA Establishment

**Purpose:** After forest plan revision, the Regional RNA Committee compiles the RNA establishment records and conducts the appropriate level of NEPA analysis. RNAs recommended in the revised Forest Plan are established in a Forest Plan Amendment.

**Status:** This step of the process does not apply, as there are no areas recommended for establishment as a research natural area.

Table 1. Review of Representative Ecological Conditions		Ecological Area Name: Cottonwood Willow Riparian Forest 12,400 acres 1% of PNF landbase	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
2	Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area <u>meets</u> the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No - see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		Land mgmt activities (recreation, permitted livestock grazing, etc.) have modified ecological processes throughout this PNVT.
	Area serves as a control area for comparing results from manipulative research.		
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		Intermingled ownership and access issues compromise the potential mgmt of most of these areas as RNAs.
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Recreational use and permitted livestock grazing activity is prevalent throughout this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	Table 2. Review of Representative Ecological Conditions	Ecological Area Name: Juniper Grasslands 187,450 acres 11% of PNF landbase	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
2	Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area <u>meets</u> the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No – see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		Land mgmt activities (tree cutting, permitted livestock grazing) have modified ecological processes throughout this PNVT.
	Area serves as a control area for comparing results from manipulative research.		
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Livestock grazing activity is prevalent throughout this PNVT. Tree removal is evident within extensive portions of this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	<b>Table 3. Review of Representative Ecological Conditions</b>	<b>Ecological Area Name:</b> Madrean Encinal Woodlands 5,580 acres <1% of PNF landbase	
<b>STEP</b>	<b>Criteria</b>	<b>YES (state justification)</b>	<b>NO (state justification)</b>
<b>1</b>	<b>Review RNA Representative Assessment Spreadsheet</b>		
	<ul style="list-style-type: none"> <li>• Are there areas on your Forest that contain the PNVNT classes that fall into the 2 or 3 rankings for low representation for a particular PNVNT class?</li> <li>• Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>• If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVNT classes with rankings of 2 or 3?</li> </ul>	YES	
<b>2</b>	<b>Use the Conditions listed below to determine if these low-representative PNVNT class areas or aquatic habitats are appropriate for RNA establishment</b>	<b>State reason why the area <u>meets</u> the criterion</b>	<b>State reason why the area <u>does not meet</u> the criterion</b>
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No – see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		
	Area serves as a control area for comparing results from manipulative research.		Land mgmt activities (tree cutting, permitted livestock grazing, etc.) have modified ecological processes throughout this PNVNT.
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Livestock grazing activity is prevalent throughout this PNVNT. Tree cutting activity is evident within portions of this PNVNT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	Table 4. Review of Representative Ecological Conditions	Ecological Area Name: PJ Evergreen Shrublands 460,660 acres 37% of PNF landbase	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
2	Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area <u>meets</u> the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No – see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		
	Area serves as a control area for comparing results from manipulative research.		Land mgmt activities (fuelwood cutting, permitted livestock grazing, etc.) have modified ecological processes throughout this PNVT.
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Livestock grazing activity is prevalent throughout this PNVT. Fuelwood cutting activity is evident over most of this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	Table 5. Review of Representative Ecological Conditions	Ecological Area Name: PJ Woodlands (persistent) 39,580 acres 3% of PNF landbase	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>• Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>• Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>• If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
2	Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area <u>meets</u> the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No – see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		
	Area serves as a control area for comparing results from manipulative research.		
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		Checkerboard ownership - Intermixed with Yavapai Ranch (part of proposed land exchange)
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Permitted livestock grazing activity is prevalent throughout this PNVT. Fuelwood cutting activity is evident over large portions of this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	<b>Table 6. Review of Representative Ecological Conditions</b>	<b>Ecological Area Name:</b> Ponderosa Pine Forests 42,440 acres 3% of PNF landbase	
<b>STEP</b>	<b>Criteria</b>	<b>YES (state justification)</b>	<b>NO (state justification)</b>
<b>1</b>	<b>Review RNA Representative Assessment Spreadsheet</b>		
	<ul style="list-style-type: none"> <li>• Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>• Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>• If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
<b>2</b>	<b>Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment</b>	<b>State reason why the area meets the criterion</b>	<b>State reason why the area <u>does not meet</u> the criterion</b>
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.	Portions of this PNVT are protected within the Juniper Ridge, Pine Mountain, and Granite Mountain Wilderness Areas.	
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.	Applies to PNVT portions within designated wilderness.	
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.	Applies to PNVT portions within designated wilderness.	
	Area serves as a control area for comparing results from manipulative research.	Applies to PNVT portions within designated wilderness.	
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		No – see reasons below.
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Timber cutting is evident in most non-wilderness areas of this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		Historical logging in support of mining industry is evident throughout this PNVT.
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	<b>Table 7. Review of Representative Ecological Conditions</b>	<b>Ecological Area Name:</b> Semi-Desert Grasslands 125,7600 acres 10% of PNF landbase	
<b>STEP</b>	<b>Criteria</b>	<b>YES (state justification)</b>	<b>NO (state justification)</b>
<b>1</b>	<b>Review RNA Representative Assessment Spreadsheet</b>		
	<ul style="list-style-type: none"> <li>• Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>• Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>• If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES	
<b>2</b>	<b>Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment</b>	<b>State reason why the area <u>meets</u> the criterion</b>	<b>State reason why the area <u>does not meet</u> the criterion</b>
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.		No - see reasons below.
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		Non-native invasive plants are known to occur within this PNVT.
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		
	Area serves as a control area for comparing results from manipulative research.		Land mgmt activities (permitted livestock grazing, recreation) have modified ecological processes throughout this PNVT.
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Livestock grazing activity is prevalent throughout this PNVT.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

	Table 8. Review of Representative Ecological Conditions	Ecological Area Name: 1 <sup>st</sup> -4 <sup>th</sup> Order Perennial Streams Approx. 79 miles within PNF	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>Are there areas on your Forest that contain the PNVN classes that fall into the 2 or 3 rankings for low representation for a particular PNVN class?</li> <li>Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVN classes with rankings of 2 or 3?</li> </ul>	YES	
2	Use the Conditions listed below to determine if these low-representative PNVN class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area meets the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.	Gap Creek is protected within the Cedar Bench Wilderness. Upper Verde River is eligible for Wild and Scenic River status (pending designation).	
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.		
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.		
	Area serves as a control area for comparing results from manipulative research.		
	Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.		Walnut Creek and Hitt Wash have intermingled ownership and access issues that compromise their potential mgmt as RNAs.
	Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.		Hassayampa Creek and Strickland Wash have evidence of mining. Williamson Valley Wash has evidence of grazing activity.
	Area reflects its original, near-pristine condition <i>as closely as possible</i> .		
	The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.		

Table 9. Review of Representative Ecological Conditions		Ecological Area Name: Springs & Seeps 563 known PNF occurrences	
STEP	Criteria	YES (state justification)	NO (state justification)
1	Review RNA Representative Assessment Spreadsheet		
	<ul style="list-style-type: none"> <li>• Are there areas on your Forest that contain the PNVT classes that fall into the 2 or 3 rankings for low representation for a particular PNVT class?</li> <li>• Is there an outstanding example of an aquatic habitat that may be appropriate as a potential RNA?</li> <li>• If you have previously proposed RNAs in your current Forest Plan, do they fall within PNVT classes with rankings of 2 or 3?</li> </ul>	YES - outstanding example of seeps and springs (aquatic habitat)	
2	Use the Conditions listed below to determine if these low-representative PNVT class areas or aquatic habitats are appropriate for RNA establishment	State reason why the area meets the criterion	State reason why the area <u>does not meet</u> the criterion
	Area contributes to a wide spectrum of high quality representative areas that represent the major forms of variability found in forest, shrubland, grassland, alpine, aquatic habitats, and natural situations of scientific interest and importance that in combination form a national network of ecological areas for research, education, and maintenance of biological diversity. RNA represents a specific vegetation type or ecosystem as identified by the Regional ecological RNA evaluation.	Upper Grapevine Creek is noteworthy for its abundance of perennial springs (12) and for its high water flow. Numerous springs occur several hundred vertical feet above the riparian vegetation. Most of the springs lie on the cool, north-facing slope and have pockets of riparian vegetation, including large alders.	
	Area contributes or continues to contribute to the preservation and maintenance of genetic diversity, including threatened, endangered, aquatic systems, and sensitive species.	The vegetation associated with the perennial springs is an Arizona alder-Arizona walnut community. It is distinct from many other occurrences of this type due to the almost complete absence of other co-dominant trees such as willows, ash, cottonwood, sycamore, or net-leaf hackberry.	
	Area serves as a baseline or reference area for the study of long-term ecological processes such as disturbance, hydrologic processes, climate change, or other processes.	Topographic features influencing the uniqueness of the vegetation include the narrow canyon, the easterly flow and the steep gradient. The canyon is relatively narrow compared to adjacent	

		<p>creeks. The easterly orientations of the creek as well as the narrowness of the canyon have additive shading effects. The higher moisture levels associated with the cooler air temperatures influence the vegetation composition. Episodic flooding events occurring within the steep gradient stream segments influence the substrate composition and thus the vegetation composition.</p>	
	<p>Area serves as a control area for comparing results from manipulative research.</p>	<p>Area is feasible for non-intrusive water quality and flow studies.</p>	
	<p>Area boundaries encompass an area large enough to provide essentially unmodified conditions within their interiors, which are necessary in accordance with the objectives stated in the establishment record (FSM 4063.02), and to protect the ecological processes, features, and/or qualities for which the RNA was established. Although not required, entire small drainages are ideal because they maintain interrelationships of terrestrial and aquatic systems.</p>	<p>Grapevine Springs Botanical Area encompasses 771 acres below Big Bug Mesa with no private land within the current unit boundaries.</p>	
	<p>Area shows little or no evidence of major disturbances by humans. Activities, such as livestock grazing and other uses have not had affected area beyond ability to recover. No evidence of timber cutting in past 50 years.</p>	<p>Permitted livestock grazing has been prohibited in upper grapevine since 1997. In 1995, the area was withdrawn from mineral entry for 20 years. Recreation is limited to day use only.</p>	
	<p>Area reflects its original, near-pristine condition <i>as closely as possible</i>.</p>	<p>The area has been managed as a Botanical Special Area since 1997. Management guidance was amended to the existing LRMP in 1997.</p>	
	<p>The best available, qualified area was chosen. In certain geographic regions and in certain community types, it may be impossible to find candidate areas that do not contain exotic plant or animal life.</p>	<p>Upper Grapevine Creek and associated springs are considered unique in its characteristics relative to the Bradshaw Mountains and west-central Arizona.</p>	

Existing Interim Management Guidance for the Grapevine Springs Botanical Area:

PRESCOTT NATIONAL FOREST  
LAND MANAGEMENT PLAN  
APPENDIX K

Standards and Guidelines for the Grapevine Springs Botanical Area:

See the attached Decision Map for referenced boundaries, trails, fences, and other information.

- No permitted livestock shall graze Upper Grapevine within the Botanical Area
- No permitted livestock shall graze the Bootlegger area
- No permitted livestock shall trail or drive through the Botanical Area
- Permitted livestock shall be allowed to trail through the Bootlegger-Grapevine Unit on established roads to Road 87A to the Coyote Springs Trail to the Mesa Unit with NO DRIFTING ALLOWED
- No motorized use of Trails 4, 304, and 9432 shall occur below the rim of Big Bug Mesa
- No mountain bike use of Trails 4, 304, and 9432 shall occur below the rim of Big Bug Mesa
- Day use only shall occur in the Botanical Area
- Should manage fire through management-ignited prescribed burns and prescribed natural fires