

**Duke Power – Nantahala Area Trial Balloon for the Tuckasegee River**

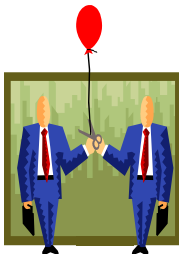
**Purpose** – Stimulate discussion within the Tuckasegee Cooperative Stakeholder Team concerning how the interests could fit together in a consensus agreement.

**Ground Rules**

- 1) Work together. Strive for an efficient process.
- 2) Find and focus on opportunities. Seek creative solutions.
- 3) Explain your interest, not position, and respect others' interests. Make sure others understand your organization's interests and their relation to Duke Power-Nantahala Area's (DPNA) hydro projects located on the Tuckasegee River.
- 4) Trial Balloon = an informal, preliminary proposal. Use trial balloons liberally... formal proposals will come later. Trial balloons are completely non-binding and may be withdrawn, in whole or in part, at any time prior to signing an agreement. We don't have a deal until an agreement is signed.
- 5) No surprises during discussions. Focus on honesty with tactfulness.
- 6) Keep all discussions at the table; Media contacts and information only as agreed to by the team.
- 7) Recognize that ground rule violations can severely impact likelihood of reaching the goal-----a consensus agreement.

**Key Remaining Unknowns**

- 1) CHEOPS Model runs for this trial balloon.
- 2) Scope of federal and state mandatory conditions.
- 3) Continued refinement of the collective priorities of the Tuckasegee Cooperative Stakeholder Team.
- 4) Impacts of relicensing expectations on other DPNA hydros.
- 5) Timely receipt of any approvals required to implement trial balloon conditions (e.g. FERC approval, agency permits, etc.).



**I. DPNA could agree to the following:**

**A. Recreation (Rec) Facilities (Tier 1 or 2 Designation\*\*)**

**1. Wolf Lake**

- a. 50-50 cost-share with NCWRC on bank repair. DPNA to add toilet, trash collection and lighting.\* (Tier 1\*\*) (Note: NCWRC to also provide a dock, but not barrier-free at this location).
- b. Upon completion, pay for the initial construction of boat-accessible-only, primitive, scattered camping sites on property owned by the USFS. One-time expense of up to \$25,000. (Tier 1\*\*)
- c. Improve/rehabilitate public access at the cemetery on property owned by the USFS to include providing canoe access and closing to public camping. (Tier 1\*\*)
- d. Develop a fishing trail on DPNA-owned and USFS-owned properties along the Wolf Creek Bypass to Wolf Creek Falls. (Tier 1\*\*)

**2. Tanassee Lake**

- a. Add “tote and float” boating access area. (Tier 1\*\*)
- b. Reconstruct day use area on property owned by the USFS to include improved parking, picnicking and trails to dispersed camping and bank fishing sites.\* (Tier 1\*\*)

**3. Bear Lake**

- a. Rebuild the boat ramp at the existing location. DPNA to improve/pave access road and parking lot, upgrade boating access area to include lighting, toilet, bank fishing area, and trash collection.\* (Tier 1\*\*) (Note: NCWRC to also provide a barrier-free dock)
- b. Upon completion, pay for the initial construction of boat-accessible-only, primitive, scattered camping sites on property owned by the USFS. One-time expense of up to \$25,000. (Tier 1\*\*)

**4. Lake Glenville**

- a. DPNA will provide a primitive toilet, a public land based bank fishing area with trail (if the site is suitable), lighting, and waste collection at each of the two existing access sites.\* (Tier 1\*\*) (Note: NCWRC to also provide a barrier-free dock at each of the two existing public access areas).
- b. Construct a Glenville Dam recreation area to include picnic tables and a barrier-free trail to a bank fishing area. (Tier 1\*\*)

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- c. Upon completion, pay for the initial construction of boat-accessible-only, scattered camping sites at Andrews Park (owned and operated by Jackson County). One-time expense of up to \$25,000. (Tier 1\*\*)
  - d. Partner with American Whitewater and other interests to construct adequate whitewater access facilities in the Glenville Bypass, including a parking area at Glenville Dam and a portage trail to the base of High Falls, provided suitable agreements can be reached with any others besides DPNA that may own property where the portage trail has to go. (Tier 1\*\*)
  - e. Partner with NCWRC to reconfigure entrance road and remove boulder in lake at one of the access areas. (Tier 2\*\*).
- 5. Tuckasegee Lake**
- a. Construct a boating take-out and gravel parking area at the headwaters of the reservoir. (Tier 1\*\*)
- 6. Cedar Cliff Lake – No new proposed facilities.**
- 7. Dillsboro Pond**
- a. If the dam remains in place – Construct a canoe portage around the dam on the right bank facing downstream. (Tier 1\*\*)
  - b. If the dam is removed – Work with the Town of Dillsboro to develop recreation facilities on DPNA’s property around the former pond, if determined necessary through the town’s STEP Initiative. (Tier 2\*\*)
- 8. Main Stem of Tuckasegee River below Tuckasegee and Cedar Cliff Hydros**
- a. Develop a public boat launch and gravel parking area below the Cedar Cliff Powerhouse on the East Fork near Shook Cove, including a companion take-out area approximately 0.5 mi downstream of the boat launch. (Tier 1\*\*)
  - b. Develop public boat launch and gravel parking area at either the Tuckasegee Powerhouse or at East Laporte site, provided suitable agreements can be reached with the property owners. (Tier 1\*\*)
  - c. Develop upstream take-out and downstream put-in for drift boat and canoe access at Cullowhee Dam, provided suitable agreements can be reached with the property owners. (Tier 1\*\*)
  - d. Provide public boat launch and gravel parking area in the catch and release section of the Tuckasegee River, provided suitable agreements can be reached with the property owners. (Tier 1\*\*)

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- e. Provide public boat launch and gravel parking area in the Barkers Creek section of the Tuckasegee River, provided suitable agreements can be reached with the property owners. (Tier 1\*\*)
- f. If suitable agreements with property owners for any of the above main stem projects cannot be negotiated by 9/15/03, the requirement for DPNA to build the subject facility will be cancelled. In such cases, DPNA will increase its maximum contribution to the General Resource Enhancement Fund (see Section I.F.4) by \$25,000 per cancelled site.

\* (1) Toilets will be made available only if pump and haul type can be approved by the NC Division of Water Quality and there is sufficient property for its installation, (2) Lighting will be provided if there is no charge for running the primary line to the site, (3) Trash collection will be provided so long as it doesn't become a domestic garbage issue and (4) the bank fishing area will be land based with trail (if the site is suitable).

\*\* For Tier 1 projects, construction will be within 5 years following issuance of the new FERC licenses for the East Fork, West Fork and Dillsboro Projects (or the FERC order approving Dillsboro Powerhouse decommissioning and dam removal) and closure of all legal challenge periods. For Tier 2 projects, construction will occur from 6 to 15 years following issuance of the new FERC licenses for the East Fork, West Fork and Dillsboro Projects (or the FERC order approving Dillsboro Powerhouse decommissioning and dam removal) and closure of all legal challenge periods.

### **B. Public Info**

#### **1. Reservoir information**

- a. Actual lake level readings and Normal Operating Ranges for all East Fork and West Fork reservoirs, except Tuckasegee Lake, added to DPNA Website.
- b. Lake level information provided beginning in 2004.

#### **2. Recreational flow information**

- a. Standard recreational flow schedule for Cedar Cliff and Thorpe/Tuckasegee maintained by DPNA telephone information line and / or website.
- b. Messages communicated when augmented recreational flows are reduced per the Low Inflow Protocol or the Hydro Project Maintenance & Emergency Protocol.
- c. Recreational flow information beginning in 2004.

#### **3. Gage activation**

- a. Upon completion by the USGS, pay for reactivation and ongoing maintenance of USGS gage # 03510500 at Dillsboro, NC and USGS gage # 03508000 at Tuckasegee, NC. (Potential additional partners – NCDWR, USFWS)

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b. Gages fully operational by 2004, provided USGS can complete by then.

**C. Lake Levels**

1. **Convention** - All elevations listed below are relative to the top of the dam (including any flood gates), with 100.0 ft = Full Pond. Normal Minimum, Normal Maximum and Normal Target Elevations change on a daily basis. The elevations shown are for the 1<sup>st</sup> day of the given month. Elevations for other days of the month are determined by linear interpolation.

2. **Lake Glenville – Maintain the following Normal Operating Range:**

Month	Normal Minimum Elevation (ft)	Normal Target Elevation (ft)	Normal Maximum Elevation (ft)
Jan	85	87	90
Feb	85	87	90
Mar	88	91	94
Apr	90	93	96
May	96	98	99
Jun	96	98	99
Jul	96	98	99
Aug	94	96	98
Sep	90	92	94
Oct	90	92	94
Nov	86	88	90
Dec	85	87	90

3. **Tanassee & Wolf Lakes – Maintain the following Normal Operating Range:**

Month	Normal Minimum Elevation (ft)	Normal Target Elevation (ft)	Normal Maximum Elevation (ft)
Jan	80	83	87
Feb	80	83	87
Mar	80	83	87
Apr	84	87	92
May	91	93	98
Jun	91	93	98
Jul	91	93	98
Aug	91	93	98
Sep	89	91	94
Oct	87	88	91
Nov	81	85	88
Dec	80	83	87

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**4. Bear Lake – Maintain the following Normal Operating Range:**

<b>Month</b>	<b>Normal Minimum Elevation (ft)</b>	<b>Normal Target Elevation (ft)</b>	<b>Normal Maximum Elevation (ft)</b>
Jan	91	93	96
Feb	91	93	96
Mar	91	93	96
Apr	93	95	98
May	96	98	100
Jun	96	98	100
Jul	96	98	100
Aug	96	98	100
Sep	96	98	100
Oct	93	96	98
Nov	93	95	98
Dec	92	94	98

**5. Cedar Cliff Lake – Maintain the following Normal Operating Range:**

<b>Month</b>	<b>Normal Minimum Elevation (ft)</b>	<b>Normal Target Elevation (ft)</b>	<b>Normal Maximum Elevation (ft)</b>
Jan	96	98	100
Feb	96	98	100
Mar	96	98	100
Apr	96	98	100
May	96	98	100
Jun	96	98	100
Jul	96	98	100
Aug	96	98	100
Sep	96	98	100
Oct	96	98	100
Nov	96	98	100
Dec	96	98	100

**6. Tuckasegee Lake – Maintain lake level as needed to provide minimum flow.**

**7. Any changes from current operation to begin in 2006.**

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### **D. Minimum Flow and Bypass Flow**

#### **1. Main Stem below Cedar Cliff and Tuckasegee**

- a. 30 cfs combined minimum flow from Dec – Jun (assuming inflow to Tuckasegee Lake  $\geq$  20 cfs) and provided by the same means as the existing provision:
  - 1) Continue existing minimum flow at Tuckasegee (20 cfs or inflow, whichever is less. DPNA chose to provide this in the bypass channel via the sluice gate out of convenience).
  - 2) Continue existing min. flow at Cedar Cliff (10 cfs from a valve at the hydro station during non-generation hours only).
- b. 55 cfs combined minimum flow from Jul – Nov (assuming inflow to Tuckasegee Lake  $\geq$  20 cfs) and provided by:
  - 1) Continue existing minimum flow at Tuckasegee (20 cfs or inflow, whichever is less. DPNA chose to provide this in the bypass channel via the sluice gate out of convenience).
  - 2) Increasing the valve capacity at Cedar Cliff to 35 cfs. When Cedar Cliff is generating, the valve is turned off.

#### **2. Wolf Creek Bypass**

- a. 5 cfs Dec – Jun, provided by installing a valve or orifice beneath the Tainter gate sill at Wolf Dam.
- b. 8 cfs Jul – Nov from the same orifice or valve.

#### **3. Implement new and additional minimum and bypass flows in 2006, or within 1 year following receipt of FERC construction approval, whichever comes last.**

### **E. Angling and Boating Recreation Flows**

#### **1. Primary Angling Periods in the Main Stem Tuckasegee River**

- a. The first weekend after Labor Day through the last weekend of October and April 1st through the second weekend of June are defined as primary angling periods with actual flows at or below about 500 cfs being preferred (as measured at the reactivated Dillsboro gage).
- b. During part of this time period, boating release schedules overlap. During this overlap period (the Saturday that occurs nine days before Memorial Day through second weekend of June and Saturdays in September and October) the flow release schedule would be:

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- 1) West Fork Release: Saturday and Sunday one week prior to Memorial Day Weekend, Saturday and Monday of Memorial Day Weekend and 3 of 4 Saturdays in September and October plus Tuesday, Friday Saturday for the period between Memorial Day Weekend to the second weekend in June for 5 hours, 11AM to 4PM (at the reactivated USGS gage at Dillsboro).
- 2) East Fork Release: Sunday of Memorial Day Weekend plus Wednesday, Thursday Sunday for the period between Memorial Day Weekend to second weekend in June for 5 hours, 11AM to 4 PM (at the reactivated USGS gage at Dillsboro).

### **2. Primary Boating periods in the Main Stem Tuckasegee River**

- a. Primary boating periods = Period after the second weekend of June through Labor Day, with actual flows at about 800 cfs (as measured at the reactivated Dillsboro gage) being preferred.
- b. During this time period, the weekly flow release for 3 out of 4 weeks would be:
  - 1) West Fork Release: Tuesday, Friday, Sunday for 5 hours 11AM to 4PM (at the reactivated USGS gage at Dillsboro).
  - 2) East Fork Release: Wednesday, Thursday, Saturday plus the Monday of Labor Day Weekend for 5 hours 11AM to 4PM (at the reactivated USGS gage at Dillsboro).
- c. During this time period, the weekly flow release for 1 out of 4 weeks would be:
  - 1) West Fork Release: Tuesday, Friday, Saturday for 5 hours 11AM to 4PM (at the reactivated USGS gage at Dillsboro).
  - 2) East Fork Release: Wednesday, Thursday, Sunday for 5 hours 11AM to 4 PM (at the reactivated USGS gage at Dillsboro).
- d. During the period from the Saturday before Memorial Day – Labor Day plus the remaining Saturdays in September and October, DPNA will check the river flow daily (at the reactivated Dillsboro gage) from 11:00AM to 4:00 PM. If the 5-hour average reading is less than 500 cfs, DPNA will implement the above recreation flow releases from its hydropower plants. When baseline river flows increase sufficiently to allow average flow at the Dillsboro gage to remain above 500 cfs during the primary boating periods, specific recreation flow releases from the DPNA hydropower stations can be reduced or stopped.

### **3. Establish rec flows in the Glenville Bypass using a Tainter Gate at Glenville Dam:**

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- a. Release water for five hours per day for one weekend (Saturday and Sunday) per year in April. Releases will be @ approximately 250 cfs each day and will begin at 10 am.
- b. Provide five total afternoon releases per year for five hrs each @ approximately 250 cfs, scheduled on days in the months of May through August. Releases will begin at 1 pm.
- c. Any time the flow in the Glenville Bypass is naturally at or above the desired flow within 4 hours prior to the scheduled release time, DPNA does not need to provide a release.

#### **4. Implement new recreation flows in 2006, with DPNA continuing voluntary rec flow releases from its hydro stations until then in coordination with the Tuckasegee Gorge Association.**

### **F. Resource Enhancement Initiatives**

Note – these initiatives also encompass other DPNA hydro projects beyond just the areas covered by this stakeholder team.

#### **1. Dillsboro STEP (Small Town Enhancement Planning) Initiative**

- a. Work with the Town of Dillsboro to complete the conceptual plan for their STEP Initiative by 5/30/03 and follow through on any DPNA action items agreed to in the Initiative Plan.
- b. Complete necessary environmental and engineering assessments and determine if Dillsboro Dam removal can be done in a safe, environmentally beneficial and cost-effective manner.
- c. Assuming positive results from Item b above, file application with the FERC to surrender license, decommission Dillsboro Powerhouse and remove Dillsboro Dam as follows:
  1. Partner with the USFWS and other stakeholders and complete the necessary assessments by 1/1/06.
  2. File license surrender application with the FERC by 1/1/07.
  3. Decommission powerhouse and complete dam removal within 3 years following the final FERC approval order and the closure of all legal challenge periods.
  4. Complete any DPNA portion of the post-removal stream remediation and monitoring within 2 years following completion of dam removal.

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5. Dillsboro Project operation to continue under terms of existing license until powerhouse decommissioning occurs.

### **2. Unique Fishery Identification**

- a. Partner with the USFWS and the NCWRC on studies to determine the range and distribution of the sicklefin redhorse sucker in the Little Tennessee, Hiwassee and Tuckasegee Rivers.
- b. DPNA's contribution may be in the form of a one-time funding contribution, in-kind services or a combination of the two, not to exceed a total cost of \$40,000.

### **3. Southern Brook Trout Restoration Partnership**

- a. Partner with the NCWRC and the USFS in a project to restore the native strain of brook trout to a selected stream in the vicinity of Tennessee Creek Hydro Station.
- b. DPNA's contribution may be in the form of a one-time funding contribution, in-kind services or a combination of the two, not to exceed a total cost of \$40,000.

### **4. General Resource Enhancement Fund**

- a. Make a one-time contribution to a resource enhancement fund for use during the terms of the new licenses for the East Fork, West Fork, Nantahala and Dillsboro Projects to protect or enhance the environmental, recreational, cultural or aesthetic opportunities within the Tuckasegee and Nantahala river basins.
- b. Resource enhancement fund to be designed and oversight provided by a board of trustees composed of a DPNA representative and at least one representative each from a federal agency, a state agency, a local government and a non-governmental organization, each of which are member organizations of the present Tuckasegee Cooperative Stakeholder Team and Nantahala Cooperative Stakeholder Team. Funds will be awarded based on consensus agreement among the board of trustees.
- c. DPNA contribution to be provided 6 years following issuance of the new FERC licenses for the East Fork, West Fork, Nantahala and Dillsboro Projects (or the FERC order approving Dillsboro Powerhouse decommissioning and dam removal) and closure of all legal challenge periods.
- d. DPNA contribution will be 100% of the total value of cost-share funding provided by other stakeholders until initial construction of the recreation facilities proposed for relicensing of the East Fork, West Fork and Nantahala Projects or for removal of Dillsboro Dam is begun.
- e. DPNA's maximum contribution will be ?.

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- f. Funds may be used to enhance the environmental, recreational, cultural or aesthetic opportunities within, adjoining or in the near vicinity of:
  - 1) The subject hydro projects
  - 2) Direct tributaries to the subject hydro projects
  - 3) River segments that have their flows directly affected by the subject hydro projects.
- g. Funds will only be awarded for cost-share requests with a minimum required match from other sources of 50%.
- h. Other stakeholders besides DPNA may also contribute to the fund.
- i. Once the fund's principle has been expended, the fund will be terminated.
- j. Any portion of the DPNA contribution that remains at the end of the new license period for the East Fork, West Fork or Nantahala Projects will revert back to DPNA.

### **G. Shoreline Management**

- 1. Continue enforcing shoreline protection measures for environmentally sensitive areas (e.g. Duke-designated wetlands) and continue limiting cutting of trees within the FERC project boundaries.**
- 2. Develop shoreline classification maps for each lake on the Tuckasegee River except Dillsboro Pond and Tuckasegee Lake, identifying any unique areas that need protection for environmental, recreational, cultural or operational reasons and provide the associated lake use restrictions, including incorporating any necessary Species Protection Plans.**
- 3. Work with others to support an annual “Lake Wide Clean Up” on Wolf Lake, Bear Lake, Cedar Cliff Lake and Lake Glenville and an annual “River Clean Up” On the main stem of the Tuckasegee River. DPNA’s contribution will be to remove trash during the week following the clean-up from pre-designated disposal sites around these 4 lakes and the river.**
- 4. Implement the final version of the lake use restrictions, vegetation management requirements and the shoreline management guidelines on 7/1/03.**

**H. Cultural Resources**

- 1. Develop a Cultural Resources Management Plan for the Thorpe Development to ensure that significant cultural resources within the FERC Project boundary are documented and protected to the extent necessary.**
- 2. Cultural Resources Management Plan to be developed and implemented within 2 years following FERC issuance of the new license and the closure of all legal challenge periods.**

**II. If the Tuckasegee Cooperative Stakeholder Team could agree in consensus to the following:**

**A. Support continued operational flexibility for DPNA’s Tuckasegee River hydros**

- 1. Flow Prescriptions** - No requests or support for prescribed flows of any kind (minimum flows, bypass flows, recreation flows, channel maintenance flows, etc.) other than the prescribed flows proposed in this trial balloon.
- 2. Lake Level Limitations** – No requests or support for lake level restrictions of any kind other than those identified in this trial balloon.
- 3. Operational Restrictions** – No requests or support for hydro operational restrictions of any kind (e.g. ramping rate limits, peaking power limits, etc.).
- 4. Low Inflow Protocol** – Agreement to share the burden of low water availability.
- 5. Hydro Project Maintenance & Emergency Protocol** – Agreement to the approach for temporary deviation from certain license conditions to handle in a practical manner specific abnormal situations.

**B. Actively participate with DPNA in recreation area construction and/or management.**

**1. Access Area Operation and Maintenance**

- a. NCWRC to enter into a cooperative maintenance agreement with DPNA similar to the existing agreement on Duke’s Catawba-Wateree Hydro Project for the access areas located on property owned by DPNA at Wolf Lake (1), Tanassee Lake (1), Bear Lake (1), Cedar Cliff Lake (1), Lake Glenville (2) and the access areas on the main stem of the Tuckasegee River (6, 7 if Dillsboro Dam is removed).
- b. Glenville Community Groups to enter into a cooperative maintenance agreement for the Glenville Dam recreation area.
- c. American Whitewater to enter into a cooperative maintenance agreement for the parking area and portage trail at Glenville Dam.
- d. Jackson County Parks Department to operate and maintain the above facilities located at Andrews Park.
- e. USFS to operate and maintain the above facilities located on land owned by the USFS plus the portion of the Wolf Creek Bypass Trail that lies on property owned by DPNA.

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### **2. Access Area Construction**

- a. NCWRC to provide any cost-share funding and construction support as noted above and to repair / rebuild the facilities as needed.
- b. American Whitewater to provide any cost-share funding and construction support as noted above and to repair / rebuild the facilities as needed.
- c. Jackson County Parks Department to repair / rebuild the facilities on their land as needed.
- d. USFS to repair / rebuild the facilities on their land as needed.

### **C. Support new FERC license conditions and compliance monitoring requirements and 401 Water Quality Certification conditions that are consistent with this trial balloon, reasonably simple to implement and that define any future risks to DPNA.**

#### **1. Compliance Monitoring**

- a. All agencies to work cooperatively with DPNA to design adequate, yet simple compliance monitoring programs.

#### **2. FERC Licenses**

- a. No requests or support for any FERC license conditions that conflict with the above trial balloon or that add substantial additional burden, cost or risk to DPNA above the burdens, costs and risks associated with this trial balloon.
- b. No requests or support for any FERC license re-openers of any kind beyond those customarily included by FERC in licenses for hydro projects of this size.
- c. No Section 18 Mandatory Conditions for fishways included in the new license orders, beyond the standard reservation of that authority.
- d. No Section 4e Mandatory Conditions beyond those absolutely essential to protect National Forest resources located on FERC Project land that is owned in fee by the USFS and that do not conflict with the above trial balloon or add substantial additional burden, cost or risk to DPNA above the burdens, costs and risks associated with this trial balloon.

#### **3. 401 Water Quality Certifications**

- a. No requests or support for any 401 Water Quality Certification conditions that conflict with the above trial balloon or that add substantial additional burden, cost or risk to DPNA above the burdens, costs and risks associated with this trial balloon.
- b. No requests or support for any re-openers of any kind in the 401 Water Quality Certifications for these hydro projects.

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**D. Agree that the above actions adequately protect, mitigate, and enhance all the resources of the Tuckasegee River Basin as they may relate to DPNA's hydro stations, including but not limited to:**

1. **Water Quality** (e.g. dissolved oxygen, temperature, etc.)
2. **Fish habitat and management**
3. **Fish entrainment, impingement and turbine mortality**
4. **Fish Passage** – Agreement that the USFWS will not petition the FERC for any fish passage requirements at any of the Nantahala Area hydros until at least 15 years after the issuance of all the new license orders by the FERC and closure of all legal challenge periods. If after that 15-year period any fish passage requirements are imposed, the USFWS will pay for at least 75% of the capital cost of the facilities and at least 75% of the operational cost of any non-structural fish passage requirements, with DPNA being responsible for the other 25% plus the providing any attraction flows.
5. **Habitat fragmentation**
6. **Rare, Threatened or Endangered Species**
7. **Wetlands, conservation areas and other unique habitats**
8. **Shoreline and riparian buffers**
9. **Terrestrial species**
10. **Cultural resource protection**
11. **Recreational facility needs, enhancement, construction and management**
12. **Prescribed flow releases of any kind**
13. **Aesthetics**
14. **Land and water management**
15. **Sedimentation and nutrients**
16. **Shoreline or riverbank erosion**