

**HCP Steering Committee Meeting**  
**April 29, 2005**  
**Cumming**

**Present:** Mauro Chiaverini, *Temple-Inland*; Laurie Anderson, *UGA*; Marcus Beavers, *Cherokee County*; Bob Bourne, *Cobb County*; Pam Bowman, *Cumming-Forsyth Chamber*; Sam Breyfogle, *Temple-Inland*; Bill Bumback, *UGA*; Tim Carter, *UGA*; Melissa Casteel\*, *City of Canton*; Robin Dake\*, *UERA*; Steve Dempsey, *Forsyth County*; Jay DiPasquale, *Forsyth County*; Heather Dyke, *CH2M Hill*; Laurie Fowler, *UGA*; Emily Franzen, *UGA*; Bud Freeman, *UGA GMNH*; Mary Freeman, *USGS*; Tyrone Gardner, *City of Holly Springs*; Beth Gavrilles, *UGA*; Curt Gervich, *HCP*; Stan Hall, *Cherokee County*; Hal Hamrick, *US FWS law enforcement*; Mike Harris\*, *GA DNR*; Darcie Holcomb, *UC Riverkeeper*; Steve Holder\*, *City of Dawsonville*; Mark Hutcheson\*, *City of Woodstock*; Katie Knowles\*, *USACE-Allatoona*; David Kubala\*, *Cherokee County Water & Sewer*; Charles Laughinghouse\*, *Forsyth County*; Louise McPherson\*, *USDA*; Diane Minick, *UERA*; Stu Moring\*, *City of Roswell*; Geoff Morton, *Cherokee County*; Nanette Nelson, *UGA*; Norman Pope\*, *Pickens County*; Steve Shelton, *Cobb County Water & Sewer*; Candace Stoughton, *TNC*; Carol Stowers, *Dawson County citizen*; Hugh Stowers, *Dawson County citizen*; David True, *Interested citizen*; Sandy Tucker, *US FWS*; Lynn Tully\*, *Dawson County*; Seth Wenger, *UGA*.

\* Steering Committee member

**Enforcement Issues**

Hal Hamrick, USFWS law enforcement official for Georgia, introduced himself. He works closely with Sandy Tucker and the regional FWS office. Endangered species protection is a priority for FWS law enforcement. There are 250 FWS personnel nationwide, one in Georgia. They tend to take on those cases that have large impacts on habitat and species. His office is in the ATL airport (for interdiction of smuggling of endangered species.) Office phone: 404-763-7959, ext 23; pager: 770-588-6993. He's a native of Cherokee County. He knows about the Etowah and its significance. He hopes that putting the Etowah Regional HCP in place will cut down on ESA infractions. The HCP will affect enforcement by reducing the amount of "gray area." The HCP will not only protect the fish but also developers, because they'll know in advance what they have to do, and if they can show that they've complied with the provisions of the HCP they are protected from liability.

He explained that he is not a compliance officer but a criminal investigator; he comes out after "take" has occurred. Often he investigates reports from citizens or other FWS, state or local officials. He doesn't just take peoples' word for it that there's a problem, he gets an opinion from biologists, about whether "take", including habitat destruction, has occurred. Sometimes he will get more than one opinion if he feels it's needed. Then he'll talk to the federal attorneys (prosecutors).

He was asked if he'd ever brought charges against a local government for failing to enforce an HCP. He said he hadn't, but that it could conceivably be done. Laurie Fowler said that it was her understanding that the consequence to local government for not enforcing the provisions of

the HCP would NOT be a lawsuit, instead the FWS would take away the government's Incidental Take Permit (ITP). Therefore developers within the jurisdiction would have to procure individual ITPS (and thus develop their own individual Habitat Conservation Plans which are required prior to issuance of an ITP). Hal said that he pursues civil and criminal cases, depending on what the federal prosecutor decides. In those cases it is the person causing the harm who's prosecuted, not the county or city that regulates the activity.

He gave an example of a case in Florida involving high-priced property with a well-known, well-documented eagle's nest. The developer bulldozed it. He paid over \$1 million in fines and was on probation for 3 years.

Sandy Tucker said that the person who caused the problem would be the first place to look. If take happened, then she'd go to Hal and he'd go to the US attorney. It could result in fines or/and jail time. With the HCP in place, if the developer had done everything right and somehow take still happened, they would be less likely to send in law enforcement.

Laurie reminded the Steering Committee that they had suggested that the HCP should include a provision requiring ongoing training and perhaps certification for government staff and developers engaged in activities with the potential to affect the imperiled aquatic species. A technical committee is starting to work on fleshing out , and will need input from the Steering Committee.

Public education is important as well, because some people perceive the HCP to be a slow- or no-growth initiative. But the HCP is independent is neither, it is all about protecting the threatened and endangered aquatic species. The HCP will ensure that any development that occurs will not adversely impact those species, but that's it – it will not slow growth.

#### **US FWS and US ACE compliance letters:**

Sandy explained that her colleague in the office of ecological services, Robin Goodloe, spends a lot of time advising developers how their actions may affect fish and wildlife, which is their charge from Congress. They have found the forum of the Developments of Regional Impact (DRI) review process a good way to let developers know of the potential impacts of their projects on fish and wildlife. Where DRIs are in areas likely to be covered by the HCP, Robin Goodloe is letting them know about the HCP, and what it is likely to require in terms of site design, etc. This is for projects where the timing will intersect with the HCP. Some developers think FWS is asking them to comply with the HCP now. This is not Robin's intent. She is just letting developers know the local governments will likely have some rules in the near future that will affect how they build; this is a "heads up." Robin and FWS will make it clearer that FWS is not asking them to demonstrate compliance, just letting them know that this is probably coming so they can start preparing for it.

However, the Endangered Species Act (ESA) does apply even though the HCP is not in place. Developers who adversely impact imperiled aquatic species habitat, by causing dirt to go into a creek where darters live, for example, are currently liable under the ESA. If they want to be insulated from liability, they have to get an ITP and go through the whole HCP process. If FWS hears about a development, they advise the developer to incorporate management strategies

necessary to protect the fish. But if they don't have an ITP and "take" occurs, they may be subject to civil and criminal penalties.

There was a question about whether, in the absence of an HCP, developers are protected from liability under the ESA if they've applied for and received a land disturbing permit. Sandy explained that in the absence of an HCP, even if a developer abides by the local E&S ordinance, if "take" occurs, he is still liable under the ESA. If an HCP is in place, and the developer is complying with the terms of the HCP, he is shielded from liability under the ESA even if "take" occurs. Laurie pointed out that if a county opts out of the HCP, developers in that county who cause "take" would be liable under the ESA.

**Local Updates from SC members:**

Geoff Morton, Cherokee County: They've incorporated HCP changes into the MNGWPD versions of the stormwater and buffer ordinances, and commissioners are reviewing those now. They have a few details to work out, but don't foresee any problems with adopting them. Last week they adopted the MNGWPD conservation subdivision ordinance with HCP provisions incorporated, and expect to adopt the others in June/July. He'll invite Curt and Advisory Committee folks to the public hearing.

Melissa Casteel, City of Canton: They are currently reviewing at the staff level the three HCP policies developed to date. Curt has come twice to talk to the Building Committee – which includes the mayor – which has been helpful. She doesn't foresee any problems. The notebooks will help. They have adopted the MNGWPD ordinances.

Tyrone Gardner, City of Holly Springs: They are following Cherokee. July 1 is their target date for adoption, and they don't foresee problems.

Steve Holder, City of Dawsonville: They're getting ready to present the ordinances to the City Council, and are also working with EPD for sewer permit expansion. They need to make sure these coordinate with their watershed assessment.

Mark Hutcheson, City of Woodstock: They have adopted the MNGWPD ordinances, but not yet the HCP versions. The problem is staff time. They're aware of it, and don't foresee a problem, it's just a matter of time.

Lynn Tully, Dawson County: The HCP policies have been distributed to the commission, but it has not yet discussed or deliberated on them. They want to see a specific analysis detailing how these ordinances are different from what they've already got – a SWOT analysis on each ordinance. They will likely wait to take this up after it's clear out the HCP addresses the issue of water supply. She briefly discussed the scenic river designation issue; the commissioners approved conducting the study, but haven't endorsed the designation.

Laurie said that a technical committee is being formed to discuss the water supply component of the HCP. She pointed out that the scenic river designation is completely separate from the HCP.

Charles Laughinghouse, Forsyth County: They have adopted most of the MNGWPD ordinances. The definition of priority areas is an issue. The comments he's heard back is there's not a lot of

difference between the MNGWPD and HCP ordinances, it will just be a matter of convincing the entire commission that it's in best interest of county.

Norman Pope, Pickens County: Pickens' sole commissioner is reviewing the ordinances; he doesn't anticipate any problems. They haven't adopted the MNGWPD ordinances yet, but anticipate doing that. They have a couple of private entities working to protect a 5-6 mile stretch along Long Swamp Creek via conservation easement, which will have a big impact.

Stu Moring, City of Roswell: The City Council took pride to be first to adopt MNGWPD ordinances; he doesn't anticipate any problem with the HCP ordinances. It's just a question of getting the priority areas information. Kim Shorter has replaced Charles Richards on the engineering staff.

**Review of what's been done and what's next:**

Laurie provided a recap of the HCP process to date, beginning with the original idea of finding funds to purchase land in order to protect threatened and endangered species in the Etowah, the initial grant from FWS to develop the HCP, the interests of the local governments, and the development of the HCP governance structure.

The next step was to identify the threats to the endangered species, which is what the HCP is intended to address, although protecting these species will also bring other benefits such as clean water, etc. The chief threats were determined to be:

- Habitat fragmentation
- Sedimentation of streams
- Alteration of the hydrologic regime
- Pollutants in streams

With the help of technical committees, The Steering and Advisory Committees have been working on ways to mitigate and minimize these threats. The strategies include ordinances and BMPs.

Fragmentation strategies:

- Stream crossings guidelines. Draft road and utility crossings guidelines are currently being drafted with input from the Georgia DOT; the staff hopes to convene a technical committee by late summer.
- Reservoir siting guidelines. As mentioned earlier, the initial technical committee meeting on this issue will take place next month.

Sedimentation strategies:

- Stream buffer ordinance – adopted by steering committee
- E&S procedures – adopted by steering committee
- Mass grading ordinance (in process)

Alteration of hydrologic regime strategies:

- Stormwater ordinance – adopted by steering committee

- Floodplain protection – The Advisory Committee looked into it and discovered that other ordinances (i.e. stormwater and stream buffers) are already providing a lot of the same protection. The AC suggests there is therefore no need for a floodplain provision in the HCP.
- Better Site Design guidelines for natural infiltration – adopted by steering committee
- Conservation subdivision ordinance – this ordinance does not mandate conservation subdivisions, but allows this type of development. There have been two technical committee meetings to date, and the Advisory Committee will bring this back to the Steering Committee this fall for a vote after a final review by the Technical Committee
- Priority Area Protection – some areas that might be so critical that they need extra protection. Bud and Mary Freeman and Seth Wenger have been doing cutting-edge working on this, based on the available science. Their work has been reviewed and verified by aquatic scientists across the country. The Advisory Committee is still identifying potential strategies for providing extra protection in these areas (discussed below) and will convene a technical committee to refine these strategies by late summer.

The AC hopes to bring recommendations on all of these pending policies back to the Steering Committee at the next meeting.

The other area now being worked on is HCP implementation, including monitoring and adaptive management. Those technical committees have started meeting, and will continue this summer.

#### **Priority Area Protection (formerly called Sensitive Areas) – Runoff Limits:**

Seth explained that the Advisory Committee is proposing changing the term to “Priority Areas Protection – Runoff Limits” because it’s a more accurate description. We discussed this in December in terms of impervious surface limits. Having done more research, we now think that setting runoff limits will accomplish more, in a more flexible and fair way.

Stormwater runoff is the greatest threat to the imperiled aquatic species, so limiting runoff is the focus in priority areas. Runoff affects the aquatic species in a couple of major ways: hydrologic alteration and pollutants. The pollutant problem is relatively easy to understand, but hydrological alteration is more complicated. High flows from runoff change stream channels, lessen base stream flows, etc.

Existing stormwater management rules are good, especially the latest generation of stormwater rules recommended by the MNGWPD, which is why they were used as the basis for the HCP rules. The MNGWPD rules, however, don’t guarantee protection of species. For instance, we don’t know for sure that their detention requirements will replicate the pre-development hydrology. Pollutant removal under the MNGWPD rules also may not be protective enough.

So the Advisory Committee is proposing a series of runoff limits that will vary throughout the Etowah. These would be limits on the maximum volume of runoff that can be discharged from sites during half-year, 1-year and 2-year storms. They will require infiltration, will ensure a minimum amount of hydrological alteration, and lead to effective pollutant removal. The predictability of results is important in terms of the HCP; we have to have a very good idea of

the extent of “take” associated with the development authorized by the HCP or FWS won’t sign off on the ITP.

Seth then explained how our team of scientists have determined what the runoff limits should be. They had a number of research questions: Where are the fish and where are existing high impervious areas? Where are the priority areas for protecting the target fish of the HCP? What are the runoff limits that the fish will tolerate? What are the tools to achieve those limits? What has to change with how we manage stormwater?

They considered 13 species, mostly listed as endangered or threatened under federal and/or state law. There are not many data on the rarest species, some of which are found only in the Etowah mainstem, so as a surrogate for those species they used data for more common sensitive species that have similar habitat needs.

They had to address the fact that we build towns now where we used to farm, so had to ask if the fish were extirpated by old agricultural uses before urbanization. They also looked at existing impervious cover.

They built a series of models to see which one was the best at predicting fish occurrence. The models included stream size because certain fish are only found in streams of certain size. They looked at historic and current land uses and the probability of fish occurrence. For 11 out of the 13 species that appear to be significantly affected by current land uses, they looked for the runoff threshold at which the species started to disappear.

So they predicted the possibility of species disappearance based on historic land use, current land use, and stream size. They found that impervious cover was the best indicator of current land use. As imperviousness increases, species occurrence drops off.

Some species disappear at very low levels (2-4%) of impervious cover. For example, the Etowah darter’s tolerance threshold is very low – it seems to be disappearing at very low levels of imperviousness, even taking historic land use into account. Others disappear at mid-range levels (10-18%). For others, like the Cherokee darter, there is not a good predictive model. They did not find a correlation between imperviousness and Cherokee darter disappearance, but it is still unclear what has driven the changes.

Mary Freeman explained that they have a good amount of information on Cherokee darter life history, and can identify their habitat needs. The Cherokee darter had a very wide distribution in the past. There are many sites where they’ve dropped out, and others where they’ve survived.

Seth described the distributions of the other threatened and endangered species. The Etowah Darter is found in Pumpkinvine Creek, Long Swamp Creek, the Amicalola, the Etowah headwaters and mainstem, Shoal Creek, and Smithwick Creek. The amber darter is found in the mainstem and the lower reaches of a few large tributaries. These locations will be very

important for determining where the priority areas are, because many of the other targeted HCP species are within the same areas as the Etowah darter.

They came up with three priority levels. Priority 1 areas are driven by Etowah darters. Fortunately, protecting the upper part of the Etowah will also protect the mainstem.

Priority 2 areas are mainly for protecting the mainstem and its other (not Priority 1) tributaries. These could have a less strict runoff limit. These also protect areas for Cherokee darters. These are now thought to be 3 distinct sub-species, located in separate areas, and they want to be sure each of those sub-species survives.

Priority 3 areas don't have any of the HCP species except for marginal habitat for Cherokee darters, but are not essential for the survival of any of the sub-species.

The HCP endangered species and species of concern (FWS encourages including species of concern in HCPs in hopes of keeping them off the endangered list) are:

Endangered: amber, Cherokee, and Etowah darters, and frecklebelly madtom;

Species of concern: frecklebelly darter, holiday darter, bridled darter.

The runoff limits being proposed:

Priority 1 areas: Match pre-development (*i.e.* forested) runoff volume.

Priority 2 – Match runoff volume from 5% impervious cover.

Priority 3 – Match runoff volume from 20% (tentatively) impervious cover. Priority 3 is open for discussion.

Next, Seth talked about the practices to allow development to meet these runoff limits. The tools already exist. The pre- and post-development volume of runoff is already estimated as part of current stormwater management practices. The pre-development volume is calculated as if the site is forested; the difference between that and post-development runoff volume is the amount that will need to be infiltrated.

There are two approaches: first, minimize change – maintain as much forest as possible, *e.g.* through conservation subdivisions. This will minimize runoff. Second, use bioretention, rain gardens, green roofs or other infiltration/transpiration best management practices. Many of these practices are already being practiced in the basin – Diane Minick, of UERA, is doing some of this work. It is important to distribute infiltration over a site instead of constructing one big pond. Bioretention and infiltration are not new ideas, and there are manuals and guides that explain how to do it. They are demonstrated to work in Piedmont soils, although amendments may be necessary.

There was a question about maintenance issues. Diane explained that if properly planned and installed, the maintenance can be minimal, roughly once a year.

Seth pointed out that the biggest obstacle to widespread use of these techniques is not cost, but that people haven't learned how to design and install them. It's not necessarily more expensive or harder, just different.

There was a question about whether infiltrating runoff containing pollutants might damage groundwater. Seth explained that this is a question that's been thoroughly investigated. There is a good amount of literature from Europe, where these methods have been in use longer than they have been in the US, and also from Florida. Under most circumstances, if installed properly and in the right places, these methods are excellent at pollutant removal. There are certain exceptions, certain chemicals that can move quickly. The runoff from parking lots doesn't fall into that exception category. The pollutant removal rates of these methods are among the best of any stormwater BMPs. They can remove 80-90%, and close to 100% for many pollutants, if designed and installed properly. Our science team is taking into account the pollutants that will not be removed by these BMPs, however, in determining the impacts on the aquatic species.

For higher densities, it becomes more challenging, but not impossible, to use the Low Impact Development stormwater management techniques. Options like green roofs could be considered for those areas, for example. A large commercial or industrial enterprise could be asked to do a green roof.

Seth then discussed costs. In a worst-case scenario, the cost for a residential rain garden ranges from \$3-8,000. In many cases, especially in low density residential, costs of low impact techniques are less than conventional stormwater management techniques because they offset other costs. For instance, reducing runoff reduces the need for curb and gutter, and smaller detention ponds are needed so developers can fit more lots on the site.

Seth next talked about translating runoff limits into density. In the Priority 1 areas, densities up to 1 unit per acre should be able to match predevelopment runoff volume. For Priority 2 areas, 2 units per acre, or possibly even more, should meet the proposed runoff limit. For Priority 3 areas, probably 50% actual impervious would meet the proposed runoff limit. The Advisory Committee is conducting studies to provide more exact estimates.

Another issue Seth discussed was development nodes. Some of the land use plans within the watershed include nodes of higher density within some of the priority areas. The HCP can accommodate small density nodes in Priority 1 areas, and slightly larger ones in Priority 2 areas. In other words, in one of these nodes a developer could build a Kroger, for example, but would have to infiltrate more volume than for a similar development outside of a priority area.

The Advisory Committee has studied the zoning and land use maps to see if any high density is allowed in or planned for the priority areas. (Lumpkin County has a very flexible zoning code, which needs to be looked at more carefully.) Most of the density allowed has already been built in those areas. There are some areas not yet built out, however, where the zoning is above 2 units per acre, and we need to determine how to deal with those.

Some of those areas could be classed as development nodes. Some could be used as sending areas for TDRs. In Lumpkin County, perhaps a few of the land uses that aren't actually being

built there but are technically allowed by their code could be restricted. Otherwise, it doesn't appear that zoning codes will need to be changed to accommodate the HCP.

Determining where the development nodes are will be up to each jurisdiction. Then our team of scientists will have to review the proposed nodes to determine how their size and location would affect the HCP species. It will have to be an interactive process. Our scientists can estimate impacts to streams based on what's projected to happen, looking at accumulated and local impacts.

There was a question about who will run the models, the scientific team or the local governments. Seth explained that it would take many months to turn the models into a tool that local governments can use themselves, which is more time than we have. We hope to have our strategy regarding protection of priority areas completed within a year. Things are, of course, likely to change, which can be accommodated by adaptive management. But each change affects what neighboring jurisdictions can do, so the local governments will have to look into it together. Seth also said that we may learn as we go along that we can raise the runoff limits.

Seth explained that the HCP runoff limits are very different from the impervious cover limits for water supply watersheds. Those apply to the entire watershed area, and have a "first come, first served" aspect. The HCP runoff limits apply to each property, not the entire priority area.

There was a question about what mitigation measures can be used to take an actual 50-60% impervious area and convert it to effective 20% or less, with a comment that while we're looking for innovation, some site planners need a "cookbook" that prescribes exactly how to achieve these results.

Seth said developers, engineers, and those who review plans will need training, which the Steering Committee had already identified as a component of the HCP. They need more information than is in the GA stormwater manual. Tim Carter will be working on putting together more supporting materials over the next 6-9 months. We'll also be relying on the folks who've already done this kind of work in the watershed, folks like Diane and Earth-Tec, to help us develop the "cookbook" that those who are only interested in doing the minimum can use.

Tim added that the beauty of the runoff limits approach is its simplicity. It uses curve number methodology that the stormwater engineers are used to. It does not tell them to use any particular BMPs, just to meet a performance standard.

There was a question about TMDLs. Laurie said that the runoff limits should go a long way toward addressing TMDLs.

There was a question about efforts to involve the development community. Laurie explained that each strategy and draft ordinance that has been developed by the technical committees to date include local developers, particularly ones recommended by commissioners in the HCP jurisdictions. We'll invite developers to participate on the Priority Area Protection – Runoff Limits technical committee as well

Laurie suggested that we develop a Priority Area Protection Strategy for one of our jurisdictions as a kind of pilot project. This would include identifying development nodes, putting together various combinations of BMP that would meet the runoff limits and developing information about the costs of these BMPs and bring the results back to the Steering Committee at our next meeting. There was general agreement, and Pickens County was suggested as a candidate. Pickens Steering Committee representative Norman Pope said that the City of Jasper would need to be involved too.

There was a suggestion that infiltration and maintenance are the things public works directors will be worried about. Laurie suggested a technical committee to work on this issue.

### **Next Meeting**

The agenda will include priority areas, also conservation subdivisions, road crossings, and possibly water supply issues. August 5 was suggested as a potential date, and Camp Wahsega in Lumpkin County as a potential location. We'll get the details out ahead of time.

Curt handed out CDs and notebooks with implementation documents, and Georgia River Network Award of Merit certificates to Steering Committee members.