Meeting Minutes

Meeting Date: August 18, 2003

Meeting Time: 1 p.m.

Meeting Place: EPD Conference Room

Attendees:

Name	
Charlie Adams	Raja Veeramachaneni
Suzie Ridenour	Dan O'Leary
Heather Amick	Karen ?
Chuck Weinkam	
Jessica Morrow	
Brian Bernstein	

Todays Date: September 5, 2003

Subject: ICC Brown Trout

Minutes:

The purpose of the meeting was to discuss SHA's approach to addressing watershed issues.

Discussion:

- Interagency Work Group (IAWG) membership was discussed, a handout was presented by Heather.
    - Greg Golden offered to be contact for DNR
    - John Galli for MWCOG
    - Candy Bunnag (?)
    - Jessica has a list of more people being considered.
- Upper Paint Branch Technical Work Group
    - Assembled by Councilwoman Praisner
    - Expecting to complete work and issue a report by November '03.
    - Chuck has the history in a notebook.

- Final document should include a list of watershed problems
  - Break problems into mitigation and enhancement opportunities

- KCI is working with SHA Planning to get GIS information from MoCo.
  - HHD needs resources, impairments and identified projects map
  - Chuck/Coastal is working on it
- DEIS: Technical studies due in May of '04, Final in August '04
- SHA to develop a "tree" of issues, then fill in details as studies progress.
  - Tree structure to follow NEPA process
  - Public Meetings can be forums for adding issues or opportunities to the tree
  - Coordinate issues with MNCPPC and County
  - Coordinate with DNR's Watershed Group ?
- Discussion about "mitigation" vs. "enhancement"
- Charlie said not to develop enhancements beyond a list until roadway alternates have been developed.
  - Focus on mitigation
  - Removes real or perceived alignment bias
- "Enhancements" don't apply to no-build alternative
- Next IAWG Meeting at SHA on 9/10/03
  - Present a list of needs to the group and continue to build list
- Brown Trout
  - What is the process for addressing?
  - 3 things to address:
    - Metals
    - Sediment
    - Temperature
  - Impervious area discussion
    - Should the County be required to purchase and remove impervious because it is their regulation? – Yes
    - Should we establish a Brown Trout Mitigation/Enhancement Group to deal with specific issues? -- Yes
    - UMD to help with Temperature issues

- Need a watershed model
  - Groundwater and surface water
  - Defensible technical solutions
- Propose work group composition to Agencies
  - COE Vicksburg?
  - HHD and Coastal to develop a list for the 9/10/03 meeting
    - Need idea run by planning
    - Develop a written committee purpose

Meeting adjourned.

Meeting Minutes

Meeting Date: October 22, 2003

Meeting Time: 10 a.m.

Meeting Place: BDD Conference Room

Attendees:

Name	Representing
S. Ridenour	SHA/EPD
A. Kosicki	SHA/BHD
P. Wettlaufer	USACOE
S. Elinsky	USACOE
D. Johnson (FHWA)	FHWA
J. Parikh	FHWA
R. Rye	SHA/PPD/W.T. B. – ICC PMT
B. Jarboe	SHA/PPD/URS – ICC PMT
D. O'Leary	SHA/HHD/NMP

Todays Date: December 3, 2003

Subject: ICC / Good Hope Tributary

Minutes:

This meeting was called by USACOE to discuss stormwater concerns related to Good Hope tributary to Paint Branch. The purpose of the meeting was to discuss USACOE concerns and present SHA's approach to addressing specific water resources related issues, e.g. water quality including temperature.

Discussion:

- Stormwater concerns in Paint Branch are.
    1. Additional impervious cover in the watershed as a result of the project.
    2. Thermal stormwater loadings affecting fish and other aquatic species.
    3. Present and future runoff volumes causing channel degradation.
    4. Sediment control during construction.
- USACOE wants to address the first 3 items above as follows:
    1. Consider moving the high point along the alignment between NH Avenue and Good Hope to be centered over Good Hope. Drainage from the roadway would

then be directed away from Good Hope in both directions. Only the first 1-1/2 inches of runoff would be treated via infiltration in the watershed.

2. Employ bioretention and infiltration to treat first 1-1/2 inch of runoff while minimizing taking of trees.
3. Treat water quantity within roadway footprint using vaults. Direct outflow from facilities to Paint Branch, not Gum Springs or Good Hope tributaries.

- USACOE recently constructed an outfall from an existing pond in Gum Springs watershed to Paint Branch to divert warm water discharges. The result has been positive, e.g. temperatures in Gum Springs have been lowered.
- USACOE brought up that USFWS has suggested pumping groundwater to mix with surface water to mitigate temperature.
- PMT members discussed shifting the high point along the alignment and what other factors / constraints must be evaluated before the comment about moving the high point to center on Good Hope can be addressed.
- HHD informed USACOE about on-going work with regard to:
    - Temperature: HHD has engaged UM PhD to develop temperature strategy for BMPs.
    - Water Quality: Agreed to look into diverting flow from Good Hope elsewhere.
        - Assessing potential for treating WQ in medians.
        - Acknowledge that infiltration, bioretention and filters are best BMPs for application.
        - Will provide WQ off-line and discharge downstream to Paint Branch depending on feasibility.
    - Water Quantity:
        - Informed USACOE that SHA already considering underground storage.
        - Awaiting info from UM about the best way to mitigate temperature at the same time.
        - Assessing whether SHA can divert runoff from developed areas up-gradient from ICC to beyond Good Hope and Gum Springs.
- Action Items for DJO
    - Check with USGS to determine if they have any national stream temperature expertise.
    - Get a copy of the Groundwater Siphon paper to USACOE.
    - Prepare a BMP Maintenance and Inspection Program presentation for a future IAWG meeting.

Meeting adjourned.

Meeting Minutes

Meeting Date: November 14, 2003

Meeting Time: 1 p.m.

Meeting Place: SHA / OPPE Conference Room

Attendees:

Name	Representing
R. Veeramachaneni	SHA/HHD
R. Shreeve	SHA/EPD
Heather Amick	SHA/PPD
S. Elinsky	USACOE
D. O'Leary	SHA/HHD/NMP
G. Golden	DNR
C. Gougeon	DNR
W. Schultz	USFWS
D. Marshall	MCDEP
B. Bernstein	SHA/EPD/KCI
C. Weinkam	SHA/EPD/CR

Today's Date: March 18, 2003

Subject: ICC Brown Trout

Minutes:

The purpose of the meeting was to further discuss Brown Trout issues and develop a team for establishing and attaining group goals.

Discussion:

- History of the fishery (from C.G.)
  - Station on Good Hope began in 1979 for electrofishing.
  - Trout stocking dates back to 1929.
  - In the lower portion of the watershed, fish have been found upstream of BARC property and downstream to Metzerott Road.
  - '03 was the first year when no "young of the year" were found in Good Hope and other tributaries.

- ’02 groundwater lowest on record and contributed to fishery failure.
- Water is clear but hydrology isn’t right, e.g. cobble material found on point bars.
- Paint Branch is among the last of urban trout streams.
- Maintaining Paint Branch is essential part of Anacostia Restoration efforts.
- Option “G” -from previous studies (above Hobbs Drive) - crosses the historically most productive (highest number of trout) fishery in the watershed.
- Good Hope is at 10.2% impervious (D.M.)

- SHA’s approach to SWM (R.V.)
  - Treat 1-1/2 inches of runoff.
  - Divert flows around critical fisheries.
  - Can we add cold water to Good Hope?
    - Temperature sensitive switch or other technology.
  - Provide Channel Protection Volume (Cpv) but not Overbank Flood Protection Volume (Qp). Qp would likely access floodplain unless stream deeply incised / entrenched.
- FHWA (D.J.) meets with special interest groups, so maybe he should be included or get minutes from this group.

Other business:

- Work Group attendees should (and does) include MWCOG and MNCPPC representatives. Difficulty in attending may be a result of location.
  - Meet in the watershed to get better participation?
- How frequently should this group meet? Next meeting in January ’04.
- Do road salting operations impact the fishery? If so, is it correctable?

Meeting adjourned.

Meeting Minutes

Meeting Date: January 20, 2004

Meeting Time: 10 a.m.

Meeting Place: SHA Fairland Shop

Attendees:

Name	Representing
Raja Veeramachaneni	SHA/HHD
Rob Shreeve	SHA/EPD
Heather Amick	SHA/PPD
Steve Elinsky	USACOE
Dan O'Leary	SHA/HHD/NMP
Greg Golden	DNR
Candy Bunnag	MNCPPC
Bill Schultz	USFWS
Doug Marshall	MCDEP
Roger Windschitl	SHA/KCI
Richard Heimbach	SHA/Skelly & Loy
Sarah Williamson	SHA/CRI

Today's Date: May 13, 2004

Subject: ICC Brown Trout Meeting

Minutes:

The purpose of the meeting was to further discuss Brown Trout issues, begin to review some of the designs being developed to address these issues, and receive comments on the designs and overall approach as they are developed.

Discussion:

1. Work group guidelines
    a. Would like to meet whenever there may be new information to present for review and comment.

b. SHA (R.V.) would like to expand scope of group somewhat to get feedback on other watersheds as SHA works to customize SWM for each watershed. This will also be addressed in other forums, but this group would have valuable insight.

c. MDNR (G.G.) suggested there may be areas of Use III waters where temperature is not the primary issue and trade offs for water quality might provide greater benefit to the stream, e.g. the lowest portions of the North Branch Rock Creek Use III stream reaches. Further interagency discussion, especially with local jurisdictions, is required to gain consensus on this approach within the work group.

d. Group would still benefit from participation from MWCOG (J. Galli). A letter is being drafted specifically asking for MWCOG's participation. It was suggested that MDE also be invited to the meetings so they were aware of any negotiations that affect the SWM package that will ultimately be reviewed by their office. They will be invited or at least provided with copies of all the minutes of the meetings.

e. MNCPPC (C.B.) suggested that copies of Brown Trout Meeting Agendas and Invitations be sent to Leo Galanko of MDPS. Leo coordinates SPA reviews for MCDPS.

f. SHA handed out a written draft of SHA's "Stormwater Management Approach to Water Resource Protection in the ICC Study Area".

2. ICC update (H.A.)

a. Public meetings were held in November. Two in Montgomery and one in PG. Over 900 total in attendance in Montgomery and over 100 in Prince George's. Comments seemed to center on natural resources, concerns by citizens along Alt. 2 that they had purchased homes with the understanding that ICC would follow Alt. 1, requests for bicycle trail for the length of the alignment and concerns over cost.

b. Schedule continues to move towards document hearings in November.

c. The Alternatives Retained for Detailed Study (ARDS) have been sent out to agencies for comment. Comments are due back this week with a final copy expected to be circulated by the 26th.

d. Tech reports will go to agencies in April/May.

e. More detailed design by Section Engineers is beginning this week.

f. Should be noted that the Brown Trout resource has been mentioned numerous times as an important issue by the Governor and the media. This group will be important in helping achieve the least impact practicable and will need to "think outside the box" to make this happen.

3. Typical Sections and SWM (R.V.)

a. Looking at two main typical sections: one with 26' median and one with a 50 foot median. In sensitive areas that do not lend themselves to traditional SWM

approaches, SHA is investigating the use of linear stormwater treatment that puts SWM along shoulders and within the median. The overall difference in the roadway footprint between the 26 foot and 50 foot median when linear stormwater treatment is included is less than 12 feet, which is negligible when considering the overall width of roadway.

b. SHA presented the SWM approaches for the Paint Branch watershed that are currently being developed. They rely primarily on linear infiltration practices including bioretention, sand filters and dry swales with an additional system to capture extra stormwater not infiltrated that will then be stored and/or routed away from temperature sensitive resources. SHA will look at the needs at each individual drainage point and choose the best type of facility for that site. A more traditional SWM approach will most likely be used in other watersheds with a few exceptions.

c. In general, ICC SWM strategy is to provide water quality treatment for 1-1/2 inches of runoff and detain the 1-year storm (2.6" rainfall) for slow release using MDE manual procedures for channel protection volume (Cpv). Result is expected to be reductions in the 10 and 100 year discharge rates as well.

d. Because drainage from bridge decks should bypass GH and GS, the bridges will likely have to be wider than usual (=> more impervious area) to accommodate storm flows on the shoulders without flooding the travel lanes.

e. DNR (G.G.) asked if medians (26 or 50 foot) could be transitioned back to "0" feet for the stream crossings. The answer is yes, but stormwater management becomes more challenging in those areas.

f. Details of the proposed infiltration system that were presented will be summarized by SHA (D.O.) in writing and provided to the NEPA team and this group.

g. MDNR asked which median design provides the most redundancy. Answer: wider median does, but this also has much higher construction and maintenance costs.

4. Alternatives for runoff treatment at Good Hope (GH) and Gum Springs (GS) (D.O. & R.V.): Looking at best way to deal with flows not infiltrated in the linear treatment facilities. They will be piped, but still looking at where they will discharge.

   a. Option 1: Water not infiltrated in GH watershed moved through trunk lines (perhaps a half-pipe across bridge) to discharge beyond lower Gum Springs into Paint Branch mainstem. Will look into options for modifying existing GS bypass pipe and the possibility of providing treatment of some of the runoff by enlarging two existing ponds between GH and GS.

   b. Option 2: Run ICC runoff away from GH to the west through deep pipe to discharge to NW Branch watershed. This pipe would have to be 50' in the ground to buck natural grade. For numerous reasons this does not appear to be a viable option because of required disturbance to bury pipe, long-term maintenance of the

pipe, and cost. Additionally, MDEP (Dan Harper/K. Van Ness) raised concerns about potential impacts to NW Branch tributary and downstream stream restoration plans. Impacts of concern would result from increased stream flows resulting from a drainage area diversion. Further discussion is required to resolve benefits and disbenefits of creating a drainage area diversion from Paint Branch to NW Branch.

c. Options 3: Pumping station to pump runoff away from GH to the west to NW Branch. At least three large pumps would be required to handle large stormflows. This option may have too many moving parts that could fail when they are most crucial. SHA is currently putting one in Frederick in a sinkhole situation because there are no other viable options. There they also have a large holding pond to facilitate the system, which couldn't be accommodated here without additional impacts. Cost of the Frederick system is 10 million.

d. Notes / Comments on Options

   i. USFWS (B.S.) noted that pumping seems too risky, as failure of could potentially mean a large release of stormwater that could wipe out the trout.

   ii. MDEP (D.M.) was concerned that piping runoff out of watershed might negatively affect streamflow. Particularly in the small tributary between MD 650 and GH where the road will impact a wetland that provides the primary baseflow to that small stream. Suggested that increasing infiltration at the MC Maintenance Depot might help maintain hydrology for the stream. SHA noted that the flow from the wetland would still be captured in a spring box and piped to maintain flow of the stream.

   iii. SHA (R.V.) stated that the goal of the proposed linear infiltration system is to replace the recharge that the impervious roadway removes at a minimum, so that the overall water budget for the watersheds is not changed.

   iv. USFWS (B.S.) stated that they would prefer that the hillsides north of the proposed road not be allowed to drain directly to GH because there were a number of areas that were acting as sediment sources. SHA should try to convey off-site water from those areas along with ICC drainage to discharge below GH and GS.

   v. MNCPPC (C.B.) noted that the open area where equipment and gravel is stored below Cavendish Drive will be restabilized as mitigation for Briggs Chaney Intersection and will also be planted so that it will no longer cause sedimentation. It may be possible to use some of this site for additional infiltration along with the plantings that are already planned. SHA will keep this in mind.

   vi. MDNR (G.G.) suggested that SHA look at the possibility for retrofitting the pond at Countryside (perhaps as ES) to improve treatment and/or

minimize thermal impacts there. SHA (D.O.) will contact MDPS to obtain any available information on Countryside pond.

vii. SHA (D.O.) said that SHA was looking in to the possibility of doing something on the tributary to Gum Springs to potentially bypass stormwater to lower Gum Springs. MDEP (D.M.) noted that Dan Harper has already identified that area for a retrofit and may already have a design there. D.O. said he would talk to D.H.

5. DEIS will include language about linear and traditional approaches to SWM.
6. Linear approach to SWM should be pursued in SPA along the Corridor 2.
7. North Branch of Rock Creek wetland system is a DNR Biodiversity Area and MCouncil will be voting on whether or not it should be a SPA soon.
8. Summary:
    a. In Upper Paint Branch SHA is proposing to go with this linear infiltration approach unless something new and even more effective is developed.
    b. For the entire ICC, will assess importance of temperature parameters and may use it elsewhere if needed. The remainder of the corridor would receive more conventional treatment.
    c. Where there are baseflow issues and wetland hydrology concerns, infiltration could be targeted if necessary or as stewardship.
9. Future Meetings:
    a. Fairland location is an improvement and acceptable to all.
    b. Will meet in two months (March) when more information should be available and sooner if there is something to be discussed.

Action Items:

- Send Meeting Minutes to MDE. Also include Leo Galanko MNCPPC Department of Permitting (240-777-6242).
- Develop written summary of linear infiltration approach for use in NEPA document and for those that did not attend.
- Talk to Dan Harper about Gum Springs retrofit plans.
- Get plans for Countryside pond.

Meeting adjourned.

Meeting Minutes

Meeting Date: March 19, 2004

Meeting Time: 1 p.m.

Meeting Place: SHA Fairland Shop

Attendees:

Name	Initials	Representing	Phone
Raja Veeramachaneni	R.V.	SHA/HHD	410 545 0412
Steve Elinsky	S.E.	USACOE	410 962 4503
Dan O'Leary	D.O.	SHA/HHD/NMP	410 545 8431
Greg Golden	G.G.	DNR	410 260 8334
Charlie Gougeon	C.G.	DNR	301 854 6060
Candy Bunnag	C.B.	MNCPPC	301 495 4543
Leo Galanko	L.G.	MCDPS	240 777 6242
Doug Marshall	D.M.	MCDEP	240 777 7740
Keith Van Ness	K.V.N.	MCDEP	240 777 7726
Barbara Rudnick	B.R.	US EPA	215 814 3322
Chuck Weinkam	C.W.	SHA/CRI	410 956 9000

Today's Date: March 24, 2004

Subject: ICC Brown Trout Meeting

Minutes:

The purpose of the meeting was to further discuss Brown Trout issues, begin to review some of the designs being developed to address these issues, and receive comments on the designs and overall approach as they are developed.

Discussion:

1. The question was raised from previous meeting minutes about how SHA would know where temperature is a concern, versus where water quality concerns may supercede temperature concerns, etc.
    a. G.G. responded by saying that in Upper Paint Branch (UPB) the concern is definitely temperature, whereas in North branch Rock Creek (NBRC) in the

"lower portion" concern for water quality may override temperature concerns (because there is not much stream length between where the ICC impacts would be and where the Use III designation downstream boundary is located).

b. K.V.N. mentioned that the DNR Biodiversity Area is just south of the ICC alignment in NBRC so minimizing impacts in that area should be high priority. Limits of Biodiversity Area can be obtained from Brian Bernstein.

2. Median Width Update (D.O.)

   a. D.O. informed the group that median widths being used in the engineering studies included 26 feet, 36 feet and 50 feet. The 26 foot median was being studied for use only in tightly constrained corridors such as neighborhoods, and the 50 foot was studied in all Special Protection Areas (SPAs). The 36 foot median was being studied everywhere else. The SPAs now include the Upper Rock Creek SPA, assuming that the Olney Master Plan is adopted.

3. Update on alignment studies in Good Hope:

   a. Infiltration is paramount, both from SHA and resource agency perspectives, however, given the design life of infiltration facilities, a stormwater management approach having a longer design life, less rigorous maintenance and higher pollutant removal efficiency may be preferable. SHA will include groundwater recharge and infiltration in stormwater management designs within SPAs.

   b. D.O. described the vertical alignments being studied, including one that places the roadway high point just west of the ICC bridge over Good Hope Tributary, causing about 2,000 linear feet of mainline roadway and ramps to NH Avenue to drain toward Northwest Branch. D.O. Asked if the change in drainage area caused by the highpoint location would affect the SPA boundary. C.B. answered that the SPA boundary would remain the same, and infiltration should be pursued in the area diverted so as not to remove groundwater recharge from the watershed.

   c. D.O. explained about the typical spring box that SHA uses to handle groundwater upwelling on roadway projects. The spring box was discussed as a means for addressing the spring on the south side of the MCDPW&T Maintenance Depot (Depot). MCDEP (D.M.) commented that the spring box outlet should be shaded and should not include riprap that may cause discharge temperatures to increase. Additionally, MCDEP has retrofitted the Forester Pond to mitigate thermal problems it caused on the same tributary. MCDEP has been monitoring temperature, biology and chemical data in this tributary for years.

   d. A project goal should be to replicate the groundwater recharge from the diverted drainage area even though the surface runoff from the same area would be diverted.

   e. MCDEP recommended that any spring box outlet be constructed underground in a stone trench so as to discharge via upwelling through the stone.

   f. C.B. asked if Depot impervious could be reduced and infiltration added. R.V. answered by saying that stormwater changes to the Depot would be viewed as

Environmental Stewardship. D.M. added that maybe some impervious surface at the Depot could be removed. C.B. commented that any impervious removal would be applied to the 10% impervious cap.

g. Should the Depot stormwater discharges cross the ICC into the Good Hope Tributary or should they be conveyed to Northwest Branch with the roadway stormwater?

   i. Keeping the outfall the same: Pro: maintenance of baseflow in trib. Con: Surface discharge that may have chlorides gets discharged to trib, infrequent storm flows (Q10, etc.) may affect stream stability.

   ii. Discharging to NW Branch: Pro: Surface discharge that may have chlorides bypass trib and Good Hope. Con: Baseflow may be reduced.

This topic needs more discussion in a future BTWG Meeting, after review of the MCDEP monitoring data and a field visit to the Depot.

4. Environmental Stewardship

   a. Piping Rock Road:

      i. Discharge entering mainstem is discolored. May be a result of runoff from construction near Safeway on MD 650: Needs water quantity and quality control.

      ii. Peachwood Park: Small park with parking area, tennis courts, basketball court, sitting right on a significant uncontrolled tributary. C.W. and others at Coastal Resources (CRI) are investigating.

   b. CRI staff is looking at Good Hope mainstem and tributaries throughout the watershed in effort to identify stream restaoration and stormwater retrofit projects, in concert with MCDEP efforts (past and on-going).

   c. K.V.N.: GIS from early Upper Paint Branch (UPB) studies shows uncontrolled paved areas. Schools and other areas may be uncontrolled or “under-controlled”.

   d. Reforestation of buffer areas could be considered as ES in Left Fork (LF), UPB.

   e. Thermal spikes occur upstream from Twin Ponds on LF, below trib confluence.

   f. Trout habitat areas (Good Hope, Gum Springs) should get higher ranking priority than others (Left Fork, Right Fork).

   g. ES Opportunities may include trout habitat improvements, e.g. removing blockages that inhibit or prevent access for spawning.

   h. K.V.N.: Is SHA planning to monitor to determine effectiveness of ES? May need to focus on monitoring needs in future meetings.

5. SPA Coordination.

   a. L.G., the SPA Coordinator for MCDPS attended this BTWG meeting to participate and determine if these meetings would suffice as SPA Preapplication or Coordination Meetings as required under the SPA process. L.G. stated that, like

other SHA planning projects, it is difficult to establish goals for a project that has multiple alignments still under consideration.

b. R.V.: All alignments and alternatives are being studied to equal depths at this time, so would broader water quality goals be more appropriate for this project than specific goals typically envisioned for development projects?

c. L.G.: The BTWG meetings are an acceptable means at present for documenting the process that SHA has undertaken to address stormwater concerns in the SPA watersheds. Additionally, the treatment train approach described for treating stormwater in the SPA should be documented.

Action Items and Disposition from Last Meeting:

- **AI:** Send Meeting Minutes to MDE. Also include Leo Galanko MNCPPC Department of Permitting (240-777-6242). **Disposition:** L.G. invited and in attendance at the 03/19/04 meeting. Minutes from previous meetings distributed for L.G. and all participants to review and comment.
- **AI:** Develop written summary of linear infiltration approach for use in NEPA document and for those that did not attend. **Disposition:** D.O. prepared a written description of the linear stormwater treatment approach for inclusion in the Natural Environment Technical Report (NETR) that was due in draft form to SHA reviewers on March 19, 2004. Once reviewed and approved by SHA, the NETR will be available for public comment.
- **AI:** Talk to Dan Harper about Gum Springs retrofit plans. Disposition: D.O. and C.W. have to meet with D.H. in the near future about ES opportunities in general, and Gum Springs will be on the agenda.
- **AI:** Get plans for Countryside pond. **Disposition:** K.V.N. suggested that we look at the temperature data from the vicinity of Countryside Pond to determine if discharge from it truly is a thermal impact on UPB mainstem before trying to retrofit. D.O. will follow up with Dan Harper and K.V. N on this.

Action Items This Meeting:

- **AI:** D.O. to get biodiversity area boundary from Brian Bernstein at KCI and pass on to Section Engineers.
- **AI:** SHA to obtain and review biological and chemical monitoring from downstream of the MCDPW&T Maintenance Depot and prepare to report to BTWG on findings.
- **AI:** SHA to organize a field trip for BTWG members to visit UPB watershed and discuss spring on Depot trib and ES opportunities.

Meeting adjourned.

COASTAL RESOURCES INC.

2988 Solomons Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (Fax)

MEETING MINUTES

Date: September 7, 2004

To: Attendees

From: Sarah Williamson

Subject: ICC Small Drainage Crossings

On August 19, 2004, representatives from MDNR, MCDEP, MNCPPC, and SHA met at the MCDEP offices to discuss resident fish passage through proposed small drainage crossings along the ICC Corridors. The purpose of the meeting was to review the location of the proposed culverts in relation to stream channel and fish community characteristics and determine where fish passage was of particular concern. The following were in attendance at the meeting:

Lonnie Darr	MCDEP	
Greg Golden	MDNR	410-260-8334
Dan O'Leary	SHA-HHD/NMP	410-545-8431
Doug Redmond	MNCPPC	301-650-4367
Matt Smith	Skelly & Loy	301-766-4236
Keith Van Ness	MCDEP	240-777-7726
Chuck Weinkam	CRI	410-956-9000
Sarah Williamson	CRI	410-956-9000
Alicia Youmans	MCDEP	240-777-7738

The group reviewed the GIS overlays of the SHA culvert and right-of-way information with the stream features and fish data from MCDEP. Prior to the meeting, both CRI and MCDEP had performed an initial review of these data layers and identified which culverts would most likely be a priority for fish passage. The group worked with these initial efforts and came to consensus on any discrepancies between the MCDEP and CRI efforts. In general, the group used four categories to identify the fish passage needs at each culvert as follows:

- **Not Applicable** - these culverts were proposed in areas with no stream channel or only small ephemeral channels and would therefore not require any fish passage considerations;
- **Standard MDE Protocol** – these culverts generally occur on streams with drainage areas smaller than 100 acres and/or with limited upstream habitat that would be available for fish after construction of an ICC Corridor. At these culverts, it is assumed that compliance with standard MDE requirements for burying of culvert bottoms wherever possible would meet the fish passage requirements at these sites;
- **Further Investigation Needed** – these culverts occur on streams where fish data, stream drainage area or design information provided for the crossing does not clearly indicate whether fish passage will be a priority. A field review of these sites will be set up to investigate the needs at these locations.

- **Fish Passage Needed** - these culverts occur on streams where fish data and/or stream drainage area indicate that passage of resident fish populations would be a priority for maintaining the biologic integrity of the stream. Standard MDE protocols for burying culverts at these locations would be investigated, but further design considerations may be needed if the buried bottom requirements could not be met or might not provide adequate fish passage due to the length of the culvert required.

The category assigned to each culvert during the meeting is provided in the "Current Status" column of the attached spreadsheet.

In addition to the crossings reviewed in the attached table, the group noted a few other crossings where culverts appear to be proposed that do not show up in this culvert data table. The first of these is at Station 151 on Corridors 1 and 2 on Mill Creek just west of Shady Grove Road. The group determined that this crossing would fall into the "**Standard MDE Protocol**" category as upstream habitat is limited by an existing SWM pond. The crossing of Buckhorn Branch by Corridor 2 at Layhill Road (Station 518) was categorized as "**Fish Passage Needed**" for any culvert extensions for the ICC. It was assumed that the Corridor 2 crossing of Northwest Branch would include an extension of the existing bridge, effectively retaining the existing fish passage at this location.

Based on the work completed at the meeting, ten sites were determined to require fish passage or further investigation. The group decided that they would meet again for a field review of these ten sites to provide additional information on these crossings to SHA. Due to the volume of project work in August and early September, it was decided that a date to meet would be determined at a later time; most likely late September or early October.

cc: Rob Shreeve, SHA EPD
Heather Lowe, SHA PPD

Meeting Record

Organization: ICC Brown Trout Work Group
Date of Meeting: January 10, 2005 Location: Good Hope Tributary
Meeting Documented By: Dan O'Leary/Chuck Weinkam

ATTENDEES

Name/Title	Organization
Daniel O'Leary	SHA/NMP Engineering Consultants, Inc.
Chuck Weinkam	Coastal Resources, Inc.
Doug Marshall	Montgomery County DEP
Andy Franks	M-NCPPC
Barbara Rudnick	USEPA
John Galli	MWCOG
Rob Shreeve	SHA Environmental Programs
Heather Lowe	SHA Project Planning
Doug Redmond	M-NCPPC
Candy Bunnag	M-NCPPC
Greg Golden	MDNR - Fisheries
Charlie Goudgeon	MDNR - Fisheries
Steve Elinski	US Army Corps of Engineers
Matt	MdTA Skelly and Loy
Roger Winschitl	KCI Technologies, Inc.
Guy with Binoculars	

Summary of Discussion

Purpose of the Meeting : Address concerns raised that there may be more opportunities than presently identified in the Good Hope watershed to construct stream restoration projects for ICC Environmental Stewardship or Compensatory Mitigation.

The meeting began at the Piping Rock Drive crossing of a Good Hope tributary, and then the attendees proceeded to walk the stream in the downstream direction, exiting the stream corridor to Gladbeck Drive. Initial conversation centered around the need for hydrologic controls in the watershed to prevent further stream degradation.

What are the concerns of the organization or individual:

Piping Rock Drive SWM Pond

1. Sediment discharges are entering trib upstream from the SWM pond. Likely source is/was the Safeway construction site, but not confirmed. SHA team to review the upstream trib to better understand sediment input source(s).
2. SHA Team to review design of the SWM pond to determine if there is room to "tweak" the flow splitter design to make more use of the pond. Members of the group discussed

Meeting Record

maintenance of the facility because clogging of the pond intake causes frequent overtopping of the weir.

3. DEP has hydrograph data on the trib that has been collected for about 10 years. The data collected since the pond was constructed has never been analyzed to determine the effectiveness of the pond.

Peachwood Park Tributary

1. DEP is soon to be constructing a stream restoration project below Peachwood Park. No peak control is contemplated in the park because of the difficulty in gaining consensus about park uses and benefits. Opportunity still exists for SHA to pursue this retrofit.

Good Hope Road

1. A short section of Cape May Road (just north of the Maintenance Depot) drains uncontrolled through the woods to Good Hope. Erosion is present in the drainage course and DEP added biologs in the past to reduce bank erosion
2. Retrofitting was proposed upstream from Cape May Road but never pursued because the drainage area and discharges are small. Another opportunity may exist to retrofit this section of road.

Additional information:

Follow-up / Action Items:

1. .

cc: Attendees, File

COASTAL RESOURCES INC.

2988 Solomons Island Road
Edgewater, MD 21037
410-956-9000
410-956-0566 (Fax)

MEETING MINUTES

Date: September 20, 2005

To: Attendees

From: Sarah Williamson

Subject: ICC Small Drainage Crossings Field Meeting – Revised Meeting Minutes

On August 08, 2005, representatives from MDNR, MCDEP, MNCPPC, and consultants for SHA and MdTA met to follow up on an August 2004 meeting. The following were in attendance at the meeting:

Greg Golden	MDNR	410-260-8334
Doug Redmond	MNCPPC	301-650-4367
Tina Schneider	MNCPPC	
Matt Smith	Skelly & Loy	301-766-4236
Keith Van Ness	MCDEP	240-777-7726
Sarah Williamson	CRI	410-956-9000
Megan Roberts	CRI	410-956-9000

At the meeting in 2004, the group had reviewed the location of proposed culverts on Corridors 1 and 2 in relation to stream channel and fish community characteristics using GIS and County fish data and determined where fish passage was of particular concern. In general, the group used four categories to identify the fish passage needs at each culvert as follows:

- **Not Applicable** - these culverts were proposed in areas with no stream channel or only small ephemeral channels and would therefore not require any fish passage considerations;
- **Standard MDE Protocol** – these culverts generally occur on streams with drainage areas smaller than 100 acres and/or with limited upstream habitat that would be available for fish after construction of an ICC Corridor. At these culverts, it is assumed that compliance with standard MDE requirements for burying of culvert bottoms wherever possible would meet the fish passage requirements at these sites;
- **Further Investigation Needed** – these culverts occur on streams where fish data, stream drainage area or design information provided for the crossing does not clearly indicate whether fish passage will be a priority. A field review of these sites will be set up to investigate the needs at these locations.
- **Fish Passage Needed** - these culverts occur on streams where fish data and/or stream drainage area indicate that passage of resident fish populations would be a priority for maintaining the biologic integrity of the stream. Standard MDE protocols for burying culverts at these locations would be investigated, but further design considerations may be needed if the buried bottom requirements could not be met or might not provide adequate fish passage due to the length of the culvert required.

The purpose of the current meeting was to conduct a field visit to the sites categorized as "Fish Passage Needed" or "Further Investigation Needed" to either confirm the determination made in the 2004 GIS analysis or gather the additional information needed to place the crossing in one of the above categories.

The group visited the location of culverts 1 and 17 which are located in close proximity to each other on a tributary of Mill Creek. It was the opinion of the group that these culvert crossings should receive the Standard MDE Protocol and that additional measures would not necessarily be called for to meet a greater measure of passage design. This was based on the fact that the two culverts would be placed so close together, and the culverts are each proposed to be approximately 300 feet in length (based on updated information from the engineering team, culvert 1 would be 315' long and culvert 17 would be 300 feet long). The stream is a headwater system and is likely to support mostly pioneer species. The culvert lengths are likely to diminish upstream passage and there would be little upstream habitat that would be accessible even with additional passage measures on the culverts.

The group then noted that all the remaining sites to be reviewed were located on Corridor 2, with the exception of two on Indian Creek in Prince George's County. Because the state's preferred alternative has been announced as Corridor 1, it was decided that it was not necessary to visit the Corridor 2 sites at this time. The primary meeting was then adjourned, though MDNR was still interested in reviewing the two sites in Indian Creek., which are outside of Montgomery County jurisdiction.

Upon review, culvert 136, which carries Bear Branch beneath I-95, was found to have an existing fish blockage at the downstream end. The concrete apron is cracked and falling into the stream which is three to four feet below the culvert invert. The stream runs through old mining land and is very entrenched and unstable. In addition, there is an in-line pond upstream of I-95, and Laurel Lake is located a relatively short distance downstream. MDNR asked that the crossing be listed as Standard MDE Protocol, but recognized that the further engineering analysis may determine that this protocol is not feasible given the existing conditions. With the existing impediments to fish passage just upstream, MDNR would not oppose the interagency consideration of a potential waiver. However, it was noted that extension of the culvert should include measures to stabilize the outfall and improve the unstable nature of the stream.

At culvert 140, MDNR requested Standard MDE Protocol, though it was noted that the culvert downstream at Muirkirk Rd. and the intermittent nature of portions of the stream might limit existing fish movement enough that if the culvert could not be buried to MDE guidelines, these conditions might preclude it as a priority for further measures.

cc: Rob Shreeve, SHA EPD
Heather Lowe, SHA PPD
Dan O'Leary, SHA HHD

Meeting Notes

Meeting Date: October 25, 2005

Meeting Time: 9 a.m.

Meeting Place: Montgomery County DPS

Attendees: MCDPS – Leo Galanko (LG)
SHA / HHD – Dan O'Leary (DO) / author

Subject: MC Coordination

Minutes:

The purpose of the meeting was to meet again with MCDPS about SPA issues and where the ICC studies have gone since the last meeting. With the Final Environmental Impact Statement distribution imminent, MDPS is likely to start hearing questions and concerns from citizens about the FEIS language regarding the SPAs. Additionally, with the evolution of the ICC typical sections and other factors affecting the SPAs, input from MDPS was sought to ensure that there would be no surprises later.

General

DO gave an update regarding ICC FEIS, ROD and potential contract schedules, potential contract breaks, typical sections, ROD commitments, etc.

DO reviewed the typical sections for SPA and non-SPA areas, explaining that MDE said they could approve the project using grass channel credits in SPAs (provided that the channels meet the criteria) and that linear filter would be viewed as over and above requirements. Although not necessary to meet MDE SWM requirements, the linear filters were added to address SPA requirements, minimize receiving stream impacts, and do the best possible job of resource protection. Check dams would be included on approximately 750 to 1000 foot intervals to control the 10-year storm, and that there would be more frequent inlets as required to keep the WQ storm discharge from exceeding 1 fps.

LG mentioned that MDPS drainage area thresholds for BMPs are: 3 acres for surface sand filters; 1 acre for underground sand filters; and 1 acre for biofilters (linear dry swales). Also, surface sand filters are required to have pea gravel topping to reduce clogging potential. LG said that if grass topping were to be used on dry swales, MDPS would likely consider them to be bioswales, and recommended

constructing a pea gravel window for approximately 20 feet upstream from inlets to better ensure sand filtration of the water quality discharge prior to reaching inlets.

Roll Maps

DO reviewed roll maps provided by RKK and WTB Co. for the SPAs. DO explained that except where parkland impacts would result, SHA would construct dry ponds to meet 12 hour ED requirements. LG stated that 12-hour ED dry ponds are consistent with DPS policy in SPAs.

DO explained that no surface runoff would enter Good Hope or Gum Springs, as well as diverting drainage area to NW Branch from Paint Branch.

Follow-up

LG asked for a copy of the typical sections for discussion within MDPS. DO will get approval from the GEC to give MDPS a copy of the draft typical.

DO asked if LG could e-mail a response to DO's previous e-mail explaining the SWM approach in SPAs and requesting concurrence from MDPS.

DO asked about the possibility of using porous pavement for the bike trail and how that might be viewed under the impervious cap in the SPA. LG said the lead agency for the impervious cap reviews in the SPA is MNCPPC (Environmental Staff), and to coordinate with them directly.

CC:

1. All Attendees
2. Raja Veeramachaneni
3. Karuna Pujara
4. Mike Wetzel
5. Wesley Mitchell
6. Ronald Rye
7. Brian Jarboe

Meeting Notes

Meeting Date:	June 9, 2006
Meeting Time:	1:30 a.m.
Meeting Place:	Montgomery County DPS
Attendees:	MCDPS – Leo Galanko (LG) MCDPS – Mark Etheridge (ME) MNCPPC – Andy Frank (AF) MNCPPC – Pamela Rowe (PR) SHA – Mike Wetzel (MW) SHA / HHD – Dan O'Leary (DO) / author
Subject:	ICC – MCDPS SPA Meeting

Minutes:

The purpose of the meeting was to meet with MCDPS and MNCPPC about SPA issues, where the ICC studies have gone since the last meeting, and how to incorporate SPA Review and Mandatory Referral into the Design Build process (or vice versa).

General

MNCPPC is charged with writing a staff report including recommendations to the Board by the end of June 06. Typically the staff report discusses the water quality plan as approved by MCDPS. On this project there is no formal water quality plan at this time because plans (in general) will not be developed until a design builder is selected and that entity develops plans. Discussion continued about how and when MCDPS would get involved in the WQ plan review process so as to contribute in a meaningful way.

Typically a project is submitted for SPA review to MCDPS with sketch level SWM concepts included. MCDPS reviews the submittal and a (preapplication) meeting is arranged to discuss the WQ aspects, establish WQ goals, and pre and post construction monitoring requirements. By County Code no earth disturbance can start until Preliminary and Final WQ Plans are approved. ICC Performance Specifications (PSpecs) and other documents provided to MCDPS and MNCPPC to date do not sufficiently address WQ Plan requirements to constitute submission of a WQ plan.

Two questions were raised about MCDPS involvement:

1. The question was raised (by AF) about whether or not MCDPS review and approval can be added into the PSpecs (PS 310 Environmental, under Permits the DB'r is required to obtain). This would make DB'r aware that MCDPS coordination is required. MCDPS would like to be involved in the process at a point prior to development of formal plans? Or…

2. Should the SPA process be added to the PSpecs (Section 3.6 B) and spelled out so the DB'r understands what is involved?

MCDPS (ME) concerned that if they identify a flaw or major flaw in the plans during design, how can it be fixed? And, if not fixed, how can it be documented that they tried to fix the problem? Should MCDPS be commenting to MDE?

Creating an MOU (PR) was discussed to address MCDPS roles and responsibilities, and process for obtaining MCDPS review of plans. The MOU should be between MCDPS, SHA and MDE. Initially the review process would involve submission of plans and reports to SHA and MCDPS. MCDPS would comment to SHA reviewers, and SHA would address or incorporate MCDPS comments. If comments were not addressed to MCDPS satisfaction, then MDE would be the appeal / arbiter.

Follow-up/Action Items
LG and PR asked for copies of "SWM Approach for the ICC" dated November 05.

SHA (DO) will prepare a table of commitments and PSpec reference sections for MNCPPC and MCDPS use.

SHA will prepare a draft MOU between SHA, MCDPS, and MNCPPC regarding SWM and ESC plan review in the SPA. The draft MOU should be ready by the end of June as part of the Mandatory Referral process.

CC:
All Attendees
Raja Veeramachaneni
Karuna Pujara
Melinda Peters
Wesley Mitchell
Brian Jarboe