



DEWAP Partner & Stakeholder Workshop



Photo by Holly Niederriter



Breakout Group Notes
DE WAP Revision & Development Team
December 2, 2014 Partner Workshop
St Jones NERR, Dover, DE



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ELEMENT 1 – SPECIES OF GREATEST CONSERVATION NEED

Compiled by Matt Sarver & Kevin Kalasz

I. Species Criteria and Ranking

Species questioned:

- Northern Goshawk (rarity)
- Rough-legged Hawk (rarity)
- Ruffed Grouse (some thought reintroduction impossible, others did not)
- American Scoter = Black Scoter

Possible list additions:

- Bald Eagle – don't we need to keep it common?
- Wild Turkey – PA, NY seeing declines in harvest and productivity
- Mink (Joe Rogerson – 1 or 2 trapping reports per year, prob more common in N Delaware. Mentioned by more than 1 person)
- Short-tailed Weasel (roadkill)
- Muskrat (regional declines across multiple habitats – possible regional project to survey in NE)
- Indiana Bat
- Big Brown Bat (check criteria)
- Dung Beetles – Dana Price at Salisbury University, Scarabaeoidea of MD eastern shore
- Mayflies – Ellen Dickey has some species-level data from DE
- Striped bass
- Billfish? Especially White Marlin

Other comments / questions

- How many species added for each criterion (e.g. especially RSGCN)? Desire to see list by criteria.
- Reminder to update new Leopard Frog name in list, as well as possible ACTION: survey for its range in DE
- How to address plant species of concern in WAP (brought up by multiple individuals)?
- Don't lose sight of state perspective in regional effort.
- Identify data gap species even if not GCN
- Why so many SGCN? How much of a cut will prioritization make?
- Do all ASMFC managed species occur offshore of Delaware?

ELEMENT 2 – KEY HABITATS

Compiled by Matt Sarver

Rick McCorkle – include GAP analysis info for habitats and species-habitat associations.

Land Use Land Cover (LULC) is being updated for Delaware

Why is microhabitat important? Kevina Vulinec mentioned importance of microhabitat to bats in golf course study

How to emphasize importance not of specific habitats but of broader systems and their interfaces (ecotones)?

How to handle mitigation wetlands of various types?

How to address standing dead forest from saltwater inundation in coastal areas (e.g. BHNU habitat at Milford Neck)

Possible habitat types:

- Impoundments – distinguish fresh vs. estuarine
- Modified/anthropogenic vernal pool – ephemeral seasonally flooded
- Stormwater Management facilities (ACTION: manage stormwater facilities for wildlife)
- Retention basins
- Sewage treatment plants for wintering waterfowl
- nourished vs. natural beaches (grain size, etc.)
- Tax Ditches
- Canals (e.g. Rehoboth)

ELEMENT 3 – CONSERVATION THREATS

Compiled by Shannon Alexander & Amy Mallette

IUCN Threat Categories

1. Residential/Commercial Development-

- Development in increased population in high mosquito risk areas
- (lack of)- consideration of indirect impacts
- Population density- too many in some places, improve quality of life at increased density areas to encourage/promote “green space” of true wild life conservation areas
- Storm water ponds (ex: Lewis Landong) because mosquito area, fish stocked to combat- fish reach other unintended habitats.
- Need more environmentally friendly solutions to temporary ponding that occurs in residential yards; instead of the common practice [at least in New Castle County] of installing a drainage system to drain this water to the nearest stream, which adds to peak discharge, and increases downstream flooding, stream channel/bank erosion and sedimentation, we need to promote rain gardens and educate homeowners about the negative impacts of this approach of installing drainage systems in these situationsLack of incentives for public implementation of BMP type solutions
- Storm water retention ponds are not “one size fits all”, ex. Bullfrog, dragon flies- predators of native species
- Impervious surfaces- storm sedimentation and water quantity issues- too much flash flooding
- Cultivated lawns should be considered as semi impervious surfaces
- Tax Ditching- (S. DE) – old infrastructure
- Environmental justice
- Require alternative energy at time of development; Make convincing argument that incentivizes developers in order to increase property value- outreach to contractor/developer

2. Agriculture & Aquaculture-

- Lack of Sustainable forestry certification requirement- DE Wild Lands & forestland has this, but expensive
- Pine Plantation- sustainability plans
- Tax ditches-
 - Dredging
 - Mowing
 - Management of navigable waters (if a wetland or water feature is either, itself, a navigable water of the U.S., or is hydrologically connected to a navigable water of the U.S., then it would fall under federal Clean Water Act jurisdiction and be subject to regulation.)
 - Exempt under CWA?- research further
 - Don’t work with other orgs.- ex: DEL DOT plantings at bridges, etc.

3. Energy Production/Mining-

- Wind Turbine Development- Birds, bats, etc.- lack of info/data- sounds from vibrations at base, electromagnetic field disruptions (sea turtles, marine mammals, etc.), placement- migration paths, dredging
- Seismic activity
- New development requirements- solar at time of building

4. Transportation/Corridors-

- Noise pollution
- Mowing of flowering plants- conflict w/ adjacent agricultural fields
- Increased shipping/larger ships- oil spills, marine mammals (noise, collisions, etc.), fish
- Salt from winter roads- fresh water plants/animals intolerant
- Dredging- timing sensitive to benthic feeders presence
- RR coordination (for maintenance around lines)- DE Valley, N Southern Ind. RR Co's.
- Channel degradation (streams, erosion, restrict)- not just passing right volume of water, but not necessarily quality of water and water body
- Scorched earth policy- for service corridor threatens successional habitats, visit too frequent, use 'light-handed' 2-3+ year cycle/approach, need to have BMPs required
- Regarding transportation infrastructure, when culverts are replaced at stream crossings, there is a history of engineering those replacement culverts to pass high flows, but without allowing for floodplain/out-of-bank flow. In other words, a replacement culvert may handle the quantity of flow, but because it is not designed to also span the floodplain, high flows become constricted by the culvert, which increases velocity and downstream erosion, and also interrupts floodplain ecological processes.

5. Biological Resource Use-

- Horseshoe Crab harvest- performance measures- review current harvest restrictions and ensure that enforcement of these restrictions is adequate
- Declining participation in hunting/trapping- now many areas protected due to recreational use

7. Natural System Modification-

- Hard shorelines
- Sand grain size for beach renourishment- eliminating benthic & intertidal inhabitants, etc.
- Concentration of toxins at place of sand dredging
- Fish stocking effects on invertebrates and native fish populations
- Dams (performance measures, look at dam removal plans)

8. Invasives/Disease

- Asian Tiger Mosquito control- larval stage
- Deer & other game species
- Lots of new diseases
 - White nose syndrome in bats
 - Viruses in reptiles & amphibians (e.g., Ranavirus)
 - Fungal problems in reptiles & amphibians (e.g., the chytrid fungus *Batrachochytrium dendrobatidis*, which causes chytridiomycosis)
- Prevention/preempt emerging diseases

9. Pollution

- Runoff- include water quality, not just hydrology

- Noise- Underwater anthrop. Activities-
 - Ships
 - Seismic testing
 - Naval activities (coordination w/ FWS)
- Ocean outfall pipes (state waters)
 - Medicinal content endocrine inhibitors, cancer rate increasing
 - Chlorine- plankton layer degraded
 - (constructed wetlands)- look at West Coast example
 - Often submerged pipes
- Pesticides- Neonicotinoids (negative effects on pollinators, etc.)
 - Sales/availability (Home Depot no longer carries herbicides/pesticides containing neonics)
 - Lawn care industry
 - Golf courses
 - Agriculture
- ‘Super weeds’ – tolerant/resistant to various herbicides/pesticides

11. Climate Change

- Inland migration of wetland- how funds are allocated for this
- Most protection/funding on Coast; need to plan further inland- “Prime Hook” example
- Misallocation of funds to protect the “wrong” areas- protect further west for strategic planning for retreat
- Increase in frequency of “100 year” storms

12. Lack of Information

- Privatization of mosquito (insect control)- Asian Tiger Mosquitoes control
- Nontarget species research/info.
- Residual chemicals in neighborhoods
- Emerging industry (lack of info and regulations)
- Demographic trend changes
- Wind turbines- currently no regulations
- Cooperation/opportunity for various stakeholders to come together- universities, NPO, etc.- this will address new faces in the industry
- Outreach/dissemination- have DE WAP at existing refuges/centers and educate staff
- DE WAP “App”
- Plan- have protocol/plan ready “in case”- response plans
- Cooperate with health department
- Design of funds to non-game (lacking as most funds go to game species) ex. Binoculars, kayak sales- registering
- salt road treatments- need salinity data
- underwater noise effects
- long-term effects of use of dredge material ex: DE River Project
- baseline data unavailable for fish stocks (native)

13. Lack of Planning

- Population density- unique county regulations that don’t align with state wide recommendations

- Lack of specific/direct purposes/goals for WMAs; DNREC standards, ex: seeds
- Strategic retreat plan needed
- Include plants as GCN- ensure plants are addressed via threats and actions for species and habitats- SWG gunding for plants, education actions not included
- National/Regional/State plant ranking
- White Hall- New town, reach out to increase economic development- reached out to Ducks Unlimited already, but ?, socio ecologically minded, worth reaching out

13. Lack of Planning, Law & Policy

- Home Owners Associations; City/County Org. require certain lawn maintenance
- Public land policies are shrinking (90% of land)- promote access, etc.
- Cemetery planning

Lack of Integration and Cooperation

- Working with “outside” organizations, companies, NPOs
- Lack of participation
- Pre planning
- Change perceived threat of hunters/hunting
- Work with legislators & educators

Lack of Coordination/Information/Resources

- Integrated pest management
- With County regulations
- Integrated/educated decisions in landscaping- in plant suppliers, increased incentives, increased demand
- Migratory bird species- international threats ex: shorebirds hunted in South America, cerulean warbler and cocaine
 - Cerulean warblers occur in winter at the same elevation where coca is grown (in the mountains of n. South America, on both the east and west slopes of the Cordillera Central of the Andes in Columbia, and on east slopes in Venezuela, Ecuador, Peru, and n. Yungas of Bolivia); coca production has increased in response to growing demand for powder and crack cocaine among North American and European populations, which is leading to the destruction of the cerulean warbler’s winter habitat.
- Data collection accountability- important for SGCH determination/protection, check station, challenges to collection- new, creative techniques
- Lack of funding
- Lack of advocacy at State level for habitat conservation- motivating force, advocating, state level sportsman, hunt/fish, org., lack of action from small org- potential for political clout (Ducks Unlimited, DOS)
- Lack of advocacy guidelines ex: Chesapeake Conservancy, doesn’t actually own land

ELEMENT 4 – CONSERVATION ACTIONS

Compiled by Karen Terwilliger, Shannon Alexander, & Amy Mallette

TRACS Action Categories

1. Coordination and Administration

- Coordination with DEL DOT
- Mitigation, Sp surveys
- Road maintenance- corridors
 - Value to pollinators
 - Information to DEL DOT staff
 - Weed control balance with habitat management
- Tax ditching- prioritization, balance the need by farmers and environmental consequences
 - remove the exemption of tax ditches from regulation under the CWA because they (tax ditches) are either navigable waters or are hydrologically connected to navigable
- Conservation districts
- Funding for incentive
- Include plant species
- \$ included in SWG
- Develop stable funding source for NG wildlife diversity
- Tax/fee for cultivated lawns, impervious surface
- Breaks for rain barrels and other good practices, i.e., VT
- Acreage and impervious surface
- Noise pollution- plant native trees, natural noise barrier, different concrete blends

2. Management of Natural Resources

- Sustainable forestry plans- DOF, for private lands, public- state forests and WMAs
- Sand grain size requirement for beach nourishment
- Consider estuarine and marine species and habitat impacts from dredging
- Develop objectives/plans for WMA
- Develop monitoring mitigation projects and standards (DNREC)
- Minimize hardened shorelines
- DEL DOT- minimize use of winter salting
- Stormwater management ponds- overflow in sensitive wetlands, Lewis Landing, mosquito/fish/sunfish- vernal pools
- Coordination from Navy/seismic testing- Fish and Wildlife Coordination Act (USFWS/NMFS)
 - i.e., the Fish and Wildlife Coordination Act requires federal agencies or federally funded activities to coordinate with either USFWS or NMFS, or possibly both, depending on the situation
- Rehoboth Beach Project- NOAA & DNREC, USACOE, USFWS, NMFS- sea turtle and other Inverts and fish- effluent pipes and dredging
- Control of Asian Tiger mosquitos
- Overabundant species control

- Sunday hunting (ID areas and limiting areas)
- Invasive Species
 - Increase \$ for Invasive Species Council
 - Regulations- PARC- letter to USFWS, not allowing importation of salamanders
 - Provide info on how to decontaminate
 - Research for finding to identify and determine locations if present
 - Develop a response plan
 - need for everyone who enters streams or wetlands to decontaminate their hip boots/waders to prevent the spread of diseases among reptiles and amphibians
 - Currently in Delaware, the preferred decontamination protocol involves the spray application of a bleach solution

3. Data collection

- Nontarget impacts of pest control
- Economic development coordination, especially demographic trends
- Wind energy- no regulations in state
- DEL DOT collecting data on roads/bridges to determine impacts on wildlife
- Ponds/catchment areas road runoff, salt impacts
- Impacts of noise/seismic on marine mammals
- Wind turbines- vibrate at base/electromagnetic fields
- Use of dredge spoil on marshes- wildlife need monitoring
- Impacts of roads/rail road corridors- water volume, hydrology
- Baseline/information on inverts, macroinverts (mayflies as indicators of rare habitats)

5. Facilities & Areas

- Doe Bridge (nature preserve)- lots of S but no G-ranked Plants & Animals
- Include disjunct populations
- “protected” but danger of highway development
- Importance of long-term protect

6. Protection/Acquisition

- Beach habitat conversion
- Provide more public access on private land
- Cemeteries and open space needs
- Strategic retreat-
 - buyout lands for climate change migration for resiliency for west systems
 - Strategic retreat vs. hardening
- Stormwater retention ponds on species/habitat/hydrology

7. Law Enforcement

- Enforce invasive/disease

- Allow enforcement to be SWG eligible

8. Education/Outreach

- Target landowners to promote and use natural wetland solutions
- Target beach communities for strategic retreat vs. walls or hardening
- Target businesses about use and selling pesticides i.e., Home Depot signed agreement to not sell certain ones. Target Lowe's and others to reduce selling of harmful pesticides
- Target lawn care industries to reduce pesticide and fertilizer use and promote green solutions
- Target golf courses for same reasons
- Target farmers and agriculture for same reasons
- Promote sister city concept for international shorebird and songbird protection
- Determine the impacts of non-native species stocking- i.e., Trout and other species on non-native species
- Alternative mosquito control/naturals
- Sound/police property to reduce mosquitoes
- Inform/coordinate with State and local planning to control sprawl
- Inform County residents and decision makers- long term impacts of decreased quality of life
- Impacts on water quality- impacts on fishing, wetland impact, etc.
- Target developers- green solutions i.e., Shorelines- hard/soft
- Encourage green cluster development
- TDRs to leave open space
- Incentives & \$ to control development and encourage conservation
- Target landscapers/developers/communities to plant natives/design
- Nurseries & plant distribute – model example: Longwood Gardens
- Homeowners associations
- Conservation districts
- Tax ditching association
- Educate staff about how to share info on WAP, use available Parks/facilities/resource education centers
- Allow education to be eligible for SWG funding
- Coordinate with fisheries division to include SGCN species in their new fish ID App (Bruce Cole)
- Identify neighborhoods with impervious surface problems and outreach to them about green solutions
- Target decision makers to inform them of cost/benefits of strategic migration for sea level rise
- Coordinate with NGOs for more advocacy
- Develop smart phone apps for state/public lands for nature education
- Use existing visitor centers and facilities to educate residents and visitors about DE WAP and its priorities
- Digital media
- Encourage pervious surfaces
- To developers- green energy design, pervious surfaces, etc.
- Marine contractors- living shorelines
- Whitehall town in design
- Educate people to address anti-hunting sentiment
- Recruitment & encouragement of hunting, fishing, farming, non-consumptive outdoor recreation and conservation.
- Increase participation in wildlife related activities/professions
- Need to improve/enforce data collection ie. Check stations etc. vs. online lack of new challenges ie. Butcher shops
- Proposed imitative DE Bay Clean Water

- Develop/increase advocacy social capital
- Develop advocacy infrastructure
- Stormwater retention ponds on species/habitat/hydrology

8. Planning

- Plants- Nature serve- G/S ranks
- Unique threats & actions for plants (vs. just listing in key habitat text of WAP)
- Veg Map Element occurrence layer
- Bill & Robert- Bill's DE flora book (has ranks, etc.)
- Develop advocacy guidelines
- Hold summit (conservation coordination)
- Work with power companies on utility corridors for habitat management (Delmarva Power, DEL electric coop, etc.)
- Work with universities for interns & programs; improve influx of new young professionals

10. Species Reintroduction/Management

- Maintain & monitor- limited horseshoe crab harvest and good enforcement
- Coordination with DEL DOT- design/develop
- Flood plain flows for roads/rail roads
- Climate change exacerbation on flooding/road/hydrology/impacts
- Energy development- require in new houses/development i.e., solar in planning/design
- Placement of wind turbines

11. Technical Assistance

- Promote wildlife habitats & species
- Landscaping/natives/design
- Incentivize agricultural buffers and hedgerows
- BMPs
- Natural wetland solutions- incentivize

12. Climate change

- Create new habitat inland
- Target funds for acquisition
- Minimize nontarget impacts
- Pesticide/mosquito control
- Target/nontarget species
- Regulation of privatization of mosquito control applicators (50 companies)
- Need for coordination between state and localities
- Vegetation barrier treatment in back yards in urban areas- direct application of vegetation
- Promote sustainable forestry
- All impacts of development need to be considered in development

- Consistency between counties
- Natural wetland
- Regulation of tax ditches and maintenance- exempt under clean water act
- Promote beach renourishment- natural sand sharing systems
- Concern about contaminants being deposited in sediments
- Federal \$ support constructed wetlands- mitigation banking vs. outfall pipe, decreased maintenance- look at West section

PARTICIPANT LISTS

DE WAP REVISION AND DEVELOPMENT TEAM:

Agency/Organization	First Name	Last Name
DNREC	Kevin	Kalasz
TCI	Karen	Terwilliger
Sarver Ecological	Matt	Sarver
TCI	Amy	Mallette
TCI	Shannon	Alexander

ATTENDEES SESSION 1 (9AM – NOON):

Agency/Organization	First Name	Last Name
FWS	Susan	Guiteras
DNREC	Jeremy	Ashe
DNREC	Joe	Rogerson
DNREC	Mark	Biddle
DNREC	Craig	Rhoads
DNREC	Holly	Niederriter
TNC	John	Graham
DNREC	Ellen	Dickey
DNREC	Robert	Coxe
UD	Jake	McPherson
DNREC	Matt	Bailey
DNREC	Matt	DiBona
DNREC	Johnny	Moore
DNREC	Elena	Stewart
DNREC	Holly	Niederriter

ATTENDEES SESSION2 (1:30PM – 4:30PM)

Agency/Organization	First Name	Last Name
DelDOT	Anna	Smith
DelDOT	Christie	Bonniwell
USACE	Barbara	Conlin
DNREC	Jordan	Zimmerman
DNREC	Bill	Meredith
MNH	Jean	Woods
DESU	Kevina	Vulinec
DESU	Nine	Students
DNREC	Paul	Zarebicki
DNREC	Eric	Ludwig
DNREC	Kate	Fleming
DE Wildlands	Andrew	Martin
DNREC	Avery	Dunn
DE Wildlands	Peter	Martin
DWS	Jim	White
UD	Hal	White
MERR	Suzanne	Thurman
USFWS	Rick	McCorkle
IHS	Stuart	Ramsey