Ecosystem Task Force

Dimond Library 343, February 21, 2013, 12:30-2:00pm

Participants
Tom Ballestero, Doug Bencks, Dave Cedarholm, Paul Chamberlain, Michelle Daley, Jim Dombrosk, Jim Haney, El Farrell, Tom Kelly

Meeting Agenda
- Natural Resource Inventory
- Development Boundaries & Smart Growth Issues: Doug
- Water Supply & Usage: town/campus water quality management
- Watershed/aquifer protection

Next Steps
- College Brook restoration project: Doug will email group with details and to solicit feedback
- Biodiversity inventory: Mike Palace, Jim Haney, Tom Lee to meet and discuss how this could be developed

Discussion
Natural Resource Inventory: Jim
- class with teams assessing natural resources and wildlife, setting up cameras, monitoring animal tracks, using Google Earth, videos and track images for verification, geo-referencing data points something for use on campus, beginning as a microcosm trial
- assessing bird population in same areas
- examining biodiversity, managing the natural landscape, will inform land planning as well as support research
- in comparison to GHGI, what are the implications across different systems? What different methods can be used to appraise them? Key foundational elements before GIS technological details
- are there anticipated ranges for the different species of animals?
  ◦ Using genetics to see if they’re isolated, making them connect is difficult depending on migratory patterns, can determine whether patches will extend and interact

Development Boundaries & Smart Growth Issues:

Ecosystem Task Force, 2/21/13
Campus master planning progress: long-term plan, must be adjusted over time
  - land use diagram: shows currently developed regions, unlike past diagrams which only showed potential, doesn't require future expanse
  - flexible planning vision: recession in expression of potential development, what do we need to continue to have as a discussion of future development? Thinking long-term vision of development
    - assessment of biodiversity helpful in this process
    - Trust for public land: trying to secure money to enter conservation easement?
      - Acreage that is continuous extension of wooded property of UNH, around spruce woods development area, abuts spruce hole
    - Amber acres: conservation easement discussion, permanent easement, not wooded acres
    - Create visual including these two areas?

Where do we go from here?
  - sq. footage needs: discussion much more modest than prior years, outlook that it may grow, but physical space needs may contract, flexible planning vision allows for open-ended, middle road possibility
  - Contrast to private development under discussion in Durham, outside UNH the town has not been building significantly, may be pent up development stifled by UNH growth

Development in place of current Greens on Madbury, 2+ acres, sits on Pettee Brook, significant drainage, call to respect and clean up Pettee Brook as a water body, interacting with town, will be component of development project
  - appropriate steps for Pettee Brook?: not contaminate impervious area, zoning allows for 100% impervious area, cannot create further impairment under zoning regulations, idea to do flat roof with green on top, flat roofs undesirable to community

Water Supply & Usage: town/campus water quality management:

Watershed/aquifer protection:
  - Michelle gather existing data regarding water bodies
  - bpa released draft MS4 permit
  - spruce hole: go ahead to complete engineering/get final costs, ready to go to funding sources for FY14
  - potential impact on Chesley brook: resolve operational plans, relatively low risk but needs to be addressed
  - study to look at replacing current water treatment plant: from 1930s, sits in floodplain, very vulnerable, could jeopardize water supply
  - opportunity to better design plant better tuned to new water sources: lamprey, oyster spruce hold
• town/university partnering on water plan: how to split responsibility? university water quality monitoring, town developing plan with VHB (?) approved for SRF (State Revolving Loan Fund) grant, development of plan

• in addition to integrated watershed, stormwater SRF loan, money for rain gardens, wetlands, for constructing structural controls 2014

• concern from town that planning was occurring without enough data, data collected and approved

• impoundment study: partnering with VHB, mill pond, beards creek,
  ◦ graduate thesis on cyanobacteria (Helen), water quality study rather than dam safety, grew out of desire to maintain Mill pond dam, need to better know how to manage pond → water quality data, may lead to dam removal depending on magnitude of the battle, management plan?
  ◦ Has many deficiencies, including flood capacity, would require $1 million worth of work if decision is to maintain it
  ◦ sediment loading: average thickness only 1 foot in thicker in stagnant areas, defined channel in middle of little sediment, contrary to popular belief of contamination and considerable sediment
  ◦ if dam removed, pond would be tidal, leading to reduced wildlife in channeled areas, what would net biodiversity be? Brackish water benefit, divert downtown high-chloride runoff, wouldn't be impacting water body, mitigation of EPA, but would still have to manage nitrogen
  ◦ Parallel track but related in integrated watershed plan

• Doug: remedial work that needs to be done in College Brook Ravine, received funding from SARC, intend to pursue this summer, long-hanging fruit project, include perspectives of those who know the brook well
  ◦ find objectives: not identified as stream restoration, but things to alleviate runoff into the brook, (treatment of pipe water, etc)
  ◦ Master plan for the ravine ten years ago identifying problems, which have worsened, same priority list or in need of rapid analysis to re-evaluate?
    ▪ Things identified, now to choose the most obvious issues
    ▪ who should we talk to? Coherent first steps conjoined by phase 2, email group and ask for contacts and thoughts
    ▪ concern that sewer (college brook sewer) under brook has been leaking into brook, will be slip-lined this spring (week after graduation, 500-600 ft), manholes fixed
    ▪ monitoring ongoing, once a month (college and pettee)