

Possible Climate Change Actions Plan (71 possible actions)

(* = underway) 4/22/19 Draft

TOPIC	ISSUES	SUSCEPTIBLE TO PC INFLUENCE: Mitigation	SUSCEPTIBLE TO PC INFLUENCE: Adaptation	RANGE OF PC ACTION POSSIBILITES? (<u>Mitigate</u> extent of impacts; <u>Adapt</u> to the impacts that will come)
EXTREME HEAT				
a. Ecosystem change	Invasive species	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Create management feasibility and timeliness for minimizing invasions 2. MITIGATE: Mandate clustering to reduce conversion of Pinelands to non-Pinelands (stormwater basins are incubators)* 3. ADAPT: Work with NJ DEP to control*
	T & E habitat loss	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Prioritize open space that serves as migration corridors* 2. ADAPT: Permit species relocation 3. ADAPT: Link up preserved lands to create N-S migration corridors*
	Loss of Pitch Pines	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Plan for alternative evergreens that take advantage of the shifting ranges of North America pines? Virginia or Shortleaf pine?
a. Agricultural viability threats	Droughts. Loss of colder weather crops like Cranberries. Evaporation water losses.	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Plan for and permit alternative wetland crops? Assist research into crop adaptation. 2. ADAPT: Plan for more and/or control agricultural and landscaping irrigation?
b. Increased energy demand for cooling		Some	Some	<ol style="list-style-type: none"> 1. MITIGATE: Adopt LEEDS or other energy building standards and fund with density bonuses 2. MITIGATE: Incentives for greater Insulation in new development 3. MITIGATE: Incentives for Solar* and wind in new development 4. ADAPT: Plan for micro-grids*, community solar, and localized grid overloads 5. MITIGATE: Reduce tree removal in new development 6. ADAPT: Passive solar design - Orient house /overhangs in new development 7. MITIGATE Incentives for energy audits and retrofits

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EXTREME WEATHER EVENTS: STORMS AND DROUGHTS				
c. More big storms	More runoff, less recharge More standing water – mosquitoes, ticks Loss of power grid	Very little	Some	<ol style="list-style-type: none"> 1. ADAPT: Require bio-retention basins or other means to capture overflow 2. ADAPT: Permit wetland buffer use for big storm retention 3. ADAPT: Re-think stormwater management (more rain, bigger storms, source for non-natives, etc.) 4. ADAPT: Mandate underground electric (better reliability) 5. ADAPT: Utilize flood plains as retention facilities 6. ADAPT: Utilize permeable pavements to store and recharge excess stormwater 7. ADAPT: Consider incentives for projects that store more stormwater than that required. 8. ADAPT: Require green infrastructure techniques not already required, e.g. rain gardens, and green roofs 9. ADAPT: protect toxic sites and landfills from the big stormwater events 10. ADAPT: permit stormwater facilities in RDA to serve adjacent develop areas
d. More droughts	More stress on K/C? Other aquifers? Dropping low stream flows?	Very little	Some	<ol style="list-style-type: none"> 1. ADAPT: Specify and mandate non-K/C water supply alternatives* 2. ADAPT: Study and incentivize aquifer storage (ASR) 3. ADAPT: Minimize non-drought resistant landscaping* 4. ADAPT; require more water conservation efforts* 5. ADAPT: Create water markets – transferring land and water from agricultural to community use 6. ADAPT: Work with farmers to ensure water access during droughts 7. ADAPT: work with small water purveyors to ensure supplies
	More frequent and bigger forest fires	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Re-institute Fire-wise programs 2. ADAPT: Encourage more controlled burns 3. ADAPT: Re-examine and re-invigorate fire buffer requirements

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				4. ADAPT: Coordinate with DCA to revise building standards for fire resistance (7:50-6.125)
	Dropping water table (dshwt) will impact wells, wetlands and expand areas where septic may go	Very Little	Some	1. ADAPT: Require deeper personal wells (<100') 2. MITIGATE: Change wetlands buffer standard, dshwt, or zoning to "freeze" current development levels?

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CARBON SINK				
f. Maintenance/enhancement of Carbon Sink	Loss of places to sequester excess carbon	Some		<ol style="list-style-type: none"> 1. MITIGATE: Adopt tree replacement requirement, e.g. like State has for development (net loss equal zero) 2. MITIGATE: Encourage conversion of unused farm fields and mines to forests 3. MITIGATE: Minimize turf/maximize tree cover 4. MITIGATE: Green roofs (also addresses stormwater management) 5. MITITGATE: Mandate clustering and preserve forests
RISING SEA LEVEL				
g. Sea level rise in general	Overall temperature impacts from CO ₂	Very Little (leadership?)		<ol style="list-style-type: none"> 1. MITIGATE: Provide more incentives and/or mandate for solar (e.g., rooftops, parking lots) 2. MITIGATE: Permit wind as accessory (little opportunity in Pines for larger opportunities) 3. MITIGATE: Permit bio solids in appropriate management areas 4. MITIGATE: Incentivize retrofits
h. Sea level rise impacts (1)	Wetlands loss from inundation	Very Little	Some	<ol style="list-style-type: none"> 1. ADAPT: Analyze loss from 1', 3', 6' sea level rise 2. ADAPT: Require larger buffers for new development in areas subject to sea level rise (tidal water like the Mullica's) 3. ADAPT: Permit existing development to construct protection in existing buffer areas.
i. Sea level rise impacts (2)	Greater coastal flooding. Relocation from Coastal Areas?	Very Little	No direct, just relief	<ol style="list-style-type: none"> 1. ADAPT: Implement new PDC rules allowing higher densities* 2. MITIGATE: Plan for transmission from wind power*
j. Sea level rise impacts (3)	Infrastructure Flooding: subsequent loss of service		Some	<ol style="list-style-type: none"> 1. ADAPT: Identify key infrastructure that may be prone to coastal flooding in the Pinelands

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ENVIRONMENTAL LEADERSHIP POLICIES (By Example)				
k. Direct PC investments	Solar, energy audit	Minimal tangible impact, larger impact as an example		<ol style="list-style-type: none"> 1. MITIGATE: Energy Audit and Retrofit PC Headquarters 2. MITIGATE: All vehicles electric 3. MITIGATE: Solar on roof and parking lot
l. New Carbon Infrastructure	Discourage	Minimal tangible impact, larger impact as an example		<ol style="list-style-type: none"> 1. MITIGATE: Require full alternatives analysis with choice of least impact alternative rerouting, greenhouse gases, etc. 2. MITIGATE: Require PDCs to offset impacts 3. MITIGATE: Discourage new carbon-based infrastructure
m. Stranded Assets	Removal after non-use	Minimal but wiser future use		<ol style="list-style-type: none"> 1. MITIGATE: Require removal after 1 year of non-use (e.g., like solar, cell towers)
n. PC Research Agenda		n/a	Some	<ol style="list-style-type: none"> 1. ADAPT: Establish Early warning system: invasive species 2. ADAPT: Apply climate change models to Pinelands sub-regions 3. ADAPT: Conduct periodic climate change seminars 4. ADAPT: Monitor ground water levels <i>vis a vis</i> climate change
o. State action		Little		<ol style="list-style-type: none"> 1. MITIGATE: Encourage establish/continuation of incentives for both private and public development and retrofits <ol style="list-style-type: none"> i. Solar ii. Wind iii. Geothermal
p. Showcase BMPs	Ensuring adequate knowledge of important tactics	m/a	Medium with adequate partners	<ol style="list-style-type: none"> 1. Highlight Stormwater BMPs 2. Highlight Utility BMPs