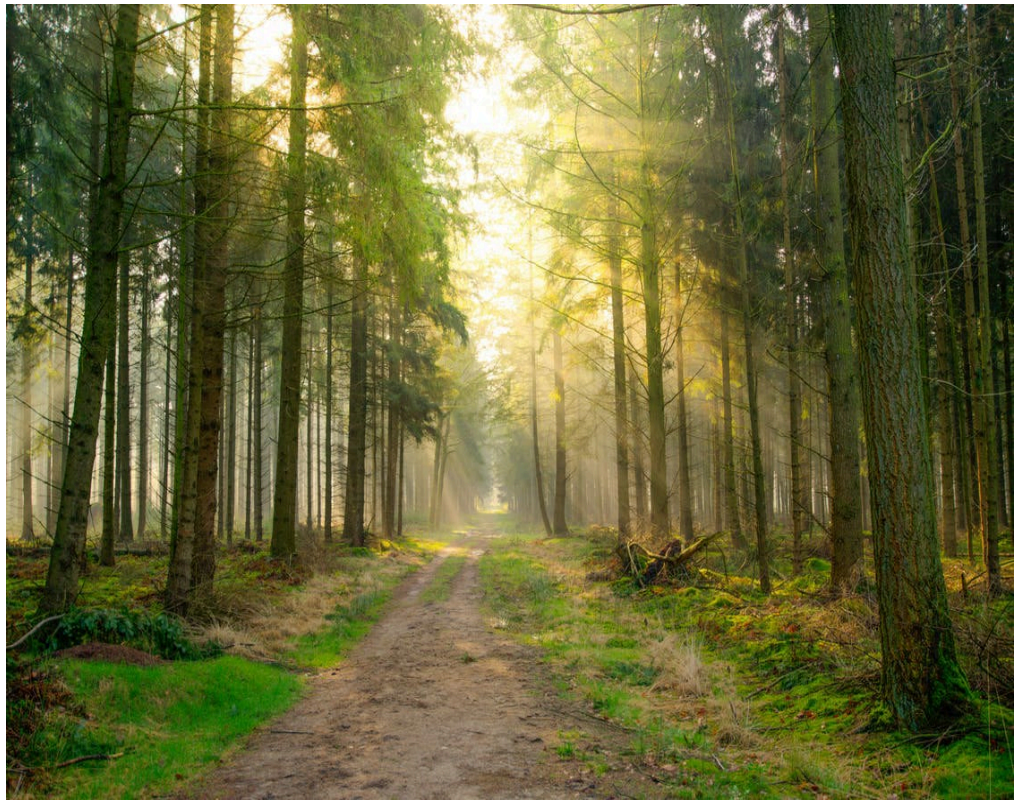
CDBG Supplemental Environmental Training
July 14, 2022



Ed Basch, ed.basch@iowaeda.com 515-348-6208

Robert Jonet, robert.jonet@iowaeda.com 515-348-6205

IOWA economic development

Environmental Assessment (EA)

- Training pertains only to the EA level of review
- Specifically focuses on changes to Part II, Environmental Assessment Checklist
- *New categories of Climate Change and Energy are being added to the checklist along with an Environmental Justice addition under the broader Socioeconomic category*
- Bottom line to grant administrators: you will have to spend more time on this part of the review and consider some new factors (I know – it's more work for us too but this is a must from HUD)
- ***EFFECT ON IT / FROM IT Concept (What environment does to project and/or what project does to environment)***
- Takes effect for all EA level ERRs submitted **from July 15, 2022 forward**
- My comments on the HUD slides are shown in RED FONT

IOWA economic development

Environmental Assessment (EA)

- Much of what these slides outline will rarely be a true factor of concern in small town Iowa CDBG projects that we fund
- If you are an entitlement city applicant, more things could apply, so more thought will be necessary
- Best advice I can give you is to really think about the project and the potential environmental factors and then use common sense
- Regardless of applicability however, you will need to demonstrate that you considered the items and, if you find they are not applicable, just say so
- In regards to those items that are applicable, they are actions you should implement if reasonably practical and not cost prohibitive, but I do not believe they are mandatory for the ERR
- These slides and recording will be posted on our web site under Community Infrastructure/Community Development Block Grant Programs/CDBG Resources/CDBG Training Resources/Environmental Training/Environmental Assessment Factors

IOWA economic development

Environmental Assessment (New Checklist)

- Is posted at our IEDA website: CDBG Management Guide | Iowa Economic Development Authority (iowaeda.com) under Environmental Compliance / Environmental Assessment Packet
- These are new additions to form: (new scoring criteria) **(1)** Minor beneficial impact; **(2)** No impact anticipated; **(3)** Minor Adverse Impact that may require mitigation; **(4)** Significant or potentially significant impact requiring avoidance or modification. Plus new review items:
-

SOCIOECONOMIC		
Employment and Income Patterns		
Demographic Character Changes, Displacement		
Environmental Justice		

CLIMATE CHANGE / ENERGY		
Impact on occupants, alteration of future site, effect on weather related disaters		
Energy efficiency, Green building practices		
Energy usage, Emissions		

Training Objectives

- Guide responsible entities (REs), recipients, applicants, and partners to effectively use the Environmental Assessment Factors eGuide
- Provide an overview of the different EA Factors
- Describe the analysis steps for each of the impact categories:
  - Land Development
  - Socioeconomic
  - Community Facilities and Services
  - Natural Features
  - *Climate and Energy (New)*

Introduction to EA Factors eGuide

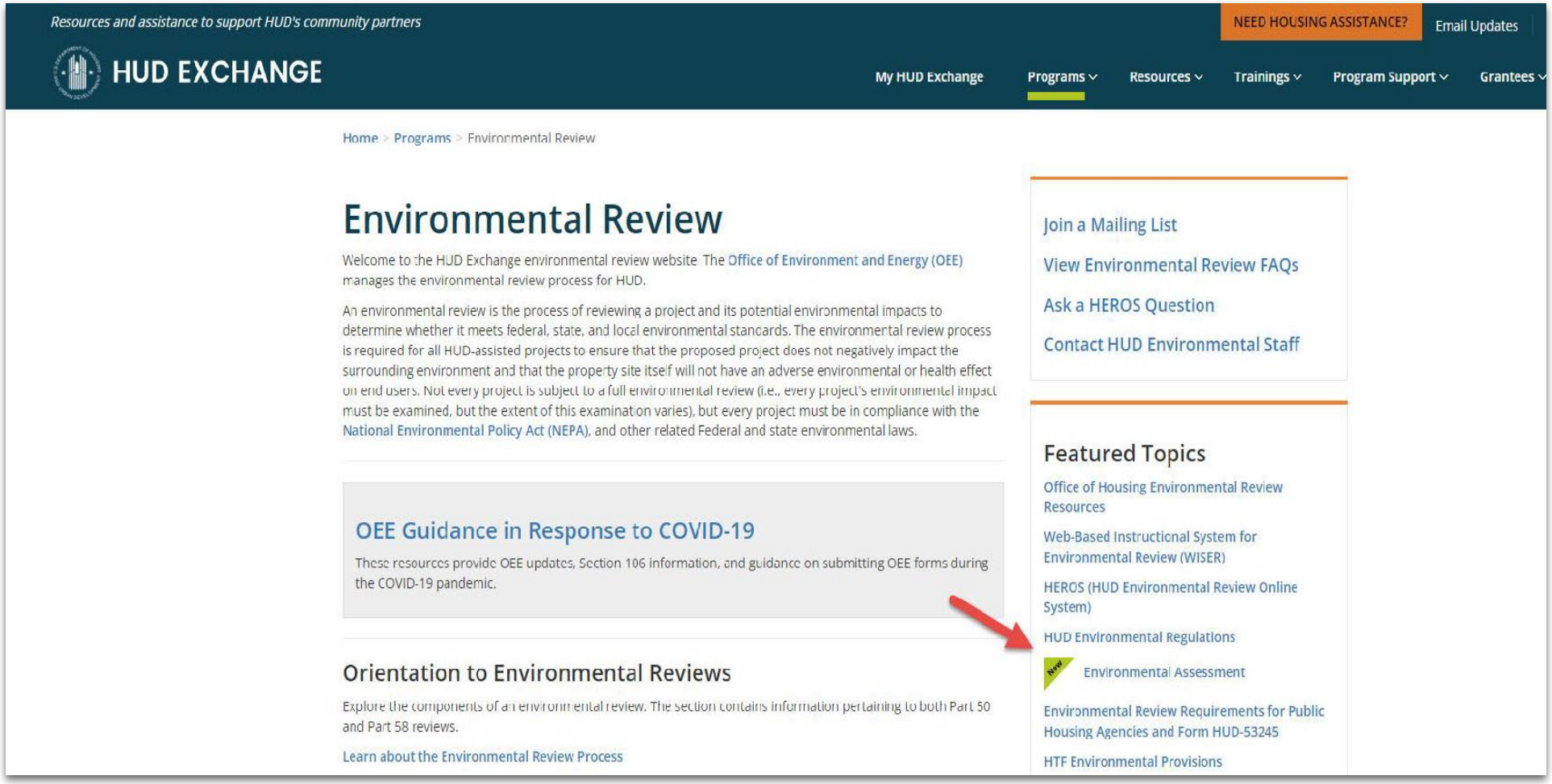
Environmental Assessment (EA) Factors eGuide

EA Factors eGuide was launched on HUD Exchange in November 2021 (worth your time to scroll through it)

- eGuide assists environmental review preparers with background information and details on assessing an EA factor's impact from and on the project
- eGuide expanded upon longstanding EA Factor guidelines previously available such as:
  - Important considerations
  - Additional resources
  - Case studies

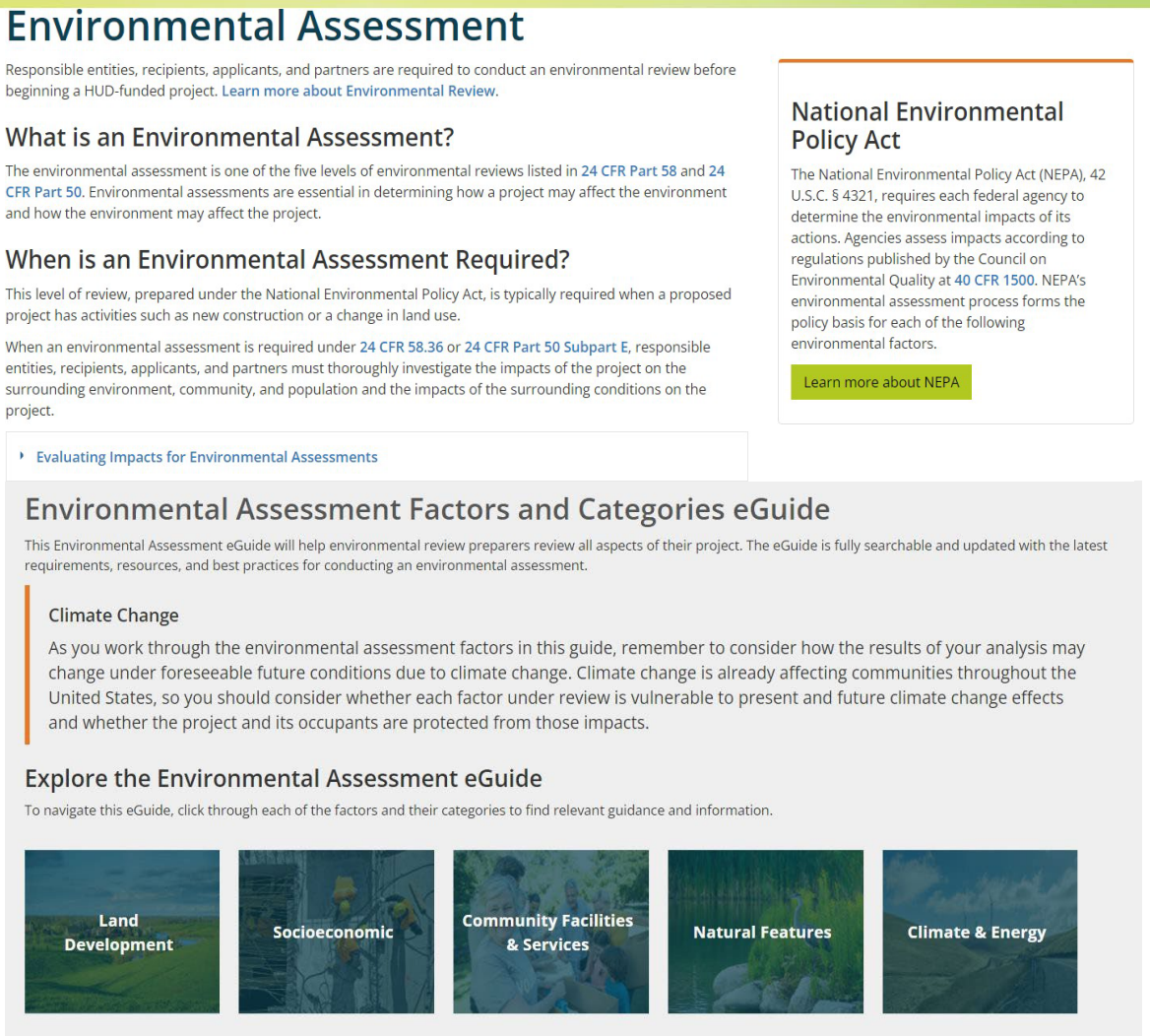
Where to Locate the EA Factors eGuide?

Environmental Review - HUD Exchange



Navigating through the eGuide

Environmental Assessment - HUD Exchange



- The eGuide includes:
  - Helpful guidelines and information on the EA Factors
  - **Online Resource Library** presents key tools and resources to help identify and check for key environmental issues and statutory compliance responsibilities
  - **Case Study** provides the findings from a simulated environmental assessment factors and analysis of a hypothetical project
- New additions:
  - Category – **Climate & Energy**
  - Factors – **Climate Change; Environmental Justice**
- To navigate through the eGuide, click on each of the 5 primary factors to find relevant guidelines and information

Navigating through an EA Factor Page

Each EA Factor Page includes six sections

- Overview
- Important Considerations
- Analysis Techniques
- Additional Considerations
- Mitigation Measures
- Resources to Reference/Experts to Contact

This presentation briefly introduces each EA Factor. Consult the eGuide on HUD Exchange for the detailed descriptions found on each EA Factor Page.

Environmental Assessments and Evaluating Impact

Environmental Assessments (EA)

- The EA is one of five levels of environmental review (24 CFR Part 58 and 24 CFR Part 50)
- Typically required for projects that include new construction or a change in land use
- In addition to compliance with the Related Laws and Authorities under 58.5 and 50.4, EAs require an additional set of components for analysis, including environmental assessment factors and the NEPA analysis

Evaluating Impacts

NEPA (42 U.S.C. § 4321) requires each federal agency to determine the environmental impacts of its actions. NEPA's environmental assessment process forms the policy basis for each of the following Impact Categories and environmental factors:

Climate & Energy
- Climate Change
- Energy Efficiency

Land Development
- Conformance with Plans
- Compatible Land Use and Zoning
- Scale and Urban Design
- Soil Suitability
- Slope
- Erosion
- Drainage/Stormwater Runoff
- Hazards and Nuisances Including Site Safety and Noise

Socioeconomic
- Employment and Income Patterns
- Demographic Character Changes
- Displacement
- Environmental Justice

Community Facilities & Services
- Educational and Cultural Facilities
- Commercial Facilities
- Health Care Services
- Social Services
- Solid Waste Disposal and Recycling
- Wastewater and Sanitary Sewers
- Water Supply
- Public Safety – Police, Fire, and Emergency Medical
- Parks, Open Space, and Recreation
- Transportation and Accessibility

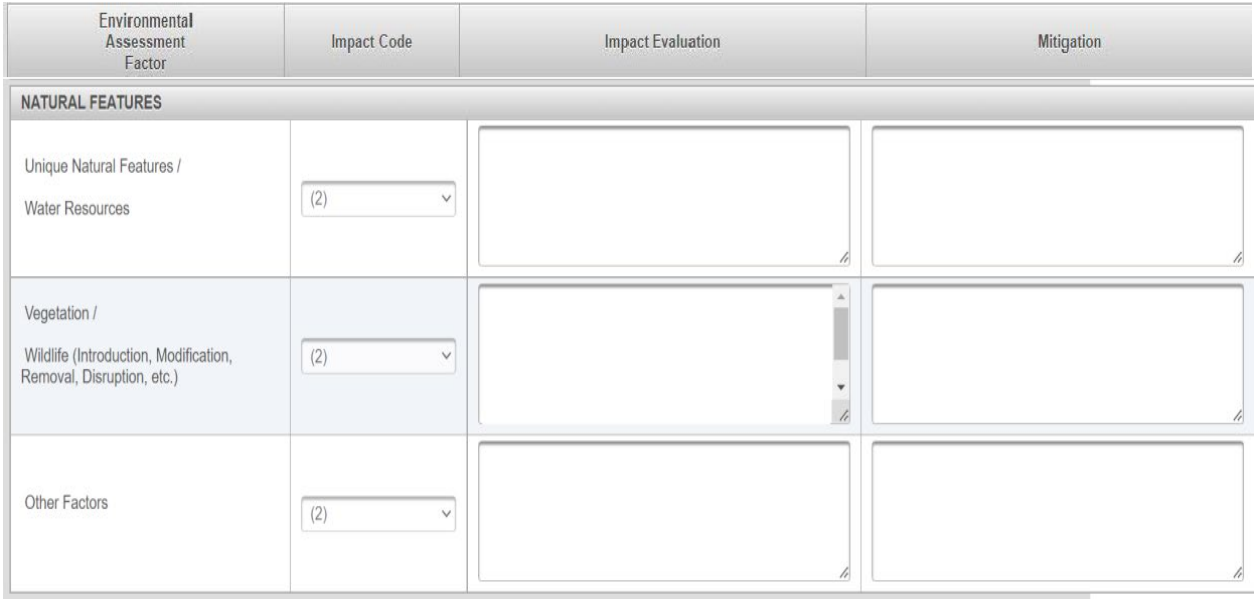
Natural Features
- Unique Natural Features
- Water Resources
- Vegetation
- Wildlife

Evaluating Impacts

Impact Codes

Note: our codes were Adverse, Beneficial and No Impact

1. Minor beneficial impact
2. No impact anticipated
3. Minor adverse impact – may require mitigation
4. Significant or potentially significant impact requiring avoidance or modification and may require EIS



Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
NATURAL FEATURES			
Unique Natural Features / Water Resources	(2)		
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	(2)		
Other Factors	(2)		

Evaluating Impacts

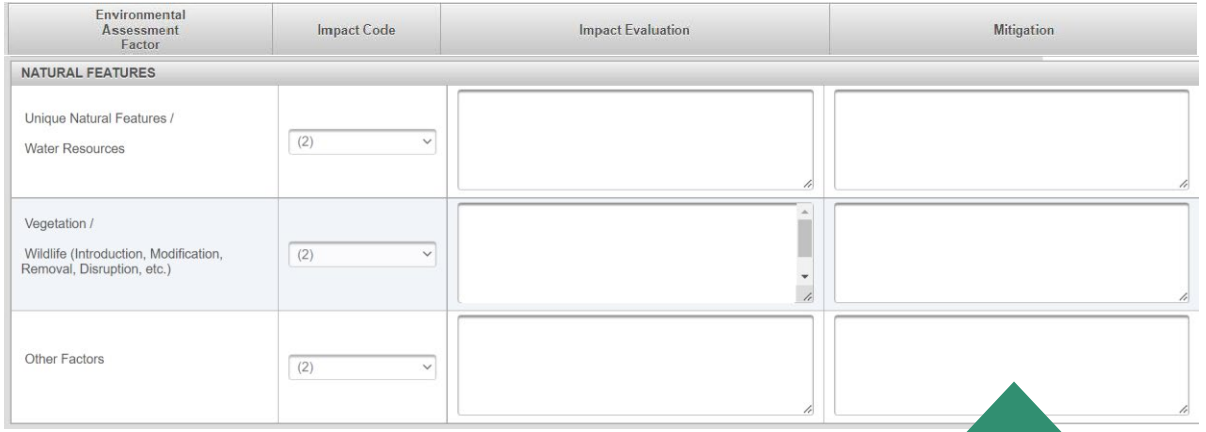
Impact Evaluation (Have own form)

- The Impact Evaluation column is for the impact analysis of all Impact Codes
  - The review preparer should record the qualitative and quantitative significance of the effects of the proposed project and the character, features, and resources of the project area
- Provide:
  - The necessary reviews or consultations that have been completed
  - Any applicable permits or approvals
  - Citations, including dates, names, titles, etc.
- **Report Climate Change and EJ impacts in "Other Factors" until HEROS is updated**
  Note: I developed new forms since we are not on HEROS system

Evaluating Impacts

Mitigation (If adverse impact identified)

- Mitigation column should include:
  - Exact measures needed to mitigate the impact
  - Implementation timeline
  - Details! (can be brief and to the point)
- Report Climate Change and EJ mitigation in “Other Factors” until HEROS is updated **(use our new form instead – put under Impact Evaluation)**



Environmental Assessment Factor	Impact Code	Impact Evaluation	Mitigation
NATURAL FEATURES			
Unique Natural Features / Water Resources	(2)		
Vegetation / Wildlife (Introduction, Modification, Removal, Disruption, etc.)	(2)		
Other Factors	(2)		

Report mitigation for Climate Change and Environmental Justice here

Guidelines on EA Impact Categories and Factors

Climate & Energy

This new impact category considers the two-way relationship between HUD-assisted projects and the surrounding environment. This category helps determine the extent to which a project will contribute to issues like greenhouse gas emissions and energy consumption, as well as how projects may be affected by the impacts of climate change.

Note: the vast majority of projects IEDA funds should have no evident, long-term measurable effect on climate change. It is more likely that climate may affect the projects rather than the reverse.

Climate Change

Proposed projects should consider the potential future impacts of climate change

- Impact on occupants
  - Applies to both new and existing structures (e.g., for major rehabilitation)
  - Consider the potential climate impacts on residents' safety, wellbeing, and property
- Altered site suitability
  - Air quality, extreme heat effects, soil suitability, and water resources
- Effects on the frequency and severity of natural hazards: (not applicable to Iowa)
  - Flooding
  - Sea level rise
  - Hurricanes/extreme storms
  - Drought
  - Extreme heat
  - Wildfire
  - Landslides (?)
  - Extreme cold

Climate Change

Executive Order 14008: Tackling the Climate Crisis at Home and Abroad

- Climate change must be incorporated into decision-making to ensure long-term resilience for HUD-assisted projects
- Protect human health and the environment by ensuring HUD-assisted projects can withstand the impacts of climate change

Climate Change

Important Considerations

Impact of climate change **on** project

- Design for resilience
- More frequent, more severe disasters
- Specific climate change impacts previously identified in the project area
- Effects of existing or ongoing local infrastructure projects designed to mitigate climate impacts (if any)
- Future climate projections (30+ year rule of thumb)* There is a link for this on next slide but, of course, very hard to predict the future)
- Apply climate lens to other EA Factors

- Project contributions **to** climate change
  - Project planning, e.g.:
    - Use low-carbon building materials
    - Incorporate existing buildings
    - Use energy efficient construction, weatherization, Green Streets practices
  - Indirect contributions, e.g.:
    - Transit-oriented development
    - Provide electric vehicle charging infrastructure

Climate Change

Analysis Techniques (Always search for Midwest Region)

- Understand the likely impacts of climate change in the project area
  - US Climate Resilience Toolkit (has future predictions for Midwest and case studies – can be good source)
  - Consider the range of potential future conditions
- Consider the social vulnerability of the project's residents and surroundings
  - Climate Change and Social Vulnerability in the United States (generally not of much concern, particularly in rural Iowa)
- Employ adaptation strategies
  - EPA Climate Change Adaptation Resource Center (drills down on specific topics)
  - HUD Community Resilience Toolkit (**Good Source**)
    - Implementation Guides forthcoming

Climate Change Architect

Mitigation Measures

- Adaptation and resilience tactics
  - Site selection and design
  - Building design and construction practices
    Adapbuild.pdf (unep.org)
  - Institutional measures
- Reduce direct and indirect greenhouse gas emissions (very rarely a factor for rural Iowa projects)
- Consider future projections and current conditions
  - Applies to any EA Factors where relevant

Energy Efficiency Architect

Energy efficiency is important in the design and siting of new facilities. Proposed projects should maximize opportunities for energy efficiency through project planning, location selection (if applicable), site development, and building design

Important Considerations

- Location and siting
- Appliance and green building standards Iowa Green Streets | Iowa Economic Development Authority (iowaeda.com)
- Energy and water use
- Project Financing
- *Direct and indirect GHG emissions*
- State and local building codes, subdivision requirements, and zoning ordinances to meet minimum energy efficiency standards (only State level codes)

Analysis Techniques

- Conduct document review
  - Local street and transit maps
  - Energy-efficient building standards
- Field Observation
  - Evaluate site design, building exposure to the sun, and use of trees
- Consultation with an expert (e.g., utility rep)

Land Development

The Land Development impact category consists of the physical elements of the potential project and project area. This section helps determine the extent to which a project will affect or be affected by topography, geology, hydrology, and other potential impacts.

Conformance with Plans
City Staff / COGs

Proposed projects should align with a community's comprehensive plans.

Important Considerations

- How does the project support the comprehensive plan?
- Is the project located within a specific planning area?
- Will the project be impacted by future land use change *or climate change*?
- Does the project conflict with any plan policies?

Analysis Techniques

- Develop an evaluation process
- Read the plans, evaluate project against plan objectives
- Discuss project with plan developers

Mitigation Measures

- Modify project to conform to comp plan (e.g., height restrictions, pervious pavers)
- Seek counsel with local planning agency

Compatible Land Use and Zoning

City Staff / COGs

Zoning regulates development patterns including the density, construction, alteration, and use of buildings, structures or land.

Important Considerations

- How is the site zoned? Does the proposed project comply?
- What is the existing land use of the surrounding properties?
- Will the location of the proposed project contribute to urban sprawl *or environmental injustices*?
- *Consider site suitability 30+ years into future*

Analysis Techniques

- Evaluate the project plans against the zoning ordinance
- Consult data sources to establish existing land use and trends, such as:
  - Aerial Photos
  - Building Permit Records
  - Ownership and Title data
- *Does it put protected classes in harm's way?*

Mitigation Measures

- Change project location
- Use protective measures to protect existing land uses
- Consider infill development
- Look for locations with existing or planned utility and service systems

Scale and Urban Design
Architect/Engineer

Projects need to consider site planning, scale and urban design, and visual quality.

Important Considerations

- How will the project alter the landform?
- How does the project “fit” or conform within the established surrounding environment?
  - Nearby buildings and built environment
  - Streetscapes
  - Natural surroundings
- ***Encourage professionals (planners, architects, etc.) to use resilient designs***

Analysis Techniques

- Examine the visual impact of the project to determine if it is a good fit for the surrounding area
- Will the new building will block or degrade views?
- Assess compatibility of:
  - Size
  - Design and materials
  - Siting

Soil Suitability
Engineer/Architect

Soil suitability is a measure of how well the qualities of the soil support the requirements of the proposed land use.

Important Considerations

- Is there evidence of ground disturbance, seismic activity, a high-water table, or other unusual conditions on the site?
- Are there visual indications of filled ground?
- *Climate change impacts precipitation and temperature*
  - *Infiltration (water & sewer?)*
  - *Shrink-swell potential (water & sewer?, new building construction?)*

Analysis Techniques

- Perform initial screening test to determine if the foundation soils are compressible or unstable
- Consider using Soil Survey Maps prepared by the National Resources Service (NRCS)
- Have a soil engineer or geologist examine the site

Mitigation Measures

- Replacing problem soil with more satisfactory fill
- Injecting additives
- Improving drainage
- Altering foundation design
- Stormwater Pollution Prevention Plan (SWPP)

Slope
Engineer/Architect

Slope refers to changes in the physical features of the land: its elevation, orientation, and topography.

Important Considerations

- Is the site on a slope?
- Does the area have a history of slope failure? Inspect for signs of previous slides or slumps in the area
- Are slopes unstable for any of the soils on the site?
- If development is proposed on a steep slope, do the design plans include measures to address potential erosion, slope stability, and runoff problems?
- Will slope modification activities affect social and cultural resources?

Analysis Techniques

- Determine the slope (soil surveys, contour or topographic maps)
- Complete a field investigation using Abney Level, a clinometer, or a phone application

Erosion
Engineer/Architect

In urbanized areas, erosion can cause structural damage in buildings by undermining foundational support, pollute surface waters with sediment, and increase the possibility of downgradient flooding and slope collapse.

Important Considerations

- Is there evidence of erosion or sedimentation?
- Does project involve development of an erosion-sensitive area (near water, on a steep slope, or on sandy or silty soil)?
- *Could erosion from the project adversely impact a downslope development or natural environment?*

Analysis Techniques

- Field observation
- Natural resources map
- Compare the slope and soils in the project location with field observation
- Calculate the potential for erosion with the Revised Universal Soil Loss Equation (RUSLE)

Mitigation Measures

- Review project plans to determine if they address need for erosion control measures
- SWPPP prepared by a civil engineer or qualified professional
- Site design and construction BMPs
- If erosion is inevitable, use sediment barriers, traps, basins
- HUD's Community Resilience Toolkit

Drainage/Stormwater Runoff

Engineer/Architect

Stormwater (SW) management can be an essential determinant of whether to construct a project. Natural flow, storm sewers, or combined sewers usually remove stormwater from an impermeable surface

Important Considerations

- Indication of cross-lot runoff, swales, or drainage flows?
- Visual indications of filled ground, active rills, or gullies on-site?
- Will existing or planned SW systems adequately serve the site?
- *Consider (climate change-related) future changes in precipitation patterns (oversize lines for future?)*
- *Does nearby SW infrastructure include safety measures to prevent drownings? (happened in Cedar Rapids)*

Analysis Techniques

- Examine the topography – water coming onto site, pooling on the site, and leaving the site
- Look at site conditions – land use, soil types, slope, and vegetative cover
- Identify where drainage structures could be placed
- Work with project architect/engineer on what is needed on-site to meet city requirements

Mitigation Measures

- Green infrastructure to lessen impact of excess drainage or impervious surfaces
- Bioswales, rain gardens, and catchment systems to capture runoff
- *Refer to HUD's Community Resilience Toolkit*

Hazards and Nuisances Including Site Safety and Noise

A proposed project's location and design should reduce natural and man-made risks to people or property damage for both the public and project users. *It should also ensure that LMI and/or minority communities do not bear an outsized risk of such hazards and nuisances.*

Important Considerations

- Will the project be affected by natural or man-made hazards?
- Will the project be affected by nuisances (gas, odors, vibration, glare, etc.)? (contaminated sites)
- Is the project itself a noise-generating facility in a noise sensitive area?

Analysis Techniques

- Earthquakes or volcanic activity
- Floods, hurricanes, tsunamis *(consider climate change)*
- Forest and range fires *(consider climate change)*
- Mudslides, sands, and hazardous terrain features
- Man-made site hazards
- *30-year rule of thumb*

Mitigation Measures

- Appropriate project planning and design (e.g., setbacks, site reclamation, or avoidance)
- *HUD's Community Resilience Toolkit to mitigate against natural hazards*

Socioeconomic

The Socioeconomic impact category consists of human-level elements that may affected or be affected by a project. This section helps identify if the project creates positive or negative social and economic change in the area for local residents.

Employment and Income Patterns

Important to identify anticipated changes in employment and income patterns, as a result of the proposed project, then evaluate the anticipated number and types of jobs created. (Few IEDA projects directly affect many new jobs, especially permanent ones. Contractors may be able to help some with this factor)

Important Considerations

- Will the project significantly increase or decrease employment opportunities?
- How many jobs (temporary and permanent) will the project create?
- What are the profiles of the newly created jobs? What is distribution across the skill sets and income scale?
- Where are the new employees likely to come? What degree will these new jobs go to local residents?

Analysis Techniques

- Determine whether the project is likely to result in additional jobs or displace existing jobs or businesses
  - Identify existing employment and income characteristics
  - Use job data to assess the likely employment-generating or displacement effects of the project

Mitigation Measures (If jobs created)

- Coordinate with community organizations for job training and resources
- Provide specialized training programs for the types of jobs created by the project
- Explore need for worker housing before project begins
- Assess potential for permanent job creation during the project's operational phase
- Explore potential to maximize local job creation and secondary employment benefits

Demographic Character Changes

HUD-assisted activities primarily benefit low- and moderate-income households and preserve existing social networks and institutional ties in areas where residents share a common cultural and/or religious heritage. Such communities and factors should be identified. (Generally not applicable to rural Iowa).

Important Considerations

- Does the project contribute to reducing/altering racial, ethnic, or income segregation in the area's housing?
- Will the project isolate a particular neighborhood or population group from access to services and facilities?
- *Could the project help address historical barriers segregating the community?*
- Does proposed project create a concentration of low-income or disadvantaged people in violation of HUD site and neighborhood standards?
- *Are low- and moderate-income or minority persons more significantly impacted by adverse factors than the general public?*

Analysis Techniques

- Use U.S. Census data to assess the demographic factors
- Utilize social networks and institutions which characterize a neighborhood
- See Executive Order 12898: "Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations" (2/94)
- See Executive Order on Tackling the Climate Crisis at Home and Abroad

Displacement

Displacement refers to the dislocation of people, businesses, institutions, or community facilities as a result of a project. Displacement may be either direct or indirect. (IEDA projects almost never result in direct displacement and very rarely indirect)

Important Considerations

- Will the project directly displace individuals or families? Will the project result in indirect displacement? (i.e.) gentrification
- Will the project destroy or relocate existing jobs, community facilities, or business establishments?
- Will the project affect identifiable groups such as elderly, females, single-parent households, racial/ethnic groups, income groups, or minority group members?
- Are replacement facilities or housing units available and what will be the effect of relocation on receiving neighborhoods?
- What measures are planned to support those whose displacement is not covered under the Uniform Relocation Act (URA)?

Analysis Techniques

- Plot the project location on a land ownership map to identify whether the project sponsor will need to purchase property or if anyone else currently occupies the site
- Prepare an inventory of potential displaced entities
- For indirect displacement, conduct an analysis of trends in the local real estate market, vacancy rates, recent sales, and rental prices along with income statistics of the area

Mitigation Measures

- HUD Handbook 1378: Tenant Assistance, Relocation and Real Property Acquisition

Environmental Justice

Environmental Justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, disability, or income, including tribal persons, with respect to both positive and negative implications associated with the planning and development of a project. (Rarely a factor in rural Iowa or with IEDA CDBG type projects overall)

Environmental Reviews should:

- Incorporate the meaningful involvement of low-income and/or minority communities
- Identify and address disproportionate environmental and health impacts faced by these populations
- Consider the direct, indirect, and cumulative impacts associated with EJ

Environmental Justice

Important Considerations

- Were any adverse environmental impacts identified in the project's environmental review? Does the project disproportionately impact low-income and/or minority persons or communities?
  (refer to your 58.5 checklist)

- Are there ways to mitigate the adverse environmental impacts of a project on a marginalized community group? Is there evidence of historical environmental injustices or disproportionate impacts burdening low-income and/or minority persons
- Have all potentially impacted populations or communities been consulted about the project? Has there been a strong effort to discuss the project's impacts with these communities?
- Is the proposed project located in a low-income and/or minority community?
- What sources of pollution already impact the site area?
- Will the project affect areas of local or cultural significance?
- Will climate change alter the impact a project has on a marginalized community? How will this impact change over the project's lifespan? Will this impact be disproportionate compared to the impact on the broaden community?
- Does the project cause any secondary effects or future implications that would have EJ ramifications?

Environmental Justice

Analysis Techniques

- Is the project located in or likely to affect a community with potential EJ concerns?
  - EPA's EJ Screen
- Has the impacted community been meaningfully informed and involved in a participatory planning process for the project?
- Will the project expose these communities to disproportionate adverse environmental or human health conditions?
- How can the adverse impacts be mitigated?

- Use Groundwork USA's Best Practices for Meaningful Community Engagement guide for effective communication and outreach techniques
- Review preparer should consider impacts on populations in the project's immediate vicinity and neighboring populations **(should do this regardless of nature of that population)**

Environmental Justice

Mitigation Measures

- Promising Practices for EJ Methodologies in NEPA Reviews – provides best practices, guiding principles and specific steps to assess EJ
- Get familiar with federal, state, local, and/or tribal EJ regulations relevant to proposed project
  - Compendium of State Regulatory Activities on Environmental Justice

Note: If you think you do have an EJ population issue, please consult the links on this page……..and CALL ME.

Resources to Reference

- Local community, fair housing, and/or justice organizations
- U.S. Climate Resilience Toolkit – Social Vulnerability Index
- EPA NEPAssist
- Interagency Working Group for Environmental Justice
- HUD Pursuing Environmental Justice

Community Facilities & Services

The Community Facilities and Services impact category consists of the community assets and services impacted by and necessary for a potential project. This section of the eGuide will help identify what impact the project may have on local infrastructures such as the capacity to handle volume changes.

Educational and Cultural Facilities

Educational facilities include schools (traditional elementary/high school systems and higher/adult education) and cultural resources (art galleries, libraries, community centers, museums, etc.). Consider the capacity, accessibility, and demand for these facilities.

Important Considerations

- Can educational facilities accept additional demand caused by the proposed project?
- Is there adequate and equitable access to educational facilities?
- Are additional or alternative facilities needed?

Note: Rarely applicable to IEDA projects; scale is most often too small to make a real difference.

Analysis Techniques

- Calculate the projected increase in student population
- Assess the conditions of access options to the facilities
- *Assess if transportation routes will be affected by the foreseeable future impacts of climate change, such as increased flooding*

Mitigation Measures

- If the project will overcrowd schools, alternative options may need to be considered
  - Build additions to existing school
  - Add temporary classrooms
  - Locating classroom space in nearby buildings
  - Provide transportation to other local schools
- For safe access considerations:
  - Construct all-weather walking paths in proximity to bus stops, schools, and crosswalks
  - Identify crossing guard locations
  - Establish clearly marked intersections near school and bus stops

Commercial Facilities

To assess commercial facilities, consider the adequacy of existing commercial facilities to service the project and the impact on the surrounding commercial establishments.

Important Considerations

- Is there adequate convenient access to affordable, retail services that meet local needs?
- Is public transportation available to carry commuters to retail services within half an hour?
- Will the proposed project adversely impact or displace existing retail and commercial services?
- **Note: Not usually applicable to IEDA CDBG projects.**

Analysis Techniques

- Use a map or applicable market study to evaluate the relationship between the project and existing commercial facilities
- Determine the occupant access to neighborhood amenities by probable mode(pedestrian, transit, or private automobile)
- Account for demographic factors that influence shopping needs and preferences

Mitigation Measures

- When a project is poorly situated to retail centers:
  - Arrange for additional or new transportation services to meet needs of residents
  - Encourage new retailing in the area through incentive programs

Health Care Services

Health care services are those regular and emergency dental, medical care, mental health, and substance abuse services which private doctors, dentists, and other trained medical staff at a hospital; outpatient clinic, public, private community health facility; home-care medical programs; or an emergency treatment facility provide.

Important Considerations

- Will the project increase demand on health care services past current capacity?
- Are emergency and non-emergency health care services appropriately accessible?
- Are health care resources and staff proportional to the increase in residents?
- Will project residents/users require special medical services or skills?
- **Note: *Could* be applicable if for example, a community facilities project is serving a clientele with special needs or with large disaster housing.**

Analysis Techniques

- Examine relevant demographic data of new residents to determine any need for specialized medical services
- Determine accessibility of existing health care services from project site

Mitigation Measures

- Adopt special shuttle and emergency transportation to medical services
- Incorporate a small medical service area into the development

Social Services

Social services must cater to and be easily accessed by those who need them. Such services include, but are not limited to, programs for drug addition, alcoholism, and mental health; halfway houses; family counseling centers; daycare centers; and *cooling centers in areas prone to heat risk*.

Important Considerations

- Are the social services onsite or within reasonable distance to project residents and capable of accommodating residents?
- Will the provision of additional social services at this site create a concentration of the disadvantaged in violation of HUD site and neighborhood standards?
- **Note: *Could* be applicable if a community facilities project is serving a clientele with special needs.**

Analysis Techniques

- Determine if specific services will be required for new residents
- Assess accessibility of existing social services from proposed project site
- Determine whether the project will overburden existing services and facilities

Mitigation Measures

- Consider the need for special transportation services
- Coordinate on funding and space for added social services with local partners

Solid Waste Disposal and Recycling

CITY

Solid waste disposal is an essential service, making its availability an essential determinant for proceeding with a project. Assessments should take into consideration the proximity of service to disposal site, capacity of disposal sites, and the *likely climate resilience of the disposal site*.

Important Considerations

- What types and amounts of waste will be generated during project construction?
- What types of solid waste will the completed project generate?
- Is solid waste permitting required?
- What organization will handle garbage collection, composting, and recycling? Do they have the additional required capacity?
- **Note: Not usually applicable to IEDA projects but is possible with new or largely expanded CF projects or disaster housing.**

Analysis Techniques

- Conduct inventory of landfill locations and capacities
- Assess opportunities to reduce waste production from project site

Mitigation Measures

- Determine if recycling and/or composting can be added to the project design to reduce burden on local sites.
- Improve compaction methods to reduce the volume of waste
- Investigate the re-use of materials as appropriate and as resources allow

Wastewater and Sanitary Sewers
Engineer

Wastewater treatment and disposal are essential for all new developments. When analyzing impacts to wastewater treatment/disposal facilities, consider two factors: proximity of the service to the site and capacity of the service to accommodate the project.

Important Considerations

- What is the capacity of the existing or proposed wastewater/sewage system?
- *Will climate change-induced floods increase the risk of combined sewage overflow events? Which populations would be exposed to added pollution, if so?*
- Are soil conditions suitable for on-site septic systems? *Is the water table likely to rise due to climate change?*
- *Will climate change impact site suitability factors in the foreseeable future?*
- ***(floods, drought, built elevations)***

Analysis Techniques

- Compare the location of the site to municipal services and infrastructure
- For on-site disposal, determine septic tank feasibility and identify any contamination risks
- Estimate water use and volume of waste and assess local capacity

Mitigation Measures

- Expand capacity of sewer lines and treatment facilities
- Incorporate resilient landscaping elements and re-use grey water
- Regionalize wastewater treatment facilities
- *Use future, rather than historic, high-water projections for septic system location*

Water Supply
Engineer

Project residents must be able to receive sufficient quantities of potable water under adequate pressure at affordable costs. On average, users consume approx. 80-100 gallons of water per day per capita.

Important Considerations

- Is the water system adequate to serve potable water to the proposed project?
- Will any sole source or other aquifers be affected?
- Will the project result in a significant consumption of the available water supply or significant deterioration of water quality?
- *Consider future water conditions, both quality and quantity under likely climate change scenarios (Drought?)*

Analysis Techniques

- Determine the number and type of residential units proposed and estimate future water use
- Contact local water authority or public works department to determine adequacy of the project's water needs
- Confirm potability of water supplies based on state and local public health standards

Mitigation Measures

- Investigate other options, such as wells drilled on-site

Public Safety - Police, Fire, Medical
City Staff & Emergency Service Providers

Adequacy of existing fire, police, and ambulance services should be considered for the project site, which includes assessing the key variables of emergency equipment and service personnel, response time, and access. (Is unlikely to be a factor in IEDA CDBG projects, but is possible).

Important Considerations

- What emergency services are located within the reasonable proximity to the project?
- Is firefighting protection adequate and equipped to service the project?
- Will the project cause significant additional burden on police, fire or health care providers? *Is the project in an area prone to wildfires?*

Analysis Techniques

- Review project plans to assess proximity to protective services, size of buildings, number of residents, and other factors relevant to public safety
- Consult with secondary data (fire-service maps, emergency medical service plans, etc.) and local public safety departments to determine potential adverse impacts from the project

Mitigation Measures

- Expand local public safety services
- Include safety features and access points for emergency services in project design
- Provide supplement protective services (private security service, alarms system, etc.)
- *Consult forward looking regional fire maps and incorporate fire mitigation measures when appropriate*

Parks, Open Space, and Recreation

City Staff

Community services such as cultural resources and passive/active recreational facilities have become a necessary component of community development. *Additionally, higher-density communities also benefit from the positive health impacts associated with additional public green space (e.g., mitigating urban heat islands, improving air quality.)*

Important Considerations

- Are these facilities easily accessed from the project site? How many?
- Will project overload existing facilities?
- Does project satisfy any special recreational/cultural needs of certain population groups?
- Does proposed housing developments include playgrounds for children or recreational space for adults?

Analysis Techniques

- Assess the access to and expected impact that additional residents will have on existing facilities
- Refer to Community Plans to see if any facilities are proposed in future planning

Mitigation Measures

- Expand existing facilities
- Modify the design to mitigate project impacts
- Work with local school administration to arrange after-school use of school recreational facilities

Transportation and Accessibility

Accessing transportation impacts involves analyzing the four sub-elements of transportation: access, safety, balance, and level of service.

Important Considerations

- Is a traffic study required? How will the project impact local traffic patterns?
- Do safe and adequate public transportation services serve the project?
- Is the project pedestrian and bicycle friendly?
- Is the project accessible to the elderly and persons with disabilities?
- *Does proximity to a highway or high traffic area disproportionately expose low-and moderate-income or minority persons or communities to harmful air pollutants?*
- **Note: This factor can sometimes warrant true consideration, (elderly, noise, childcare).**

Analysis Techniques

- Review project plans to determine local transit services and highway access
- Consult project data to determine need for specialized transportation services
- Evaluate safety of biking and walking pathways
- Confirm existing public transit systems in accordance with U.S. Department of Transportation Section 504 Regulations

Mitigation Measures

- Design project site plans for traffic calming measures
- Ensure handicap accessibility
- Adopt multiple transportation options for residents

Natural Features

The Natural Features impact category consists of the natural features surrounding or on the site of potential projects. This category includes factors such as water resources, endangered species, local wildlife, and unique natural features.

This section of the eGuide will help consider how a project can adversely affect or enhance the appreciation and protection of natural resources and sites.

Unique Natural Features

Unique natural features are rare or of special social/cultural, economic, educational, aesthetic, or scientific value. Development on or near natural features may render them inaccessible, degrade their value, *reduce the resilience and ecosystem services benefits they offer*, or otherwise limit their potential future use and appreciation. *Note: Think about this factor – and look around the site……should not often be a concern.*

Important Considerations

- Will any part of the project adversely impact unique natural features?
- Will unique features pose safety hazards?
- Will views between public areas and unique features be altered?
- Will runoff from project erode or degrade unique features?
- *Will the project limit the ability of a natural feature to provide important ecosystem services?*

Analysis Techniques

- Review project plans and determine proximity to unique natural features
- Observe site and interview a knowledgeable person(s)
- Use aerial photography or state geological survey, USGS, local GIS dataset analysis
- Determine how the project will impact the natural feature visually and audibly
- Consider traffic (foot and vehicular)

Mitigation Measure

- Long-term preservation efforts
- Provide visual or physical access to feature
- Modify landscaping plans to avoid invasive exotics or harmful herbicides/pesticides
- Allow scientific research (e.g., excavation of fossil bed) before development if feature cannot be avoided

Water Resources Engineer

Water resources consists of two categories: groundwater and surface water. Groundwater refers to all the water found below the ground's surface; whereas surface water ranges from very large rivers and lakes to small ponds and streams. (think water run-off, drought and contaminants)

Important Considerations

- Is the site subject to rapid water withdrawal problems?
- Will the project use a septic system?
- Are there visual or other indicators of water quality problems on or near the site?
- Will there be substantial increase in impervious surface area?
- *Does the project limit downstream access to or quality of water?*
- *Climate change may impact precipitation patterns and water stress (e.g., SSA)*

Analysis Techniques

- Review project plans
- Conduct field observation
- Consult groundwater resources:
  - U.S. Army Corps of Engineers (USACE) Groundwater Modeling System
  - USGS or State Geological Survey Hydrologic Maps/Reports
  - Many other USGS resources
  - USDA NRCS Surveys
  - Areawide Water Quality Management Plans ("208" Plans)

Mitigation Measures

- Use pervious pavers in aquifer recharge areas
- Limit surface water contamination via the SWPPP
- Design underground structures to withstand high water tables
- Expand sewer capacity, if overloading will occur

Vegetation
Landscaper

Vegetation is susceptible to multiple types of damage from project development. Plants and natural communities can experience disruption from changes in environmental conditions.
Note: Be sure to look at and around the site.

Important Considerations

- Will the project create problems by introducing nuisance or non-indigenous species of vegetation? (Kudzu)
- Will project introduce harmful landscape maintenance practices?
- Will the project damage or destroy existing remnant or endemic plant communities?
- Will project damage or destroy plant species or trees?
- *How can vegetation be used to improve climate resilience? (hearty plants)*

Analysis Techniques

- Review existing documentation to determine the ecological features of the area
- Conduct field observation to help determine the nature, viability, and degree of vulnerability of plant species on the site
- Determine the percentage of site that will be developed or altered to measure the level of ecological disturbance

Mitigation Measures

- Cluster development to prevent sprawling
- Limit tree cutting to areas occupied by buildings
- Put buffer areas between construction activities and sensitive areas
- Terrace downhill slopes
- Plant vegetation in open space areas and *select native species that provide appropriate ecosystem services to mitigate climate and other impacts*

Wildlife

Wildlife habitats are where wildlife species normally live and meet their basic needs for food, water, cover, breeding space, and group territory. (Refer to your endangered species check)

Important Considerations

- Will the project create special hazards for animal life?
- Will migratory birds be impacted?
- Will the project damage existing wildlife habitats?
- Will excessive grading alter the groundwater level, which can adversely impact trees and habitats?
- *Will species or habitats particularly at risk due to climate change be impacted?*
- *Will project impact ecosystem as a whole?*

Analysis Techniques

- Assess impact on vegetation
- Review:
  - Biotic surveys
  - State and local Threatened and Endangered Species lists
  - Vegetation maps
  - Natural community databases prepared by state agencies
  - USFWS ECOS critical habitat ArcGIS mapviewer and IPaC tool
- Compare project location to existing ecologically sensitive areas

Mitigation Measures

- Alter project design to avoid impact on habitat areas
- Plant native vegetation to help feed and shelter protected species
- Conserve essential or critical habitat area
- *Develop migration pathways (e.g., wildlife crossings, conserve migration corridors), especially for subsistence hunting species*

- Reminder:

  This presentation is not exhaustive; consult the eGuide at HUD Exchange for more information

QUESTIONS ?