Federal Facilities Boundary and Land Use ~~d~~Data ~~c~~Collection ~~p~~Proposal -- ~~Monday, February~~June ~~08~~07, 2016

Background

Updated federal facility boundary and land use data are needed by August 2016 for use in the Phase 6 Watershed Model. The objective is to improve the current federal facility data layer to ensure accurate progress outputs from the Phase 6 Watershed model for the federal facilities sector. Efforts have been underway for some time to prepare for this need, including the prototyping and ongoing development of a Federal Facilities Editor Tool, Federal Facility Workgroup meetings, and internal CBP planning meetings between members of the Federal Facility Workgroup and the GIS Team.

Federal Facility Boundary Data

For use in the watershed model, federal facility boundary data must be in a GIS layer format. The current GIS layer was developed in 2010, and is out of date. For the last several months, some federal partners have provided additions and deletions to their facilities in non GIS-formatted (e.g., Excel) format, but these additions and deletions must be made in the GIS layer, as well. Other partners are providing GIS-formatted data for the GIS team to incorporate into the federal facility layer.

As the Federal Facility Editor tool was developed, it was envisioned that one of its uses might be for federal partners to edit the boundaries of their facilities, thereby keeping the GIS layer up to date with minimal intervention by GIS Team members. However, discussions among the Federal Facility Workgroup have shown that many federal partners who have the capability would prefer to submit their data to CBP in a GIS format, rather than draw and maintain them in the Federal Facility Editor. In addition, web-based GIS editing introduces the potential for problems with data accuracy, and the time needed for the development and maintenance of editing functionality, combined with the time needed for quality assurance of edits made by federal partners, would likely outweigh the benefits of allowing web-based editing.

Therefore, **CBP plans to ask federal partners to submit all new GIS boundary data by ~~March 31~~June 15, 2016**. **This will allow the GIS Team to complete a new federal facility boundary layer by ~~April~~ June 30, 2016**. The GIS Team will work with any federal partners that wish to modify their facility boundaries, but that do not have the capacity to generate and submit GIS data, in order to ensure that their data is included.

Federal Facilities Land Use Data

It was originally planned that federal partners would review and correct land use data for their facilities using the Federal Facility Editor Tool. Prototyping of the tool, along with the continued development of Phase 6 land use data, showed that this approach would require users to understand and correctly input data for up to 13 classes of land use. The complexity makes it likely that there would be data accuracy issues. In addition, concerns arose regarding the concept of allowing federal partners to override all of CBP's land use calculations, when state and local government partners are not given that capability.

New, high-resolution imagery arriving at CBP between now and August is allowing the development of CBP's most accurate land use dataset to-date. Review of sample data has shown that the only weakness of this data is the ability to differentiate between turf grass, ~~open space~~mixed open, cropland, and pasture/hay land ~~land~~ uses~~, which results in areas containing any of these four land use classes to be classified as turf grass~~. These are instead classified as "low vegetation".

In order to assure the most accurate land use data for federal facilities, **CBP plans to ask federal partners to ~~input~~ select estimated percentages of turf grass, mixed open ~~space~~, crop~~land, and pasture/hay (in 10% increments) for their facilities between ~~May~~ July 16, 2016 and ~~July 31~~August 24, 2016**, using the Federal Facility Editor Tool. Using the tool will provide the benefit of having an image, probably Google Map, to assist the agencies with estimating the percentages of turf grass, open space, cropland, and pasture land on each facility. The default assumption for any facilities without data entered by federal partners will be that all areas classified as ~~turf grass are, in fact turf grass~~low vegetation are a combination (exact percentages TBD) of two or more of the low vegetation subtypes.

Land Use Definitions

Turf Grass (TG) = Herbaceous and barren lands that have been altered through compaction, removal of organic material, and/or fertilization. These include all herbaceous and barren lands within road right-of-ways and residential, commercial, recreational, and other turf-dominated land uses (e.g., cemeteries, shopping centers) and a portion of herbaceous and barren lands within federal facilities, parks, institutional campuses, and large developed parcels.

Mixed Open (MO) – All scrub-shrub and herbaceous and barren lands that have been minimally disturbed (e.g., periodically bush hogged, meadows, etc.), reclaimed, or that have internal and/or regulated drainage. These include active, abandoned and reclaimed mines, landfills, beaches, waterbody margins, natural grasslands, utility right-of-ways and a portion of herbaceous lands within industrial, transitional (early stages of construction), and warehousing land uses. Also included are potential agricultural lands that were not mapped as either cropland or pasture in the NASS Cropland Data Layers (2008 through 2015).

Cropland (CRP): Herbaceous and barren lands that are not classed as turf grass or mixed open. The portion of such lands that are crops is determined by the frequency at which the lands are classified as crops in the NASS Cropland Data Layers (2008 through 2015).

Pasture/Hay (PAS): Herbaceous and barren lands that are not classed as turf grass or mixed open. The portion of such lands that are pasture/hay is determined by the frequency at which the lands are classified as pasture/hay in the NASS Cropland Data Layers (2008 through 2015).

Proposed Timeline

Present – ~~March~~ June 15~~31~~, 2016: Federal partners submit updated boundary data
Present – ~~April~~ June 30, 2016: GIS Team develops an updated federal facility GIS layer
July 1 - July 15, 2016~~Present – April 30, 2016~~: GIS Team completes development of the Federal Facilities Editor tool

Formatted: Font: Bold
Formatted: Normal

~~Present – July 31, 2016:~~ ~~GIS Team develops high-resolution land use data~~

~~May~~ July 16 – ~~July 31~~Aug. 24, 2016: Federal partners ~~enter~~ select percentages of turf grass, open space, crop land, and pasture

Aug. 25 – Sept. 30, 2016: GIS Team incorporates federal land use input into watershed-wide Phase 6 federal facilities data layer

~~August 1– August 15, 2016: GIS Team incorporates federal facilities boundary and land use data (i.e., combine the high resolution data with the four land use data update) into watershed-wide Phase 6 land use data~~federal facilities data ~~layer~~

Formatted: Indent: Left: 0", Hanging: 2"