Please include natural turf management in the alternatives to consider if you approve this bond measure.

1. Naturally managed grass fields serve as a **practical and safer alternative** to artificial turf.
    a. Natural turf management practices can improve the health of soil and grass without the need for synthetic pesticides or fertilizers.
    b. Well-designed and maintained grass fields absorb rain.
    c. Grassy areas help to reduce the urban heat island effect. Artificial turf can reach extreme temperatures because they absorb heat on hot summer days. This can be unhealthy for players.

2. Natural turf maintenance can be **cost-competitive** with conventional management.
    a. In general, artificial turf fields have a higher life-cycle cost than natural grass fields.
    b. If full lifecycle costs, including installation, maintenance, and disposal/replacement are considered, a natural grass soil-based field is the most cost effective.
    c. One study found that once established, an organic turf management program can cost 25% less than a conventional turf management program.

The installation of artificial turf sports fields is contradictory to the city's climate goals:

1. According to the Citizens Campaign, the manufacturing, installation, service and disposal of a 2-acre artificial turf field is responsible for the generation of 55.6 tons of CO2.
    a. The infill material migrates off the fields and into the environment, thereby requiring **periodic replacement** and introducing even more plastic and synthetic chemicals.
    b. Fields require **periodic disinfection** with harmful fungicides, herbicides, and insecticides.
    c. Degrading plastic pollution is a source of climate change gas emissions, and once it goes into a **landfill**, artificial turf fields release methane and contribute to global warming.

2. Artificial turf fields contribute to **microplastics pollution**.
    a. The black rubber pieces are made from old car tires and contain a variety of hazardous materials. They are known to migrate into nearby bodies of water.
    b. PFAs leach off artificial turf fields into the water. Numerous studies have shown that the water surrounding these fields quickly becomes contaminated due to stormwater runoff.

3. The **environmental health impacts** posed by plastic carpets and polypropylene shock pads are significant and should be at the forefront of any decision regarding these materials.

Protect the turtles and other critical wildlife:

1. The Western pond turtle is about to be protected under **endangered species** listing.
    a. "Endangered Species Act protections are a much-needed lifeline for our dwindling native West Coast turtles," said Jeff Miller, a senior conservation advocate at the Center for Biological Diversity. "Pond turtles are crucial to healthy rivers and wetlands, and losing them would impoverish aquatic ecosystems."
    b. The Western pond turtle population is most threatened by habitat loss and fragmentation from urban development and agriculture, and climate change.
    c. In Oregon's Willamette Valley, pond turtles appear to have declined by 99%.
2. Ecological **buffers** are protected zones established around sensitive or critical areas to lessen the impacts of human activity and land disturbance.
    a. The ODFW Native Turtle Best Management Practices calls for a 500 ft. minimum buffer for minor infrastructure like picnic tables, and 1650 ft. for major infrastructure like roads (pg 40).
    b. The recommendation from Biohabitats, the consultant the City hired for the site, suggested a minimum buffer of 500 ft and extending the buffer to 1700 feet where possible (pg 23-26).
    c. Generally, wider riparian buffers can support higher species abundance and diversity.
3. Despite two separate entities advising nearly identical recommendations, park designs thus far have not incorporated these minimum buffers, instead prioritizing additional sports fields.