Some of the hazards of Expanded Poylstyrene (EPS)

"Styrofoam Monster" from Sedona Recycles offers an introduction to the topic:

- "Foamed polystyrene takes hundreds of years to break down in the environment. In other words, your Styrofoam cup will outlive you by about 300 years."
- "Exceedingly few recycling companies will accept Styrofoam because it is not an economical product to recycle; it is much cheaper to simply manufacture more."
- "During the slow process of breaking down, foamed polystyrene shrinks into tiny pieces that are easily ingested by land and water-going animals. Thousands of birds are known to die each year from the consumption of small Styrofoam pieces."
- "this material … is also extremely wasteful. Because it is not reduced, reused, or recycled, Styrofoam is one of the least efficient materials being produced in mass quantity. Its low production costs and cheap marketing prices mean that companies are reluctant to switch to paper or plastic alternatives."

Sedona Recycles
http://www.sedonarecycles.org/recycle/archive.php?id=14

In "Styrofoam cups - clouds in your coffee?", Grinning Planet focuses on the health hazards of EPS:

- "styrene — the single-molecule form of polystyrene — migrates into your food and beverages from polystyrene food containers. …. A US EPA study of fat biopsies from human subjects found styrene residues in 100% of the samples tested."
- "The migration of styrene from a polystyrene cup containing cold or hot beverages has been observed to be as high as 0.025% for a single use. That may seem like a rather low number, until you work it this way: If you drink water, tea, or coffee from polystyrene cups four times a day for three years, you may have consumed about one Styrofoam cup-worth of styrene along with your beverages. Mmm…. chemically…"

- "Studies suggest that styrene mimics estrogen in the body and can therefore disrupt normal hormone functions, possibly contributing to thyroid problems, menstrual irregularities, and other hormone-related problems, as well as breast cancer and prostate cancer. …. Long-term exposure to small quantities of styrene is also suspected of causing: low platelet counts or hemoglobin values; chromosomal and lymphatic abnormalities; neurotoxic effects due to accumulation of styrene in the tissues of the brain, spinal cord, and peripheral nerves, resulting in fatigue, nervousness, difficulty sleeping, and other acute or chronic health problems associated with the nervous system."

Grinning Planet
http://www.grinningplanet.com/2005/11-01/styrofoam-cups-article.htm

Ventura County is one of the local governments which are taking action to ban the use of Styrofoam. Santa Monica has done this as well. Ventura County's webpage on EPS emphasizes:

- "EPS is made from crude oil, and like all plastics, is non-renewable, non-biodegradable, and virtually non-recyclable."
- "EPS cups and containers are a major source of pollution on our beaches, especially after a rainstorm. It breaks down into small pieces, which are mistaken for food and ingested by marine animals, birds, and fish. Once swallowed, it either acts as a poison or fills the stomach causing reduced appetite and nutrient adsorption, often leading to slow starvation. According to the Alguita Research Institute (www.alguita.com), the ratio of plastics to plankton (a major food source for many marine animals) in the oceans is currently 6:1 and rapidly increasing."

Ventura County
http://www.culturechange.org/e-letter-plastics.html

Jan Lundberg of Northern Californians Against Plastic includes EPS in his discussions, but goes further, to discuss the environmental and health impacts of PVC and other plastics. (See "Rejecting the toxic plague: War on Plastic" at CultureChange.org) Lundberg's article also contains an exceptionally clear discussion of bioplastics:

- "using petroleum fertilizers and plasticizers to make the throw away society perpetuate itself, is not appropriate" (quoting Captain Charles Moore, plastics pollution researcher)
- "Making plastics from agricultural products will encourage a massive shift of production from petroleum-based products to products that rely on petroleum-based pesticides, insecticides, and fertilizers. … Mass agriculture on the scale that would be necessary to produce the plastics to feed our consumer society will significantly increase the degradation already caused by industrial-style agriculture — that is, the use of water, energy, the use of pesticides, the depletion of top soil, and the resulting sedimentation of rivers and nearby waterways caused by soil erosion."
- "Another concern is that the ASTM standards for biodegradable and compostable plastics do not address the issue of plastic additives. So, there is no reason to believe that the plasticizing additives that cause cancer and hormone disruption will not be used in these new plastics."
- "The concept of 'biodegradable plastic' is at best a ploy by industry meant to divert our focus away from the real problem: single-use containers and packaging." (quoting Paul Goettlich)

Jan Lundberg of Northern Californians Against Plastic at Culture Change.org
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Lundberg concludes with this quote:

> "Alternatives to (petroleum) plastics," according to the Berkeley Ecology Center's Plastic Task Force do not include bioplastics:
>
> - Reduce the use – source reduction.
> - Reuse containers.
> - Require producers to take back resins.
> - Legislatively require recycled content.
> - Standardize labeling and inform the public.

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A quote on the website of the Polystyrene Packaging Council drives home this very point:

- "Very little of the waste discarded in today's modern, highly engineered landfills biodegrades. Because degradation of materials creates potentially harmful liquid and gaseous by-products that could contaminate groundwater and air, today's landfills are designed to minimize contact with air and water required for degradation, thereby practically eliminating the degradation of waste."

Jan Lundberg of Northern Californians Against Plastic at Culture Change.org
http://www.polystyrene.org/polystyrene_facts/facts.html

"It just doesn't make sense for us, as a society, to use packaging that lasts hundreds of years, when its functional use is limited to a few minutes."

Ventura County
http://www.culturechange.org/e-letter-plastics.html